

2016 – 2017 Catalog



SAINT PAUL COLLEGE
A Community & Technical College

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go anywhere.

SAINT PAUL COLLEGE

2016–2017 CATALOG

Saint Paul College—A Community & Technical College
235 Marshall Avenue • Saint Paul, MN 55102
651.846.1600 • www.saintpaul.edu

Saint Paul College—A Community & Technical College reserves the right to change without notice any information published in this catalog. This catalog is not a contract. The College makes every effort to provide the courses, programs and services outlined in this catalog. However, academic calendars and the delivery of services are subject to modification. Furthermore, course delivery methods (e.g. traditional, online and other) are subject to change without prior notice in the case of emergency or other action deemed necessary by the College.

The name of the organization is Saint Paul College—A Community & Technical College, hereinafter referred to interchangeably as “the College” in policy and procedure statements.

Saint Paul College—A Community & Technical College is committed to a policy of nondiscrimination in employment and education opportunity. No person shall be discriminated against in the terms and conditions of employment, personnel practices, or access to and participation in, programs, services, and activities with regard to race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, gender expression, or membership or activity in a local commission as defined by law.

Harassment of an individual or group on the basis of race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, gender expression, or membership or activity in a local commission has no place in a learning or work environment and is prohibited. Sexual violence has no place in a learning or work environment. Further, Saint Paul College shall work to eliminate violence in all its forms. Physical contact by designated College staff members may be appropriate if necessary to avoid physical harm to persons or property.

Saint Paul College is committed to fostering an environment without discrimination and harassment. The College has a complaint process to review complaints of discrimination, harassment and sexual violence. Inquiries regarding compliance to Federal and State Laws and Statutes may be addressed to Kelly Murtaugh, Vice President of Academic and Student Affairs, who can be reached at 651.846.1363.

Refer to the Saint Paul College Student Handbook for important information that each student should read to assure success at the College.

Available in Alternate Format

This document is available in alternative formats to individuals with disabilities by contacting the Director of Access & Disability Resources at 651.846.1547 or AccessResources@saintpaul.edu.

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Information Directory

General Information	651.846.1600
TTY – Minnesota Relay	7-1-1
	or 1.800.627.3529
Fax	651.846.1703
Academic Success Coordinators	651.846.1357
	www.saintpaul.edu/AcademicSuccess
Access & Disability Services	651.846.1547
	www.saintpaul.edu/DisabilityServices
Alumni Relations	651.846.1469
	www.saintpaul.edu/Alumni
Assessment, Intake	651.846.1555
	www.saintpaul.edu/Assessment
Bookstore	651.846.1422
Textbook Look-up	www.saintpaulcollegebookstore.com
Career Services	651.846.1384
	www.saintpaul.edu/CareerCenter
Counseling	651.846.1383
English for Speakers of Other Languages (ESOL)	651.846.1555
	www.saintpaul.edu/ESOL
Enrollment Services	651.846.1555
	www.saintpaul.edu/Admissions
Financial Aid	651.846.1386
	www.saintpaul.edu/FinancialAid
Foundation/Friends of Saint Paul College	651.846.1469
IT Services/Help Desk	651.846.1440
Library/Learning Commons	651.846.1489
Public Safety	651.846.1322
Registration	651.846.1515
	www.saintpaul.edu/Registration
Student Life	651.846.1659
	www.saintpaul.edu/StudentLife
Student Records and Transcripts	651.846.1555
Transfer Center	651.846.1739
	www.saintpaul.edu/TransferCenter
Tuition Office	651.846.1395
	www.saintpaul.edu/Tuition
Tutoring/Academic Support	651.846.1623
	www.saintpaul.edu/Tutoring
Veterans Educational Benefits	651.403.4211

College Calendar 2016-17

Fall Semester 2016

August 22, 2016 – December 16, 2016

Fall Semester Begins	08/22/16
Saturday Classes Begin	08/27/16
Labor Day – College Closed	09/03 – 09/05/16
No Classes	10/20 – 10/21/16
Veterans Day – College Closed	11/11/16
Thanksgiving – College Closed	11/24 – 11/27/16
Saturday classes end	12/10/16
Final Exams	12/10 – 12/16/16
Fall Semester Ends	12/16/16

Spring Semester

January 9, 2017 – May 16, 2017

Spring Semester Begins	01/09/17
Saturday Classes Begin	01/14/17
Martin Luther King Holiday – Closed	01/16/17
Professional Development	01/26/17
No classes before 4:00 pm	
Presidents' Day Holiday – College Closed	02/20/17
Professional Development	02/21/17
No classes before 4:00 pm	
Spring Break	03/13 – 03/18/17
Saturday classes end	05/13/17
Final Exams	05/10 – 05/16/17
Spring Semester Ends	05/16/17
Graduation Ceremony 2016/2017	05/18/17

Summer Term

May 30, 2017 – August 4, 2017

Summer Term Begins	05/30/17
Independence Day – College Closed	07/04/17
Final Exams	07/31 – 08/04/17
Summer Term Ends	08/04/17

2016 - 2017 Holidays – Campus Closed

Labor Day Weekend	September 3 – 6, 2016
Veterans Day Holiday	November 11, 2016
Thanksgiving Holiday	November 24 – 27, 2016
Martin Luther King Day	January 16, 2017
Presidents' Day	February 20, 2017
Independence Day	July 4, 2017

Calendar is subject to change

For the most current information go to
www.saintpaul.edu/CollegeCalendar

Welcome to Saint Paul College



Saint Paul College is a place that empowers students from all walks of life and places all around the globe as they navigate their different pathways. Whether your pathway is career and technical training, academic transfer, gaining skills to become a better employee, or enriching your life through life-long learning, we have a place for you at Saint Paul College!

We believe that our success is rooted in the thousands of students who find a home at Saint Paul College every year. Saint Paul College has been ranked the #1 community college in the nation by Washington Monthly magazine in 2010 and again in 2013, for student engagement in active and collaborative learning, student-faculty interaction, and support for learning. If you are looking for a caring, supportive and challenging learning environment where dedicated and knowledgeable faculty and staff are committed to your future and success, then Saint Paul College is the right place for you.

Saint Paul College has a tremendous impact on the vibrant City of Saint Paul and surrounding communities. For over 105 years, the College has been here to serve the citizens, local industries and above all else, the students. With deep roots in career and technical education, along with academic transfer, Saint Paul College has prepared over 40,000 students for employment or transfer to four-year colleges and universities.

I would like to personally invite you to visit our beautiful campus. Take a tour and see our classrooms and hands-on laboratory and training facilities; talk to our student ambassadors, staff and faculty and experience our campus community. Our newly renovated Learning Commons area provides a technology-friendly space for students to study and meet with friends and classmates.

When you visit Saint Paul College, I hope you notice “The student is” document that we have posted around our campus. It is our promise to you, and a reminder to ourselves, that the student is the most important person on our campus – for without you there would be no need for our college. As you walk around our college, I hope you see what I see – that our team of staff and faculty advance the human cause through respect, individuality and civility—it happens here each and every day. We truly care about our students and each other.

On behalf of our faculty, staff and administrators, I want to thank you for considering Saint Paul College as your educational partner and your pathway to a bright future. We look forward to working with you each step of the way.

Best wishes for success with your college plans and your personal goals. Remember, when you *start here*, you can *go anywhere!*

Sincerely,

Rassoul Dastmozd, Ph. D.
President and CEO

Saint Paul College: Vision, Mission & Values

Vision

Saint Paul College will be a leader in providing comprehensive lifelong learning through innovative and quality focused strategies and services.

Mission

The mission of Saint Paul College is to provide: *Education for Employment...Education for Life!*

Saint Paul College offers comprehensive learning opportunities in career and transfer education to enhance personal knowledge and advance economic opportunity for the benefit of a diverse population including students, business/industry/labor and the community.

our values

Excellence
Teaching & Learning
Career & Transfer Education
Student-Focused Services
Innovation
Accessibility
Technology

Integrity
Honesty
Accountability
Decision-Making
Climate Responsiveness

Respect
Student-Centered
Cultural Diversity/Inclusiveness
Human Diversity
Collaboration

 **SAINT PAUL COLLEGE**
A Community & Technical College

Our Values

The College mission and goals are based on its values which are central to an effective learning organization.

Saint Paul College — A Community & Technical College is committed to the following values.

Excellence

- Teaching & Learning
- Career & Transfer Education
- Student-Focused Services
- Innovation
- Accessibility
- Technology

Integrity

- Honesty
- Accountability
- Decision-Making
- Climate Responsiveness

Respect

- Student-Centered
- Cultural Diversity/Inclusiveness
- Human Diversity
- Collaboration

Strategic Goals

aligned with the strategic framework of Minnesota State Colleges and Universities system

MnSCU Strategic Direction 1:

Ensure access to an extraordinary education for all Minnesotans.

1. Maximize comprehensive, high-quality learning, programs and services.

Saint Paul College is committed to excellence in teaching and learning, and offers a wide spectrum of learning opportunities and delivery methods in career and transfer education to address learners' present and future needs.

- Provide seamless, comprehensive learning opportunities through innovative academic programs for diverse learners.
- Apply technology to enhance teaching and learning and to maximize effectiveness.
- Assess academic programs, student services, student achievement and instructional accountability.
- Pursue new and continuing national, regional and professional accreditation.

2. Expand access, service, opportunity and success.

Saint Paul College is dedicated to an integrated service philosophy that focuses on learner needs.

- Enhance the learner-centered success model to improve student performance in key indicators.
- Collaborate with secondary educational institutions and community organizations to promote college readiness and student success.
- Partner with other higher educational institutions to increase learning options for students.

MnSCU Strategic Direction 2:

Be the partner of choice to meet Minnesota's workforce and community needs.

3. Strengthen organizational, community and global partnerships to enhance economic competitiveness.

Saint Paul College is committed to apply systems to improve learning, communication and productivity.

- Promote the College as a key provider of high quality life-long learning for employment and/or transfer.
- Provide continuing education and short-term training to meet workforce and community needs.
- Build strong relationships/partnerships with alumni, local, state, regional, national and international constituents.
- Develop and expand outreach services and partnerships to support regional vitality.

MnSCU Strategic Direction 3:

Deliver the highest value / most affordable option by designing the Minnesota State Colleges and Universities system of the future.

4. Optimize organizational innovation and development.

Saint Paul College strives to ensure a successful future through creative thinking, shared services and the implementation of quality principles.

- Build organizational capacity for change to meet future challenges and remove barriers to innovation and responsiveness.
- Empower employee engagement to foster innovation.
- Apply technologies to improve communication and productivity.
- Maximize the use of physical resources.
- Utilize all resources to enhance effectiveness, increase efficiencies and improve learning and operations.

5. Sustain financial viability during changing economic and market conditions.

Saint Paul College is committed to ensuring its longtime financial sustainability.

- Make budget decisions that reflect priorities in core mission and fiscal stewardship.
- Utilize sound financial management and assessment practices.
- Increase student financial literacy and pursue new ways to reduce default rates.
- Expand institutional fundraising to generate additional scholarships and grants.

General Information and Services

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For information about Financial Aid, please refer to the Saint Paul College Student Handbook or website:
www.saintpaul.edu/FinancialAid

Services for Students

For information about Services for Students, please refer to the Saint Paul College Student Handbook or website:
www.saintpaul.edu/StudentServices

Student Life and Diversity

For information about Student Life and Diversity, please refer to the Saint Paul College Student Handbook or website:
www.saintpaul.edu/StudentLife

Rights and Responsibilities

For information about Rights and Responsibilities, please refer to the Saint Paul College Student Handbook or website:
www.saintpaul.edu/Rights&Responsibilities

Academic Standards

For information about Academic Standards, please refer to the Saint Paul College Student Handbook or website:
www.saintpaul.edu/AcademicStandards

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General Information

Accreditation

Saint Paul College—A Community & Technical College is accredited by The Higher Learning Commission of the North Central Association of Colleges and Schools.

The College also holds professional accreditation from:

- American Culinary Federation Education Foundation's Accrediting Commission (ACFEF)
- Commission on Accreditation for Respiratory Care (CoARC)
- National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
- Accreditation Commission for Education in Nursing (ACEN)
- Association of Collegiate Business Schools and Programs (ACBSP).

Saint Paul College meets established standards and is approved for the instruction of veterans, orphans of war veterans, state and federal rehabilitation students and members of the workforce needing training or retraining. Saint Paul College meets the definition of an institution of higher education and students are entitled to participate in federal financial assistance programs.

Minnesota State Colleges and Universities

Saint Paul College is one of the 31 colleges and universities in the Minnesota State Colleges and Universities system. The colleges in the system provide a wide array of opportunities for lifelong education in academic and technical fields, ranging from short-term certificate programs to doctoral programs. Approximately 33,500 students graduate from Minnesota State Colleges and Universities each year. Refer to the System Web site www.mnscu.edu for further information.

Alliances and Memberships

Students, Alumni & the Employer Connection

Saint Paul College offers undergraduate programs of two years or less to a widely diverse student population. Students are welcome regardless of their background, experience, or previous educational endeavors. The common goal of all students, however, is their desire for Education for Employment... Education for Life!

Alumni Relations

The College sponsors an Alumni Association to complement the educational process. All Saint Paul College graduates are encouraged to join. Call 651.846.1469 or visit www.saintpaul.edu/Alumni for further information.

Alliances with Business and Industry

Saint Paul College's greatest asset is its success in providing employment opportunity for graduates. This is due to its partnerships with the businesses, industries and trade unions with whom we collaborate. Saint Paul College relies on these major stakeholders to:

1. Hire our graduates;
2. Serve on our Advisory Committees to ensure relevant and current curriculum content and instruction; and
3. Provide quality assurance and identity within the community.

The College's relationships with businesses, industries, trade unions and alumni have remained strong to help ensure that the tradition of quality will be continuously enhanced through information, involvement and improvement.

TRIO Student Support Services Program

The TRIO Student Support Services Program provides support for nontraditional aged students (25 or older) who are low-income, first-generation, or have a documented disability registered with the Access & Disability Resources Office. Support services include academic success planning, college success skills workshops, financial aid literacy education, access to academic tutoring services and cultural enrichment activities. Enrollment is on a first-come, first-served basis. The program serves 140 actively enrolled students annually. Additional information is available by calling 651.403.4147.

Workforce Training & Continuing Education (WTCE)

The Workforce Training and Continuing Education division at Saint Paul College serves the non-credit educational and professional development needs of organizations and individuals in the greater metropolitan area. For over 20 years, Saint Paul College's Workforce Training & Continuing Education division has delivered high quality workforce training and continuing education ranging from development of assessments to consulting with business to meet industry, government, non-profit organizations, entrepreneurs, and individual needs, resulting in recognized credentials that boost performance and career opportunities. We are committed to your organizational and individual success!

Workforce Training

Workforce training provides quality training programs delivered at your location, online or on campus. We assist businesses and organizations in staying informed and knowledgeable about advances and best practices pertinent to workplace skills, leadership, organizational sustainability, and business solutions.

Training is provided in the format that best meets the needs of the client, for example:

- Offering over 100 unique courses through Web-based training.
- Presenting seminars on pertinent and timely topics for industry partners and individual professional development.
- Designing hands-on experiential workshops to promote application of newly acquired behaviors, attitudes, or skills.
- Enhancing skills or specific knowledge relating to career and professional development through continuing education courses.

Continuing Education

Continuing Education provides adult learners the opportunity to enroll in non-credit courses that build career related skills for personal or professional enrichment. Choose from online or classroom-based courses in a variety of fields and content areas.

Examples of training offered through WTCE:

- AutoCAD Training
- Business Management
- Business Writing
- Coaching

- Communication Skills
- Computer Applications
- Customer Service
- Entrepreneurship
- Esthetics Re-licensure and Training
- Health Care
- Leadership/Management
- Motorcycle Training
- Quality Assurance
- Safety
- ServSafe® Certification
- Software Training
- Supervisory & Management Training
- Welding
- Workers Compensation

All WTCE classes can be offered at your work site or custom tailored to meet your employees' needs. Call 651.846.1800 or visit www.saintpaul.edu/WTCE for more information.

Enrollment Services

Admissions Process

Admission to the College is open to students who are at least 16 years of age, have completed their high school diploma, GED, or equivalent, or meet Ability to Benefit requirements. Minnesota High School students who meet the requirements of the Post-Secondary Enrollment Options (PSEO) Act of 1985 or other special high school programs may also be admitted.

Students seeking admission to Saint Paul College who have attended another college or university and do not meet Saint Paul College's Satisfactory Academic Progress Standards must appeal for admission.

Admission to a Major Program

Students are accepted into a major program for the purpose of obtaining a specific degree, diploma, or certificate. Students may change their major program by meeting the prescribed admission requirements for the desired program.

Application Procedure

If you have not applied to or enrolled at Saint Paul College in the past, follow this application procedure:

1. Complete an Application for Admission online at www.saintpaul.edu/apply.
2. There is a one time, non-refundable \$20 application fee. Saint Paul College is currently waiving the application fee.
3. Complete the Assessment in Reading and Math or complete the English as a Second Language (ESL) Assessment if you are a nonnative speaker of English. Call 651.846.1555 for more information. Scores must be turned in to the Office of Enrollment Services. A student may be exempted from taking this Assessment based on documentation of subject area test scores on the ACT exam taken within the last three (3) calendar years for Reading and Writing and two (2) calendar years, for Mathematics. If you have taken the ACT or SAT test within the last three (3) years, please bring a copy of your scores to Enrollment Services (Room 1300) for further review.

4. Request high school transcripts and/or GED scores, as well as official transcripts from all secondary and post-secondary institutions attended be sent to Saint Paul College.
5. If you have previously applied, enrolled, or requested information from Saint Paul College please contact the Office of Enrollment Services so your records can be updated.

Some major programs require additional assessment. Applicants will be notified if their program requires additional assessment.

Assessment requirements may be waived based on previous college experience as validated by college transcripts or determined by the Director of Enrollment Services. Please contact the Transfer Center to have previous college transcripts reviewed for an assessment waiver

Intake Assessment

Saint Paul College and the Minnesota State Colleges and Universities system require assessment of basic academic skills. The College uses the ACCUPLACER™ assessment tool. The assessment for English native language speakers covers reading comprehension and mathematical computation.

The assessment for students whose native language is not English is the English as a Second Language (ESL) assessment. This assessment covers the understanding of English grammar structures and listening comprehension. Students may be assessed in additional subjects for admission to selected programs or placement into certain courses.

These assessments are available on an individual, walk-in basis in the Assessment Center in Room 3115 and usually take from 1 1/2 to 2 1/2 hours to complete. ESL assessment scores determine ESL course placement. In some cases, assessment results may indicate that the student may benefit from developmental coursework in reading, writing, grammar and/or math prior to entering a major program.

Please call 651.846.1555 for group accommodation and additional information about the assessment process.

Immunization Requirements

Minnesota Law (M.S. 135A.14) requires that all students born after 1956 and enrolled in a postsecondary educational institution be immunized against measles, rubella, mumps and diphtheria, and tetanus after 12 months of age and within 10 years of first registration, allowing for certain specified exemptions. Students must submit a statement indicating the month and year of each immunization at the first registration for classes or no later than 45 days after the start of their first term. Students born in 1956 or before are not required to provide this information. Students who graduated from a Minnesota high school in 1997 or later are also exempt.

The Immunization Record form is designed to provide the College with the information required by law and will be available for review by the Minnesota Department of Health. Students enrolled in Health programs are required to obtain additional immunizations in accordance with clinical site policy. For more information regarding immunization requirements and resources available to meet those requirements, contact Enrollment Services.

Application Procedure for Transfer Students

Students seeking admission to Saint Paul College based on previous college coursework should contact the Transfer Center at transfer.center@saintpaul.edu or 651.846.1739, after completing the online application.

Students seeking a degree, diploma or certificate, who have previously attended accredited institutions, must have all official transcripts sent directly from the previous colleges to the Saint Paul College Records Office. If a transcript is hand carried by the student, it is to be delivered in a sealed envelope. Student copies and faxed transcripts are not considered official but can be used for admission purposes.

Re-Admission

Students who have interrupted attendance at Saint Paul College must contact the Office of Enrollment Services to apply for re-admission. To have assessment tests waived based on coursework completed at another institution, contact the Transfer Center at 651.846.1739.

Undeclared Students

Students not intending to pursue an academic award may apply to the College as an undeclared student. Some classes may be limited to students admitted to a specific major or may have course prerequisites. Undeclared Students are not assigned a faculty advisor and do not qualify for financial aid or veterans' educational benefits.

If at a later date the student decides to pursue a degree, diploma or certificate, the credits earned as an 'Undeclared' Student may apply toward a program.

Change of Major

Students who have been admitted to Saint Paul College in a specific major program and want to change that program need to complete the Change of Major Form at the Office of Enrollment Services. Mid-semester major program changes are not permitted. The change of major program will be effective for the next semester.

Credit for Prior Learning

Saint Paul College offers adult students with sufficient work, non-college credit and/or life experiences the opportunity to document competencies relevant to specific course offerings at the College for prior learning credit. Credits earned from prior learning must be applicable to the student's program of study at Saint Paul College and are evaluated for credit by qualified faculty members. Credit for Prior Learning is not available if a CLEP exam exists for that course. Note: Credits earned through Credit for Prior Learning may not transfer to other colleges.

Post-Secondary Enrollment Options Program (PSEO)

The PSEO program enables eligible Minnesota high school sophomores, juniors and seniors to take college classes for credit. The purpose of the program is to promote rigorous academic pursuits and provide a wider variety of options than may be available in high school. Eligible students may attend either part-time or full-time. Tuition, fees and textbooks are provided at no cost to the student. For more information about the PSEO program, please contact the PSEO Coordinator at 651.846.1713.

High School Articulated Credit

Articulated Credit affords high school students an opportunity to receive college credit in many subjects. Articulated Credit programs effectively blend academic and technical education in a challenging and purposeful course of study that can lead to employment and credit toward further education. Since the workplace has changed significantly enough to require some training after high school, but not necessarily a full four-year degree, articulated credit programs offer viable new options for high school students who want to connect learning with life. Articulated credit is awarded for high school classes in Business, Child Development, Culinary Arts, Carpentry, Automotive Service and many other subjects. Many programs are articulated between Saint Paul Public Schools and Saint Paul College. Consult a high school counselor for more information concerning Articulated Credit.

Transfer of Credits from Other Institutions

Saint Paul College will review requests for transfer credit from individuals who completed coursework at other accredited post-secondary institutions. The number of credits transferred to Saint Paul College is dependent upon the specific requirements of each program or degree offered at Saint Paul College. Transfer credits will appear on the Saint Paul College transcript and can be used to satisfy the program graduation requirements but will not be used to calculate the grade point average. Course test-outs taken at another college or university are not transferable to Saint Paul College.

Students interested in receiving transfer credit must submit official transcripts to the Student Records Office. Upon admission to the College, transcripts will automatically be reviewed to determine transferable credits. Each credit to be considered for transfer must be supported by an official transcript from the originating institution and must be approved by a transfer specialist and/or the student's Faculty Advisor prior to the awarding of credit. Students who change programs should request a re-evaluation of their transcript credit.

Transfer of Credit Policies

Transfer of credit and courses will be evaluated based on policies and procedures of Saint Paul College, as outlined in Saint Paul College's catalog, Minnesota State Colleges and Universities system policies and procedures and according to Family Educational Rights and Privacy Act (FERPA).

Institution Accreditation

Transfer of credit will be considered for college level coursework completed at accredited institutions:

- Regionally Accredited: Degree-granting public, private, nonprofit and for-profit, two-and four-year institutions in the United States accredited by The Higher Learning Commission, (a Commission of North Central Association of Colleges and Schools) and/or parallel accrediting agencies in other regions of the United States.
- Nationally Accredited: Specialized institutions, including distance learning providers and freestanding professional schools recognized by the Council of Higher Education Accreditation (CHEA) and the U.S. Department of Education (USDE). Coursework will be considered on a course-by-course basis through a petition process and will be judged to be comparable or equivalent to courses offered at Saint Paul College.

Transfer Course Evaluation

Courses will be reviewed and considered for transfer as follows:

General education coursework completed at Minnesota State Colleges and Universities that fulfills the Minnesota Transfer Curriculum (MnTC) will transfer based on the assigned goal area at the sending institution.

- General education coursework completed at the University of Minnesota or other institutions outside the Minnesota State Colleges and Universities system will be considered for transfer as:
 - Equivalent to a Saint Paul College general education course and MnTC Goal Area
 - Not equivalent to a specific Saint Paul College course, but will fulfill a MnTC Goal Area
- Coursework that is not general education will be considered for transfer as:
 - Equivalent to a specific course in a technical program (within five years of course completion, if in a technical program)
 - Elective credit that does not apply toward general education or technical course requirements (including technical courses over five years old)

Transfer Equivalency

Courses approved for transfer must be comparable in nature, content, and level and match at least 75% of the content and goals of the course syllabus for which the student is seeking equivalent credit.

Transfer Grades

All college level courses in which a student has received a grade of A, B, C, D or P/S will be considered for transfer evaluation. No D- or F grade courses will be accepted. Please note that while D grades will transfer, some programs require a grade of C or higher for all courses to fulfill requirements.

Time Limit for Courses

General education courses shall have no transfer time limit. Additionally, technical courses applying toward an Associate of Arts degree shall have no transfer time limit.

To ensure students graduate with up-to-date skills, technical credits are valid for five years or have a five-year “lifespan.” This includes transfer technical credits which are used for specific technical program requirements. Technical courses that are beyond the five-year limit may be accepted, based on currency, relevancy and the student’s current work experience.

Degree Residency

A student shall earn a minimum of 20 credits for all associate degrees at the College. The residency requirement shall be reduced to 12 college-level credits for students transferring with at least 12 college-level credits from another Minnesota State Colleges and Universities institution or the University of Minnesota. One-third of the credits required for a diploma or certificate must be earned at the College.

Equivalency

The number of transfer credits granted per course shall not exceed the number granted by the originating institution. All quarter credits will be converted to semester credits.

Additional Types of Credit

AP—Advanced Placement Exams (for High School Students)

Advanced Placement (AP) gives high school students an opportunity to take college-level courses in various subject areas. A score of 3 is the minimum for credit awarded. Grades of 3, 4 or 5 qualify students for credits and/or placement into advanced courses at Saint Paul College. There is no limit to the number of credits a student may earn through the AP exams. However, credits earned through Advanced Placement will not satisfy the residency requirement for graduation at Saint Paul College. Credit can be given for a specific college course if a test covers substantially similar material. If the test material does not match an existing course, students will be given elective credits.

CLEP—College Level Examination Program

Saint Paul College will consider CLEP exam credits for students who want to test out of general education courses and selected business courses. There is no limit to the number of credits a student may earn through the CLEP exam. However, credits earned through CLEP examinations will not satisfy the residency requirement for graduation at Saint Paul College. A student must provide the College with an official report of CLEP examination scores in order to obtain credit. Equivalent courses and required scores can be found on the College Web site at www.saintpaul.edu.

Note: Colleges establish their own policies for accepting CLEP credit. Students should consult their transfer college’s CLEP policy to determine whether CLEP credits will transfer and/or how they will be accepted. Consult the College Board Web site www.collegeboard.org for testing locations, fees and exam information.

Credit for Life Work/Work Experience (Prior Learning)

Prior Learning (Competency-Based Education) allows students to present nontraditional learning as competencies to be evaluated for credit by qualified faculty members towards their educational program. These competencies must be the equivalent of what would have been achieved through college coursework. At Saint Paul College, Credit for Prior Learning offers, on a limited basis, students with sufficient work, non-college credit and/or life learning experiences, the opportunity to document competencies and theory learning relevant to specific courses offered at the College. Credits earned from prior learning must be applicable to the student’s program of study. The Credit for Prior Learning option may be available for a limited number of courses. Students interested in pursuing the option of earning credit for prior learning must discuss this option with the assigned Faculty Advisor and the Prior Learning Coordinator.

IB—International Baccalaureate (for High School Students)

The International Baccalaureate (IB) program is an internationally recognized program through which high school students complete a comprehensive curriculum of rigorous study and demonstrate performance on IB examinations. Students may present a full IB diploma or a certificate recognizing specific higher level or standard level test scores. Credit may be awarded for scores of 4 or higher on individual IB examinations or successful completion of the IB diploma. Credit can be given for a specific college course if an exam covers substantially similar material. There is no limit to the number of credits a student may earn through the International Baccalaureate (IB) program. However, credits earned through International Baccalaureate (IB) will not satisfy the residency requirement for graduation at Saint Paul College.

International Transcripts

Saint Paul College does not evaluate international transcripts. Students who have completed courses in another country must have their transcripts evaluated by a third-party evaluation service. Colleges and universities differ in how they accept these courses. For more information contact the Transfer Center.

Military Education and Experience

Saint Paul College is an SOC (Servicemembers Opportunity College) and will consider academic credit for military education and experience gained while on active duty. The American Council on Education's Guide to the Evaluation of Educational Experience in the Armed Forces will be used to evaluate military education and experience. A copy of the student's Report of Transfer or Discharge (Form DD-214) and an official SMART or AARTS transcript are required for evaluation.

For more information on military transcripts, go to the American Council of Education Web site at www.acenet.edu and select "Military Students and Veterans" found under "Higher Education Topics."

A maximum of 16 semester technical credits will be accepted as elective credits in transfer from military transcripts. General education credits satisfying the Minnesota Transfer Curriculum (MnTC) will be accepted beyond the 16 semester credit maximum. Students may petition for an evaluation of military credits believed to be equivalent to a specific program.

DANTES—Defense Activity for Non-Traditional Education Support

The DANTES program supports the voluntary educational program for active military personnel and members of the National Guard and Reserves. The DANTES Subject Standardized Tests (DSSTs), however, are now available for use by civilians at universities and colleges throughout the country. The DSSTs are a series of examinations in various college and technical subjects. The DSST program allows students the opportunity to demonstrate college-level learning acquired outside the classroom. All tests carry ACE (American Council on Education) credit recommendations. Saint Paul College will honor the ACE recommendation and accept courses applicable to a program or course of study.

Background Studies Policy

Designated Health and Child Development Careers program students are affected by the following:

Minnesota Statutes require that the Department of Human Services (DHS) conduct background studies on individuals providing direct contact services to people receiving services from facilities and agencies licensed by DHS and the Minnesota Department of Health (MDH). Direct contact is defined as providing face-to-face care, training, supervision, counseling, consultation, or medication assistance to people receiving services from the agency or facility.

An individual who is disqualified from having direct contact with persons served by the program as a result of the background study and whose disqualification is not set aside will not be permitted to participate in a clinical placement in facilities with programs subject to licensure under Minnesota statutes. This is to protect the health, safety and rights of persons served by those programs. Failure to participate in a clinical placement required by the academic program could result in ineligibility to qualify for a degree in this program. The Department of Human Services (DHS) determines disqualification and the Department of Human Services will inform an individual of this report.

Students are reminded of the background study requirement upon admission to the program, during the first introductory course in the program and when a work setting is identified for a clinical placement. Background studies must be submitted annually.

Registration

Registration

The Saint Paul College Course Schedule is available online and contains a complete listing of classes that are available each term. The course schedule is available approximately ten weeks before the beginning of the term. The Course Schedule lists the courses, number of credits, class times, instructors' names, room numbers and prerequisites. Please note this information is subject to change without notice.

Returning students in a declared major have registration priority. When planning for future courses you are encouraged to work with an Academic Success Coordinator, Transfer Specialist or your program faculty. If you need help in making career decisions you should make an appointment with the Director of the Career and Placement Center in Room 1326. Classes have limited enrollment. Closed classes are posted on the online course schedule.

Registration for classes takes place each semester and summer term. Information on how and when to register is sent to new students when they are accepted for admission. Information is also posted on the College Web site. Not all courses listed in the College Catalog are offered every term.

A Registration Schedule is published on the College Web site for each term and indicates assigned dates and times for registration. New students who have applied and been accepted may register for classes during orientation sessions or check the Program Requirements Guide online and register online for courses prior to attending an orientation session. Students do not need to wait for orientation sessions to register.

Students with an unpaid balance at Saint Paul College or any other Minnesota State College or University will be unable to register for courses until all unpaid balances have been paid.

Returning students should register after consulting with their Program Requirements Guides and Degree Audit Reports (DARS) during the previous semester prior to enrolling and go through the following procedures:

Registration Process for New Students

1. Follow Admission and Intake Assessment process.
2. Attend an Orientation session or utilize the College's online orientation at www.saintpaul.edu/Orientation. Students may complete step three prior to attending orientation.
3. Register online. If you have a disability that precludes you from registering online, submit the completed Add/Drop Registration Form to the Office of Enrollment Services.
4. Pay tuition online or print your fee statement and present it with payment at the Tuition Office before the posted due date. You will receive a paid fee statement upon receipt of payment. Refer to Tuition & Fees for details for payment options.
5. Purchase books and supplies.
6. Attend all courses for which you've registered.

Registration Process for Current and Returning Students

1. Review Program Requirements Guide and Degree Audit Report (DARS). Select courses.
2. Login into your account to register online; or if assistance is needed, you may go to the Office of Enrollment Services for online registration assistance.
3. Pay tuition online or print your fee statement and present it with payment at the Tuition Office before the posted due date. You will receive a paid fee statement upon receipt of payment. Refer to Tuition & Fees for details for payment options.
4. Purchase books and supplies.
5. Attend all courses for which you've registered.

Purchase your books prior to the start of class, either at the Bookstore or online at www.saintpaulcollegebookstore.com. This will help you avoid the long lines at the Bookstore on the first day of the term.

Course Add, Drop or Withdraw

Students bear primary responsibility for their Course Registrations. Students are responsible for canceling their registration by the due dates posted in the course schedule or to pay any balance due. To cancel registration, a student must log-in to their eServices account and drop their classes prior to the end of the designated drop/add period.

Non-attendance is not a cancellation and students will be held responsible to pay any amount owed.

All students, including those receiving financial aid, will be assessed tuition and fees for the term based on the number of credits for which they are registered on the 6th day of the term.

Students may add courses at any time during the published "add" period for each term. Students who drop a course through the

5th day of a term may receive a tuition refund (pro-rated for summer term).

Students may withdraw from classes to receive a "W" grade from the 6th day of the term through the posted date of withdrawal for the term. For courses that do not run the entire term, withdrawal is permitted before 80% of the class session is over. Students must withdraw from courses online. No refund is permitted after the 5th day. Courses from which a student officially withdraws will be assigned the letter grade "W" (withdraw). Students who fail to withdraw from a course but stop attending before the end of the semester are subject to being assigned a grade of FW. Refer to the current Course Schedule for details.

Students who cannot attend class during the first week of classes (or do not plan to log on for the first day of an online class) need to make arrangements for all absences in advance with their instructor. Students who miss class the first week without making prior arrangements with their instructor are subject to being assigned a grade of FN (Failure for Nonattendance). Students must drop courses they do not intend to attend before the end of the add/drop period.

Satisfactory Academic Progress Guidelines

Students bear primary responsibility for their own academic progress and for seeking assistance when experiencing academic difficulty. Students are encouraged to keep a file of their grades and transcripts.

Saint Paul College has a Satisfactory Academic Progress policy which requires degree seeking students, upon registering for 6 or more credits, to maintain a cumulative grade point average of at least 2.0 and/or a completion rate of at least 67% of the cumulative credits attempted with earned grades of A, B, C, D, F, FN, FW, W, I, or P. If these requirements are not met, students will be placed on academic warning.

Students seeking admission to Saint Paul College who have attended another college or university and do not meet Saint Paul College's Satisfactory Academic Progress Standards must appeal for admission.

First term students earning grades of all F's, FN's and/or FW's may be suspended for at least two major terms (Fall and Spring) following the unsuccessful term.

Academic Warning

Students placed on academic warning will have a registration hold placed on their academic record which will prevent them from registering in future terms.

Students must work with the Office of Academic Success to develop an academic plan and to have the hold released.

Students placed on academic warning for a deficient GPA are required to enroll in CSCR course(s). Students, who do not register for, withdraw from, or do not successfully complete CSCR course(s) as assigned by an Academic Success Coordinator may be suspended indefinitely.

While on academic warning a student is required to achieve a term grade point average of 2.5 or higher and maintain a term completion rate of 100%. The student will remain on warning until a cumulative grade point average of 2.0 or higher and a cumulative completion rate of 67% or higher is achieved.

Academic Suspension

Students who fail to meet satisfactory academic progress standards during their warning period by not earning a term GPA of at least a 2.5 and a term completion rate of 100% will be suspended for at least two major terms (fall and spring). All students placed on suspension must appeal to be reinstated.

Appealing Academic Suspension

Students who believe they failed to achieve satisfactory academic progress due to catastrophic extenuating circumstances may file an appeal to their suspension prior to taking the required two major terms off. However, students must be able to provide documentation supporting their claim of catastrophic extenuating circumstances interfering with their ability to be successful in school.

Students who have served their suspension period must appeal for reinstatement by submitting the Academic Suspension Appeal packet which includes writing a letter stating the changes that have occurred that will allow them to be successful in school.

The Suspension Appeal packet can be obtained in the Office of Enrollment Services or via the Saint Paul College Web site.

Readmission after a Suspension Period. Students whose Suspension Appeals are approved must develop an academic plan with an Academic Success Coordinator. They must enroll only for the classes approved on their academic reinstatement course plan, which may include CSCR course(s). Changes to the schedule must be approved by the Academic Success Coordinator. Students who do not register for, withdraw from or do not successfully complete, CSCR course(s) may be suspended indefinitely.

Students with approved petitions will be placed on academic probation. However, if the student fails to meet satisfactory academic progress standards during the term the petition is granted, they may be suspended indefinitely.

Academic Forgiveness Policy

The Academic Forgiveness policy is available only to students whose coursework was taken at Saint Paul College (formerly St. Paul Technical College). The policy is a onetime opportunity. The student cannot have been enrolled at Saint Paul College for a minimum of two calendar years (24 months) and the student must have a cumulative GPA of less than 2.0. The coursework forgiven will remain on the student's transcript; however, the credits and the grades will not be carried forward into the student's cumulative grade point average. The student will be permitted to pick and choose courses within the semester to be forgiven. Only D's, F's, FN's, FW's and W's can be forgiven. If more than one term is forgiven, they must be consecutive terms. A maximum of two terms may be forgiven. In order to meet eligibility requirements for Academic Forgiveness, the student must have completed a minimum of 12 credits in residence at Saint Paul College with at least a 2.0 GPA after returning from the minimum 2-year absence. The student must apply for Academic Forgiveness within one calendar year after completing the 12 semester credits with at least a 2.0 GPA. Work completed at another institution cannot be used to satisfy this requirement.

Student Records

Saint Paul College Student Records Office is the official recorder of the students' academic records.

Student Transcripts

Requests for Saint Paul College transcripts and other related records, must be processed through the Student Records Office. All financial obligations to Saint Paul College must be met before transcripts can be released.

An official transcript is issued, for a fee, upon written request or through online submission and is sent to a third party, such as another institution or employer, within three business days. The transcript will serve as the official record of student effort while enrolled at the College. There is an additional fee for next day service, if requested.

Tuition and Fees

Tuition Rates

The Board of Trustees for Minnesota State Colleges and Universities establishes tuition rates annually. Tuition rates are established on a per-credit basis for all credit course offerings and are subject to change. The Course Schedule lists tuition and fee rates for the term.

Student Fees

Similar to tuition, student fees are also assessed on a per-credit basis to all students registered for credit courses, including summer term. These fees are authorized by the Minnesota State Colleges and Universities. The Student Life and Minnesota State College Student Association fees are used to improve the quality of college life outside of the classroom. The Facilities fee maintains the grounds, security, and parking for all students. The Technology fee is for instructional equipment and materials. These include campus computers and software, audio-visual equipment, library technology, and support staff. Every student is allotted a modest printing allowance.

All fees are subject to change.

Tuition Payment

Tuition and fees are due by the posted date or the student may be dropped from their classes. Payments can be made online or at the Tuition Office. To retain classes, the Tuition Office must either have full payment, or active Nelnet Payment Plan, received a Financial Aid Award ISIR, a certified student loan, a scholarship or a completed third party authorization on file for the current term. Refer to the Saint Paul College Tuition Office webpage Tuition and Fees Payment Options for more information. Any tuition and fee balance not covered by or created as a result of the loss or change to financial aid or other deferments is the student's responsibility to pay.

Students who are qualified senior citizens (over 62) may be able to attend classes at a reduced tuition rate. Refer to the current Course Schedule for details. Registration is allowed at this rate beginning with the second class session on a space-available basis.

Non-Payment of Tuition

Students who have not fulfilled one of the seven Payment Options by the tuition due date may have their registration removed. Please refer to the Tuition page on the Saint Paul College website for the seven options. You are responsible to cancel your registration by the posted due dates in the course schedule, or pay any balance due. Non-attendance or non-payment is not a cancellation and you will be held responsible to pay any amount owed.

Payment of Textbooks and Course Materials

Students with sufficient financial aid will be allowed to charge bookstore purchases through the financial aid book charging process. Students with an existing payment plan will be allowed to add the cost of required textbooks and course materials to the plan. In both cases the student is ultimately responsible for the payment of textbooks and course materials.

Refer to the current Course Schedule for further details.

Refunds for Total Withdrawal from College

Students wishing to drop or withdraw from courses must formally notify the College by dropping or withdrawing online in e-Services. Failure to attend class does not constitute withdrawal. Students are entitled to have the opportunity to attend one class session for each registered, for-credit course, without obligation. Students are financially obligated for any classes dropped after the fifth business day of the term, or one business day after the first class session, whichever is later. Students withdrawing from all their classes are eligible for partial refunds according to the schedule below

Withdrawal Period— Fall and Spring Terms	Refund
Prior to the 1st day of the term	100%
1st through 5th class day of the term	100%
6th through 10th class day of the term	75%
11th through 15th class day of the term	50%
16th through 20th class day of the term	25%
After the 20th class day of the term	0%

Withdrawal Period— Summer/Other Terms	Refund
(At least 3 weeks but less than 10 weeks in length)	
Prior to the 1st day of the term	100%
1st through 5th class day of the term	100%
6th through 10th class day of the term	50%
After the 10th class day of the term	0%

Refunds for Change of Credit Load

Schedule changes (ADD/DROP) will be handled through the Office of Enrollment Services through the 5th day of the term. No tuition refund will be made, nor will fees be reduced by dropping individual classes after the 5th day of the term. For classes starting after the 5th day of the term, registration changes must be made within one business day after the first class session.

Refunds for Summer Session Classes

The above refund schedules are pro-rated for summer session. Consult the Office of Enrollment Services for details on summer refunds.

Saint Paul College Card

A Saint Paul College Card will be issued to all Saint Paul College students, through a partnership between Minnesota State Colleges and Universities, Saint Paul College, and HigherOne, a financial services company serving colleges and universities across the country. It will be mailed to you. This service will give you faster access to your financial aid funds, tuition refunds, and/or student payroll.

This is not a credit card, do not throw it away. You will need the card to select a financial aid or student payroll disbursement option. More information can be found on our website at www.saintpaul.edu/CardDisbursementOptions.

Refund Time Frame

Credit card payments will be refunded to the same credit card that was used when the tuition was paid. A minimum of one week is required to process credit card refunds. Refunds for payments made by cash and check will be processed through HigherOne based on the disbursement option selected by the student. A minimum of two weeks is required for refunds made by cash or check.

Waivers

Saint Paul College may waive amounts due to the College for the following reasons: employee benefits provided by bargaining agreement, death of a student, medical reasons, college error, employment related conditions, significant personal circumstances, student leader stipends, course conditions, natural disasters, ward of state or other situations beyond the control of the College. The College cannot waive the MSCSA Student Association fee. Contact the Office of Enrollment Services to request a Tuition Appeal Form if you feel you are entitled to a waiver.

Financial Aid

General Information

Financial aid is money that is available to help students finance the cost of an education. Financial aid comes in the form of grants (money that the student does not have to pay back), loans (money that the student must pay back) and college work-study (money the student earns through employment). Eligibility is determined from the results of the Free Application for Federal Student Aid (FAFSA).

The Financial Aid Office will calculate financial aid eligibility after receiving FAFSA results and all required documents. Financial aid is intended to supplement the difference between the cost of education and the expected family contribution. The student and his or her family have the primary responsibility to pay for the student’s education. Several resources are available to help students meet their educational expenses.

The student must be admitted to a program/declare a major at Saint Paul College that leads toward a degree, diploma, or eligible certificate to be qualified to receive financial aid.

Financial Aid Definitions

- FAFSA - The FAFSA is the Free Application for Federal Student Aid, FAFSA. This is the application for all types of financial aid: grants, loans, or college work-study.
- Cost of Education - The cost of education includes tuition, fees, a room and board allowance, books, supplies, a transportation allowance and a personal expense allowance.
- Expected Family Contribution - An amount, determined by a formula called Federal Methodology, that indicates how much of the student and his or her family’s resources should be available to help pay for school. The Expected Family Contribution (EFC) is used in determining the student’s eligibility for federal and state financial aid. If a student has unusual expenses that may affect his or her ability to pay for school, the student should notify the Financial Aid Director.
- Financial Need - Financial need is the difference between the cost of education and the expected family contribution calculated by the federal processing center.

- Full-Time Enrollment: 12 credits or more per semester.
- Three-Quarter-Time Enrollment: 9-11 credits per semester.
- Half-Time Enrollment: 6-8 credits per semester.
- Less Than Half-Time Enrollment: 5 credits or fewer per semester.

Types of Financial Aid

Grants

Grants are gift aid, which the student does not have to pay back. Students who have completed a bachelor's degree, or the equivalent from another college, are not eligible for grants.

Federal Pell Grant

Students may apply for the Federal Pell Grant by completing the FAFSA. Pell Grants vary from \$400 per year up to the federally legislated maximum. Pell Grant recipients must be enrolled in an eligible program.

Federal Supplemental Education Opportunity Grant (SEOG)

The Federal Supplemental Education Opportunity Grant (SEOG) program is designed for students who have exceptional financial need. Funds are limited and eligibility is determined by the Financial Aid Office. To apply you must complete the FAFSA and be Pell eligible. Awards are commonly awarded to early applicants.

Minnesota State Grant

The Minnesota State Grant is a grant for Minnesota residents who are attending an accredited post-secondary institution. Awards are similar to the Pell Grant. Students apply by completing the FAFSA. Minnesota State grant eligibility requires FAFSA be received within the first 30 days after the term begins.

Minnesota Postsecondary Child Care Grant

The Minnesota Child Care Grant is for students who are Minnesota residents, have children 12 and under (14 and under, if handicapped), have financial need and have child care expenses. Recipients must not be receiving Minnesota Family Investment Program (MFIP) assistance. Students who have received an Award Letter can download the Minnesota Child Care Grant or pick up an application in the Financial Aid Office.

Work-Study Programs

The following programs employ students on campus:

- Federal Work-Study
- State Work-Study

Students with need based eligibility may apply for a Work-Study position. These programs provide work for up to 20 hours per week. Students must be registered for at least 6 credits to qualify. The Financial Aid Office determines if a student is eligible based on information from the SAR (Student Aid Report). The SAR is generated once the student has completed and submitted the FAFSA. Students must meet Satisfactory Academic Progress standards to qualify. The funds for this program are paid by the federal government, state government, and Saint Paul College.

Loans

Loans are financial aid that must be paid back. Need based and non-need based loans are available.

Federal Direct Subsidized and Unsubsidized Loans

Whether or not students qualify for a grant, they can get help to meet their educational expenses by borrowing money from the Direct Student Loan Program or one of several other available loan programs. Depending on their eligibility, first year students may borrow up to \$5,500 per academic year. Upon completion of 30 credits toward program requirements, eligibility increases to \$6,500 per academic year. Students will find out what their loan eligibility is from the Award Letter. Subsidized Loans are need-based loans. The government pays the interest during the school enrollment and the grace period. Unsubsidized Loans are not need-based loans. The student is responsible for the interest during enrollment although the payments are not required until after the grace period.

PLUS Loans (Federal Parent Loans for Undergraduate Students)

Parents of dependent students who want to assist in paying for college may apply for a PLUS Loan through the federal government. Parents may borrow up to the student's cost of attendance minus other aid provided the student is enrolled in at least 6 credits. PLUS loans require a credit check. Repayment begins within 60 days of loan disbursement.

Private Loans

You are strongly encouraged to pursue the availability of free or lower-cost financial aid with the College's financial aid office; however, private educational loans can bridge the gap between government programs and the cost of attendance. Eligibility is typically based on your credit score. You can only apply for these loans by contacting banks or other lenders.

Other Sources of Financial Assistance

Several government and private agencies provide financial assistance to eligible students. Contact the local office of any of the following agencies for consideration. The agency determines eligibility.

- Disability, Workforce, Dislocated Worker Resources
- Minnesota Indian Scholarship
- Veteran Benefits (VA)
- Minnesota Educational Assistance for War Orphans
- Minnesota GI Bill
- Minnesota Dream Act
- Services for the Blind

Other Public and private resources for aid and information:

- www.fastweb.com
- www.ohe.state.mn.us
- www.finaid.org
- www.americorps.gov

How to Apply for Financial Aid

1. Apply for admission to Saint Paul College. Students must declare a major and be enrolled in programs leading towards a degree, diploma or eligible certificates to be qualified for financial aid. Awards vary based on enrollment level (full-time or part-time). Financial aid will be based on the number of enrolled credits by the drop/add deadline.
2. Fill out the Free Application for Federal Student Aid (FAFSA). We recommend applying electronically through the U.S. Department of Education's Web site at www.fafsa.ed.gov. Enter the Saint Paul College school code, 005533 so the Financial Aid Office will receive an electronic copy of the results. A Student Aid Report (SAR) should arrive in 2 weeks if the FAFSA is completed online, or 4 weeks if mailed.
3. If other post-secondary schools have been attended prior to attending Saint Paul College, request an official academic transcript be sent to the Student Records Office for credit evaluation. A credit/unit count of all previous college enrollment is a requirement to determine Minnesota State Grant eligibility.
4. Once the Financial Aid Office receives the SAR electronically from the Student Federal Aid Program, the student's application will be reviewed for accuracy and completeness. It is important that any requests for additional information be responded to immediately.
5. When the file is complete, financial aid eligibility will be calculated and an Award Letter explaining financial aid will be accessible at the College's Web site at the Student's eServices account. Carefully read the Award Letter that provides information regarding financial aid eligibility. The award letter explains procedures for receiving financial aid and/or applying for certain financial programs, such as student loans, child care grants and work-study employment on campus. For more information, call 651.846.1386 or visit the Financial Aid Office.

Educational Programs

Liberal Arts and Sciences Associate in Arts (AA) Degree

Program Overview

The Associate in Arts (AA) degree is awarded for successful completion of 60 semester credits in liberal arts and sciences and is designed to constitute the first two years of a baccalaureate degree. It is also intended primarily for students who plan to transfer to another college or university to complete a bachelor's degree. No specific major is listed in conjunction with the degree; however, students may choose electives in a particular field of study in preparation for a planned major or professional emphasis at a four year college or university. An AA degree must include the entire Minnesota Transfer Curriculum (MnTC) 40 semester credits which, pursuant of Minnesota statute, must transfer to any institution in the Minnesota State Colleges and University system or to the University of Minnesota. Students are to develop an educational plan with a Saint Paul College Transfer Specialist to verify degree requirements are fulfilled, as requirements may vary depending upon the major and transfer college.

The AA degree can be completed through a variety of course delivery methods including face to face, hybrid and/or online. The Science, Technology, Engineering and Math (STEM), and Liberal and Fine Arts departments offer online classes to satisfy the MnTC requirements. A student may choose to complete the entire AA degree online.

Program Outcomes:

1. Knowledge of the important concepts and principles of the natural sciences, mathematics, history, social and behavioral sciences, arts, and humanities
2. Skills necessary for life roles, including skills in thinking, communication and methods of inquiry and applications of knowledge
3. Critical examination of, and an appreciation for, diverse people, cultures and life roles

General Requirements

- At least 60 earned college-level credits (40 MnTC credits and 20 additional MnTC and/or pre-major elective credits)
- A grade of "C" or better in ENGL 1711
- Cumulative GPA of 2.0
- MnTC GPA of 2.0
- Meet Saint Paul College residency requirement of 20 credits. This requirement shall be reduced to 12 credits for students transferring with at least 12 college-level credits from another Minnesota State Colleges and Universities institution or the University of Minnesota.

Total Credits Required for the AA Degree

Minnesota Transfer Curriculum (MnTC):	40 credits
Additional MnTC and/or pre-major elective courses:	20 credits
Total Requirements:	60 credits

MnTC Distribution Requirements for the AA Degree

The minimum Minnesota Transfer Curriculum (MnTC) distribution requirements for the AA degree are listed below. (Refer to the MnTC Course List)

Course	Cr
Minnesota Transfer Curriculum (MnTC) Goals 1-10	40
Goal 1: Communication ENGL 1711 Composition 1 – 4 cr ENGL 1712 Composition 2 – 2 cr SPCH XXXX One eligible course – 3 cr	9
Goal 2: Critical Thinking Fulfilled when all the goal areas are completed (40 credits)	
Goal 3: Natural Sciences Minimum of two courses from two different disciplines, one of which must be a lab course.	7
Goal 4: Mathematical/Logical Reasoning Minimum of one course. Courses must be numbered between 1700-1799 or 2700-2799	3
Goal 5: History and the Social and Behavioral Sciences Minimum of three courses from two different disciplines.	9
Goal 6: Humanities and Fine Arts Minimum of three courses from two different disciplines.	9
Goal 7: Human Diversity Minimum of one eligible course	1-4
Goal 8: Global Perspective Minimum of one eligible course	1-4
Goal 9: Ethic and Civil Responsibility Minimum of one eligible course.	1-4
Goal 10: People and the Environment Minimum of one eligible course.	1-4

Note: Refer to the MnTC Course List. Some courses may be applied to more than one goal area. If you meet the MnTC goal requirements with fewer than 40 semester credits, select additional MnTC courses to complete the minimum requirement of 40 semester credits.

Associate in Science (AS) Degree

The Associate in Science (AS) degree is awarded for successful completion of a program of 60 semester credits in a designated field or area which transfers to a baccalaureate major in a related scientific or technical field. The AS degree provides a balance of liberal arts education and career-oriented classes. The AS degree may prepare students for direct employment; however, articulation agreements must exist between the institution awarding the Associate in Science degree and an institution awarding a related baccalaureate degree. An Associate in Science degree shall include a minimum of 30 semester credits in general education as described in the MnTC distribution requirements for the AS degree.

Transfer Note: While the AS degree has more limited transferability than the AA degree, specific transfer articulation agreements exist with designated four-year colleges and universities for each AS degree. Minnesota Transfer Curriculum courses within the AS degree transfer to institutions in the Minnesota

State Colleges and Universities system and other colleges. Please see a Transfer Specialist and refer to the Transfer Articulation Agreements Table for specific information.

AS Degree Programs

Business Management
Child Development Careers
Child Development Careers ASL
Computer Graphics and Visualization
Computer Science
Finance
Health Sciences Broad Field
Management Information Systems
Pre-Engineering
Public Health
Science Technician

General Requirements for the AS Degree:

- 60 earned college-level credits (a minimum of 30 credits from MnTC courses)
- Cumulative GPA of 2.0
- Meet Saint Paul College residency requirement of 20 credits. This requirement shall be reduced to 12 credits for students transferring with at least 12 college-level credits from another Minnesota State Colleges and Universities institution or the University of Minnesota. For specific course requirements, see the individual program descriptions, located in Enrollment Services, or speak with your Faculty Advisor.

MnTC Distribution Requirements for the AS Degree

The minimum Minnesota Transfer Curriculum (MnTC) distribution requirements for the AS degree are listed below. Credit and course requirements are specific for each program. Refer to the curriculum requirements listed in the Programs of Study for each AS degree program.

Note: Specific course recommendations or requirements for some AS degree programs may apply.

AS Degree General Education Requirements	Cr
Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	
Goal 1: Communication ENGL 1711 Composition 1 – 4 cr SPCH XXXX (Goal 1 only) – 3 cr	7
Goal 3 or Goal 4 Goal 3: Natural Sciences Goal 4: Mathematical/Logical Reasoning	3
Goal 5: History, Social Sciences and Behavioral Sciences	3
Goal 6: Humanities and Fine Arts	3
Goals 1–10 of the Minnesota Transfer Curriculum Select a minimum of 14 additional credits Students must select courses from at least six (6) Goal Areas of the Minnesota Transfer Curriculum.	14
Total General Education Requirements	30

Associate in Applied Science (AAS) Degree

The Associate in Applied Science degree (AAS) is awarded for successful completion of a program of 60–72 semester credits and is intended for students who desire immediate employment upon graduation. At Saint Paul College, the AAS program shall include a minimum of 16 semester credits of liberal arts and sciences courses as described in the MnTC distribution requirements for the AAS degree.

Transfer Note: The AAS degree is not intended to transfer to an upper-division college; however, some articulation agreements exist with designated four-year colleges and universities for several of the AAS degree programs. Minnesota Transfer Curriculum (MnTC) courses within the AAS degree transfer to institutions in the Minnesota State Colleges and Universities system and other colleges. Please see a Transfer Specialist for specific information and refer to the Transfer Articulation Agreements Table.

AAS Programs

Accounting
 Auto Body Repair
 Automotive Service Technician
 Business Administrative Professional
 Business Information Technology
 Child Development Careers
 Clinical Sports Massage
 Computer Network Engineering
 Computer Programming
 Cosmetology
 Culinary Arts
 CyberSecurity
 Entrepreneurship
 Esthetician (Medical Setting)
 Esthetician (Spa)
 Global Trade Specialist
 Health Information Technology
 Healthcare Informatics
 Hospitality Management
 Human Resources
 Individualized Studies
 Marketing
 Medical Laboratory Technician
 Medical Office Professional
 Music Business
 Personal Trainer
 Pharmacy Technician
 Project Management
 Respiratory Therapist
 Sheet Metal-HVAC Ducts and Fittings
 Sign Language Interpreter/Transliterator
 Supply Chain Logistics
 Visualization Technology
 Welding Technology

General Requirements for the AAS Degree:

- 60–72 earned college-level credits (a minimum of 16 credits from MnTC courses)
- Cumulative GPA of 2.0 or higher
- Meet Saint Paul College residency requirement of 20 credits. This requirement shall be reduced to 12 credits for students transferring with at least 12 college-level credits from another Minnesota State Colleges and Universities institution or the University of Minnesota. For specific course requirements, see the individual program descriptions, located in Enrollment Services, the Office of Enrollment Services staff or your Faculty Advisor.

MnTC Distribution Requirements for the AAS Degree

The minimum Minnesota Transfer Curriculum (MnTC) distribution requirements for the AAS degree are listed below. Credit and course requirements are specific for each program. Refer to the curriculum requirements listed in the Programs of Study section for each AAS degree program.

AAS Degree General Education Requirements	Cr
Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	
Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
Goal 5: History, Social Sciences and Behavioral Sciences	3
Goal 6: Humanities and Fine Arts	3
Total General Education Requirements	16

Diploma Programs

Diplomas are awarded for successful completion of 30–72 semester college-level credits and are intended for students who desire entry-level employment skills or career advancement. Students in diploma programs are required to complete technical courses as well as general education courses. One third of the credits required for a diploma must be earned at the College.

Certificate Programs

Certificates are awarded for successful completion of 9–30 semester college-level credits. Certificates are awarded for successful completion of a program intended to provide students with entry-level employment skills or to enhance a student's technical skills. One third of the credits required for a certificate must be earned at the College.

Developmental Coursework

Developmental coursework has assisted thousands of students in getting started in College programs. The goal of developmental coursework is for students to acquire the necessary knowledge and skills that will help them succeed in programs. Developmental courses are not considered college-level credit and will not apply towards any certificate, diploma, or degree completion requirements.

English for Speakers of Other Languages (ESOL)

The purpose of English for Speakers of Other Languages (ESOL) coursework is to assist limited-English speakers from different ethnic and cultural backgrounds to learn English and increase their chances of success at Saint Paul College. These classes are tailored to meet these unique needs.

Internships

Some major program areas require an internship. For other areas, an internship is optional. When students are ready to complete this phase of their training, they should consult with their faculty advisor to coordinate the internship.

While completing the internship, the student remains registered at Saint Paul College. Students are not excused from tuition payment and must continue to meet course requirements for all courses in which they are enrolled.

Saint Paul Joint Apprenticeship

Saint Paul College has worked with the building trades for many years. In cooperation with Advisory and Joint Apprenticeship committees, Saint Paul College works to give trade apprentices the most up-to-date education and training available in the United States.

Most applicants are accepted into an apprenticeship program by either a) working in the occupation, b) being referred by an employer, or c) having completed a pre-apprenticeship training program. To enroll in one of the trade programs, please contact the Office of Enrollment Services for the next available opening date and application. Entrance exams, and in some cases interviews, are required.

To enroll in a program without a program completion requirement, students must contact that apprenticeship coordinator. Students may obtain their name or number by calling the Career and Technical Division, 651.846.1320.

Minnesota Transfer Curriculum

The Saint Paul College mission endorses the centrality of general education in its programming and its commitment to offer breadth, as well as depth, of study in its curriculum. The Minnesota Transfer Curriculum (MnTC) is a coherent requirement of Saint Paul College programs and is clearly identifiable as an integral part of the curriculum. The College is committed to, and strives toward, outcomes that impart common knowledge, intellectual concepts and attitudes every person ought to possess.

Minnesota Transfer Curriculum Goals

The Minnesota State Colleges and Universities system has developed a common general education curriculum called the Minnesota Transfer Curriculum (MnTC). Completion of this defined transfer curriculum at one institution enables a student to receive credit for all lower division general education upon admission to any other Minnesota public institution.

The MnTC is intended to achieve the following ten goals:

1. Written and Oral Communication

To develop writers and speakers who use the English language effectively and who read, write, speak and listen

critically. As a base, all students should complete introductory communication requirements early in their collegiate studies. Writing competency is an ongoing process to be reinforced through writing-intensive courses and writing across the curriculum. Speaking and listening skills need reinforcement through multiple opportunities for interpersonal communication, public speaking and discussion.

- understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
- participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
- locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
- select appropriate communication choices for specific audiences.
- construct logical and coherent arguments.
- use authority, point-of-view, and individual voice and style in their writing and speaking.
- employ syntax and usage appropriate to academic disciplines and the professional world.

2. Critical Thinking

To develop thinkers who are able to unify factual, creative, rational and value-sensitive modes of thought. Critical thinking will be taught and used throughout the general education curriculum in order to develop students' awareness of their own thinking and problem-solving procedures. To integrate new skills into their customary ways of thinking, students must be actively engaged in practicing thinking skills and applying them to open-ended problems.

3. Natural Sciences

To improve students' understanding of natural science principles and of the methods of scientific inquiry, i.e., the ways in which scientists investigate natural science phenomena. As a basis for lifelong learning, students need to know the vocabulary of science and to realize that, while a set of principles has been developed through the work of previous scientists, ongoing scientific inquiry and new knowledge will bring changes in some of the ways scientists view the world. By studying the problems that engage today's scientists, students learn to appreciate the importance of science in their lives and to understand the value of a scientific perspective. Students should be encouraged to study both the biological and physical sciences.

- demonstrate understanding of scientific theories.
- formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students, laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
- communicate their experimental findings, analyses, and interpretations both orally and in writing.

- d. evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

4. Mathematical/Logical Reasoning

To increase students' knowledge about mathematical and logical modes of thinking. This will enable students to appreciate the breadth of applications of mathematics, evaluate arguments and detect fallacious reasoning. Students will learn to apply mathematics, logic and/or statistics to help them make decisions in their lives and careers. Minnesota's public higher education systems have agreed that developmental mathematics includes the first three years of a high school mathematics sequence, through intermediate algebra.

- a. illustrate historical and contemporary applications of mathematical/logical systems.
- b. clearly express mathematical/logical ideas in writing.
- c. explain what constitutes a valid mathematical/logical argument (proof).
- d. apply higher-order problem-solving and/or modeling strategies.

5. History, Social and Behavioral Sciences

To increase students' knowledge of how historians and social and behavioral scientists discover, describe and explain the behaviors and interactions among individuals, groups, institutions, events and ideas. Such knowledge will better equip students to understand themselves and the roles they play in addressing the issues facing humanity.

- a. employ the methods and data that historians and social and behavioral scientists use to investigate the human condition.
- b. examine social institutions and processes across a range of historical periods and cultures.
- c. use and critique alternative explanatory systems or theories.
- d. develop and communicate alternative explanations or solutions for contemporary social issues.

6. Humanities and Fine Arts

To expand students' knowledge of the human condition and human cultures, especially in relation to behavior, ideas and values expressed in works of human imagination and thought. Through study in disciplines such as literature, philosophy and the fine arts, students will engage in critical analysis, form aesthetic judgments and develop an appreciation of the arts and humanities as fundamental to the health and survival of any society. Students should have experiences in both the arts and humanities.

- a. demonstrate awareness of the scope and variety of works in the arts and humanities.
- b. understand those works as expressions of individual and human values within an historical and social context.
- c. respond critically to works in the arts and humanities.
- d. engage in the creative process or interpretive performance.
- e. articulate an informed personal reaction to works in the arts and humanities.

7. Human Diversity

To increase students' understanding of individual and group differences (e.g., race, gender, class) and their knowledge of the traditions and values of various groups in the United States. Students should be able to evaluate the United States' historical and contemporary responses to group differences.

- a. understand the development of and the changing meanings of group identities in the United States, history and culture.
- b. demonstrate an awareness of the individual and institutional dynamics of unequal power relations between groups in contemporary society.
- c. analyze their own attitudes, behaviors, concepts and beliefs regarding diversity, racism, and bigotry.
- d. describe and discuss the experience and contributions (political, social, economic, etc.) of the many groups that shape American society and culture, in particular those groups that have suffered discrimination and exclusion.
- e. demonstrate communication skills necessary for living and working effectively in a society with great population diversity.

8. Global Perspective

To increase students' understanding of the growing interdependence of nations and peoples and develop their ability to apply a comparative perspective to cross-cultural social, economic and political experiences.

- a. describe and analyze political, economic, and cultural elements which influence relations of states and societies in their historical and contemporary dimensions.
- b. demonstrate knowledge of cultural, social, religious and linguistic differences.
- c. analyze specific international problems, illustrating the cultural, economic, and political differences that affect their solution.
- d. understand the role of a world citizen and the responsibility world citizens share for their common global future.

9. Ethical and Civic Responsibility

To develop students' capacity to identify, discuss and reflect upon the ethical dimensions of political, social and personal life and to understand the ways in which they can exercise responsible and productive citizenship. While there are diverse views of social justice or the common good in a pluralistic society, students should learn that responsible citizenship requires them to develop skills to understand their own and others' positions, be part of the free exchange of ideas and function as public-minded citizens.

- a. examine, articulate, and apply their own ethical views.
- b. understand and apply core concepts (e.g. politics, rights and obligations, justice, liberty) to specific issues.
- c. analyze and reflect on the ethical dimensions of legal, social, and scientific issues.
- d. recognize the diversity of political motivations and interests of others.
- e. identify ways to exercise the rights and responsibilities of citizenship.

10. People and the Environment

To improve students' understanding of today's complex environmental challenges. Students will examine the inter-relatedness of human society and the natural environment. Knowledge of both bio-physical principles and socio-cultural systems is the foundation for integrative and critical thinking about environmental issues.

- explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
- discern patterns and interrelationships of bio-physical and socio-cultural systems.
- describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
- evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
- propose and assess alternative solutions to environmental problems.
- articulate and defend the actions they would take on various environmental issues.

Minnesota Transfer Curriculum (MnTC) Course List

To earn the full Minnesota Transfer Curriculum, all ten goal areas listed below must be completed. A total of at least 40 semester credits must be earned. Courses designated with a superscript (e.g., BIOL 1710¹⁰) satisfy more than one goal area; however, credits are counted only once toward the 40-credit minimum requirement. A (p) indicates a prerequisite is required for that course. Completion of the MnTC meets the lower division general education requirements at Minnesota State Colleges and Universities and the University of Minnesota. Contact the Transfer Center staff for more information.

To follow the Associate in Science or Associate in Applied Science requirements for general education courses, choose from the MnTC courses in the next column, according to the distribution requirements for your degree. The Associate in Science degree requires 30 MnTC credits; the Associate in Applied Science degree requires 16 MnTC credits.

For any additions or changes in the MnTC Course List, contact a College Transfer Specialist in the Transfer Center.

MnTC Goal 1: Communication			Credits
ENGL	1711	Composition 1	4
ENGL	1712	Composition 2 (p)	2
ENGL	1730	Introduction to Technical Writing	3
ENGL	2790	Special Topics in English	1-6
SPCH	1700 ⁸	Introduction to Speech Communications	3
SPCH	1710 ⁸	Fundamentals of Public Speaking	3
SPCH	1720 ⁷	Interpersonal Communication	3
SPCH	1730 ⁸	Intercultural Communication	3
SPCH	1750 ⁹	Small Group Communication	3
SPCH	1770 ⁷	Family Communication	3
SPCH	1780 ⁷	Gender Communication	3
SPCH	1790	Special Topics in Speech	1-6

MnTC Goal 2: Critical Thinking			Credits
Fulfilled when all 10 Goal Areas of MnTC are completed			40

MnTC Goal 3: Natural Sciences			Credits
Minimum of two courses (7 credits) from two different disciplines, one of which must be a lab course (designated with an *)			
BIOC	1730*	Biochemical Laboratory Exploration	4
BIOC	1790	Special Topics in Biochemistry	1-6
BIOC	2700*	Biochemistry (p)	4
BIOC	2790	Biochemistry Internship/Research Project	1-4
BIOL	1725 ^{10*}	Environmental Science	4
BIOL	1730*	Human Body Systems	3
BIOL	1735*	Understanding Biology	4
BIOL	1740*	General Biology: The Living Cell	5
BIOL	1745 ^{10*}	General Biology: The Living World (p)	5
BIOL	1760	Nutrition	3
BIOL	1782*	Introduction to Forensic Science	4
BIOL	1785 ⁹	Biology of Men and Women	3
BIOL	1790	Special Topics in Biology	1-6
BIOL	2721*	Human Anatomy and Physiology 1 (p)	4
BIOL	2722*	Human Anatomy and Physiology 2 (p)	4
BIOL	2750*	General Microbiology (p)	4
BIOL	2760	Cell and Molecular Biology	5
BIOL	2770	Biology Internship	1-4
CHEM	1700*	Chemistry Concepts (p)	4
CHEM	1711*	Principles of Chemistry 1 (p)	4
CHEM	1712*	Principles of Chemistry 2 (p)	4
CHEM	2700*	Organic Chemistry Survey (p)	4
CHEM	2720*	Organic Chemistry 1 (p)	5
CHEM	2721*	Organic Chemistry 2 (p)	5
CHEM	2730*	Instrumental Analysis (p)	4
CHEM	2790	Chemical Technology Laboratory Research Project	1-4
CHEM	2791	Cleanroom Lab Research Project	1-4
CHEM	2795	Special Topics in Chemistry	1-6
NSCI	1710 ^{10*}	Earth Science	4
NSCI	1721 ^{10*}	Introduction to Geology	4
NSCI	1730 ¹⁰	Introduction to Oceanography	3
NSCI	1740 ¹⁰	Introduction to Meteorology	3
NSCI	1750 ¹⁰	Natural Disasters	3
NSCI	1770 ¹⁰	Introduction to Energy and the Environment	3
NSCI	1780 ⁹	Contemporary Issues in Science	3
NSCI	1782 ¹⁰	Minnesota Geology	3
NSCI	1790	Special Topics in Natural Science	3
NSCI	2770	Natural Sciences Internship	1-4
PHYS	1720*	Principles of Physics 1 (p)	4
PHYS	1722*	Principles of Physics 2 (p)	4
PHYS	1760 ¹⁰	Descriptive Astronomy (no lab)	3
PHYS	2700*	General Physics 1 (with Calculus) (p)	5
PHYS	2710*	General Physics 2 (with Calculus) (p)	5
PHYS	2760 ^{10*}	Introductory Astronomy (with lab)	4
PHYS	2790	Special Topics in Physics	1-6

*Course contains lab
(p) = Indicates prerequisite required for course

MnTC Goal 4: Mathematical/Logical Reasoning			Credits
Minimum of one course (3 credits). Courses must be numbered between 1700-1799 or 2700-2799			
MATH	1710	Liberal Arts Mathematics (p)	3
MATH	1730	College Algebra (p)	3
MATH	1740	Introduction to Statistics (p)	4
MATH	1750	Trigonometry (p)	3
MATH	1762	Pre-Calculus (p)	5
MATH	1790	Special Topics in Mathematics	1-6
MATH	2749	Calculus 1 (p)	4
MATH	2750	Calculus 2 (p)	4
MATH	2753	Multivariable Calculus (p)	4
MATH	2760	Differential Equations and Linear Algebra (p)	4
PHIL	1710	Logic	3

MnTC Goal 5: History, Social Sciences, and Behavioral Sciences			Credits
Minimum of three courses (9 credits) from two different disciplines			
ANTH	1710 ⁷	Introduction to Cultural Anthropology	4
ANTH	1720 ¹⁰	Introduction to Physical Anthropology	4
ANTH	1730 ⁸	Gender and Culture in Global Perspectives	3
ANTH	1790	Special Topics in Anthropology	1-6
ECON	1710	Introduction to the American Economy	3
ECON	1720 ⁸	Macroeconomics	3
ECON	1730 ⁸	Microeconomics	3
ECON	1790	Special Topics in Economics	1-6
GEOG	1700 ¹⁰	Physical Geography	3
GEOG	1720 ⁸	Human / Cultural Geography	3
GEOG	1740 ⁸	World Geography	3
GEOG	1750 ¹⁰	Minnesota Geography	3
GEOG	1790	Special Topics in Geography	1-6
HIST	1730 ⁸	Contemporary World History	3
HIST	1745 ⁷	U. S. History to 1865	4
HIST	1746 ⁷	U. S. History Since 1865	4
HIST	1750 ¹⁰	Minnesota History	3
HIST	1760 ⁸	History of World Civilizations to 1500	3
HIST	1761 ⁸	History of World Civilizations since 1500	3
HIST	1770 ⁹	History of Women in the United States	3
HIST	1773 ⁷	African American History	3
HIST	2740 ⁹	Immigration & Ethnic History of the United States	3
HIST	2780 ⁷	Special Topics in History	1-6
HIST	2790 ⁷	Historical Methods	2
POLS	1720 ⁹	Introduction to American Government	3
POLS	1740 ⁸	Introduction to World Politics	3
POLS	1750 ⁹	Introduction to Political Science	3
POLS	1760 ⁹	Introduction to Political Philosophy	3
POLS	1790 ⁹	Special Topics in Political Science	1-6
PSYC	1710	General Psychology	4
PSYC	1720 ⁹	Psychology throughout the Lifespan	3
PSYC	1740 ⁷	Abnormal Psychology (p)	4
PSYC	1750 ⁷	Introduction to Health Psychology	3
PSYC	1790	Special Topics in Psychology	1-6
PSYC	2720 ⁷	Social Psychology	4
SOCI	1710 ⁷	Introduction to Sociology	4

SOCI	1720 ⁸	Social Problems	3
SOCI	1730 ⁷	Sociology of Families and Relationships	3
SOCI	1740 ⁸	Sociology of Work	3
SOCI	1760	Mass Media and Society	4
SOCI	1765 ⁷	Sociology of Crime and Deviance	3
SOCI	1766 ⁹	Juvenile Delinquency	3
SOCI	1772 ⁹	Introduction to Criminal Justice	3
SOCI	1774 ⁹	Introduction to Corrections	3
SOCI	1776 ⁹	Probation, Parole and Alternative Sentencing	3
SOCI	1790	Special Topics in Sociology	1-6
SOCI	2720 ⁷	Social Psychology	4
SPCH	1740 ⁹	Mass Media & Communications	3
WGST	1785 ⁹	Foundations in Women's Studies	3
WGST	1790 ⁹	Special Topics in Women's and Gender Studies	1-6

MnTC Goal 6: Humanities and Fine Arts			Credits
Minimum of three courses (9 credits) from two different disciplines			
ARTS	1713	Photography 1	3
ARTS	1714	Photography 2 (p)	3
ARTS	1720 ⁸	Art Appreciation	3
ARTS	1722 ⁷	American Animation	3
ARTS	1724 ⁷	The Design of Everyday Life	3
ARTS	1726 ⁷	Art in the Cities	3
ARTS	1730	Drawing 1	3
ARTS	1731	Drawing 2 (p)	3
ARTS	1732	Two-dimensional Design	3
ARTS	1733	Three-dimensional Design	3
ARTS	1740	Introduction to Painting	3
ARTS	1742	Intermediate Painting (p)	3
ARTS	1744	Introduction to Watercolor Painting	3
ARTS	1750	Introduction to Ceramics	3
ARTS	1752	Intermediate Ceramics (p)	3
ARTS	1760 ⁸	World Art	3
ARTS	1770	Art in America	3
ARTS	1780	Beginning Printmaking	3
ARTS	1790	History of Photography	3
ARTS	1795	Special Topics in Art	1-6
ARTS	2710	Advanced Studio Arts	3-4
ARTS	2754	Advanced Ceramics (p)	3
ENGL	1720	Introduction to Creative Writing (p)	3
ENGL	1725	Introduction to Fiction Writing (p)	3
ENGL	1780 ⁷	Recently Arrived Contemporary Immigrant Literature	3
ENGL	1790 ⁷	Contemporary Writers of Color	3
ENGL	2721 ⁷	Survey of American Literature 1 (p)	3
ENGL	2722 ⁷	Survey of American Literature 2 (p)	3
ENGL	2725	Survey of British Literature (p)	3
ENGL	2730	Contemporary American Novel (p)	3
ENGL	2732	Exploring the Short Story (p)	3
ENGL	2740 ⁷	Native American Literature (p)	3
ENGL	2750 ⁷	African American Literature (p)	3
ENGL	2760	The English Novel (p)	3

*Course contains lab
(p) = Indicates prerequisite required for course

MnTC Goal 6: Humanities and Fine Arts (continued)		Credits
ENGL 2770	Introduction to Poetry (p)	3
ENGL 2775	Science Fiction and Fantasy (p)	3
ENGL 2776 ⁷	Women Writers	3
ENGL 2778	Urban Literature – Lost in the City (p)	3
HUMA 1720 ⁸	The Ancient and Medieval World	4
HUMA 1730 ⁸	The Modern World	4
HUMA 1750 ⁸	Culture and Civilization: Spanish-Speaking Cultures	3
HUMA 1770	The Art of Film	3
HUMA 1780 ⁷	American Film	3
HUMA 1790 ⁸	International Film	3
HUMA 1795	Special Topics in Humanities.	1-6
MUSC 1700	Music Theory and Lab 1	4
MUSC 1705	Music Theory and Lab 2 (p)	4
MUSC 1710	Music Theory and Lab 3 (p)	4
MUSC 1715	Music Theory and Lab 4 (p)	4
MUSC 1720	Fundamentals of Music	3
MUSC 1730	Concert Choir	2
MUSC 1735	Class Piano 1	2
MUSC 1736	Class Piano 2	2
MUSC 1740 ⁸	Music Appreciation	3
MUSC 1745 ⁷	History of Rock and Roll	3
MUSC 1750 ⁷	Jazz History	3
MUSC 1760 ⁷	American Music	3
MUSC 1765 ⁷	Music of Latin America and the Caribbean	3
MUSC 1770 ⁸	Music in World Cultures	3
MUSC 1790	Special Topics in Music	1-6
PHIL 1700	Introduction to Philosophy	3
PHIL 1715	Philosophy of Scientific Reasoning	3
PHIL 1720 ⁹	Ethics	3
PHIL 1722 ⁹	Health Care Ethics	3
PHIL 1740 ⁸	World Mythology	3
PHIL 1742 ⁸	Greek & Roman Mythology	3
PHIL 1750 ⁸	Eastern Philosophy	3
PHIL 1760 ⁸	World Religions	3
PHIL 1770 ⁷	Feminist Philosophy	3
PHIL 1790	Special Topics in Philosophy	1-6
SPAN 1730 ⁸	Intermediate Spanish 1 (p)	5
SPAN 1740 ⁸	Intermediate Spanish 2 (p)	5
THTR 1710	Introduction to Theatre	3
THTR 1716 ⁸	Theatre Around the World	3
THTR 1720	Exploring Theatre Arts	3
THTR 1725	Acting 1	3
THTR 1730	Theatre Stagecraft and Performance	3
THTR 1731	Theatre Performance. Practicum	1
THTR 1732	Technical Theatre Practicum	1
THTR 1740	Fundamentals of Playwriting: Playwriting 1	3
THTR 1790	Special Topics in Drama and Theatre	1-6
THTR 2725	Acting 2	3

MnTC Goal 7: Human Diversity		Credits
Minimum of one course		
ANTH 1710 ⁵	Introduction to Cultural Anthropology	4
ARTS 1722 ⁶	American Animation	3
ARTS 1724 ⁶	The Design of Everyday Life	3
ARTS 1726 ⁶	Art in the Cities	3
ASLS 1435	Deaf Studies/Culture	3
ENGL 1780 ⁶	Recently Arrived-Contemporary Immigrant Literature	3
ENGL 1790 ⁶	Contemporary Writers of Color	3
ENGL 2721 ⁶	Survey of American Literature 1 (p)	3
ENGL 2722 ⁶	Survey of American Literature 2 (p)	3
ENGL 2740 ⁶	Native American Literature (p)	3
ENGL 2750 ⁶	African American Literature (p)	3
ENGL 2776 ⁶	Women Writers	3
HIST 1745 ⁵	U.S. History to 1865	4
HIST 1746 ⁵	U.S. History Since 1865	4
HIST 1773 ⁵	African American History	3
HIST 2780 ⁵	Special Topics in History	1-6
HIST 2790 ⁵	Historical Methods	2
HUMA 1780 ⁶	American Film	3
MUSC 1745 ⁶	History of Rock and Roll	3
MUSC 1750 ⁶	Jazz History	3
MUSC 1760 ⁶	American Music	3
MUSC 1765 ⁶	Music of Latin America and the Caribbean	3
PHIL 1770 ⁶	Feminist Philosophy	3
PSYC 1740 ⁵	Abnormal Psychology (p)	4
PSYC 1750 ⁵	Introduction to Health Psychology	3
PSYC 2720 ⁵	Social Psychology	4
SOCI 1710 ⁵	Introduction to Sociology	4
SOCI 1730 ⁵	Sociology of Families and Relationships	3
SOCI 1765 ⁵	Sociology of Crime and Deviance	3
SOCI 2720 ⁵	Social Psychology	4
SPCH 1720 ¹	Interpersonal Communication	3
SPCH 1770 ¹	Family Communication	3
SPCH 1780 ¹	Gender Communication	3

MnTC Goal 8: Global Perspective		Credits
Minimum of one course		
ANTH 1730 ⁵	Gender & Culture in Global Perspectives	3
ARTS 1720 ⁶	Art Appreciation	3
ARTS 1760 ⁶	World Art	3
ASLS 1411	American Sign Language 1	3
ASLS 1412	American Sign Language 2 (p)	3
ASLS 1413	American Sign Language 3 (p)	3
ASLS 1414	American Sign Language 4 (p)	3
CHIN 1710	Beginning Chinese 1	5
CHIN 1720	Beginning Chinese 2 (p)	5
CHIN 1790	Special Topics in Chinese	1-6
ECON 1720 ⁵	Macroeconomics	3
ECON 1730 ⁵	Microeconomics	3
GEOG 1720 ⁵	Human / Cultural Geography	3
GEOG 1740 ⁵	World Geography	3

*Course contains lab

(p) = Indicates prerequisite required for course

MnTC Goal 8: Global Perspective (continued)			Credits
HIST	1730 ⁵	Contemporary World History	3
HIST	1760 ⁵	History of World Civilizations to 1500	3
HIST	1761 ⁵	History of World Civilizations since 1500	3
HUMA	1720 ⁶	The Ancient and Medieval World	4
HUMA	1730 ⁶	The Modern World	4
HUMA	1750 ⁶	Culture and Civilization: Spanish-Speaking Cultures	3
HUMA	1790 ⁶	International Film	3
MUSC	1740 ⁶	Music Appreciation	3
MUSC	1770 ⁶	Music in World Cultures	3
PHIL	1740 ⁶	World Mythology	3
PHIL	1742 ⁶	Greek & Roman Mythology	3
PHIL	1750 ⁶	Eastern Philosophy	3
PHIL	1760 ⁶	World Religions	3
POLS	1740 ⁵	Introduction to World Politics	3
SOCI	1720 ⁵	Social Problems	3
SOCI	1740 ⁵	Sociology of Work	3
SPAN	1710	Beginning Spanish 1	5
SPAN	1720	Beginning Spanish 2 (p)	5
SPAN	1730 ⁶	Intermediate Spanish 1 (p)	5
SPAN	1740 ⁶	Intermediate Spanish 2 (p)	5
SPAN	1790	Spanish for the Workplace	3
SPAN	1795	Special Topics in Spanish	1-6
SPCH	1700 ¹	Introduction to Speech Communications	3
SPCH	1710 ¹	Fundamentals of Public Speaking	3
SPCH	1730 ¹	Intercultural Communication	3
THTR	1716 ⁶	Theatre Around the World	3

MnTC Goal 9: Ethical & Civic Responsibility			Credits
Minimum of one course			
BIOL	1785 ³	Biology of Men and Women	3
HIST	1770 ⁵	History of Women in the United States	3
HIST	2740 ⁵	Immigration and Ethnic History of the United States	3
NSCI	1780 ³	Contemporary Issues in Science	3
PHIL	1720 ⁶	Ethics	3
PHIL	1722 ⁶	Health Care Ethics	3
POLS	1720 ⁵	Introduction to American Government	3
POLS	1750 ⁵	Introduction to Political Science	3
POLS	1760 ⁵	Introduction to Political Philosophy	3
POLS	1790 ⁵	Special Topics in Political Science	1-6
PSYC	1720 ⁵	Psychology throughout the Lifespan (p)	3
SOCI	1766 ⁵	Juvenile Delinquency	3
SOCI	1772 ⁵	Introduction to Criminal Justice	3
SOCI	1774 ⁵	Introduction to Corrections	3
SOCI	1776 ⁵	Probation, Parole and Alternative Sentencing	3
SPCH	1740 ⁵	Mass Media & Communications	3
SPCH	1750 ¹	Small Group Communication	3
WGST	1785 ⁵	Foundations in Women's Studies	3
WGST	1790 ⁵	Special Topics in Women's and Gender Studies	1-6

MnTC Goal 10: People & the Environment			Credits
Minimum of one course			
ANTH	1720 ⁵	Introduction to Physical Anthropology	4
BIOL	1725 ^{3*}	Environmental Science	4
BIOL	1745 ^{3*}	General Biology: The Living World	5
GEOG	1700 ⁵	Physical Geography	3
GEOG	1750 ⁵	Minnesota Geography	3
HIST	1750 ⁵	Minnesota History	3
NSCI	1710 ^{3*}	Earth Science	4
NSCI	1721 ^{3*}	Introduction to Geology	4
NSCI	1730 ³	Introduction to Oceanography	3
NSCI	1740 ³	Introduction to Meteorology	3
NSCI	1750 ³	Natural Disasters	3
NSCI	1770 ³	Introduction to Energy and the Environment	3
NSCI	1782 ³	Minnesota Geology	3
NSCI	1790 ³	Special Topics in Natural Science	1-6
PHYS	1760 ³	Descriptive Astronomy (no lab)	3
PHYS	2760 ^{3*}	Introductory Astronomy (with lab)	4

*Course contains lab

(p) = Indicates prerequisite required for course

Transfer to Other Institutions

To ensure a smooth transfer from Saint Paul College to a four-year college or university, it is important to understand the types of degrees offered at the College:

The **Associate in Arts (AA) degree** is designed for transfer and offers flexibility in terms of the variety of colleges to which a student can transfer and in the variety of majors that can be chosen. The AA degree requires mostly general education courses (40 credits), which is what gives it more transferability. The AA degree consists of the Minnesota Transfer Curriculum (MnTC). Completion of the MnTC with a 2.0 GPA meets the general education requirements at any of the public Minnesota State Colleges and Universities institutions and the University of Minnesota. Several private colleges also honor the AA degree. Some four-year majors require specific general education courses referred to as premajor requirements.

Note: Course requirements may vary depending on the major and transfer college, so it is important to talk to a Transfer Specialist at Saint Paul College and to the appropriate person at the transfer college. Refer to the General Transfer Table.

For students who are undecided about their major and who are interested in a four-year degree, the AA is a good program to follow until deciding.

An **Associate in Science (AS) degree** is intended to prepare students for immediate employment; however, students can transfer to complete a Bachelor's degree when they transfer to colleges with which Saint Paul College has articulation agreements. In addition to technical requirements, the AS degree requires 30 credits of general education (MnTC) courses. Additional general education courses may be required to complete a Bachelor's degree, particularly if students transfer to a college where an articulation agreement does not exist. Refer to the Transfer Articulation Agreements Table.

An Associate in Applied Science (AAS) degree is intended mainly to prepare students for direct employment. Students who are following an AAS degree and who are interested in transfer are strongly advised to talk to a Saint Paul College Transfer Specialist in the Transfer Center as transfer options are more limited. In addition to technical requirements, the AAS degree requires 20 credits of general education (MnTC) courses. Additional general education courses typically would be required to complete a Bachelor's degree for students who transfer, particularly to colleges with which articulation agreements do not exist. Refer to the Transfer Articulation Agreements Table.

Understanding Transfer of Credits

The receiving college or university decides which credits transfer and if those credits meet its degree requirements; however, a course that meets a Minnesota Transfer Curriculum (MnTC) goal at Saint Paul College will meet the same goal at a Minnesota State Colleges and Universities institution.

Note: A course can meet a Minnesota Transfer Goal at the sending institution and yet may or may not be considered equivalent to a course at the receiving institution. The accreditation of both the sending and receiving institution can affect the transfer of credits earned, but it is not the only factor in determining transfer of credits.

Institutions accept credits from courses and programs like those they offer. They look for similarity in course goals, content and level: “like” transfers to “like.” The name of a course is not sufficient to determine equivalency. Not everything that transfers counts toward graduation. Bachelor's degree programs usually count credits in three categories: general education, major/minor courses and prerequisites/electives. The key question is, “Will your credits fulfill requirements of the degree or program you choose?”

A change in career goal or major might make it difficult to complete all degree requirements within the usual number of graduation credits.

Colleges and universities differ in how they accept courses and other types of college credits (CLEP, AP, IB, international credits, etc.).

Since requirements and acceptance of Saint Paul College credits differ from one college to another, it is important to talk to a Saint Paul College Transfer Specialist, consult college catalogs and Web sites and talk to advisors at the four-year institution. Transfer Specialists and other transfer resources are available in the Transfer Center. Transfer guides to four-year institutions may be available to provide guidance in selecting the courses intended to transfer from Saint Paul College. Also access the Saint Paul College Web site (www.saintpaul.edu) or the Minnesota Transfer Web site (www.mntransfer.org) for more information.

Obtain the following materials and information from the four-year institution: college catalog, transfer brochure, information on financial aid (how to apply and by what date), information about admissions criteria and materials required for admission. (e.g., transcripts, test scores, portfolio, etc.). Note that some majors have limited enrollment and/or special admission requirements such as specific grade point averages.

Note: Minnesota State Colleges and Universities and the University of Minnesota have high school preparation requirements for admission. Consult an advisor at your intended transfer school for more information.

After reviewing this information, contact the Transfer Center or someone in the division or program of interest. Be sure to ask about course transfer and admissions criteria.

Applying for Transfer Admission at Other Institutions

Application for admission is the first step in transferring. Fill out the application early, prior to the deadline and enclose the required application fee. Request official transcripts be sent from all previously attended institutions. The student may also be required to provide a high school transcript or GED test scores.

Make certain the college or university has been supplied with all the necessary paperwork. Most colleges make no decisions until all required documents are filed. If nothing has been heard from the intended college of transfer after one month, call to check on application status.

After receiving notification of acceptance, transcripted credits will be evaluated for transfer. A written evaluation should explain which courses transfer and which do not. How courses specifically meet degree requirements may not be decided until orientation or selection of a major.

Call the credit evaluator in the Office of Enrollment Services with questions or to find out why judgments were made about specific courses. Each student has the right to an appeal. See Your Rights as a Transfer Student.

Your Rights as a Transfer Student

Students are entitled to:

- A clear, understandable statement of an institution's transfer policy.
- A fair credit review and an explanation of why credits were or were not accepted.
- A copy of the formal appeals process.
- A review of eligibility for financial aid or scholarships.

Steps in the Appeals Process:

1. The student fills out an appeals form. Supplemental information provided to reviewers can include: a syllabus, course description, or reading list, depending upon the type of appeal.
2. A review by the appropriate department or committee will be conducted.
3. The decision is conveyed in writing to the student.
4. The student may appeal the decision.

For help with transfer questions or concerns, contact the Transfer Center or your advisor at the transfer college.

Transfer Articulation Agreements

Saint Paul College has formed articulation agreements with a number of public and private institutions to assist students following some AS, AAS, diploma or certificate programs with their transfer goals. Please see a Transfer Specialist for further information.

General Transfer Table 2016-2017

For students following the Associate in Arts or other general transfer

The following table summarizes transfer to many colleges. Students who are planning to transfer to other institutions should work with transfer specialists at Saint Paul College and the college to which they are transferring. Certain majors require specialized coursework, so the following provides a guide for general transfer; it is not intended to cover specific requirements for all majors. Admission requirements may vary depending on the major the student is pursuing. Students should consult with the transfer college and use transfer guides to find out admission deadlines and requirements. Note: Students are free to explore transfer to any college, including colleges not listed in the following table.

Transfer guides are also available in the Transfer Center in Room 1365.

Saint Paul College	Degree / Major Offered	Transfer Institution
AA/MnTC	- Various Majors	All Minnesota State Colleges and Universities
AA/MnTC	- Various Majors	Augsburg College
AA	- Various Majors	Bethany Lutheran
Selected Liberal Arts Courses	- Various Majors	Bethel University
AA/MnTC	- Various Majors	College of St. Scholastica
AA/MnTC	- Various Majors	Concordia University
Selected Liberal Arts Courses	- Various Majors	Hamline University
AS/AAS	- Individualized Studies	Metropolitan State University
Selected Liberal Arts Courses	- Various Majors	Minneapolis College of Art and Design
Selected Liberal Arts Courses	- Various Majors	St. Catherine University
AA/MnTC	- Various Majors	Saint Mary's University, Minneapolis
AA/MnTC	- Various Majors	University of Minnesota
AA/MnTC	- Various Majors	University of North Dakota
Selected Liberal Arts Courses	- Various Majors	University of St. Thomas
AA/Selected Liberal Arts Courses	- Various Majors	University of Wisconsin-River Falls
AA/Selected Liberal Arts Courses	- Various Majors	University of Wisconsin-Stout

Programs

Degree, Diploma and Certificate

References to the Minnesota Transfer Curriculum (MnTC)

Throughout the following program pages, the Minnesota Transfer Curriculum (MnTC) will be referenced regarding General Education requirements. The MnTC has specific credit requirements and ten goal areas. Some program areas will have specific general education course numbers listed as required or recommended for MnTC goal areas. Notations such as “Goal 4: Mathematics/Logical Reasoning” will be listed instead of specific course numbers, which means that students may select specific courses from that MnTC goal area to fulfill the requirements of the program.

For example, if a program requires a non-specified, four-credit course in social or behavioral sciences, the program requirement would be listed as “Goal 5 – History, Social Science & Behavioral Sciences: 4 credits.” This means that any four-credit course listed under Goal 5 of the Minnesota General Education Transfer Curriculum could be used to fulfill that requirement.

It may be necessary for students to select additional MnTC credits beyond the minimum number required in each goal area in order to reach the total MnTC/General Education credits required for their degree or program.

The specific courses for each MnTC Goal Area are listed on pages 33-36 in this Catalog and on our website at www.saintpaul.edu/TransferCenter.

Program Requirement Guides

Program Requirement Guides for each individual program are available in the Transfer Center, Career Services, and Enrollment Services.

The guides are also available on our Web site at www.saintpaul.edu/ProgramGuides.

Business	29
Career & Technical Education	67
Health Science	97
Service	142
STEM: Science, Technology, Engineering & Mathematics	167
Liberal & Fine Arts	201

Business Programs

The mission of the Business Department at Saint Paul College is to sustain the College mission by providing quality, lifelong business education supported by technology for a diverse, metropolitan student population.

Accounting

Accounting AAS Degree (60 Credits)	30
Accounting Technician Diploma (39 Credits).	32

Business Administrative Professional/ Business Technology

Office Management Professional AAS Degree (60 Credits)	33
Business Certificate (16 Credits)	35
Customer Service Office Support Certificate (27 Credits)	36
Business Information Technology AAS Degree (60 Credits) - <i>Program Discontinued</i>	36
Business Information Technology Certificate (30 Credits) - <i>Program Discontinued</i>	38
Business Applications Specialist Certificate (25 Credits)	39

Business Management

Business Management AS Degree (60 Credits).	40
Nonprofit Certificate (27 Credits)	41
Project Management Certificate (21 Credits)	42
Project Management AAS Degree (60 Credits).	43

Entrepreneurship

Entrepreneurship AAS Degree (60 Credits).	44
Entrepreneurship Certificate (16 Credits)	46
Music Business AAS Degree (60 Credits)	47

Finance

Finance AS Degree (60 Credits) NEW!	48
Finance Certificate (28 Credits)	49

Global Trade

Global Trade Specialist AAS Degree (60 Credits)	50
Global Trade Professional Certificate (16 Credits).	52

Hospitality Management

Hospitality Management AAS Degree (60 Credits).	53
Restaurant Management Certificate (25 Credits)	55
Event and Meeting Management Certificate (18 Credits)	56

Human Resource Management

Human Resources AAS Degree (60 Credits)	57
Human Resources Specialist Certificate (29 Credits).	59
Human Resources Professional Certificate (18 Credits).	60

Marketing

Marketing AAS Degree (60 Credits)	61
Social Media Marketing Certificate (17 Credits)	63

Supply Chain Logistics

Supply Chain Logistics AAS Degree (60 Credits)	64
Supply Chain Logistics Certificate (19 Credits)	66

Accounting AAS DEGREE

Program Overview

An accountant examines, analyzes, and interprets accounting data for the purpose of giving advice and preparing financial statements. Duties may include performing such activities as recording receipts and disbursements, and preparing state and federal reports. The accountant may prepare reports and statements on a computer or manually.

Excellent reading skills and a combination of interest and ability to concentrate on detail, an analytical mind, good judgment and absolute integrity are necessary for success in the field of accounting.

Career Opportunities

With more and more emphasis being placed on computer usage for accounting careers, opportunities for employment in this field are excellent. Rate of advancement may be swift and the rewards generous.

The accounting profession offers a vast arena of employment potential. Typical places of employment include accounting departments in governmental agencies, financial institutions, private business and industry, and public accounting firms. Other job titles may be tax accountant, cost accountant, staff accountant, government accountant, auditor or junior accountant. The financial accounting technician positions are found in the areas of public accounting, private accounting, non-profit accounting, auditing, taxation, cost accounting and managerial positions.

Program Outcomes

1. Graduates will possess the knowledge and skills for immediate employment in related business support areas.
2. Graduates will be proficient in computer software and its application to financial accounting, taxation, and financial analysis.
3. Graduates will have knowledge of financial accounting theory and financial statement analysis.
4. Graduates will have completed general education requirements for employment and personal roles.
5. Graduates will serve their employers and clients in all phases of accounting, including financial accounting, managerial accounting and tax accounting.
6. Graduates will have critical thinking skills.

Program Advisors

Jim O'Halloran james.o'halloran@saintpaul.edu
Kendal Loewen kendal.loewen@saintpaul.edu

Part-time/Full-time Options

Some day, evening, and Saturday class availability. Students may attend full-time or part-time.

Program Requirements

Check off when completed

Required Business Core Cr

Professional Component

- ACCT 1411 Principles of Accounting 1 4
- BTEC 1421 Business Information Applications 1 OR
CSCI 2410 Management Information Systems. 3
- BUSN 1449 Business Communications. 3
- BUSN 1410 Introduction to Business. 3
- BUSN 2465 Business Ethics. 3
- Required Business Core. 16**

Course Cr

- ACCT 1412 Principles of Accounting 2 4
- ACCT 1511 Federal Taxation 1. 4
- ACCT 1512 Federal Taxation 2. 4
- ACCT 1521 Accounting Computer Applications. 4
- ACCT 2411 Intermediate Accounting 4
- ACCT 2420 Managerial Accounting. 4
- ACCT 2540 Financial Modeling for Spreadsheets 4
- Subtotal. 28**

General Education/MnTC Requirements Cr

- Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
 - Goal 3 or Goal 4. 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
 - Goal 5: History, Social Science, and Behavioral Sciences 3
ECON 1720 Macroeconomics – 3 cr OR
ECON 1730 Microeconomics – 3 cr
 - Goal 6: Humanities and Fine Arts. 3
 - General Education Requirements 16**

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The course sequence listed on the back of this guide is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Accounting AAS

- BBA Accounting
Concordia University
- BBA Finance
Concordia University
- BS Accounting
Saint Mary's University-Twin Cities Campus
- BS Applied Management
Dunwoody College of Technology
- BS Business Management
Herzing University

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Information is subject to change.
This Program Requirements Guide is not a contract.

Accounting AAS DEGREE *(continued)*

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1	4
BTEC 1421 Business Info Applications 1 OR CSCI 2410 Mgmt Info Systems	3
BUSN 1449 Business Communications	3
BUSN 1410 Introduction to Business	3
MnTC Curriculum	3
Total Semester Credits	16

Second Semester

ACCT 1412 Principles of Accounting 2	4
ACCT 1521 Accounting Computer Applications	4
BUSN 2465 Business Ethics	3
ECON 1720 Macroeconomics OR ECON 1730 Microeconomics	3
Total Semester Credits	14

Third Semester

ACCT 1511 Federal Taxation 1	4
ACCT 2411 Intermediate Accounting	4
Mn Transfer Curriculum	7
Total Semester Credits	15

Fourth Semester

ACCT 1512 Federal Taxation 2	4
ACCT 2420 Managerial Accounting	4
ACCT 2540 Financial Modeling for Spreadsheets	4
MnTC Curriculum	3
Total Semester Credits	15

Total Program Credits	60
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Accounting Technician DIPLOMA

Program Overview

The Accounting Technician monitors and controls various types of electronic data processing equipment used to process accounting data. Applications would include automated general ledger and other accounting subsystems, spreadsheet applications, database management, and the use of graphics. The Accounting Technician may also assist in the planning and implementation of automated accounting systems.

Excellent reading skills and a combination of interest and ability to concentrate on detail, an analytical mind, good judgment and absolute integrity are necessary for success in the field of accounting.

Career Opportunities

With more and more emphasis being placed on computer usage for accounting careers, opportunities for employment in this field are excellent. Rate of advancement may be swift and the rewards generous.

The Accounting profession offers a vast arena of employment potential. Typical places of employment include accounting departments in governmental agencies, financial institutions, private business and industry, and public accounting firms. Other job titles may be tax accountant, cost accountant, staff accountant, government accountant, auditor or junior accountant. The financial accounting technician positions are found in the areas of public accounting, private accounting, non-profit accounting, auditing, taxation, cost accounting and managerial positions.

Program Outcomes

1. Graduates will possess the knowledge and skills for immediate employment in related business support areas.
2. Graduates will be proficient in computer software and its application to financial accounting, taxation, and financial analysis.
3. Graduates will have knowledge of financial accounting theory and financial statement analysis.
4. Graduates will serve their employers and clients in all phases of accounting, including financial accounting, managerial accounting and tax accounting.

Program Advisors

Jim O'Halloran james.o'halloran@saintpaul.edu
Kendal Loewen kendal.loewen@saintpaul.edu

Part-time/Full-time Options

Some day, evening, and Saturday class availability. Students may attend full-time or part-time.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> ACCT 1411 Principles of Accounting 1	4
<input type="checkbox"/> ACCT 1412 Principles of Accounting 2	4
<input type="checkbox"/> ACCT 1511 Federal Taxation 1	4
<input type="checkbox"/> ACCT 1512 Federal Taxation 2	4
<input type="checkbox"/> ACCT 1521 Accounting Computer Applications	4
<input type="checkbox"/> ACCT 2420 Managerial Accounting	4
<input type="checkbox"/> ACCT 2540 Financial Modeling for Spreadsheets	4
<input type="checkbox"/> BTEC 1421 Business Information Applications 1	3
<input type="checkbox"/> BUSN 1480 Business Career Resources	1
<input type="checkbox"/> SPCH XXXX (Goal 1 only)	3
Subtotal	35
<input type="checkbox"/> Business Elective	4
Total Program Credits	39

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1	4
ACCT 1511 Federal Taxation 1	4
BTEC 1421 Business Information Applications 1	3
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	14

Second Semester

ACCT 1412 Principles of Accounting 2	4
ACCT 1512 Federal Taxation 2	4
Business Elective	4
Total Semester Credits	12

Third Semester

ACCT 1521 Accounting Computer Applications	4
ACCT 2420 Managerial Accounting	4
ACCT 2540 Financial Modeling for Spreadsheets	4
BUSN 1480 Business Career Resources	1
Total Semester Credits	13

Total Semester Credits 39

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 60+ on Reading Comprehension or grade of "C" or better in ENGL 0921

Arithmetic: Score of 52+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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*Information is subject to change.
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Office Management Professional AAS DEGREE

Program Overview

This program will provide training for an office management professional position. Students will be trained in Microsoft Office software Excel, Word, PowerPoint Access, and Outlook. Customer service skills for internal and external customers will be emphasized. Students will learn communication, customer service, teamwork, conflict resolution, negotiation skills and problem solving skills. Events planning and project management skills will also be introduced.

Career Opportunities

1. Office Management Professional
2. Administrative Assistant
3. Customer Service Representative
4. Office Manager

Program Outcomes

1. Graduates will obtain the knowledge to plan, direct, and coordinate supportive services of an organization.
2. Graduates will have working knowledge of business information applications.
3. Graduates will have the skills to manage staff, information, and facilities.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Office Management Professional AAS

- BA Organizational Management and Leadership
Concordia University
- BAS Organizational Administration
Metropolitan State University
- BS Business Administration
Saint Mary's University-Twin Cities Campus

Program Advisor

Alli Vainshtein alli.vainshtein@saintpaul.edu
651.846.1529

Part-time/Full-time Options

This program can be completed by using a combination of day, evening and online courses. Part-time and full-time options are available. Costs will vary depending on the type of enrollment.

Program Requirements

Check off when completed

Required Business Core Cr

- Professional Component**
- ACCT 1411 Principles of Accounting 1 4
 - BTEC 1421 Business Information Applications 1 OR
CSCI 2410 Management Info Systems 3
 - BUSN 1410 Introduction to Business 3
 - BUSN 1449 Business Communications 3
 - BUSN 2465 Business Ethics 3
 - Required Business Core 16**

Course Cr

- BTEC 1410 Advanced Keyboarding Applications . . 3
- BTEC 1423 Business Information Applications 2 . . 4
- BTEC 1530 Communication Technology 4
- BTEC 2506 Business Information Applications 3 . . 4
- BUSN 1520 Customer Service 3
- BUSN 2450 Management Fundamentals 3
- BUSN 2472 Business Negotiation Skills 3
- HSPM 1440 Event Management & Planning 3
- Subtotal 27**

General Education/MnTC Requirements Cr

- Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
 - Goal 3 or Goal 4 4
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
 - Goal 5: History, Social Science, and Behavioral Sciences 3
ECON 1720 Macroeconomics – 3 cr OR
ECON 1730 Microeconomics – 3 cr
 - Goal 6: Humanities and Fine Arts. 3
 - General Education Requirements 17**

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The course sequence listed on the back of this guide is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Keyboarding Skills: Minimum of 40 WPM with 3 errors or less or a grade of "C" or better in BTEC 1400.

Computer Skills: Basic computer skills such as word processing, spreadsheets, and Internet usage or a grade of "C" or better in BTEC 1418.

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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The mission of the Business Department at Saint Paul College is to sustain the College mission by providing quality, lifelong business education supported by technology for a diverse, metropolitan student population.

Information is subject to change. This Program Requirements Guide is not a contract.

Office Management Professional AAS DEGREE *(continued)*

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1	4
BTEC 1421 Business Info Applications 1 OR CSCI 2410 Mgmt Info Systems	3
BUSN 1410 Introduction to Business	3
BUSN 1449 Business Communications	3
BUSN 2465 Business Ethics	3
Total Semester Credits	16

Second Semester

BTEC 1423 Business Information Applications 2	4
BTEC 1410 Advanced Keyboarding Applications	3
ENGL 1711 Composition 1	4
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	14

Third Semester

BTEC 2506 Business Information Applications 3	4
BUSN 2472 Business Negotiation Skills	3
HSPM 1440 Event Management & Planning	3
Goal 3: Natural Sciences OR Goal 4: Mathematical/Logical Reasoning	4
Total Semester Credits	14

Fourth Semester

BTEC 1530 Communication Technology	4
BUSN 1520 Customer Service	3
BUSN 2450 Management Fundamentals	3
ECON 1720 Macroeconomics OR ECON 1730 Microeconomics	3
Goal 6: Humanities & Fine Arts	3
Total Semester Credits	16

Total Program Credits	60
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Business CERTIFICATE

Program Overview

The business certificate consists of five business core classes that are required for all business degree majors. After completion, students may decide at that time which business degree program they would like to complete. This certificate provides a basic understanding of business.

Career Opportunities

There are many opportunities in the business area based on the individual's strengths and interests. Employment for entry level positions is expected to grow in the service and professional business industries. Students completing the Business Certificate can provide support for businesses.

Program Outcomes

1. Graduates will possess the basic knowledge and skills for entry level employment in related business support areas.
2. Graduates will be proficient in Microsoft Office applications.
3. Graduates will have understanding of core business practices.
4. Graduates will be knowledgeable in the use of business administration skills.

Program Advisors

Mindy Travers mindy.travers@saintpaul.edu
 Craig Maus craig.maus@saintpaul.edu
 Susan Senger susan.senger@saintpaul.edu
 Anna Ouattara anna.ouattara@saintpaul.edu

Part-time/Full-time Options

Classes are offered day, evening, weekend and online. Students may attend full-time or part-time.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> ACCT 1411 Principles of Accounting 1	4
<input type="checkbox"/> BTEC 1421 Business Information Applications 1	3
<input type="checkbox"/> BUSN 1449 Business Communications	3
<input type="checkbox"/> BUSN 1410 Introduction to Business	3
<input type="checkbox"/> BUSN 2470 Legal Environment of Business	3

Total Program Credits 16

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student. Students can complete this certificate in one semester. All courses are offered fall, spring and summer semester.

First Semester

ACCT 1411 Principles of Accounting 1	4
BTEC 1421 Business Information Applications 1	3
BUSN 1449 Business Communications	3
BUSN 1410 Introduction to Business	3
BUSN 2470 Legal Environment of Business	3

Total Program Credits 16

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

331C (7166)

Customer Service Office Support CERTIFICATE

Program Overview

This program provides entry level training for a customer service position. Students will learn how to resolve conflict, develop listening skills, interpersonal and problem solving skills. The program covers Microsoft Office software: Excel, Word, PowerPoint, Access, and Outlook. Students will also learn communication, teamwork, and other business professional skills.

Career Opportunities

1. Customer Service Representative
2. Account Representative
3. Bank Teller

Program Outcomes

1. Graduates will possess the basic knowledge and skills required for entry level customer service roles.
2. Graduates will reflect professional standards, ethics, and social responsibility.
3. Graduates will develop skills in effective communications, problem solving techniques and professional behavior.

Program Advisors

Alli Vainshtein alli.vainshtein@saintpaul.edu
651.846.5129

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, and online classes. Part-time and full-time options are available. Costs will vary depending on the type of enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> BTEC 1421 Business Information Applications 1	3
<input type="checkbox"/> BUSN 1449 Business Communications	3
<input type="checkbox"/> BTEC 1423 Business Information Applications 2	4
<input type="checkbox"/> BUSN 1520 Customer Service	3
<input type="checkbox"/> BTEC 1401 Skillbuilding for Keyboarding	2
<input type="checkbox"/> BUSN 1480 Career Resources	1
<input type="checkbox"/> BTEC 2410 Business Procedures	4
<input type="checkbox"/> BUSN 2465 Business Ethics	3
<input type="checkbox"/> BTEC 1530 Communication Technology	4
Total Program Credits	27

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full time student; however, this sequence is not required. Contact Program Advisor for questions.

First Semester

BTEC1421 Business Information Applications 1	3
BUSN1449 Business Communications	3
BTEC1401 Skillbuilding for Keyboarding	2
BTEC1530 Communication Technology	4
BUSN2465 Business Ethics	3
Total Semester Credits	15

Second Semester

BTEC1423 Business Information Applications 2	4
BUSN1480 Career Resources	1
BUSN1520 Customer Service	3
BTEC2410 Business Procedures	4
Total Semester Credits	12

Total Program Credits 27

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of C or better in READ 0722

Writing: Score of 78+ or grade of C or better in ENGL 0922

Arithmetic: Score of 20+

Keyboarding Skills: Minimum of 25WPM with 3 errors or less or a grade of C or better in BTEC 1400

Computer Skills: Basic computer skills such as word processing, spreadsheets, and Internet usage or a grade of C or better in BTEC 1418.

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

386C (7215)

*Information is subject to change.
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Business Applications Specialist CERTIFICATE

Program Overview

Business Applications Specialists utilize a wide range of business systems and software applications such as: electronic mail, the Internet, word processing, Excel worksheets, Access database management, PowerPoint presentation graphics, planning and scheduling, desktop publishing, and business Web site development.

Graduates in this program will have excellent technical software support skills. Professionals in this field enjoy working with computers and software, show a strong interest in emerging technology, and have a strong desire to work as part of a team.

The Business Applications specialist certificate is a short-term, concentrated format that is recommended for experienced business staff who are looking for advancement or enhancement within their current organization, or students wanting to quickly enter the business market with strong computer software skills.

Students may complete courses in the Business Applications Specialist Certificate online. To be successful in an online course, students must have easy access to the Internet, ability to work independently, be self-disciplined and self-motivated and have good time management skills.

Career Opportunities

Employment opportunities will continue to grow in this business software support area. The Business Applications Specialist program is designed to provide students with advanced Microsoft Office software skills. Graduates will possess the necessary skills to be employed in a variety of business support positions such as: Administrative Assistants, Executive Assistants, Virtual Coordinators, Software User Support Specialists, Office Systems Specialists, Assistant Managers, Project Assistants, Office Coordinators, and Desktop Publishing Specialists.

Program Outcomes

1. Graduates will possess the knowledge and skills for immediate employment in related professional software support areas.
2. Graduates will have successfully mastered the general education program requirements for work and life roles.
3. Graduates will be prepared for the Microsoft Office certification in Word, Excel, Access and PowerPoint.

Program Advisor

Alli Vainshtein alli.vainshtein@saintpaul.edu
651.846.1529

Class Options

Some day, evening, online, and Saturday class availability. Students may attend full-time or part-time.

Program Requirements

- Check off when completed

Students may complete courses in the Business Applications Specialist Certificate online. To be successful in an online course, students must have easy access to the Internet, ability to work independently, be self-disciplined and self-motivated and have good time management skills.

Required Business Core Cr

Professional Component	
<input type="checkbox"/> BTEC 1421 Business Information Applications 1 . . .	3
<input type="checkbox"/> BUSN 1449 Business Communications	3
Required Business Core	6

Course Cr

<input type="checkbox"/> BTEC 1423 Business Information Applications 2 . .	4
<input type="checkbox"/> BTEC 1530 Communication Technology	4
<input type="checkbox"/> BTEC 2506 Business Information Applications 3 . .	4
<input type="checkbox"/> BTEC 2550 Emerging Business Technologies	4
Subtotal	16

General Education/MnTC Requirements Cr

<input type="checkbox"/> SPCH 1720 Interpersonal Communications is recommended.	
General Education Requirements	3

Total Program Credits 25

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

BTEC 1421 Business Information Applications 1	3
BUSN 1449 Business Communications	3
SPCH 1720 Interpersonal Communications (recommended)	3
Total Semester Credits	9

Second Semester

BTEC 1423 Business Information Applications 2	4
BTEC 1530 Communication Technology	4
Total Semester Credits	8

Third Semester

BTEC 2506 Business Information Applications 3	4
BTEC 2550 Emerging Business Technologies	4
Total Semester Credits	8

Total Program Credits 25

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Keyboarding Skills: Minimum of 40 WPM with 3 errors or less or a grade of "C" or better in BTEC 1400.

Computer Skills: Basic computer skills such as word processing, spreadsheets, and Internet usage or a grade of "C" or better in BTEC 1418.

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

283C (7146)

*Information is subject to change.
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Business Management AS DEGREE

Program Overview

This degree is designed for students to continue their education in business towards a bachelor's degree at four-year institutions. Some bachelor degree majors include Management, Marketing, Accounting, Human Resources, and International Business. This program is also available completely online. The Business Management AS degree prepares students for general management responsibilities. Students learn about the functions of business, including accounting, management, marketing, and human resources. Students study a broad background of business and liberal arts subjects that prepare them for entry-level positions in business.

Career Opportunities

Employment opportunities are very good for skilled, capable, and dependable business professionals. Employers are looking for business professionals with excellent communication skills, organizational skills, human relation skills and enthusiasm for the job and organization. Graduates should continue their education towards a bachelor's degree or begin work in a variety of settings. Graduates can explore opportunities that match their interests and education in a variety of industries.

Program Outcomes

1. Graduates will have the skills, knowledge, and abilities, in core business functions.
2. Graduates will have a basic understanding of the ethics that impact the business environment.
3. Graduates will be prepared to transfer to another college or university to complete a bachelors program.
4. Graduates will have successfully mastered the general education requirements for work and life roles.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Business Management AS

- BS Business Administration
Metropolitan State University
- BS Business Administration
Saint Mary's University-Twin Cities Campus
- BS Business Administration
Minnesota State University, Moorhead
- BS Accounting
Saint Mary's University-Twin Cities Campus

*Information is subject to change.
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Program Advisors

- Craig Maus craig.maus@saintpaul.edu
- Susan Senger susan.senger@saintpaul.edu
- Anna Ouattara anna.ouattara@saintpaul.edu
- Mindy Travers mindy.travers@saintpaul.edu

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, Saturday and online courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Required Business Core

- | | |
|---|-----------|
| <input type="checkbox"/> ACCT 1411 Principles of Accounting 1 | 4 |
| <input type="checkbox"/> BUSN 1449 Business Communications | 3 |
| <input type="checkbox"/> BTEC 1421 Business Information Applications 1 OR
CSCI 2410 Management Information Systems | 3 |
| <input type="checkbox"/> BUSN 1410 Introduction to Business | 3 |
| <input type="checkbox"/> BUSN 2465 Business Ethics | 3 |
| Required Business Core | 16 |

Course

- | | |
|--|-----------|
| <input type="checkbox"/> ACCT 1412 Principles of Accounting 2 | 4 |
| <input type="checkbox"/> BUSN 1440 Marketing Principles | 3 |
| <input type="checkbox"/> BUSN 1480 Business Career Resources | 1 |
| <input type="checkbox"/> BUSN 2450 Management Fundamentals | 3 |
| <input type="checkbox"/> Business Management elective | 3 |
| <i>Choose 3 credits from the following electives:</i> | |
| <input type="checkbox"/> BUSN 2470 Legal Environment of Business | 3 |
| <input type="checkbox"/> BUSN 2473 Project Management | 3 |
| <input type="checkbox"/> BUSN 2591 Business Management
Internship | 3 |
| <input type="checkbox"/> HMRS 1400 Human Resources
Management | 3 |
| Subtotal | 14 |

General Education/MnTC Requirements

- Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
- | | |
|---|-----------|
| <input type="checkbox"/> Goal 1: Communication | 7 |
| ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3cr | |
| <input type="checkbox"/> Goal 3 or Goal 4 | 3 |
| Goal 3: Natural Sciences
Goal 4: Mathematical/Logical Reasoning
MATH 17XX OR
BIOL 1725 Environmental Science (recommended) | |
| <input type="checkbox"/> Goal 5: History, Social Science and
Behavioral Sciences | 3 |
| ECON 1720 Macroeconomics – 3 cr OR
ECON 1730 Microeconomics – 3 cr | |
| <input type="checkbox"/> Goal 6: Humanities and Fine Arts | 3 |
| <input type="checkbox"/> Goals 1-10 of the Minnesota Transfer Curriculum | 14 |
| Select a minimum of 14 additional credits | |
| General Education Requirements | 30 |

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

- | | |
|--|-----------|
| ACCT 1411 Principles of Accounting 1 | 4 |
| BTEC 1421 Business Info Applications 1 OR
CSCI 2410 Mgmt Info Systems | 3 |
| BUSN 1410 Introduction to Business | 3 |
| ENGL 1711 Composition I | 4 |
| Total Semester Credits | 14 |

Second Semester

- | | |
|---|-----------|
| ACCT 1412 Principles of Accounting 2 | 4 |
| BUSN 2465 Business Ethics | 3 |
| ECON 1720 Macroeconomics OR
ECON 1730 Microeconomics | 3 |
| Humanities and Fine Arts (Goal 6) | 3 |
| SPCH XXXX (Goal 1 only) | 3 |
| Total Semester Credits | 16 |

Third Semester

- | | |
|---|-----------|
| BUSN 1449 Business Communications | 3 |
| BUSN 1440 Marketing Principles | 3 |
| BUSN 2450 Management Fundamentals | 3 |
| BUSN 1480 Business Careers Resources | 1 |
| MATH 17XX OR BIOL 1725 Environmental Science
(recommended) | 4 |
| Total Semester Credits | 14 |

Fourth Semester

- | | |
|-------------------------------|-----------|
| Business Management elective | 3 |
| Mn Transfer Curriculum | 13 |
| Total Semester Credits | 16 |

Total Program Credits 60



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Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722 and ENGL 0922

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

233S (7100)

Nonprofit CERTIFICATE

Program Overview

The Nonprofit Certificate program is designed for students who are currently working in the nonprofit sector or for those who desire an introductory perspective on the unique issues facing a nonprofit organization. This certificate program consists of 12 courses geared to provide the essential information of nonprofit business. These courses are delivered in a timely manner designed to fit your busy work and family schedules. Students will examine the fundamental principles of nonprofit, the roles and responsibilities of a nonprofit board of directors and the management team, the essential aspects of fundraising, and the fundamentals of the budgeting process.

Nonprofit organizations face new challenges: government funding cutbacks, growing numbers of clients, and the expanding need to acquire and manage financial resources. Nonprofit organizations must find ways to meet these challenges.

Enrolling in this certificate program will provide you with knowledge designed to empower the nonprofit organization employee with the skills necessary to succeed. For those who work in, or desire to work in, a nonprofit organization or business environment, this is the program for you!

Program Outcomes

1. Graduates will examine the fundamental principles of the nonprofit organization, as well as roles and responsibilities of nonprofit board of directors, volunteers, and the management team.
2. Graduates will develop practical and managerial skills necessary to plan operational success.
3. Graduates will understand financial and accounting terms.
4. Graduates will develop the skills of the marketing process.
5. Graduates will learn the basics of employment law, compliance and regulatory requirements.
6. Graduates will examine the foundational aspects of fundraising and grant writing and how to maximize those opportunities.
7. Graduates will develop a successful leadership style.
8. Graduates will gain confidence and improve communication skills.
9. Graduates will explore the process of negotiating and evaluate negotiation styles.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Advisor

Susan Senger susan.senger@saintpaul.edu
651.846.1519

Part-time/Full-time Options

Some day, evening, Saturday and online class availability. Students may attend full-time or part-time.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> ACCT 1411 Principles of Accounting 1	4
<input type="checkbox"/> BUSN 1449 Business Communications	3
<input type="checkbox"/> BUSN 2440 Fundamentals of Nonprofit Management	3
<input type="checkbox"/> BUSN 2441 Fundraising Techniques	1
<input type="checkbox"/> BUSN 2442 Grant Writing and Research	1
<input type="checkbox"/> BUSN 2443 Dynamics of Board Relations	1
<input type="checkbox"/> BUSN 2444 Volunteer Program Management	1
<input type="checkbox"/> BUSN 2445 Nonprofit Law and Ethics	1
<input type="checkbox"/> BUSN 2450 Management Fundamentals	3
<input type="checkbox"/> BUSN 2465 Business Ethics	3
<input type="checkbox"/> BUSN 2472 Business Negotiation Skills	3
<input type="checkbox"/> BUSN 2473 Project Management	3
Total Program Credits	27

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1	4
BUSN 1449 Business Communications	3
BUSN 2440 Fundamentals of Nonprofit Management	3
BUSN 2441 Fundraising Techniques	1
BUSN 2442 Grant Writing and Research	1
BUSN 2443 Dynamics of Board Relations	1
Total Semester Credits	13

Second Semester

BUSN 2444 Volunteer Program Management	1
BUSN 2445 Nonprofit Law and Ethics	1
BUSN 2450 Management Fundamentals	3
BUSN 2465 Business Ethics	3
BUSN 2472 Business Negotiation Skills	3
BUSN 2473 Project Management	3
Total Semester Credits	14

Total Program Credits 27

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

304C (7156)

Project Management CERTIFICATE

Program Overview

Project management is used throughout business to make sure an organization achieves its objectives. A project management certificate prepares students with the tools, skills, and knowledge necessary to initiate, plan, and implement projects successfully. Project planning topics include various types of business projects with special focus on information technology projects to help provide an overview of project management. Techniques such as work breakdown structures, network diagrams, critical path method, earned value analysis, various financial analysis templates and others are covered in the courses.

Career Opportunities

Employment opportunities are very good for skilled, capable, and dependable business professionals. Employers are looking for business professionals with excellent communication skills, organizational skills, human relation skills and enthusiasm for the job and organization. Graduates may choose to continue their education towards a bachelor's degree or begin work in a variety of settings. Graduates can explore opportunities that match their interests and education in a variety of industries.

Program Outcomes

1. Graduates will have the skills, knowledge, and abilities in project management.
2. Graduates will have a basic understanding of project planning.
3. Graduates will have the skills and knowledge necessary to initiate, plan, and implement projects successfully.

Program Advisor

Kendal Loewen kendal.loewen@saintpaul.edu

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, online and Saturday courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> BUSN 1449 Business Communications	3
<input type="checkbox"/> BUSN 1760 Principles of Finance	4
<input type="checkbox"/> BUSN 2464 Leading and Coaching Others	2
<input type="checkbox"/> BUSN 2472 Business Negotiation Skills	3
<input type="checkbox"/> BUSN 2473 Project Management	3
<input type="checkbox"/> BSLM 2450 Procurement Principles and Applications	3
<input type="checkbox"/> CSCI 2410 Management Information Systems	3
Total Program Credits	21

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

BUSN 1449 Business Communications	3
BUSN 1760 Principles of Finance	4
BUSN 2464 Leading and Coaching Others	2
BUSN 2472 Business Negotiation Skills	3
Total Semester Credits	12

Second Semester

BUSN 2473 Project Management	3
BSLM 2450 Procurement Principles and Applications	3
CSCI 2410 Management Information Systems	3
Total Semester Credits	9

Total Program Credits 21

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

251C (7152)

*Information is subject to change.
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Project Management AAS DEGREE

Program Overview

Project Managers oversee the planning, implementing, quality control, and status reporting for a given project. Projects exist in all industries including construction, information technology, healthcare and business. Project Managers are needed to manage teams, plan, coordinate, and budget projects from initiation to completion. If you are skilled in a specific industry there are opportunities to use your technical expertise to lead industry-related projects. Construction, IT, Healthcare and Real Estate Project Managers are in especially high demand. Projects can vary greatly in size, specialty and complexity, creating opportunities for Project Managers with varying expertise and experience.

This program provides students with the skills and knowledge to effectively initiate, plan, and implement projects. In addition, the program provides a transferrable skill set in the areas of management, human resources, finance, negotiation, decision making, and leadership.

Career Opportunities

Employment opportunities are very good for skilled, capable, and dependable business professionals. Graduates may choose to continue their education towards a bachelor's degree or begin work in a variety of settings. Possible roles might include: Project Manager, Cost Estimator, Project Coordinator, Project Scheduler, or Assistant Project Manager.

Program Outcomes

1. Graduates will define project management concepts including project, program and portfolio management and its application in today's business world.
2. Graduates will have knowledge in various approaches for selecting projects and programs.
3. Graduates will have knowledge and skills in customer service and demonstrate good oral and written presentation skills.
4. Graduates will apply project management concepts by working on a team project as a project manager or active team member.
5. Graduates will understand the importance of sound business and project management principles.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Project Management AAS

- BS Project Management
Minnesota State University-Moorhead
- BS Business Administration
Saint Mary's University-Twin Cities Campus

Program Advisors

Kendal Loewen kendal.loewen@saintpaul.edu
Susan Senger susan.senger@saintpaul.edu

Program Requirements

Check off when completed

Required Business Core Cr

Professional Component

- ACCT 1411 Principles of Accounting 1 4
- BTEC 1421 Business Info Applications 1 OR
CSCI 2410 Management Information Systems. 3
- BUSN 1449 Business Communications. 3
- BUSN 1410 Introduction to Business. 3
- BUSN 2465 Business Ethics 3
- Required Business Core 16**

Program Courses Credits

- BUSN 2473 Project Management 3
- BUSN 2450 Management Fundamentals. 3
- BSLM 2420 Supply Chain Management. 4
- BSLM 2450 Procurement Principles and Applications. 3
- BUSN 2464 Leading and Coaching Others 2
- BUSN 2472 Business Negotiation Skills 3
- BUSN 1760 Principles of Finance 4
- HMRS 1400 Human Resource Management 3
- BUSN 2410 Critical Thinking for Business Decision Making. 2
- Subtotal. 27**

General Education/MnTC Requirements Cr

- Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4cr
SPCH XXXX (Goal 1 only) – 3cr
 - Goal 3 or Goal 4 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical /Logical Reasoning
 - Goal 5: History, Social Science, and Behavior Sciences. 3
ECON1720 Macroeconomics OR
ECON1730 Microeconomics
 - Goal 6: Humanities & Fine Arts 3
 - Goal 1-10 on the Minnesota Transfer Curriculum. . . 1
 - General Education Requirements 17**

Total Program Credits 60



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Program Start Dates

Fall, Spring, Summer

Course Sequence

This course sequence is recommended for a full-time student; however, this sequence is not required.

Not all courses are offered each semester; a selection of courses is offered summer term.

Students should consult with the Program Advisor each semester.

First Semester

- ACCT 1411 Principles of Accounting 1. 4
- BTEC 1421 Business Info Applications 1 OR
CSCI 2410 Management Info Systems. 3
- BUSN 1449 Business Communications. 3
- BUSN 1410 Introduction to Business 3
- ENGL 1711 Composition 1 4
- Total Semester Credits. 17**

Second Semester

- BUSN 2473 Project Management. 3
- BUSN 2450 Management Fundamentals 3
- BSLM 2420 Supply Chain Management. 4
- BSLM 2450 Procurement Principles and Applications. . . 3
- SPCH XXXX (Goal 1 only) 3
- Total Semester Credits. 16**

Third Semester

- BUSN2464 Leading and Coaching 2
- BUSN 2465 Business Ethics. 3
- BUSN1760 Principles of Finance. 4
- ECON 1720 Macroeconomics OR
ECON 1730 Microeconomics. 3
- Total Semester Credits. 12**

Fourth Semester

- BUSN 2472 Business Negotiation Skills 3
- BUSN 2410 Critical Thinking for Business Decision Making 2
- HMRS1400 Human Resource Management 3
- Mn Transfer Curriculum. 7
- Total Semester Credits. 15**

Total Program Credits 60

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of C or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+; Visit the Transfer Center to determine if transfer programs require college-level math

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

251A (7207)

Entrepreneurship AAS DEGREE

Program Overview

Many people dream of owning their own business for financial and professional independence as well as the pride of ownership. A degree in Entrepreneurship can help make that dream become a reality, by providing students with the skills and knowledge necessary to launch a successful business. In this degree program students will learn how to develop, maintain and grow their own business; explore entrepreneurial concepts and processes that apply to both start-up and well-established enterprises, with an innovative focus and an entrepreneurial spirit. Students will analyze how an organization contributes to society and how entrepreneurship and commercial activities affect the environment. They will also explore topics such as market opportunity, product development, intellectual property and commercialization.

Entrepreneurship and small business plays a key role in the U.S. economy by providing jobs to a large segment of the workforce. Completing this degree will help the small business entrepreneur maximize the skills and abilities necessary to do business in our challenging environment.

Career Opportunities

Employment opportunities are excellent for starting your own business.

Program Outcomes

1. Graduates will have skills, knowledge and abilities in core business functions, including accounting, marketing and management.
2. Graduates will have an understanding of how to start and market an entrepreneur/small business operation.
3. Graduates will be prepared to manage, market, and enhance an entrepreneurship/small business operation.
4. Graduates will successfully complete a business plan for their new business.
5. Graduates will have critical thinking skills.



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Program Advisor

Susan Senger susan.senger@saintpaul.edu
651.846.1519

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, Saturday, and online courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Required Business Core Cr

Professional Component

- ACCT 1411 Principles of Accounting 1 4
- BUSN 1449 Business Communications 3
- BTEC 1421 Business Information Applications 1 OR CSCI 2410 Management Information Systems 3
- BUSN 1410 Introduction to Business 3
- BUSN 2465 Business Ethics 3
- Required Business Core 16**

Course Cr

- BUSN 1440 Marketing Principles 3
- BUSN 1480 Business Career Resources 1
- BUSN 2450 Management Fundamentals 3
- BUSN 2455 Essentials of Entrepreneurship & Small Business Management 3
- BUSN 2460 Entrepreneurship Resources 2
- BUSN 2464 Leading and Coaching Others OR BUSN 2466 Managing Change and Conflict 2
- BUSN 2472 Business Negotiation Skills 3
- BUSN 2482 Entrepreneurship Capstone 3
- DGIM 1443 Graphical Web Design 1 2
- HMRS 2410 Employee/Labor Relations 3
- Elective credits with advisor approval 3
- Subtotal 28**

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
- Goal 3 or Goal 4 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
- Goal 5: History, Social Science, and Behavioral Sciences 3
ECON 1720 Macroeconomics – 3 cr OR
ECON 1730 Microeconomics – 3 cr
- Goal 6: Humanities and Fine Arts 3
- General Education Requirements 16**

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The course sequence listed on the back of this guide is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Entrepreneurship AAS

- BS Applied Organizational Studies
Minnesota State University-Mankato
- BS Business Administration
Saint Mary's University-Twin Cities Campus

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites

252A (7119)

Entrepreneurship AAS DEGREE *(continued)*

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1	4
BTEC 1421 Business Info Applications 1 OR CSCI 2410 Mgmt Info Systems	3
BUSN 1449 Business Communications	3
BUSN 1410 Introduction to Business	3
ENGL 1711 Composition I	4
Total Semester Credits	17

Second Semester

BUSN 1440 Marketing Principles	3
BUSN 1480 Business Career Resources	1
BUSN 2450 Management Fundamentals	3
BUSN 2465 Business Ethics	3
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	13

Third Semester

BUSN 2455 Essentials of Entrepreneurship & Small Business Management	3
BUSN 2460 Entrepreneurship Resources	2
BUSN 2464 Leading and Coaching Others OR BUSN 2466 Managing Change and Conflict	2
BUSN 2472 Business Negotiation Skills	3
ECON 1720 Macroeconomics OR ECON 1730 Microeconomics	3
Total Semester Credits	13

Fourth Semester

BUSN 2482 Entrepreneurship Capstone	3
DGIM 1443 Graphical Web Design 1	2
HMRS 2410 Employee/Labor Relations	3
Elective credits with advisor approval	3
Mn Transfer Curriculum	6
Total Semester Credits	17

Total Program Credits	60
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Entrepreneurship CERTIFICATE

Program Overview

Many people dream of owning their own business for financial and professional independence as well as the pride of ownership. A certificate in Entrepreneurship can help make that dream become a reality, by providing students with the skills and knowledge necessary to launch a successful business. In this certificate program students will learn how to develop, maintain and grow their own business; explore entrepreneurial concepts and processes that apply to both start-up and well-established enterprises, with an innovative focus and an entrepreneurial spirit. Students will analyze how an organization contributes to society and how entrepreneurship and commercial activities affect the environment. They will also explore topics such as market opportunity, product development, intellectual property and commercialization.

Entrepreneurship and small business plays a key role in the U.S. economy by providing jobs to a large segment of the workforce. Completing this certificate will help the small business entrepreneur maximize the skills and abilities necessary to do business in our challenging environment.

Career Opportunities

Employment opportunities are excellent for starting your own business.

Program Outcomes

1. Graduates will have skills, knowledge and abilities in core business functions, including accounting, marketing and management.
2. Graduates will have an understanding of how to start and market an entrepreneur/small business operation.
3. Graduates will be prepared to manage, market, and enhance an entrepreneurship/ small business operation.
4. Graduates will successfully complete a business plan for their new business.

Program Advisor

Susan Senger susan.senger@saintpaul.edu
651.846.1519

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, Saturday, and online courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> BUSN 2455 Essentials of Entrepreneurship & Small Business Management	3
<input type="checkbox"/> BUSN 2460 Entrepreneurship Resources	2
<input type="checkbox"/> BUSN 2472 Business Negotiation Skills	3
<input type="checkbox"/> BUSN 2482 Entrepreneurship Capstone	3
<input type="checkbox"/> DGIM 1443 Graphical Web Design 1	2
<input type="checkbox"/> HMRS 2410 Employee/Labor Relations	3

Total Program Credits 16

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

BUSN 2455 Essentials of Entrepreneurship & Small Business Management	3
BUSN 2460 Entrepreneurship Resources	2
BUSN 2472 Business Negotiation Skills	3
BUSN 2482 Entrepreneurship Capstone	3
DGIM 1443 Graphical Web Design 1	2
HMRS 2410 Employee/Labor Relations	3

Total Program Credits 16

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

253C (7171)

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Music Business AAS DEGREE

Program Overview

The Music Business AAS Degree is an innovative curriculum designed to prepare students for today's music industry. The degree has a business entrepreneur emphasis and is designed for both the performing musician and the business student. The program combines a flexible curriculum with an emphasis in business and marketing, along with music industry related course and experiences.

Career Opportunities

Typical career paths include musician, manager or agent, songwriter, and publisher. Since the industry has radically changed over the last decade and has largely become a field in which Do-It-Yourself skills have become essential survival tools, much of the curriculum is focused on the self-sufficiency of the student, and the ability to access all available means of production and promotion with superb technical skills, and relevant industry knowledge. The entertainment industry is one of the largest industries worldwide. Next to the film industry, the music industry represents the largest component of the entertainment industry. Publishing, marketing, musical instrument sales, record companies, copyrights, management, music production, evolving Internet opportunities and other components of the music industry are explored in the new program. Wherever music is created or heard, there exists employment opportunities.

Program Outcomes

1. Graduates will have knowledge and skills in music production, internet opportunities and marketing.
2. Graduates will have knowledge and skills in digital sound and video.
3. Graduates will be prepared for positions in marketing, management, music production, web site design, and blogging techniques.
4. Graduates will have knowledge and skills to provide foresight of potential opportunities in the management of the music business.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Music Business AAS

- BA Individualized Studies
Metropolitan State University
- BS Marketing
Saint Mary's University-Twin Cities Campus
- BS Business Administration
Saint Mary's University-Twin Cities Campus

Information is subject to change.
This Program Requirements Guide is not a contract.

Program Advisor

Craig Maus craig.maus@saintpaul.edu

Part-time/Full-time Options

Some day, evening, and Saturday class availability. Students may attend full-time or part-time.

Recommended Equipment

Digital Camera, USB Drive, Adobe Software

Program Requirements

Check off when completed

Required Business Core Cr

Professional Component

- ACCT 1411 Principles of Accounting 1 4
- BUSN 1449 Business Communications 3
- BTEC 1421 Business Information Applications 1 OR
CSCI 2410 Management Information Systems . . . 3
- BUSN 1410 Introduction to Business 3
- BUSN 2465 Business Ethics 3
- Required Business Core 16**

Course Cr

- BUSN 1770 The Business of Music. 3
- BUSN 1780 Business Trends in Music. 3
- BUSN 2455 Entrepreneurship and
Small Business Management 3
- BUSN 2460 Entrepreneurship Resources. 2
- BUSN 2482 Entrepreneurship Capstone 3
- DGIM 1443 Graphical Web Design 1. 2
- DGIM 1444 Graphical Web Design 2. 2
- DGIM 1540 Blogging Applications 2
- DGIM 2586 Digital Sound 2
- DGIM 2587 Digital Video 1 2
- DGIM 2588 Digital Video 2 2
- Any 2 Credit DGIM Elective 2
- Subtotal. 28**

General Education/MnTC Requirements Cr

- Must complete at least 16 credits from the Minnesota Transfer Curriculum-MnTC
- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
 - Goal 3 or Goal 4 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
 - Goal 5: History, Social Science, and
Behavioral Sciences 3
ECON 1720 Macroeconomics – 3 cr OR
ECON 1730 Microeconomics – 3 cr
 - Goal 6: Humanities and Fine Arts. 3
Students are strongly encouraged to consider
MUSC 1740 Music Appreciation and/or
MUSC 1750 Jazz History
 - General Education Requirements 16**

Total Program Credits 60



The mission of the Business Department at Saint Paul College is to sustain the College mission by providing quality, lifelong business education supported by technology for a diverse, metropolitan student population.

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

- ACCT 1411 Principles of Accounting 1. 4
- BTEC 1421 Business Info Applications 1 OR
CSCI 2410 Mgmt Info Systems 3
- BUSN 1449 Business Communications 3
- BUSN 1410 Introduction to Business 3
- ENGL 1711 Composition 1 4
- Total Semester Credits. 17**

Second Semester

- BUSN 1770 The Business of Music. 3
- BUSN 1780 Business Trends in Music 3
- BUSN 2455 Entrepreneurship and Small
Business Management. 3
- BUSN 2460 Entrepreneurship Resources 2
- MUSC 1740 Music Appreciation OR
MUSC 1750 Jazz History (recommended). . . 3
- Total Semester Credits. 14**

Third Semester

- BUSN 2465 Business Ethics. 3
- DGIM 1443 Graphical Web Design 1 2
- DGIM 1444 Graphical Web Design 2 2
- DGIM 1540 Blogging Applications. 2
- DGIM 2586 Digital Sound. 2
- DGIM 2587 Digital Video 1. 2
- SPCH XXXX (Goal 1 only) 3
- Total Semester Credits. 16**

Fourth Semester

- BUSN 2482 Entrepreneurship Capstone. 3
- DGIM 2588 Digital Video 2. 2
- Any 2 Credit DGIM Elective 2
- ECON 1720 Macroeconomics OR
ECON 1730 Microeconomics 3
- Mn Transfer Curriculum. 3
- Total Semester Credits. 13**

Total Program Credits 60

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

335A (7182)

Finance AS DEGREE

Program Overview

This degree is designed for students to continue their education in finance towards a bachelor's degree at four-year institutions. Students taking this degree would be planning to major in Finance or Accounting. The Finance AS degree prepares students for finance responsibilities. Students learn about the functions of business, including accounting, management, marketing, and human resources. Students study a broad background of finance, business and liberal arts subjects that prepare them for entry-level positions in finance.

Career Opportunities

Employment opportunities are very good for skilled, capable, and dependable finance professionals. Employers are looking for business professionals with excellent communication skills, organizational skills, human relation skills and enthusiasm for the job and organization. Graduates should continue their education towards a bachelor's degree or begin work in a variety of settings. Graduates can explore opportunities that match their interests and education in a variety of industries.

Program Outcomes

1. Graduates will have the skills, knowledge, and abilities in core business functions.
2. Graduates will have a basic understanding of the ethics that impact the business environment.
3. Graduates will be prepared to transfer to another college or university to complete a bachelors program.
4. Graduates will have successfully mastered the general education requirements for work and life roles.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Finance AS

- BA Accounting (Cohort)
Concordia University
- BS Business (Cohort)
Concordia University
- BA Business Management (Traditional)
Concordia University
- BS Finance (Traditional)
Concordia University
- BS Accounting
Saint Mary's University-Twin Cities Campus
- BS Business Administration
Saint Mary's University-Twin Cities Campus
- BS Finance
Metropolitan State University

Program Advisors

Kendal Loewen kendal.loewen@saintpaul.edu
Jim O'Halloran james.o'halloran@saintpaul.edu

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, Saturday and online courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Required Business Core Cr

Professional Component

- ACCT 1411 Principles of Accounting 1 4
- BUSN 1449 Business Communications 3
- BTEC 1421 Business Information Applications 1 OR
CSCI 2410 Management Information Systems 3
- BUSN 1410 Introduction to Business 3
- BUSN 2465 Business Ethics 3
- Required Business Core 16**

Course Cr

- BUSN 1760 Principles of Finance 4
- BUSN 1762 Money and Banking 4
- BUSN 1782 Investments 3
- BUSN 1784 Principles of Risk Mgmt. & Insurance . . 3
- Subtotal 14**

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3cr
- Goal 3 or Goal 4 4
Goal 3: Natural Sciences
Goal 4: Mathematical/Logical Reasoning
MATH 1740 Introduction to Statistics – 4 cr OR
BIOL 1725 Environmental Science – 4 cr
- Goal 5: History, Social Science and Behavioral Sciences 3
ECON 1720 Macroeconomics – 3 cr OR
ECON 1730 Microeconomics – 3 cr
- Goal 6: Humanities and Fine Arts 3
- Goals 1-10 of the Minnesota Transfer Curriculum . . 13
Select a minimum of 13 additional credits
- General Education Requirements 30**

Total Program Credits 60



The mission of the Business Department at Saint Paul College is to sustain the College mission by providing quality, lifelong business education supported by technology for a diverse, metropolitan student population.

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

- ACCT 1411 Principles of Accounting 1 4
- BTEC 1421 Business Info Applications 1 OR
CSCI 2410 Mgmt Info Systems 3
- BUSN 1410 Introduction to Business 3
- ENGL 1711 Composition I 4
- Total Semester Credits 14**

Second Semester

- BUSN 1760 Principles of Finance 4
- BUSN 2465 Business Ethics 3
- ECON 1720 Macroeconomics OR
ECON 1730 Microeconomics 3
- Humanities and Fine Arts (Goal 6) 3
- SPCH XXXX (Goal 1 only) 3
- Total Semester Credits 16**

Third Semester

- BUSN 1449 Business Communications 3
- BUSN 1782 Investments 3
- BUSN 1784 Principles of Risk Mgmt. & Insurance . . 3
- Goal 3 or Goal 4 4
- Total Semester Credits 13**

Fourth Semester

- BUSN 1762 Money and Banking 4
- Mn Transfer Curriculum 13
- Total Semester Credits 17**

Total Program Credits 60

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

362S (7209)

Finance CERTIFICATE

Program Overview

The Finance Certificate program is designed for students who have a desire to learn or enhance specific finance skills. These skills include summarizing and analyzing specific financial data, personal finance and money and banking. The graduate will help prepare spreadsheet analysis, database entries and provide other application software support.

This program is targeted at accounting and business students who have an interest in finance and would like to add a certificate in finance to their resume to enhance their career path and potential. Accounting students pursuing an AAS degree from Saint Paul College can obtain this Certificate by taking three additional courses. This certificate program covers the fundamental areas of family and personal financial planning, basic financial theory and issues related to banking and the financial industry. Basic financial theory includes the time value of money concepts and the theory of pricing various types of financial instruments.

Business managers in all different roles face financial challenges in today's complex business environment. Enrolling in this certificate program will give students the financial tools they need to become better rounded financial managers and also will allow professionals in any field to improve their performance by understanding the financial functions within their area and company.

Excellent reading skills and a combination of interest and ability to concentrate on detail, an analytical mind, good judgment and absolute integrity are necessary for success in the field of finance.

Program Outcomes

1. Graduates will have a self-awareness of business and personal finance theory and learn how to apply this theory to real-world personal and business financial issues.
2. Graduates will be equipped with a solid foundation in finance theory.
3. Graduates will be able to apply finance theory to their personal financial situation.
4. Graduates will be able to apply finance theory to financial decisions within the banking and financial industries.
5. Graduates will develop characteristics and finance intelligence that will allow them to make prudent financial decisions in whatever function they occupy within an organization.
6. Graduates will have a working knowledge of finance consistent with ethical, legal and regulatory expectations.
7. Graduates will have a competitive advantage in job and career development.

Program Advisors

Kendal Loewen kendal.loewen@saintpaul.edu
 Jim O'Halloran james.o'halloran@saintpaul.edu

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> ACCT 1411 Principles of Accounting 1	4
<input type="checkbox"/> ACCT 1412 Principles of Accounting 2	4
<input type="checkbox"/> ACCT 2420 Managerial Accounting	4
<input type="checkbox"/> ACCT 2540 Financial Modeling for Spreadsheets	4
<input type="checkbox"/> BUSN 1760 Principles of Finance	4
<input type="checkbox"/> BUSN 1762 Money and Banking	4
<input type="checkbox"/> BUSN 2459 Family and Personal Financial Planning	4
Total Program Credits	28

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1	4
BUSN 1760 Principles of Finance	4
Total Semester Credits	8

Second Semester

ACCT 1412 Principles of Accounting 2	4
BUSN 1762 Money and Banking	4
Total Semester Credits	8

Third Semester

ACCT 2420 Managerial Accounting	4
ACCT 2540 Financial Modeling for Spreadsheets	4
BUSN 2459 Family and Personal Financial Planning	4
Total Semester Credits	12

Total Program Credits 28

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

362C

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Global Trade Specialist AAS DEGREE

Program Overview

The global trade area is especially suited for persons who are self-reliant, imaginative, adaptable, and who possess an interest in working with people from other cultures.

Career Opportunities

More than four million people in the United States work in jobs related to global trade. In Minnesota, many businesses engage in global trade, with a dramatic increase in trade activity expected within five years.

A career in global trade offers you the opportunity to work in the global marketplace. The Global Trade Specialist Program will provide you with knowledge and skills that will prepare you for employment in the export and import departments of businesses. You will be working with people from foreign countries, handling foreign orders, filling overseas orders, handling customer matters and determining tariff rates for the entry of foreign goods through U.S. Customs. Job titles include: Global Sales/Marketing Assistant, Global Marketing Communication Coordinator, Global Documentation Specialist, Global Customer Service Coordinator, Export-Import Coordinator, Global Banker and Global Transportation Coordinator.

This program also provides an excellent foundation for individuals wanting to be entrepreneurs in the import/export business. The import/export field is growing! You can grow with it.

Program Outcomes

1. Graduates will have knowledge and skills in domestic and global transportation management and logistics.
2. Graduates will have knowledge of U.S. Custom regulations and classifications.
3. Graduates will demonstrate the ability to successfully perform as Global Trade Specialists via internships.
4. Graduates will be prepared for employment as Global Trade Specialists.
5. Graduates will have knowledge and skills in customer service.
6. Graduates will have critical thinking skills.

Program Advisor

Susan Senger susan.senger@saintpaul.edu
651.846.1519

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, Saturday and online courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Required Business Core Cr

Professional Component

- ACCT 1411 Principles of Accounting 1 4
- BTEC 1421 Business Information Applications 1 OR
CSCI 2410 Management Information Systems 3
- BUSN 1449 Business Communications 3
- BUSN 1410 Introduction to Business 3
- BUSN 2465 Business Ethics 3
- Required Business Core 16**

Course Cr

- BSLM 1410 Transportation Management. 3
- BSLM 1510 Distribution Management. 3
- BSLM 2420 Supply Chain Management. 4
- BUSN 1480 Business Career Resources 1
- INTL 1400 Introduction to International Business . . . 3
- INTL 1410 International Communications and
Cultural Awareness 3
- INTL 1512 Export Shipping and Compliance. 3
- INTL 2420 U.S. Customs and Importing. 3
- INTL 2530 International Marketing 3
- Business Electives 2
Select 2 credits with advisor approval
- Subtotal. 28**

General Education/MnTC Requirements Cr

- Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
 - Goal 3 or Goal 4. 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
 - Goal 5: History, Social Science, and
Behavioral Sciences 3
ECON 1720 Macroeconomics – 3 cr OR
ECON 1730 Microeconomics – 3 cr
 - Goal 6: Humanities and Fine Arts. 3
 - General Education Requirements 16**

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The course sequence listed on the back of this guide is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Global Trade Specialist AAS

- BAS International Commerce
Metropolitan State University
- BS Applied Organizational Studies
Minnesota State University-Mankato
- BS Business Administration
Saint Mary's University-Twin Cities Campus

Continued on next page



The mission of the Business Department at Saint Paul College is to sustain the College mission by providing quality, lifelong business education supported by technology for a diverse, metropolitan student population.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

333A (7175)

Global Trade Specialist AAS DEGREE *(continued)*

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1	4
BTEC 1421 Business Info Applications 1 OR CSCI 2410 Mgmt Info Systems	3
BUSN 1449 Business Communications	3
BUSN 1410 Introduction to Business	3
ENGL 1711 Composition 1	4
Total Semester Credits	17

Second Semester

BSLM 1410 Transportation Management	3
BSLM 1510 Distribution Management	3
BSLM 2420 Supply Chain Management	4
INTL 1400 Introduction to International Business	3
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	16

Third Semester

BUSN 1480 Business Career Resources	1
BUSN 2465 Business Ethics	3
INTL 1410 International Communications and Cultural Awareness	3
INTL 1512 Export Shipping and Compliance	3
ECON 1720 Macroeconomics OR ECON 1730 Microeconomics	3
Total Semester Credits	13

Fourth Semester

INTL 2420 U.S. Customs and Importing	3
INTL 2530 International Marketing	3
Business Elective	2
Mn Transfer Curriculum	6
Total Semester Credits	14

Total Program Credits	60
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Global Trade Professional CERTIFICATE

Program Overview

This certificate is transferable to the Global Trade Specialist AAS program.

This certificate program is designed for an individual who is currently working in the Global Trade/Logistics field, or has a prior degree. It is not for entry level to the global trade field, but is designed as an add-on certificate to enhance and build on prior knowledge.

Career Opportunities

More than four million people in the United States work in jobs related to global trade. In Minnesota, many businesses engage in global trade, with a dramatic increase in trade activity expected within five years.

A career in global trade offers you the opportunity to work in the global marketplace. The Global Trade Specialist Program will provide you with knowledge and skills that will prepare you for employment in the export and import departments of businesses. You will be working with people from foreign countries, handling foreign orders, filling overseas orders, handling customer matters and determining tariff rates for the entry of foreign goods through U.S. Customs. Job titles include: Global Sales/Marketing Assistant, Global Marketing Communication Coordinator, Global Documentation Specialist, Global Customer Service Coordinator, Export-Import Coordinator, Global Banker and Global Transportation Coordinator.

This program also provides an excellent foundation for individuals wanting to be entrepreneurs in the import/export business. The import/export field is growing! You can grow with it.

Program Outcomes

1. Graduates will have knowledge and skills in domestic and global transportation management and logistics.
2. Graduates will have knowledge of U.S. Custom regulations and classifications.
3. Graduates will demonstrate the ability to successfully perform as Global Trade Specialists via internships.
4. Graduates will be prepared for employment as Global Trade Specialists.
5. Graduates will have knowledge and skills in customer service.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Advisor

Susan Senger susan.senger@saintpaul.edu
651.846.1519

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, Saturday and online courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Admission Requirements

Applicants are required to have a high school diploma or equivalent.

The global trade area is especially suited for persons who are self-reliant, imaginative, adaptable, and who possess an interest in working with people from other cultures.

Program Requirements

Check off when completed

This certificate program is designed for an individual who is currently working in the International Trade/Logistics field, or has a prior degree. It is not for entry level to the international trade field, but is designed as an add-on certificate to enhance and build on prior knowledge.

Program Advisor approval is required.

Course	Cr
<input type="checkbox"/> BSLM 2420 Supply Chain Management	4
<input type="checkbox"/> INTL 1410 International Communication and Cultural Awareness	3
<input type="checkbox"/> INTL 1512 Export Shipping and Compliance	3
<input type="checkbox"/> INTL 2420 U. S. Customs and Importing	3
<input type="checkbox"/> INTL 2530 International Marketing	3

Total Program Credits 16

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

BSLM 2420 Supply Chain Management	4
INTL 1410 International Communication and Cultural Awareness	3
Total Semester Credits	7

Second Semester

INTL 1512 Export Shipping and Compliance	3
INTL 2420 U. S. Customs and Importing	3
INTL 2530 International Marketing	3
Total Semester Credits	9

Total Program Credits 16

Minimum Program Entry Requirements

Advisor approval required.

Contact Faculty Advisor, Susan Senger, at 651.846.1519 or susan.senger@saintpaul.edu

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

333C (7174)

Hospitality Management AAS DEGREE

Program Overview

The Hospitality Management curriculum focuses on the management of today's exciting hospitality and entertainment industries. Students will receive a solid foundation of business practices related to this growing service industry. Courses will examine organizations in lodging, tourism, sports, entertainment, food and beverage operations.

Career Opportunities

According to the Minnesota Department of Revenue and the Minnesota Department of Employment and Economic Development, there are 245,000 full and part-time jobs, and 4.3 billion dollars in wages in the Leisure and Hospitality sector.

There are a wide variety of employment opportunities including hotel/lodging operations, restaurant and catering management, travel and tourism, sports, recreation and facilities management, gaming and casino operations, meeting, convention and special event management.

Program Outcomes

1. Graduates will understand broad hospitality, food and entertainment concepts.
2. Graduates will have knowledge of the hotel, travel and tourism industry.
3. Graduates will develop strong customer service, human relations and communications skills.
4. Graduates will demonstrate problem-solving skills and integrate new ways of thinking and learning.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Hospitality Management AAS

- BA Individualized Studies
Metropolitan State University
- BA Travel and Tourism
Saint Cloud State University
- BS Marketing
Saint Mary's University-Twin Cities Campus

Program Advisor

Craig Maus craig.maus@saintpaul.edu
651.846.1531

Program Requirements

Check off when completed

Required Business Core Cr

- Professional Component**
- ACCT 1411 Principles of Accounting 1 4
 - BTEC 1421 Business Information Applications 1 OR
CSCI 2410 Management Information Systems. 3
 - BUSN 1449 Business Communications. 3
 - BUSN 1410 Introduction to Business 3
 - BUSN 2465 Business Ethics 3
 - Required Business Core 16**

Course Cr

- BUSN 1440 Marketing Principles 3
- BUSN 1441 Consumer Behavior. 3
- BUSN 1446 Sales and Account Management 3
- BUSN 1480 Business Career Resources 1
- BUSN 2450 Management Fundamentals. 3
- BUSN 2472 Business Negotiation Skills 3
- HSPM 1410 Introduction to Hospitality
Management 3
- HSPM 1440 Event Management and Planning 3
- HSPM 2420 Hotel and Lodging Operations 3
- HSPM 2440 Hospitality Marketing and Sales. 3
- Subtotal. 28**

General Education/MnTC Requirements Cr

- Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
 - Goal 3 or Goal 4 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
 - Goal 5: History, Social Science, and
Behavioral Sciences 3
ECON 1720 Macroeconomics – 3 cr OR
ECON 1730 Microeconomics – 3 cr
 - Goal 6: Humanities and Fine Arts 3
 - General Education Requirements 16**

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The course sequence listed on the back of this guide is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

The following courses are not offered every semester.

Fall Semester Only

The following courses are offered fall semester only.
HSPM 1410 Introduction to Hospitality Management
HSPM 2440 Hospitality Marketing and Sales
BUSN 1441 Consumer Behavior

Spring Semester Only

The following courses are offered spring semester only.
HSPM 1440 Event Management and Planning
HSPM 2420 Hotel and Lodging Operations
BUSN 1446 Sales and Account Management

All other courses are offered both fall and spring semester.

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

300A (7130)

*Information is subject to change.
This Program Requirements Guide is not a contract.*



The mission of the Business Department at Saint Paul College is to sustain the College mission by providing quality, lifelong business education supported by technology for a diverse, metropolitan student population.

Hospitality Management AAS DEGREE *(continued)*

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1	4
BTEC 1421 Business Info Applications 1 OR CSCI 2410 Mgmt Info Systems	3
HSPM 1410 Introduction to Hospitality Management	3
BUSN 1410 Introduction to Business	3
ENGL 1711 Composition 1	4
Total Semester Credits	17

Second Semester

BUSN 1440 Marketing Principles	3
BUSN 1441 Consumer Behavior	3
BUSN 1446 Sales and Account Management	3
BUSN 2450 Management Fundamentals	3
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	15

Third Semester

BUSN 1449 Business Communications	3
BUSN 1480 Business Career Resources	1
BUSN 2465 Business Ethics	3
BUSN 2472 Business Negotiation Skills	3
ECON 1720 Macroeconomics OR ECON 1730 Microeconomics	3
Total Semester Credits	13

Fourth Semester

HSPM 1440 Event Management and Planning	3
HSPM 2420 Hotel and Lodging Operations	3
HSPM 2440 Hospitality Marketing and Sales	3
Mn Transfer Curriculum	6
Total Semester Credits	15

Total Program Credits	60
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Restaurant Management CERTIFICATE

Program Overview

The Restaurant Management curriculum introduces students to the management of today's exciting hospitality and entertainment industries with a focus on restaurant management. Students will receive a solid foundation in business practice related to the growing food and beverage industry. Courses will examine areas of food service operations including supervision, management and labor, and cost control.

Career Opportunities

According to the Minnesota Department of Revenue and the Minnesota Department of Employment and Economic Development, there are 245,000 full and part-time jobs and 4.3 billion dollars in wages in the Leisure and Hospitality sector. There are a wide variety of employment opportunities in restaurant and catering management. Restaurants are listed by MN DEED as one of the industries adding the most jobs in 2012-2022.

Program Outcomes

1. Graduates will demonstrate safe food preparation and sanitation training.
2. Graduates will demonstrate effective communication skills in interactions with staff and guests.
3. Graduates will have knowledge of wine terminology and describe various wine classifications.
4. Graduates will describe how food and beverages contribute to the success of special events.

Program Advisor

Craig Maus craig.maus@saintpaul.edu
651.846.1531

Part-time/Full-time Options

These programs can be completed by using a combination of day, evening, and Web-enhanced courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> ACCT 1411 Principles of Accounting 1	4
<input type="checkbox"/> BUSN 2450 Management Fundamentals	3
<input type="checkbox"/> CULA 1455 Food Safety and Sanitation	2
<input type="checkbox"/> CULA 1565 Principles of Culinary Leadership	2
<input type="checkbox"/> CULA 1600 Professional Introduction to Wine	2
<input type="checkbox"/> CULA 2230 Food/Beverage/Labor Cost Control	3
<input type="checkbox"/> HMRS 1490 Talent Management	3
<input type="checkbox"/> HSPM 2440 Hospitality Marketing and Sales	3
<input type="checkbox"/> HSPM 1440 Event Management and Planning	3

Total Program Credits 25

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

BUSN 2450 Management Fundamentals	3
CULA 1455 Food Safety and Sanitation	2
CULA 1565 Principles of Culinary Leadership	2
CULA 1600 Professional Introduction to Wine	2
HSPM 2440 Hospitality Marketing and Sales	3
Total Semester Credits	12

Second Semester

ACCT 1411 Principles of Accounting 1	4
CULA 2230 Food/Beverage/Labor Cost Control	3
HMRS 1490 Talent Management	3
HSPM 1440 Event Management and Planning	3
Total Semester Credits	13

Total Program Credits 25

*Information is subject to change.
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Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements in addition to having acquired previous technical computer skills:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Arithmetic: Score of 20+

Degree option may have a greater requirement than this certificate.

286C (7148)

Event and Meeting Management CERTIFICATE

Program Overview

The Event and Meeting Management curriculum focuses on the management of special events planning, organizing activities and timelines, operational effectiveness and customer satisfaction. Students will receive a solid foundation of business practices related to this growing service industry. Courses will examine organizations in lodging, tourism, and entertainment, food and beverage operations.

This certificate is intended for those seeking to expand their career paths with the skills necessary to plan efficient and effective events and meetings.

Career Opportunities

According to the Minnesota Department of Revenue and the Minnesota Department of Employment and Economic Development, there are 245,000 full and part-time jobs, and 4.3 billion dollars in wages in the Leisure and Hospitality sector.

There are a wide variety of employment opportunities including hotel/ lodging operations, restaurant and catering management, travel and tourism, sports, recreation and facilities management, gaming and casino operations, meeting, convention and special event management.

Program Outcomes

1. Graduates will have knowledge of the meeting and special event industry.
2. Graduates will develop customer service, human relations and communications skills.
3. Graduates will have knowledge and skills to plan, manage and promote meeting and special events.

Program Advisor

Craig Maus craig.maus@saintpaul.edu
651.846.1531

Part-time/Full-time Options

These programs can be completed by using a combination of day, evening, and Web-enhanced courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> BUSN 1440 Marketing Principles	3
<input type="checkbox"/> BUSN 2450 Management Fundamentals	3
<input type="checkbox"/> BUSN 2455 Essentials of Entrepreneurship & Small Business Management	3
<input type="checkbox"/> HSPM 1410 Introduction to Hospitality Management	3
<input type="checkbox"/> HSPM 1440 Event Management and Planning	3
<input type="checkbox"/> HSPM 2440 Hospitality Marketing and Sales	3

Total Program Credits 18

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

BUSN 1440 Marketing Principles	3
HSPM 1410 Introduction to Hospitality Management	3
HSPM 2440 Hospitality Marketing and Sales	3
Total Semester Credits	9

Second Semester

BUSN 2450 Management Fundamentals	3
BUSN 2455 Essentials of Entrepreneurship & Small Business Management	3
HSPM 1440 Event Management and Planning	3
Total Semester Credits	9

Total Program Credits 18

*Information is subject to change.
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Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements in addition to having acquired previous technical computer skills:

Reading: Score of 38+

Arithmetic: Score of 20+

Degree option may have a greater requirement than this certificate.

332C (7173)

Human Resources AAS DEGREE

Program Overview

The Human Resources Associate in Applied Science Degree is intended for students who desire immediate employment upon graduation, or who plan to transfer to another institution of higher education.

The human resource professional plays a strategic role in the success of the organization. A human resource professional needs to be competent in human resource knowledge, able to facilitate change, have personal credibility which includes trust and confidentiality and the understanding of how a business operates. Specific duties may involve facilitating employee communication, managing human resource record keeping, administering employee compensation and benefit plans, recruiting, hiring and orienting new employees, writing policies and applying federal, state and local employment laws and regulations.

Qualifications include excellent communication and human relation skills, computer skills, flexibility and the ability to work under pressure.

Career Opportunities

Employment opportunities are excellent for skilled, capable, and dependable Human Resource program graduates.

Human Resource program graduates may be employed in positions such as: Human Resource Representative, Human Resource Coordinator, HR Assistant, Human Resource Specialist, Human Resource Generalist, Compensation or Benefits Specialist, Staffing Coordinator, Employment Specialist, Payroll Specialist, or Training and Development Assistant.

Program Outcomes

1. Graduates will have the skills, knowledge and abilities in core human resource functions (e.g., HRIS, record keeping, compensation/benefits administration and staffing procedures).
2. Graduates will have the skills, knowledge, and abilities to identify and deal with employee relation issues and to communicate effectively in a work environment.
3. Graduates will have the skills, knowledge, and abilities in applicable federal, state, and local employment regulations and a working knowledge of basic employment laws.
4. Graduates will be prepared for employment in the field of human resources (in a variety of positions).
5. Graduates will have successfully mastered the general education requirements for work and life roles.



The mission of the Business Department at Saint Paul College is to sustain the College mission by providing quality, lifelong business education supported by technology for a diverse, metropolitan student population.

Program Advisor

Mindy Travers mindy.travers@saintpaul.edu
651.846.1526

Approved Provider of Courses for Recertification

The Human Resource Certification Institute has recognized Saint Paul College as an approved provider of educational courses for recertification of the PHR or SPHR certification.

The Human Resources Program at Saint Paul College is the only program of its kind in the Metro Area.

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, and Saturday courses. Part time and full time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Required Business Core Cr

Professional Component

- ACCT 1411 Principles of Accounting 1 4
- BTEC 1421 Business Information Applications 1 OR CSCI 2410 Management Information Systems 3
- BUSN 1449 Business Communications 3
- BUSN 1410 Introduction to Business 3
- BUSN 2465 Business Ethics 3
- Required Business Core 16**

Course Cr

- BUSN 1480 Business Career Resources 1
- BUSN 2450 Management Fundamentals 3
- BUSN 2464 Leading and Coaching Others 2
- BUSN 2466 Managing Change and Conflict 2
- HMRS 1400 Human Resource Management 3
- HMRS 1490 Talent Management 3
- HMRS 1510 HR Information Systems & Records . . . 3
- HMRS 1520 Compensation & Benefits Administration 3
- HMRS 2410 Employee/Labor Relations 3
- HMRS 2420 Employment Law & HR Policies 3
- Subtotal 26**

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

- Goal 1: Communication 7
- ENGL 1711 Composition 1 – 4 cr
- SPCH XXXX (Goal 1 only) – 3 cr
- Goal 3 or Goal 4 3
- Goal 3: Natural Sciences OR
- Goal 4: Mathematical/Logical Reasoning
- Goal 5: History, Social Science, and Behavioral Sciences 3
- ECON 1720 Macroeconomics – 3 cr OR
- ECON 1730 Microeconomics – 3 cr
- Goal 6: Humanities and Fine Arts 3
- Goals 1-10 of the Minnesota Transfer Curriculum . . 2
- General Education Requirements 18**

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The course sequence listed on the back side of this guide is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

The following courses are not offered every semester:

- HMRS 1490 Talent Management
- HMRS 1510 HR Information Systems & Records
- HMRS 1520 Compensation & Benefits Administration
- HMRS 2410 Employee/Labor Relations
- HMRS 2420 Employment Law & HR Policies

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Human Resources AAS

- BS Applied Organizational Studies
Minnesota State University, Mankato
- BS Human Resource Management
Saint Mary's University-Twin Cities Campus

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*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

015A (7027)

Human Resources AAS DEGREE *(continued)*

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1	4
BTEC 1421 Business Info Applications 1 OR CSCI 2410 Mgmt Info Systems	3
BUSN 1449 Business Communications	3
BUSN 1410 Introduction to Business	3
ENGL 1711 Composition 1	4
Total Semester Credits	17

Second Semester

BUSN 2450 Management Fundamentals	3
BUSN 2464 Leading and Coaching Others	2
HMRS 1400 Human Resource Management	3
HMRS 1490 Talent Management	3
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	14

Third Semester

HMRS 1510 HR Information Systems & Records	3
HMRS 1520 Compensation & Benefits Administration	3
BUSN 1480 Business Career Resources	1
BUSN 2466 Managing Change and Conflict	2
BUSN 2465 Business Ethics	3
ECON 1720 Macroeconomics OR ECON 1730 Microeconomics	3
Total Semester Credits	15

Fourth Semester

HMRS 2410 Employee/Labor Relations	3
HMRS 2420 Employment Law & HR Policies	3
Mn Transfer Curriculum	8
Total Semester Credits	14

Total Program Credits	60
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Human Resources Specialist CERTIFICATE

Program Overview

This program is designed for an individual who desires to enter the Human Resources field with a general grounding in Human Resources within a short period of time. The HR Specialist certificate is for an individual who has a background in computer and office skills. The certificate program is transferable to the Human Resources AAS program.

Career Opportunities

Employment opportunities are excellent for skilled, capable, and dependable Human Resource program graduates.

Human Resource program graduates may be employed in positions such as: Human Resource Representative, Human Resource Coordinator, HR Assistant, Human Resource Specialist, Human Resource Generalist, Compensation or Benefits Specialist, Staffing Coordinator, Employment Specialist, Payroll Specialist, or Training and Development Assistant.

Program Outcomes

1. Graduates will have the skills, knowledge, and abilities in core human resource functions (e.g., HRIS, Record Keeping, Compensation/Benefits Administration, and staffing procedures).
2. Graduates will have the skills, knowledge, and abilities to identify and deal with employee relation issues and to communicate effectively in a work environment.
3. Graduates will have the skills, knowledge, and abilities in applicable federal, state, and local employment regulations and a working knowledge of basic employment laws.
4. Graduates will be prepared for employment in the field of human resources (in a variety of positions).
5. Graduates will have successfully mastered the general education requirements for work and life roles.

Program Advisor

Mindy Travers mindy.travers@saintpaul.edu
651.846.1526

Approved Provider of Courses for Recertification

The Human Resource Certification Institute has recognized Saint Paul College as an approved provider of educational courses for recertification of the PHR or SPHR certification. The Human Resource Program at Saint Paul College is the only program of its kind in the Metro Area.

Additional Application Requirements

Interested applicants should submit transcripts from all colleges previously attended as part of the application process.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> BUSN 1410 Introduction to Business	3
<input type="checkbox"/> BUSN 1480 Business Career Resources	1
<input type="checkbox"/> BUSN 2464 Leading and Coaching Others	2
<input type="checkbox"/> BUSN 2466 Managing Change and Conflict	2
<input type="checkbox"/> HMRS 1400 Human Resources Management	3
<input type="checkbox"/> HMRS 1490 Talent Management	3
<input type="checkbox"/> HMRS 1510 HR Information Systems & Records	3
<input type="checkbox"/> HMRS 2410 Employee/Labor Relations	3
<input type="checkbox"/> HMRS 2420 Employment Law & HR Policies	3
Subtotal	23
<input type="checkbox"/> Business Elective	3
<i>Choose 3 credits from the following:</i>	
<input type="checkbox"/> BUSN 2463 Organizational Leadership and Decision Making	3
<input type="checkbox"/> BUSN 2465 Business Ethics	3
<input type="checkbox"/> BUSN 2471 Strategic Planning	3
<input type="checkbox"/> BUSN 2472 Business Negotiation Skills	3
<input type="checkbox"/> BUSN XXXX Business Management Elective	3
<input type="checkbox"/> HMRS 2591 Human Resources Internship	3
<input type="checkbox"/> General Education Requirements	3
<i>Choose a SPCH XXXX course, 1000 level or higher, OR ENGL 1711 or higher</i>	
Total Program Credits	29

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

BUSN 1410 Introduction to Business	3
BUSN 1480 Business Career Resources	1
HMRS 1400 Human Resources Management	3
HMRS 1490 Talent Management	3
HMRS 1510 HR Information Systems & Records	3
SPCH XXXX or ENGL 1711	3
Total Semester Credits	16

Second Semester

BUSN 2464 Leading and Coaching Others	2
BUSN 2466 Managing Change and Conflict	2
HMRS 2410 Employee/Labor Relations	3
HMRS 2420 Employment Law & HR Policies	3
Business Elective	3
Total Semester Credits	13

Total Program Credits **29**

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Arithmetic: Score of 20+

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

014C (7026)

*Information is subject to change.
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Human Resources Professional CERTIFICATE

Program Overview

This certificate is designed for an individual who is currently working in the Human Resource field or has management background dealing with HR issues. This program contains courses that can be completed online and others that are completed in a traditional classroom. The program schedule is designed to support working students. This certificate program is transferable to the Human Resources AAS degree.

Career Opportunities

Employment opportunities are excellent for skilled, capable, and dependable Human Resource program graduates.

Human Resource program graduates may be employed in positions such as: Human Resource Representative, Human Resource Coordinator, HR Assistant, Human Resource Specialist, Human Resource Generalist, Compensation or Benefits Specialist, Staffing Coordinator, Employment Specialist, Payroll Specialist, or Training and Development Assistant.

Program Outcomes

1. Graduates will have the skills, knowledge, and abilities in core human resource functions (e.g., HRIS, Record Keeping, Compensation/Benefits Administration, and staffing procedures).
2. Graduates will have the skills, knowledge, and abilities to identify and deal with employee relations issues and to communicate effectively in a work environment.
3. Graduates will have the skills, knowledge, and abilities in applicable federal, state, and local employment regulations and a working knowledge of basic employment laws.
4. Graduates will be prepared for employment in the field of human resources (in a variety of positions).
5. Graduates will have successfully mastered the general education requirements for work and life roles.

Program Advisor

Mindy Travers mindy.travers@saintpaul.edu
651.846.1526

Approved Provider of Courses for Recertification

The Human Resource Certification Institute has recognized Saint Paul College as an approved provider of educational courses for recertification of the PHR or SPHR certification. The Human Resource Program at Saint Paul College is the only program of its kind in the Metro Area.

Additional Application Requirements

Interested applicants should submit transcripts from all colleges previously attended as part of the application process.

Program Advisor approval required for admission.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> HMRS 1400 Human Resource Management	3
<input type="checkbox"/> HMRS 1490 Talent Management	3
<input type="checkbox"/> HMRS 1510 HR Information Systems & Records	3
<input type="checkbox"/> HMRS 1520 Compensation & Benefits Administration	3
<input type="checkbox"/> HMRS 2410 Employee/Labor Relations	3
<input type="checkbox"/> HMRS 2420 Employment Law & HR Policies	3
Total Program Credits	18

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

HMRS 1400 Human Resource Management	3
HMRS 1490 Talent Management	3
HMRS 1510 HR Information Systems & Records	3
Total Semester Credits	9

Second Semester

HMRS 1520 Compensation & Benefits Administration	3
HMRS 2410 Employee/Labor Relations	3
HMRS 2420 Employment Law & HR Policies	3
Total Semester Credits	9

Total Program Credits 18

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements
Program advisor approval is needed prior to entrance into this program.

This certificate program is transferable to the Human Resources AAS Degree.

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

218C (7176)

Marketing AAS DEGREE

Program Overview

This program provides students with the fundamentals of marketing and business management. Practices and concepts will be explored relating to sales, promotions, public relations, retail sales and event planning. Students will develop marketing and communication plans that create value and develop long term customer relationships.

Career Opportunities

According to the U.S. Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, marketing and sales positions are projected to grow 10-12% from 2012-2022.

Program Outcomes

1. Graduates will have skills, knowledge and abilities in core business functions including accounting, marketing and management.
2. Graduates will have an understanding of how to market products and services and deliver customer value.
3. Graduates will have knowledge and skills to attract new customers and retain existing customers.
4. Graduates will have successfully mastered the general education required for work and life roles.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Marketing AAS

- BS Marketing
Saint Mary's University-Twin Cities Campus
- BS Sales & Marketing
Saint Mary's University-Twin Cities Campus

Program Advisor

Craig Maus craig.maus@saintpaul.edu

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, Saturday, and online courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Required Business Core Cr

- Professional Component**
- ACCT 1411 Principles of Accounting 1 4
 - BUSN 1449 Business Communications 3
 - BTEC 1421 Business Information Applications 1 OR
CSCI 2410 Management Information Systems 3
 - BUSN 1410 Introduction to Business 3
 - BUSN 2465 Business Ethics 3
 - Required Business Core 16**

Course Cr

- BUSN 1440 Marketing Principles 3
- BUSN 1441 Consumer Behavior 3
- BUSN 1444 Advertising and
Promotional Strategies 3
- BUSN 1446 Sales and Account Management 3
- HSPM 2440 Hospitality Marketing and Sales 3
- HSPM 1440 Event Management and Planning 3
- INTL 2530 International Marketing 3
- BUSN 2450 Management Fundamentals 3
- BUSN 2472 Business Negotiation Skills 3
- BUSN 1480 Business Career Resources 1
- Subtotal 28**

General Education/MnTC Requirements Cr

- Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
 - Goal 3 or Goal 4 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
 - Goal 5: History, Social Science, and Behavioral Sciences 3
ECON 1720 Macroeconomics – 3 cr OR
ECON 1730 Microeconomics – 3 cr
 - Goal 6: Humanities and Fine Arts 3
 - General Education Requirements 16**

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The course sequence listed on the back side of this guide is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

The following courses are not offered every semester.

Fall Semester Only

The following courses are offered fall semester only.
BUSN 1441 Consumer Behavior
HSPM 2440 Hospitality Marketing and Sales

Spring Semester Only

The following courses are offered spring semester only.
BUSN 1444 Advertising and Promotion Strategies
BUSN 1446 Sales and Account Management
HSPM 1440 Event Management and Planning

All other courses are offered both fall and spring semester.

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

302A (7157)

*Information is subject to change.
This Program Requirements Guide is not a contract.*



The mission of the Business Department at Saint Paul College is to sustain the College mission by providing quality, lifelong business education supported by technology for a diverse, metropolitan student population.

Marketing AAS DEGREE *(continued)*

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1 4
 BTEC 1421 Business Info Applications 1 OR
 CSCI 2410 Mgmt Info Systems 3
 BUSN 1440 Marketing Principles 3
 BUSN 1410 Introduction to Business 3
 ENGL 1711 Composition 1 4
Total Semester Credits. 17

Second Semester

BUSN 1449 Business Communications 3
 BUSN 1441 Consumer Behavior 3
 BUSN 1444 Advertising and Promotional Strategies . . 3
 HSPM 1440 Event Management and Planning 3
 SPCH XXXX (Goal 1 only) 3
Total Semester Credits. 15

Third Semester

BUSN 1446 Sales and Account Management. 3
 BUSN 2450 Management Fundamentals 3
 HSPM 2440 Hospitality Marketing and Sales 3
 INTL 2530 International Marketing 3
 ECON 1720 Macroeconomics OR
 ECON 1730 Microeconomics 3
Total Semester Credits. 15

Fourth Semester

BUSN 1480 Business Career Resources 1
 BUSN 2465 Business Ethics 3
 BUSN 2472 Business Negotiation Skills 3
 Mn Transfer Curriculum 6
Total Semester Credits. 13

Total Program Credits 60

Social Media Marketing CERTIFICATE

Program Overview

Facebook, Twitter, YouTube and other social media platforms are opportunities for organizations to inform, communicate and connect with customers. Social media provides both a listening and outreach tool for promoting organizations, products, services and ideas. This program provides a foundation of social media and Internet marketing. Students will learn and analyze techniques, tactics and tools used to engage customers and deliver superior value. Jobs and careers in this fast changing field of marketing will be explored.

Career Opportunities

All organizations, including for-profit business or non-profit organizations, have the need for communicating with customers and stakeholders. This program is designed for those who want to expand their knowledge and skills of social media and internet marketing strategies. Many employers require some education or experience in marketing even for “non-marketing” positions. Employment opportunities are excellent for marketers who can engage, delight and develop meaningful relationships with customers. Opportunities and positions include social media marketing specialist, marketing coordinator and web marketing analyst.

Program Outcomes

1. Develop an understanding of social media and e-marketing and the fundamental shifts on how organizations communicate with its customers.
2. Students will have skills and abilities to analyze internet marketing and communications strategies to serve and deliver value that attract new customers and develop relationships with existing customers.
3. Create e-marketing and social media marketing plans that are integrated with an organization’s overall marketing strategy and goals.

Program Advisor

Craig Maus craig.maus@saintpaul.edu
651.846.1531

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, Saturday and online courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> BUSN 1440 Marketing Principles	3
<input type="checkbox"/> BUSN 1441 Consumer Behavior	3
<input type="checkbox"/> BUSN 1444 Advertising and Promotional Strategies	3
<input type="checkbox"/> BUSN 1490 E-Marketing	3
<input type="checkbox"/> BUSN 1492 Social Media Marketing	3
<input type="checkbox"/> DGIM 1540 Blogging Applications	2

Total Program Credits 17

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

BUSN 1440 Marketing Principles	3
BUSN 1441 Consumer Behavior	3
BUSN 1444 Advertising and Promotional Strategies	3
BUSN 1490 E-Marketing	3
BUSN 1492 Social Media Marketing	3
DGIM 1540 Blogging Applications	2

Total Program Credits 17

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

338C

Supply Chain Logistics AAS DEGREE

Program Overview

Logistics management is concerned with the procurement, movement, storage and processing of materials and information across the whole of the supply chain, from acquisition of raw materials and components, through manufacturing, to delivery of finished products to end users.

This program provides students the opportunity to understand modern supply chain management. Supply Chain management demands a multidisciplinary and cross- functional approach to business that transcends the traditional functional boundaries and management disciplines that characterize many organizations.

Career Opportunities

Supply Chain Logistics offers a wide variety of employment opportunities. Some of these are purchasing and supplier management, manufacturing logistics, inventory management, transport management, distribution, warehousing management, customer service management, information management and logistics and supply chain strategy. Because of the wide range of jobs open to graduates, prospective students are asked to consult with the program instructor for specific job forecasts.

Program Outcomes

1. Graduates will have knowledge and skills in distribution, transportation management, logistics, and purchasing.
2. Graduates will have knowledge and skills in customer service.
3. Graduates will be prepared for positions in transportation, distribution, and supply chain management.
4. Graduates will have knowledge and skills to provide foresight of potential opportunities in the management of supply chain.
5. Graduates will have critical thinking skills.



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Information is subject to change.
This Program Requirements Guide is not a contract.

Program Advisor

Susan Senger susan.senger@saintpaul.edu
651.846.1519
Anna Ouattara anna.ouattara@saintpaul.edu

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, Saturday and online courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Required Business Core Cr

- Professional Component**
- ACCT 1411 Principles of Accounting 1 4
 - BTEC 1421 Business Information Applications 1 OR
CSCI 2410 Management Information Systems 3
 - BUSN 1449 Business Communications 3
 - BUSN 1410 Introduction to Business 3
 - BUSN 2465 Business Ethics 3
 - Required Business Core 16**

Course Cr

- BSLM 1410 Transportation Management 3
- BSLM 1510 Distribution Management 3
- BSLM 2420 Supply Chain Management 4
- BSLM 2450 Procurement Principles and
Applications 3
- BUSN 1440 Marketing Principles 3
- BUSN 1480 Business Career Resources 1
- BUSN 2472 Business Negotiation Skills 3
- INTL 1512 Export Shipping and Compliance 3
- INTL 2420 U. S. Customs and Importing 3
- Business Elective 1
- Subtotal 27**

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
- Goal 3 or Goal 4 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
- Goal 5: History, Social Science, and
Behavioral Sciences 3
ECON 1720 Macroeconomics – 3 cr OR
ECON 1730 Microeconomics – 3 cr
- Goal 6: Humanities and Fine Arts 3
- Goals 1-10 of the Minnesota Transfer Curriculum
Select a minimum of 1 additional credit. 1
- General Education Requirements 17**

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The course sequence listed on the back side of this guide is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Supply Chain Logistics AAS

- BA Marketing & Innovative Management
Concordia University
- BS Marketing
Saint Mary's University-Twin Cities Campus
- BS Business Administration
Saint Mary's University-Twin Cities Campus

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

314A (7159)

Supply Chain Logistics AAS DEGREE *(continued)*

Course Sequence

The following sequence is recommended for a fulltime student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

ACCT 1411 Principles of Accounting 1 4
 BTEC 1421 Business Info Applications 1 OR
 CSCI 2410 Mgmt Info Systems 3
 BUSN 1449 Business Communications 3
 BUSN 1410 Introduction to Business 3
 ENGL 1711 Composition 1 4
Total Semester Credits. 17

Second Semester

BSLM 1410 Transportation Management 3
 BSLM 1510 Distribution Management 3
 BSLM 2420 Supply Chain Management 4
 BSLM 2450 Procurement Principles and
 Applications 3
 SPCH XXXX (Goal 1 only) 3
Total Semester Credits. 16

Third Semester

BUSN 1440 Marketing Principles 3
 BUSN 1480 Business Career Resources 1
 BUSN 2465 Business Ethics 3
 INTL 1512 Export Shipping and Compliance 3
 ECON 1720 Macroeconomics OR
 ECON 1730 Microeconomics 3
Total Semester Credits. 13

Fourth Semester

BUSN 2472 Business Negotiation Skills 3
 Business Elective 1
 INTL 2420 U. S. Customs and Importing 3
 Mn Transfer Curriculum 7
Total Semester Credits. 14

Total Program Credits 60

Supply Chain Logistics CERTIFICATE

Program Overview

In order to be admitted to the Supply Chain Logistics certificate program, the student must have previous related work experience or a business degree (minimum – AAS). Program advisor approval is required for admission. This certificate is not designed for entry level to the logistics field, but as an add-on certificate to enhance and build on prior knowledge.

Logistics management is concerned with the procurement, movement, storage and processing of materials and information across the whole of the supply chain, from acquisition of raw materials and components, through manufacturing, to delivery of finished products to end users.

This program provides students the opportunity of understanding modern supply chain management. Supply chain management demands a multidisciplinary and cross-functional approach to business which transcends the traditional functional boundaries and management disciplines that characterize many organizations.

This certificate program is transferable to the Supply Chain Logistics AAS Degree.

Career Opportunities

Supply Chain Logistics offers a wide variety of employment opportunities. Some of these are purchasing and supplier management, manufacturing logistics, inventory management, transport management, distribution, warehousing management, customer service management, information management and logistics and supply chain strategy. Because of the wide range of jobs open to graduates, prospective students are asked to consult with the program instructor for specific job forecasts.

Program Outcomes

1. Graduates will have knowledge and skills in distribution planning, transportation management, and logistics.
2. Graduates will have knowledge and skills in customer service.
3. Graduates will be prepared for positions in transportation, distribution, and supply chain management.
4. Graduates will have knowledge and skills to provide foresight of potential opportunities in the management of the supply chain.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Advisor

Susan Senger susan.senger@saintpaul.edu
651.846.1519

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, Saturday and online courses. Part time and full-time options are available; costs will vary depending on part time or full-time enrollment.

Program advisor approval required for admission

This certificate is not designed for entry level to the logistics field, but as an add-on certificate to enhance and build on prior knowledge.

Program Requirements

- Check off when completed

The student must have related work experience or a business degree (minimum – AAS) to be admitted to the Supply Chain Logistics Certificate.

Program Advisor approval required for admission.

Course	Cr
<input type="checkbox"/> BSLM 1410 Transportation Management	3
<input type="checkbox"/> BSLM 1510 Distribution Management	3
<input type="checkbox"/> BSLM 2420 Supply Chain Management	4
<input type="checkbox"/> BSLM 2450 Procurement Principles and Applications	3
<input type="checkbox"/> BUSN 1440 Marketing Principles	3
<input type="checkbox"/> BUSN 2472 Business Negotiation Skills	3
Total Credits	19

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

BSLM 1410 Transportation Management	3
BSLM 1510 Distribution Management	3
BSLM 2420 Supply Chain Management	4
BSLM 2450 Procurement Principles and Applications	3
BUSN 1440 Marketing Principles	3
BUSN 2472 Business Negotiation Skills	3

Total Credits 19

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Arithmetic: Score of 20+

Requires additional education and/or experience in the field in addition to assessment requirements.

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

In order to be admitted to the Supply Chain Logistics program, the student must have related work experience or a business degree (minimum – AAS Degree).

Advisor approval required for admission.

Degree option may have a greater requirement than this certificate.

315C (7186)

Career & Technical Education Programs

Transportation Programs

Auto Body Repair

Auto Body Repair AAS Degree (62 Credits)	68
Auto Body Repair Diploma (49 Credits)	70

Automotive Service

Automotive Service Technician AAS Degree (72 Credits)	72
Automotive Service Technician Diploma (69 Credits)	74

Truck Technician

Truck Technician Diploma (67 Credits)	75
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Construction & Building Trades

Cabinetmaking

Cabinetmaking Diploma (35 Credits)	76
Wood Finishing Techniques Certificate (22 Credits)	77

Carpentry

Carpentry Diploma (42 Credits)	78
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Electrical Technology

Electrical Technology Diploma (74 Credits)	79
Electromechanical Systems Diploma (59 Credits)	80
Electromechanical Systems Certificate (28 Credits)	81

Pipefitting

Pipefitting Diploma (40 Credits)	82
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Plumbing

Plumbing Diploma (44 Credits)	83
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Sheet Metal

Sheet Metal/HVAC Ducts & Fittings AAS Degree (60 Credits)	84
Sheet Metal/HVAC Ducts & Fittings Diploma (40 Credits)	85

Welding Technology

Welding Technology AAS (60 Credits)	86
Welding Technology Diploma (48 Credits)	87
Robotic Welding Certificate (18 Credits)	88

Technical Programs

Manufacturing Technology

CNC Toolmaking Diploma (64 Credits)	89
Machine Operator Certificate (Right Skills Now) (20 Credits)	90

Individualized Studies Program

Individualized Studies

Individualized Studies AAS (60 Credits)	91
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360° eTECH Programs

Automation Technologies Certificate (30 Credits)	92
Machine Technologist Certificate (30 Credits)	93
Machining & Automation Diploma (51 Credits)	94
Production Technologies Certificate (16 Credits)	95
Welding Technology Certificate (30 Credits)	96

Auto Body Repair AAS DEGREE

Program Overview

Auto body workers repair or replace automotive body and frame components. The job involves many skills including frame repair, welding and cutting, metal straightening, application of up-to-date body materials, metal finishings, and painting and alignment of body components. Auto body repair workers also estimate damage and compute labor and material costs.

Career Opportunities

As the population increases so does the use of automobiles and the number of automobile accidents. The U.S. Department of Labor predicts that employment of auto body repair workers will continue to increase.

Employment is steady throughout the year. Graduates often enter an apprenticeship training program and work under an experienced journey person for a period of at least three years. The usual four-year apprenticeship term is shortened by completing a college program in auto body repair. There are opportunities for advancement to estimator, adjuster, service manager, parts manager, or shop owner.

Program Outcomes

1. Graduates will have knowledge and skills in operating hand and power tools necessary in Auto Body Repair.
2. Graduates will have knowledge and skills in welding, cutting, straightening and replacement of parts on an automobile.
3. Graduates will have knowledge and skills in correct use and application of up-to-date materials used in auto body repairs.
4. Graduates will have knowledge and skills in assessing damage, writing a repair plan, and ordering parts and materials.
5. Graduates will have supervised hands-on experience working on customer vehicles and doing real-world repairs.
6. Graduates will be prepared for entry-level employment in the auto body industry.
7. Graduates will have business and management skills required of an Auto Body Technician.
8. Graduates will have critical thinking skills.

Additional Requirements/Recommendations

- Students must read well enough to follow written instructions and comprehend technical information.
- Basic arithmetic skills are needed in order to prepare paint and body material estimates and paint formulas.
- Physical requirements include good mechanical coordination, good eyesight (including color vision), average strength, good sense of feel, and ability to withstand dust, paint fumes, and noise.

Program Faculty

Doug DeRosier doug.derosier@saintpaul.edu
651.846.1392

Shop/Classroom visit recommended

Contact program faculty for a shop visit.

Length of Program

This is a full-time, day program. The program can be completed in three semesters, one of which is the summer term.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> ABDY 1400 Introduction to Auto Body Repair . . . 3	
<input type="checkbox"/> ABDY 1410 Auto Body Sheet Metal Repair 3	
<input type="checkbox"/> ABDY 1420 Auto Body Repair Techniques 3	
<input type="checkbox"/> ABDY 1430 Introduction to Paint Prep. 4	
<input type="checkbox"/> ABDY 1440 Advanced Body & Frame Repair Theory. 2	
<input type="checkbox"/> ABDY 1450 Collision Repair, Estimating & Shop Management 2	
<input type="checkbox"/> ABDY 1510 Advanced Body & Frame Repair 3	
<input type="checkbox"/> ABDY 1520 Paint & Color Matching Techniques . . . 4	
<input type="checkbox"/> ABDY 1530 Paint Finish & Detailing 4	
<input type="checkbox"/> ABDY 1540 Auto Body Specialization Finishes . . . 4	
<input type="checkbox"/> ABDY 1550 General Auto Body Detailing 4	
<input type="checkbox"/> ABDY 1560 Alignment & Brakes for Auto Body . . . 2	
<input type="checkbox"/> ABDY 1570 Air Conditioning & Auto Electric . . . 3	
<input type="checkbox"/> ABDY 1581 Welding – Auto Body 1 2	
<input type="checkbox"/> ABDY 1582 Welding – Auto Body 2 3	
Subtotal 46	

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication 7	
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3 or Goal 4 3	
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science, and Behavioral Sciences 3	
<input type="checkbox"/> Goal 6: Humanities and Fine Arts. 3	
General Education Requirements 16	

Total Program Credits 62

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Additional Program Requirements/Costs

It is mandatory for students in this program to purchase tools and equipment, personal protective/safety equipment, and textbooks for a total additional program cost of approximately \$1,000 to \$2,000. Contact Program Faculty for more information.

Program Start Dates

Fall, Summer

Course Sequence

Recommended course sequence is dependent upon which Semester/Term the student starts the Auto Body Repair, AAS Degree program. Follow the appropriate sequence listed - see back page.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Auto Body Repair AAS

- BS Operations Management
Minnesota State University-Moorhead
- BS Applied Management
Dunwoody College of Technology

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Spatial assessment required: Score 10+ Shop/classroom visit recommended

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

258A (7136)

Auto Body Repair AAS DEGREE *(continued)*

Course Sequence

Recommended course sequence is dependent upon which Semester/Term the student starts the Auto Body Repair, AAS Degree program. Follow the appropriate sequence listed as indicated below.

Summer Term Start

First Semester

ABDY 1560 Alignment & Brakes for Auto Body	2
ABDY 1570 Air Conditioning & Auto Electric.	3
ABDY 1581 Welding - Auto Body 1	2
ABDY 1582 Welding - Auto Body 2	3
General Education Requirement.	3
Total Semester Credits.	13

Second Semester

ABDY 1400 Introduction to Auto Body Repair	3
ABDY 1410 Auto Body Sheet Metal Repair	3
ABDY 1420 Auto Body Repair Techniques	3
ABDY 1430 Introduction to Paint Prep	4
ABDY 1440 Advanced Body & Frame Rep Theory.	2
ABDY 1450 Collision Repair, Estimating & Shop Management	2
Total Semester Credits.	17

Third Semester

ABDY 1510 Advanced Body & Frame Repair	3
ABDY 1520 Paint & Color Matching Techniques	4
ABDY 1530 Paint Finish & Detailing	4
ABDY 1540 Auto Body Specialization Finishes.	4
ABDY 1550 General Auto Body Detailing	4
Total Semester Credits.	19

Remaining General Education courses. 13

General Education courses are taken after the ABDY courses are completed or if your schedule permits in the evening during the semester of ABDY enrollment.

Total Program Credits 62

Fall Semester Start

First Semester

ABDY 1400 Introduction to Auto Body Repair	3
ABDY 1410 Auto Body Sheet Metal Repair	3
ABDY 1420 Auto Body Repair Techniques	3
ABDY 1430 Introduction to Paint Prep	4
ABDY 1440 Advanced Body & Frame Rep Theory.	2
ABDY 1450 Collision Repair, Estimating & Shop Management	2
Total Semester Credits.	17

Second Semester

ABDY 1510 Advanced Body & Frame Repair	3
ABDY 1520 Paint & Color Matching Techniques	4
ABDY 1530 Paint Finish & Detailing	4
ABDY 1540 Auto Body Specialization Finishes.	4
ABDY 1550 General Auto Body Detailing	4
Total Semester Credits.	19

Third Semester

ABDY 1560 Alignment & Brakes for Auto Body	2
ABDY 1570 Air Conditioning & Auto Electric.	3
ABDY 1581 Welding - Auto Body 1	2
ABDY 1582 Welding - Auto Body 2	3
General Education Requirement.	3
Total Semester Credits.	13

Remaining General Education courses. 13

General Education courses are taken after the ABDY courses are completed or if your schedule permits in the evening during the semester of ABDY enrollment.

Total Program Credits 62

Auto Body Repair DIPLOMA

Program Overview

Auto body workers repair or replace automotive body and frame components. The job involves many skills including frame repair, welding and cutting, metal straightening, application of up-to-date body materials, metal finishings, and painting and alignment of body components. Auto body repair workers also estimate damage and compute labor and material costs.

Career Opportunities

As the population increases so does the use of automobiles and the number of automobile accidents. The U.S. Department of Labor predicts that employment of auto body repair workers will continue to increase.

Employment is steady throughout the year. Graduates often enter an apprenticeship training program and work under an experienced journey person for a period of at least three years. The usual four-year apprenticeship term is shortened by completing a college program in auto body repair. There are opportunities for advancement to estimator, adjuster, service manager, parts manager, or shop owner.

Program Outcomes

1. Graduates will have knowledge and skills in operating hand and power tools necessary in Auto Body Repair.
2. Graduates will have knowledge and skills in welding, cutting, straightening and replacement of parts on an automobile.
3. Graduates will have knowledge and skills in correct use and application of up-to-date materials used in auto body repairs.
4. Graduates will have knowledge and skills in assessing damage, writing a repair plan, and ordering parts and materials.
5. Graduates will have supervised hands-on experience working on customer vehicles and doing real-world repairs.
6. Graduates will be prepared for entry-level employment in the auto body industry.
7. Graduates will have business and management skills required of an Auto Body Technician.

Additional Requirements/Recommendations

- Students must read well enough to follow written instructions and comprehend technical information.
- Basic arithmetic skills are needed in order to prepare paint and body material estimates and paint formulas.
- Physical requirements include good mechanical coordination, good eyesight (including color vision), average strength, good sense of feel, and ability to withstand dust, paint fumes, and noise.

Program Faculty

Doug DeRosier doug.derosier@saintpaul.edu
651.846.1392

Length of Program

This is a full-time, day program. The program can be completed in three semesters, one of which is the summer term.

Shop/Classroom visit recommended

Contact program faculty for a shop visit.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> ABDY 1400 Introduction to Auto Body Repair	3
<input type="checkbox"/> ABDY 1410 Auto Body Sheet Metal Repair	3
<input type="checkbox"/> ABDY 1420 Auto Body Repair Techniques	3
<input type="checkbox"/> ABDY 1430 Introduction to Paint Prep	4
<input type="checkbox"/> ABDY 1440 Advanced Body & Frame Repair Theory	2
<input type="checkbox"/> ABDY 1450 Collision Repair, Estimating & Shop Management	2
<input type="checkbox"/> ABDY 1510 Advanced Body & Frame Repair	3
<input type="checkbox"/> ABDY 1520 Paint & Color Matching Techniques	4
<input type="checkbox"/> ABDY 1530 Paint Finish & Detailing	4
<input type="checkbox"/> ABDY 1540 Auto Body Specialization Finishes	4
<input type="checkbox"/> ABDY 1550 General Auto Body Detailing	4
<input type="checkbox"/> ABDY 1560 Alignment & Brakes for Auto Body	2
<input type="checkbox"/> ABDY 1570 Air Conditioning & Auto Electric	3
<input type="checkbox"/> ABDY 1581 Welding – Auto Body 1	2
<input type="checkbox"/> ABDY 1582 Welding – Auto Body 2	3
Subtotal	46
<input type="checkbox"/> General Education Requirement	3
Contact advisor for recommendation	

Total Program Credits 49

Additional Program Requirements/Costs

It is mandatory for students in this program to purchase tools and equipment, personal protective/safety equipment, and textbooks for a total additional program cost of approximately \$1,000 to \$2,000. Contact Program Faculty for more information.

Program Start Dates

Fall, Summer

Course Sequence

Recommended course sequence is dependent upon which Semester/Term the student starts the Auto Body Repair Diploma program. Follow the appropriate sequence listed - see back page.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Auto Body Repair Diploma

BS Operations Management
Minnesota State University-Moorhead

Continued on next page

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Spatial assessment required: Score 10+

Shop/classroom visit recommended

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Auto Body Repair DIPLOMA *(continued)*

Course Sequence

Follow the appropriate sequence for either a Summer or Fall start.

Summer Term Start

First Semester

ABDY 1560 Alignment & Brakes for Auto Body2
 ABDY 1570 Air Conditioning & Electric3
 ABDY 1581 Welding - Auto Body 12
 ABDY 1582 Welding - Auto Body 23
 General Education Requirement3
Total Semester Credits13

Second Semester

ABDY 1400 Introduction to Auto Body Repair3
 ABDY 1410 Auto Body Sheet Metal Repair3
 ABDY 1420 Auto Body Repair Techniques3
 ABDY 1430 Introduction to Paint Prep4
 ABDY 1440 Advanced Body &
 Frame Repair Theory2
 ABDY 1450 Collision Repair, Estimating &
 Shop Management2
Total Semester Credits17

Third Semester

ABDY 1510 Advanced Body & Frame Repair3
 ABDY 1520 Paint & Color Matching Techniques4
 ABDY 1530 Paint Finishing & Detailing4
 ABDY 1540 Auto Body Specialization Finishes4
 ABDY 1550 General Auto Body Detailing4
Total Semester Credits19

Total Program Credits49

Fall Semester Start

First Semester

ABDY 1400 Introduction to Auto Body Repair3
 ABDY 1410 Auto Body Sheet Metal Repair3
 ABDY 1420 Auto Body Repair Techniques3
 ABDY 1430 Introduction to Paint Prep4
 ABDY 1440 Advanced Auto Body &
 Frame Repair Theory2
 ABDY 1450 Collision Repair, Estimating &
 Shop Management2
Total Semester Credits17

Second Semester

ABDY 1510 Advanced Body & Frame Repair3
 ABDY 1520 Paint & Color Matching Techniques4
 ABDY 1530 Paint Finish & Detailing4
 ABDY 1540 Auto Body Specialization Finishes4
 ABDY 1550 General Auto Body Detailing4
Total Semester Credits19

Third Semester

ABDY 1560 Alignment & Brakes for Auto Body2
 ABDY 1570 Air Conditioning & Auto Electric3
 ABDY 1581 Welding - Auto Body 12
 ABDY 1582 Welding - Auto Body 23
 General Education Requirement3
Total Semester Credits13

Total Program Credits49

Automotive Service Technician AAS DEGREE

Program Overview

Automotive repair requires trained technicians skilled in the use of testing equipment, special tools, and the latest information and specifications to service the many types of automobiles. Technicians diagnose trouble in any one of thousands of automotive components. They work with many new systems each year that require new service techniques and training. Some of these include air conditioning units, emission control devices, alternators, electronic ignition, and electronic fuel injection.

Students are prepared to take the ASE certification tests when they have completed the program. ASE certifies technicians nationwide.

Students should have good mechanical aptitude, be in good physical condition and have the ability to get along with others. To profit from the training offered, the students must read well enough to understand the technical information presented.

Career Opportunities

Opportunities are expected to be plentiful for automotive technicians with technical training according to the U.S. Department of Labor. The department also states that the growing complexity of automotive technology, such as the use of electronic and emissions control equipment increasingly necessitates that cars be serviced by professionals.

The auto technician may work in a dealership garage, an independent garage, or as a specialist. Opportunities exist for a technician to become a shop service sales person, new car dealership service manager, or shop owner.

Program Outcomes

1. Graduates will have knowledge and skills in use of testing equipment, special tools, and specifications for servicing automobiles.
2. Graduates will have the knowledge and skills to diagnose problems in automotive systems.
3. Graduates will have knowledge and skills to service automobile brakes, alignment, and suspension, manual transmission, four wheel drive and differentials, heating and air conditioning, starting and charging systems, electrical accessories, fuel systems and automatic transmissions.
4. Graduates will have acquired supervised hands-on experience working on customer vehicles.
5. Graduates will be prepared for employment as Automotive Service Technicians.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Greg Pardun greg.pardun@saintpaul.edu
 John Purcell john.purcell@saintpaul.edu
 Jake Yernberg jake.yernberg@saintpaul.edu
 David Vorderbruggen david.vorderbruggen@saintpaul.edu

Admission Requirement

Admission requires completion of the Automotive Service Technician Diploma, or concurrent enrollment in the second year Auto Technician program.

Tool Costs

Students will need to supply their own basic tools and tool box.

The estimated cost for professional quality tools and tool box is approximately \$2,000–\$3,000.

Tool vendors will be on campus during the first week.

Program Requirements

Check off when completed

Successful completion of each semester in this program is a pre-requisite for participation in the following semester.

Course	Cr
<input type="checkbox"/> AUTO 1415 Introduction to Automotive Technology	4
<input type="checkbox"/> AUTO 1430 Brakes	4
<input type="checkbox"/> AUTO 1441 Alignment & Suspension	4
<input type="checkbox"/> AUTO 1510 Clutch/Driveline Manual Transmission	3
<input type="checkbox"/> AUTO 1523 Four Wheel Drive Differential	3
<input type="checkbox"/> AUTO 1530 Basic Electrical & Battery	3
<input type="checkbox"/> AUTO 1540 Basic Engine Management	3
<input type="checkbox"/> AUTO 1550 Heating & Air Conditioning	4
<input type="checkbox"/> AUTO 2410 Starting & Charging Systems	3
<input type="checkbox"/> AUTO 2420 Electrical Accessories	3
<input type="checkbox"/> AUTO 2430 Engine Theory & Repair	4
<input type="checkbox"/> AUTO 2440 Engine Installation	2
<input type="checkbox"/> AUTO 2450 Introduction to Auto Computers	2
<input type="checkbox"/> AUTO 2513 Fuel Systems	3
<input type="checkbox"/> AUTO 2520 Engine Drivability	3
<input type="checkbox"/> AUTO 2530 Automatic Transmission Theory	2
<input type="checkbox"/> AUTO 2542 Automatic Transmission Diagnosis & Repair	4
<input type="checkbox"/> AUTO 2550 Specialized Lab 1	2
Subtotal	56

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

Goal 1: Communication 7
 ENGL 1711 Composition 1 – 4 cr
 SPCH XXXX (Goal 1 only) – 3 cr

Goal 3 or Goal 4 3
 Goal 3: Natural Sciences OR
 Goal 4: Mathematical/Logical Reasoning

Goal 5: History, Social Science, and Behavioral Sciences 3

Goal 6: Humanities and Fine Arts 3

General Education Requirements 16

Total Program Credits 72

Program Start Dates

Fall, (Spring - if space available and with instructor permission)

Length of Program

This is a full-time, day and evening program. The program can be completed in four semesters. Students can enroll in the program only in the fall.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Automotive Service Technician AAS

- BS Operations Management
Minnesota State University-Moorhead
- BS Automotive Engineering Technology
Minnesota State University-Mankato

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 64+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Spatial assessment required: Score 10+

Shop/classroom visit recommended

Student must have a valid driver's license

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Automotive Service Technician AAS DEGREE *(continued)*

Course Sequence

The following full-time sequence is recommended.

First Semester

AUTO 1415 Introduction to Automotive Technology4
 AUTO 1430 Brakes4
 AUTO 1510 Clutch/Driveline Manual Transmission . . . 3
 AUTO 1530 Basic Electrical & Battery3
 ENGL 1711 Composition 14
Total Semester Credits18

Second Semester

AUTO 1441 Alignment & Suspension4
 AUTO 1523 Four Wheel Drive Differential3
 AUTO 1540 Basic Engine Management3
 AUTO 1550 Heating & Air Conditioning4
 SPCH XXXX3
Total Semester Credits20

Third Semester

AUTO 2410 Starting & Charging Systems3
 AUTO 2420 Electrical Accessories3
 AUTO 2430 Engine Theory & Repair4
 AUTO 2440 Engine Installation2
 AUTO 2450 Introduction to Auto Computers2
 Goal Area 53
Total Semester Credits17

Fourth Semester

AUTO 2513 Fuel Systems3
 AUTO 2520 Engine Drivability3
 AUTO 2530 Auto Transmission Theory2
 AUTO 2542 Auto Tran Diagnosis & Repair4
 AUTO 2550 Specialized Lab 12
 Goal Area 63
Total Semester Credits17

Any Semester

General Education requirement courses may be taken before, after or concurrently with the Automotive Service Technician courses.
General Education Requirements16

Total Program Credits72

Automotive Service Technician DIPLOMA

Program Overview

This program prepares technicians to perform automotive repairs on complex automobiles at the Technician level. Upon completion of the program students may qualify for the Master Technician designation by passing all 8 of the Automotive Service Excellence (ASE) tests. The program includes courses that ensure individuals have the necessary oral, written, and critical thinking skills to help them with supervisory and management responsibilities.

Students should have good mechanical aptitude, be in good physical condition and have the ability to get along with others. To profit from the training offered, the students must read well enough to understand the technical information presented.

Career Opportunities

Opportunities are expected to be plentiful for automotive technicians with technical training according to the U.S. Department of Labor.

The department also states that the growing complexity of automotive technology, such as the use of electronic and emissions control equipment increasingly necessitates that cars be serviced by professionals.

The auto technician may work in a dealership garage, an independent garage, or as a specialist. Opportunities exist for a technician to become shop service sales person, new car dealership service manager, or shop owner.

Program Outcomes

1. Graduates will be prepared to pass all 8 ASE tests.
2. Graduates will have the skills to perform repairs on automobiles at a Master Technician level.
3. Graduates will have proficient communication skills for customer service.
4. Graduates will have business and management skills required of an automotive service technician.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Automotive Service Technician Diploma

BS Operations Management
Minnesota State University-Moorhead

Program Faculty

Greg Pardun greg.pardun@saintpaul.edu
John Purcell john.purcell@saintpaul.edu
Jake Yernberg jake.yernberg@saintpaul.edu
David Vorderbruggen
david.vorderbruggen@saintpaul.edu

Length of Program

This is a full-time, day and evening program. The program can be completed in four semesters. Students can enroll in the program only in the fall.

Tool costs

Students will need to supply their own basic tools and tool box.

The estimated cost for professional quality tools and tool box is approximately \$2,000–\$3,000.

Tool vendors will be on campus during the first week.

Program Requirements

Check off when completed

Successful completion of each semester in this program is a pre-requisite for participation in the following semester.

Course	Cr
<input type="checkbox"/> AUTO 1415 Introduction to Automotive Technology	4
<input type="checkbox"/> AUTO 1430 Brakes	4
<input type="checkbox"/> AUTO 1441 Alignment & Suspension	4
<input type="checkbox"/> AUTO 1510 Clutch/Driveline Manual Transmission	3
<input type="checkbox"/> AUTO 1523 Four Wheel Drive Differential	3
<input type="checkbox"/> AUTO 1530 Basic Electrical & Battery	3
<input type="checkbox"/> AUTO 1540 Basic Engine Management	3
<input type="checkbox"/> AUTO 1550 Heating & Air Conditioning	4
<input type="checkbox"/> AUTO 2410 Starting/Charging Systems	3
<input type="checkbox"/> AUTO 2420 Electrical Accessories	3
<input type="checkbox"/> AUTO 2430 Engine Theory & Repair	4
<input type="checkbox"/> AUTO 2440 Engine Installation	2
<input type="checkbox"/> AUTO 2450 Introduction to Auto Computers	2
<input type="checkbox"/> AUTO 2513 Fuel Systems	3
<input type="checkbox"/> AUTO 2520 Engine Drivability	3
<input type="checkbox"/> AUTO 2530 Automatic Transmission Theory	2
<input type="checkbox"/> AUTO 2542 Automatic Transmission Diagnosis & Repair	4
<input type="checkbox"/> AUTO 2550 Specialized Lab 1	2

Total Program Credits56

Program Start Dates

Fall

Course Sequence

The following full-time sequence is recommended.

First Semester (Fall 2016)

AUTO 1415 Introduction to Automotive Technology	4
AUTO 1430 Brakes	4
AUTO 1510 Clutch/Driveline Manual Transmission	3
AUTO 1530 Basic Electrical & Battery	3
Total Semester Credits	14

Second Semester (Spring 2017)

AUTO 1441 Alignment & Suspension	4
AUTO 1523 Four Wheel Drive & Differential	3
AUTO 1540 Basic Engine Management	3
AUTO 1550 Heating & Air Conditioning	4
Total Semester Credits	14

Third Semester

AUTO 2410 Starting & Charging Systems	3
AUTO 2420 Electrical Accessories	3
AUTO 2430 Engine Theory & Repair	4
AUTO 2440 Engine Installation	2
AUTO 2450 Introduction to Auto Computers	2
Total Semester Credits	14

Fourth Semester

AUTO 2513 Fuel Systems	3
AUTO 2520 Engine Drivability	3
AUTO 2530 Auto Transmission Theory	2
AUTO 2542 Auto Tran Diagnosis & Repair	4
AUTO 2550 Specialized Lab 1	2
Total Semester Credits	14

Total Program Credits56

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 64+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Spatial assessment required: Score 10+

Shop/classroom visit recommended

Student must have a valid driver's license

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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*Information is subject to change.
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Truck Technician DIPLOMA

Program Overview

Technicians diagnose trouble accurately with the use of modern testing equipment. They repair and service the entire truck and trailer including gas and diesel engines. They also work on air brakes, multi-speed transmissions, differentials, electrical systems, chassis and engine electronics, cooling systems, air conditioning and refrigeration, the chassis, and many more components of today's modern truck.

Career Opportunities

Maintenance departments, which have the responsibility for the repair and the maintenance of the entire truck, need skilled graduates to fill truck technician positions. Many technicians find employment with companies that own a fleet of vehicles such as truck lines, bus lines, and construction companies. Other technicians work for small repair shops, truck dealerships, heavy equipment dealers and the government.

Employment of truck technicians is expected to increase faster than average according to the U.S. Department of Labor.

Program Outcomes

1. Graduates will have the knowledge and skills to service and repair medium and heavy duty trucks and trailers.
2. Graduates will have acquired supervised work experience servicing and repairing medium and heavy duty trucks and trailers.
3. Graduates will be prepared for employment as entry level truck technicians and truck preventative maintenance technicians.
4. Graduates will have mastered the general education program requirements for work and life roles.

Additional Requirements/Recommendations

- The student should be capable of passing a rigorous physical examination with emphasis on eyesight, color vision, hearing, back condition and motor coordination.
- Applicants should be high school graduates or equivalent with good reading ability and an understanding of basic mathematics in order to understand and apply technical information.
- Drug test, background check, driving record, and a commercial drivers license may also be required by many employers.

Program Faculty

Patrick Rafferty patrick.rafferty@saintpaul.edu

Full-time enrollment is required

This is a two-year, full-time day program.

- Intro and Safety must be taken concurrently with the other truck technician classes at the start of the program.
- It is recommended that the general education requirements be taken in the summer term before the first year or between the first and second years.

Textbook and supply costs

The following are estimated costs:

- Textbooks: \$450
- Tools: \$1,000–\$2,000 depending on brand of tools purchased.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> TRKM 1400 Introduction and Safety	1
<input type="checkbox"/> TRKM 1445 Truck Welding 1	2
<input type="checkbox"/> TRKM 1455 Truck Welding 2	2
<input type="checkbox"/> TRKM 1521 Electrical 1	5
<input type="checkbox"/> TRKM 1522 Electrical 2	5
<input type="checkbox"/> TRKM 1551 Clutch and Transmission	5
<input type="checkbox"/> TRKM 1552 Driveshafts and Differentials	4
<input type="checkbox"/> TRKM 1553 Automatic and Automated Transmissions	4
<input type="checkbox"/> TRKM 1560 Truck Brake Systems	6
<input type="checkbox"/> TRKM 2401 Steering and Suspension Systems	6
<input type="checkbox"/> TRKM 2425 Truck Cab Climate Control Systems	3
<input type="checkbox"/> TRKM 2440 Gasoline Engines	6
<input type="checkbox"/> TRKM 2511 Diesel Engines 1	6
<input type="checkbox"/> TRKM 2512 Diesel Engines 2	6
<input type="checkbox"/> TRKM 2540 Preventive Maintenance	3
Subtotal	64
General Education Requirement	3
Refer to the Minnesota Transfer Curriculum Course List for specific course options.	
<input type="checkbox"/> Any college level general education course	3

Total Program Credits 67

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Truck Technician Diploma

BS Operations Management
Minnesota State University-Moorhead

Program Start Dates

Fall

Course Sequence

This diploma program generally includes four semesters of full-time study. The course sequence will depend upon when a student starts the Truck Technician program. Each of the four required semester blocks is offered once every other year. Students beginning Fall Semester will follow the following sequence outlined.

Fall Semester

TRKM 1400 Introduction and Safety	1
TRKM 1521 Electrical 1	5
TRKM 1522 Electrical 2	5
TRKM 1552 Driveshafts and Differentials	4
TRKM 1445 Truck Welding 1	2
Total Semester Credits	16

Second Semester

TRKM 1455 Truck Welding 2	2
TRKM 1551 Clutch and Transmission	5
TRKM 1553 Automatic and Automated Transmissions	4
TRKM 1560 Truck Brake Systems	6
Total Semester Credits	17

Third Semester

TRKM 2401 Steering and Suspension Systems	6
TRKM 2425 Truck Cab Climate Control Systems	3
TRKM 2440 Gasoline Engines	6
Total Semester Credits	15

Fourth Semester

TRKM 2511 Diesel Engines 1	6
TRKM 2512 Diesel Engines 2	6
TRKM 2540 Preventive Maintenance	3
Total Semester Credits	15

General Education Requirement (any) 3
May be taken any semester, but Summer Term is recommended.

Total Program Credits 67

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Spatial assessment required: Score 10+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

100D (7066)

*Information is subject to change.
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Cabinetmaking DIPLOMA

Program Overview

Cabinetmakers are skilled in the phases of cabinet construction from the initial drafting and layout, to material cutting, assembly, finishing and installation. The principles used in building kitchen cabinets are also used in building store fixtures, furniture and all other types of woodworking. The program prepares students to work for cabinet manufacturers and custom cabinet shops.

Career Opportunities

New construction in housing and industry, and the renovation and modernization of existing structures are expected to increase the demand for cabinetmakers.

Cabinetmaking graduates find positions in kitchen cabinet shops, lumber companies, sash and door factories, store fixture manufacturers, display shops, wood specialty shops, and furniture repair shops. Some graduates operate their own business.

Program Outcomes

1. Graduates will have acquired supervised hands-on experience building framed and frameless cabinetry.
2. Graduates will have knowledge, skill, and hands-on experience in the use of CAD/CAM software and CNC equipment.
3. Graduates will have knowledge, skill, and hands-on experience with wood stains, finishes and finishing equipment.
4. Graduates will have knowledge, skill, and hands-on experience in plastic laminate technology and fabrication.
5. Graduates will have acquired supervised hands-on experience in raised panel door layout, machinery set up, and production.
6. Graduates will have the knowledge, skills, and hands-on experience on the safe operation of woodworking equipment.

Program Faculty

Thomas Hillstead thomas.hillstead@saintpaul.edu

Part-time/Full-time options

Part-time and full-time options available. Technical courses are offered during days.

Textbook, tool, and supply costs

Additional program costs total approximately \$1,000 for the following:

- Tools: \$500.00
- Books & Supplies: \$350.00
- Projects (costs vary) about: \$150.00

Program Requirements

Check off when completed

MATH 1411 – Applied Math is required for program graduation. It can be taken any semester but must be completed by the end of the second semester.

Course	Cr
<input type="checkbox"/> CABT 1410 Print Reading and Design	3
<input type="checkbox"/> CABT 1415 Wood Technology	3
<input type="checkbox"/> CABT 1425 Machining 1	5
<input type="checkbox"/> CABT 1426 Machining 2	3
<input type="checkbox"/> CABT 1431 Framed Cabinetry	5
<input type="checkbox"/> CABT 2410 Laminates and Countertops	4
<input type="checkbox"/> CABT 2441 Frameless Cabinetry	5
<input type="checkbox"/> CABT 2510 CAD/CAM/CNC	4
<input type="checkbox"/> MATH 1411 Applied Mathematics	3

Total Program Credits 35

Additional Requirements/Recommendations

- Mathematics and drawing skills are helpful.
- Students need to be alert, physically fit and have good vision.
- Students are expected to attend all classes and be prompt.
- It is necessary to have good hand and eye coordination.
- Safety will be a major factor in operating all equipment.
- Safety is taught and students must pass all safety tests before operating equipment.

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester.

First Semester

CABT 1410 Print Reading and Design	3
CABT 1415 Wood Technology	3
CABT 1425 Machining 1	5
CABT 1431 Framed Cabinetry	5
MATH 1411 Applied Mathematics	3
Total Semester Credits	19

Second Semester

CABT 1426 Machining 2	3
CABT 2410 Laminates and Countertops	4
CABT 2441 Frameless Cabinetry	5
CABT 2510 CAD/CAM/CNC	4
Total Semester Credits	16

Total Program Credits 35

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Cabinetmaking Diploma

BS Operations Management
Minnesota State University-Moorhead

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

085D (7040)

*Information is subject to change.
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Wood Finishing Techniques CERTIFICATE

Program Overview

Wood finishers in the Cabinet industry are responsible for the final appearance of the product. They are able to change the look of a product by adding color with different types of stains and then protecting the product with finish coats of materials such as lacquer, varnish, etc. Students in this program will learn all phases of finishing from repairing existing finishes to applying finishes to new products using various techniques. They will also learn the various products available in the finish industry.

Career Opportunities

With a high demand in both the residential & commercial wood manufacturing industry for their products, the demand for quality wood finishing specialists will always be high.

Graduates of the Wood Finishing Techniques program will be able to find employment such as residential cabinet shops, commercial fixtures shops, millwork companies, wood specialty shops, retail furniture companies, and restoration companies.

Program Outcomes

1. Graduates will have acquired supervised hands-on experience with state-of-the-art wood finishing techniques.
2. Graduates will have knowledge, skill, and hands-on experience with faux, aging and new finishes.
3. Graduates will have knowledge, skill, and hands-on experience with wood stains, finishes and finishing equipment.
4. Graduates will have knowledge, skill, and hands-on experience in plastic laminate technology and fabrication.
5. Graduates will have acquired supervised hands-on experience with print reading and print design.
6. Graduates will have the knowledge, skills, and hands-on experience on the safe operation of woodworking equipment.

Program Faculty

Thomas Hillstead thomas.hillstead@saintpaul.edu

Part-time/Full-time options

Part-time and full-time options available. Technical courses are offered during days.

Textbook, tool, and supply costs

Additional program costs total approximately \$1,000 for the following:

- Tools: \$500.00
- Books & Supplies: \$350.00
- Projects (costs vary) about: \$150.00

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CABT 1410 Print Reading and Design	3
<input type="checkbox"/> CABT 1415 Wood Technology	3
<input type="checkbox"/> CABT 1425 Machining 1	5
<input type="checkbox"/> CABT 1440 Wood Preparation and Repair	3
<input type="checkbox"/> CABT 1447 Wood Finishing 1	3
<input type="checkbox"/> CABT 1448 Wood Finishing 2	3
<input type="checkbox"/> CABT 2705 Specialty Finishes	2

Total Program Credits 22

Additional Requirements/Recommendations

- Mathematics and drawing skills are helpful.
- Students need to be alert, physically fit and have good vision.
- Students are expected to attend all classes and be prompt.
- It is necessary to have good hand and eye coordination.
- Safety will be a major factor in operating all equipment.
- Safety is taught and students must pass all safety tests before operating equipment.

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended; however, this sequence is not required. Not all courses are offered each semester.

First Semester

CABT 1410 Print Reading and Design	3
CABT 1415 Wood Technology	3
CABT 1425 Machining 1	5
Total Semester Credits	11

Second Semester

CABT 1440 Wood Preparation and Repair	3
CABT 1447 Wood Finishing 1	3
CABT 1448 Wood Finishing 2	3
CABT 2705 Specialty Finishes	2
Total Semester Credits	11

Total Program Credits 22

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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*Information is subject to change.
This Program Requirements Guide is not a contract.*

Carpentry DIPLOMA

Program Overview

Construction is the largest industry in terms of investment and manpower expended. Carpenters make up the largest trade group in the construction industry. They erect the wood framework in buildings; they install wood paneling, cabinets, door and window frames, and hardware; and they build stairs and frame roofs. Carpenters work under a wide variety of conditions, indoors and out, in all types of weather. They use many different hand and power tools working with wood, concrete, metals, plastics, and other construction materials.

Good work habits, mechanical aptitude, and strong communication and math skills are necessary to become a successful carpenter. Carpenters must be able to climb, lift, carry, measure, calculate, and plan their work. They often work at considerable heights.

Career Opportunities

Construction activity continues to be strong. Demand for quality carpenters exists in residential, commercial, and heavy construction. Increased activity in infrastructure and building renovation has provided additional opportunities for carpenters.

Carpenters can be involved in the many different phases of a building project or choose to specialize in areas such as framing, drywall, acoustic ceilings, concrete form building, hardware, and millwork. Many graduates continue their training by entering a formal apprentice program. Carpenter apprentices advance to journey person by working on the job and attending classes related to their work. Advancement can continue to lead carpenter, carpenter foreman, and job superintendent. Carpenters are employed by a wide variety of construction contractors, or they may choose to become self-employed in their own business.

Program Outcomes

1. Graduates will have the knowledge and skills to safely use hand and portable power tools used by carpenters in the construction industry.
2. Graduates will be able to work with wood, plastics, concrete, metals, gypsum, and various fiber composite products used by carpenters in the construction industry.
3. Graduates will have practiced procedures used by carpenters in framing layout, stair construction, wood and steel framing, and installation of doors, windows, and cabinets.
4. Graduates will be familiar with forming systems and types of scaffold used in concrete construction.
5. Graduates will be familiar with and have practiced job site safety requirements.

6. Graduates will be able to operate instruments and demonstrate procedures used in building layout.
7. Graduates will display effective work habits deemed necessary by employers.
8. Graduates will be prepared for entry level employment as carpenters and admission to the Carpenters Apprentice Training Program.

Program Faculty

Perry Franzen perry.franzen@saintpaul.edu
651.846.1391

Full-time enrollment is required

This is a full-time day program. Students should plan for a full day of classes.

Special supplies and tool costs

Students should expect to spend approximately \$1,100.00, beyond the cost of tuition, fees, and books, for special supplies and tools. A list is available from the advisor.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CARP 1410 Project Estimating	3
<input type="checkbox"/> CARP 1420 Construction Blueprint Reading	2
<input type="checkbox"/> CARP 1430 Intro to Carpentry & Hand Tools	3
<input type="checkbox"/> CARP 1510 Intermediate Carpentry	5
<input type="checkbox"/> CARP 1521 Building Technology	5
<input type="checkbox"/> CARP 1522 Power Tool and Shop Procedures	5
<input type="checkbox"/> CARP 2410 Advanced Carpentry	6
<input type="checkbox"/> CARP 2421 Fieldwork and Carpentry Procedures	5
<input type="checkbox"/> CARP 2422 Carpentry Concrete Technology and Installation	5
<input type="checkbox"/> MATH 1411 Applied Mathematics	3

Total Program Credits 42

*Information is subject to change.
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Program Start Dates

Summer

Course Sequence

The following sequence is required.

Summer Term

CARP 1410 Project Estimating	3
CARP 1420 Construction Blueprint Reading	2
CARP 1430 Intro to Carpentry & Hand Tools	3
Total Semester Credits	8

Fall Semester

CARP 1510 Intermediate Carpentry	5
CARP 1521 Building Technology	5
CARP 1522 Power Tool and Shop Procedures	5
MATH 1411 Applied Mathematics	3
Total Semester Credits	18

Spring Semester

CARP 2410 Advanced Carpentry	6
CARP 2421 Fieldwork and Carpentry Procedures	5
CARP 2422 Carpentry Concrete Technology and Installation	5
Total Semester Credits	16

Total Program Credits 42

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Carpentry Diploma

BS Operations Management
Minnesota State University-Moorhead

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

086D (7039)

Electrical Technology DIPLOMA

Program Overview

An electrician is employed to install electrical wiring and equipment for lighting, heating, cooling and other power requirements in residential, commercial and industrial buildings. Using blueprints, diagrams and specifications, students perform installations in accordance with national, state and local safety codes. Considerable physical exertion is often required and the work may be performed outdoors or under such hazardous conditions as heights, unfinished construction or high voltages.

Students should have an interest and aptitude in applied algebra, trigonometry, drawing and science. Good eyesight and color vision are important.

Career Opportunities

According to the U.S. Department of Labor, "As the population and the economy grow... more electricians will be needed to maintain the electrical systems used by industry and to install electrical devices and wiring in new homes, factories, offices and other structures."

Graduates are employed as apprentices by electrical construction firms. Upon completion of apprenticeship and the obtaining of a journeyman's license, students are open to opportunities as master electricians, inspectors, contractors, estimators and repair persons.

Program Outcomes

1. Graduates will have the ability to communicate and conduct themselves in a professional manner with the customers and co-workers.
2. Graduates will have the skills for performing entry level tasks required of an apprentice electrician in residential, commercial and industrial construction.
3. Graduates will have knowledge of the National Electric Code, enabling them to legally and safely install electrical services with supervision.
4. Graduates will have the ability to apply electrical theory to practical applications.
5. Graduates will meet the MN Department of Labor and Industry's electrical program requirement of specific curriculum and 95% course attendance policy.

Apprenticeship opportunity

Completion of the Electrical Technology Diploma program meets the Minnesota Department of Labor and Industry requirements. 95% attendance in each course and completion of the diploma may qualify for one year of apprenticeship credit.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Julie Selton	julie.selton@saintpaul.edu 651.846.1770
Keith Setley	keith.setley@saintpaul.edu 651.846.1539
Ed Schones	edward.schones@saintpaul.edu 651.846.1631
Dean Weikle	dean.weikle@saintpaul.edu 651.846.1790

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> ELTN 1410 National Electrical Code 1 and Trade Calculations	4
<input type="checkbox"/> ELTN 1422 Direct Current Circuit Analysis	5
<input type="checkbox"/> ELTN 1432 Alternating Current Circuit Analysis	5
<input type="checkbox"/> ELTN 1442 Single-Phase Motors and Generators	5
<input type="checkbox"/> ELTN 1512 Three-Phase Systems Motors and Generators	5
<input type="checkbox"/> ELTN 1522 Introduction to Electronics and Test Equipment	5
<input type="checkbox"/> ELTN 1532 Intermediate Electronics and PLC's	5
<input type="checkbox"/> ELTN 1540 Low Voltage Systems and Job Site Safety	4
<input type="checkbox"/> ELTN 2410 Distribution Power and Specialty Transformers	4
<input type="checkbox"/> ELTN 2420 Motor Controls	4
<input type="checkbox"/> ELTN 2430 Residential Wiring and Blueprint Reading	4
<input type="checkbox"/> ELTN 2440 Heating and Cooling System Controls	4
<input type="checkbox"/> ELTN 2510 Wiring Methods and Systems	4
<input type="checkbox"/> ELTN 2522 Commercial Wiring Methods	5
<input type="checkbox"/> ELTN 2532 Industrial Wiring Methods and Service Entrance	5
<input type="checkbox"/> ELTN 2540 National Electrical Code 2	4
<input type="checkbox"/> ELTN 2550 Renewable Energy	2

Total Program Credits 74

Additional Program Requirements/Costs

- Students must attend orientation.
- Textbooks are required the first day of class. Go to www.saintpaulcollegebookstore.com for textbook information.
- Multimeter and hand tools, approximately \$500 new.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Electrical Technology Diploma

BS Operations Management
Minnesota State University-Moorhead

Program Start Dates

Fall, Spring

Course Sequence

The following full-time sequence is recommended.

First Semester

ELTN 1410 National Electrical Code 1 and Trade Calculations	4
ELTN 1422 Direct Current Circuit Analysis	5
ELTN 1432 Alternating Current Circuit Analysis	5
ELTN 1442 Single-Phase Motors and Generators	5
Total Semester Credits	19

Second Semester

ELTN 1512 Three-Phase Systems Motors and Generators	5
ELTN 1522 Introduction to Electronics and Test Equipment	5
ELTN 1532 Intermediate Electronics and PLC's	5
ELTN 1540 Low Voltage Systems and Job Site Safety	4
Total Semester Credits	19

Third Semester

ELTN 2410 Distribution Power and Specialty Transformers	4
ELTN 2420 Motor Controls	4
ELTN 2430 Residential Wiring and Blueprint Reading	4
ELTN 2440 Heating and Cooling System Controls	4
Total Semester Credits	16

Fourth Semester

ELTN 2510 Wiring Methods and Systems	4
ELTN 2522 Commercial Wiring Methods	5
ELTN 2532 Industrial Wiring Methods and Service Entrance	5
ELTN 2540 National Electrical Code 2	4
ELTN 2550 Renewable Energy	2
Total Semester Credits	20

Total Program Credits 74

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Reading: Score of 60+ or a grade of "C" or better in READ 0721

Writing: Score of 60+ or a grade of "C" or better in ENGL 0921

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

309D (7158)

Electromechanical Systems DIPLOMA

Program Overview

Electromechanical systems, also referred to as mechatronics, is a new and rapidly growing field that integrates electronics, mechanics, pneumatics, hydraulics, and computer control systems to create new and improved automated manufacturing production systems. This program is designed for people who are interested in plant maintenance (troubleshooting & repair), process set up, installation, and commissioning.

Electromechanical Systems move beyond simply cross-training employees, as the discipline recognizes that individuals need to be trained in five areas: mechanical, electrical, fluid power, process control, and industrial programming.

Students/electricians that previously acquired a diploma/AAS degree in the study of electricity may transfer in credits toward the Electromechanical Systems diploma. Students should have an interest and aptitude in applied algebra, trigonometry, drawing and science. Good eyesight and color vision are important.

Career Opportunities

The Electromechanical Systems program prepares students for careers requiring specialized skills in electricity, electronics, instrumentation, programmable logic controllers, microprocessors, automation and robotics. Students will become multi-skilled technicians capable of solving the many complex problems of manufacturing automation. Students will be prepared for a wide variety of careers including: Instrument Technician, Electrical Technician, Electromechanical Technician, Robotics Technician, Electronics Mechanic, Machine Repair & Maintenance, Motor Installer, Instrumentation Calibration Technician, Industrial Programmer, PLC Programmer, and Field Service.

These jobs are found in a wide range of fields including: oil refineries, water treatment, wastewater treatment, manufacturing plants, chemical, medical, electronics, agriculture, biotechnology and automotive industries.

Program Outcomes

1. Graduates will have the ability to communicate and conduct themselves in a professional manner with the customers and co-workers.
2. Graduates will have the skills for performing entry level tasks required of an apprentice electrician in residential, commercial and industrial construction.
3. Graduates will have knowledge of the National Electric Code, enabling them to legally and safely install electrical services with supervision.
4. Graduates will have the ability to apply electrical theory to practical applications.
5. Graduates will meet the MN Department of Labor and Industry's electrical program requirement of specific curriculum and 95% course attendance policy.

Program Faculty

Travis Schachtner travis.schachtner@saintpaul.edu
651.846.7163

Program Delivery

While addressing the general education needs of the program, students will be working within the Electrical Technology program in second semester. Third and fourth semester consist of online course delivery with hands-on labs to reinforce the lessons learned as well as one-on-one with instructors.

Additional Program Requirements/Costs

- Student must attend orientation.
- Textbooks are required the first day of class. Go to www.saintpaulcollegebookstore.com for textbook information.
- Students are responsible for having their own Personal Protective Equipment (PPE) to participate in the labs.

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> CMAE 1514 Safety Awareness	.2
<input type="checkbox"/> CMAE 1518 Manufacturing Process and Production	.2
<input type="checkbox"/> CMAE 1522 Quality Practices	.2
<input type="checkbox"/> CMAE 1526 Maintenance Awareness	.2
<input type="checkbox"/> EMEC 1510 AC/DC Fundamentals	.3
<input type="checkbox"/> EMEC 1520 Electrical Motors	.3
<input type="checkbox"/> EMEC 1530 Motor Controls	.4
<input type="checkbox"/> EMEC 1540 Motor Drives	.4
<input type="checkbox"/> EMEC 2620 Mechanical Fundamentals I	A
<input type="checkbox"/> EMEC 2625 Mechanical Fundamentals 2	.4
<input type="checkbox"/> EMEC 2610 Fluid System Fund. - Pneumatics	.3
<input type="checkbox"/> EMEC 2615 Fluid System Fund. - Hydraulics	.3
<input type="checkbox"/> EMEC 2740 Electromechanical Troubleshooting & Maintenance	.3
<input type="checkbox"/> EMEC 2751 Automated Process Control	.4
<input type="checkbox"/> EMEC 2760 Programming for Robotic Manufacturing	.4
<input type="checkbox"/> EMEC 2770 Advanced PLC Programming	.4
Subtotal	51

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	.3
ENGL XXXX (Goal 1 only)	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning	.3
General Education Requirements	.6

Total Program Credits **57**

Program Start Dates

Fall, Spring

Course Sequence

This course sequence is recommended for a full-time student; however, this sequence is not required. Students should consult with the Program Advisor each semester.

Not all courses are offered each semester; a selection of courses is offered summer term.

First Semester

CMAE 1514 Safety Awareness	.2
CMAE 1518 Manufacturing Process and Production	.2
CMAE 1522 Quality Practices	.2
CMAE 1526 Maintenance Awareness	.2
ENGL XXXX (Goal 1 only)	.3
MATH 17XX Math	.3
Total Semester Credits	14

Second Semester

EMEC 1510 AC/DC Fundamentals	.3
EMEC 1520 Electrical Motors	.3
EMEC 1530 Motor Controls	.4
EMEC 1540 Motor Drives	.4
Total Semester Credits	14

Third Semester

EMEC 2620 Mechanical Fundamentals I	.4
EMEC 2625 Mechanical Fundamentals 2	.4
EMEC 2610 Fluid System Fund. - Pneumatics	.3
EMEC 2615 Fluid System Fund. - Hydraulics	.3
Total Semester Credits	14

Fourth Semester

EMEC 2740 Electromechanical Troubleshooting & Maintenance	.3
EMEC 2751 Automated Process Controls	.4
EMEC 2760 Programming for Robotic Manufacturing	.4
EMEC 2770 Advanced PLC Programming	.4
Total Semester Credits	15

Total Program Credits **57**

*Information is subject to change.
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Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Score of 60+ or grade of "C" or better in ENGL 0921

Arithmetic: Score of 52+

Assessment Results and Prerequisites: Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Electromechanical Systems CERTIFICATE

Program Overview

Note: Students must be a journeyman electrician, have a Construction Electricity (CNEL) or Electrical Technology (ELTN) Diploma/AAS, or have Instructor approval.

Electromechanical systems, also referred to as mechatronics, is a new and rapidly growing field that integrates electronics, mechanics, pneumatics, hydraulics, and computer control systems to create new and improved automated manufacturing production systems. This program is designed for people who are interested in plant maintenance (troubleshooting & repair), process set up, installation, and commissioning.

Electromechanical Systems move beyond simply cross-training employees, as the discipline recognizes that individuals need to be trained in five areas: mechanical, electrical, fluid power, process control, and industrial programming.

The Electromechanical Systems Certificate program requires high school graduation or equivalent. Students/electricians that previously acquired a diploma/AAS degree in the study of electricity may transfer in credits toward the Electromechanics certificate. Students should have an interest and aptitude in applied algebra, trigonometry, drawing and science. Good eyesight and color vision are important.

Career Opportunities

The Electromechanical Systems program prepares students for careers requiring specialized skills in electricity, electronics, instrumentation, programmable logic controllers, microprocessors, automation and robotics. Students will become multi-skilled technicians capable of solving the many complex problems of manufacturing automation. Students will be prepared for a wide variety of careers including: Instrument Technician, Electrical Technician, Electromechanical Technician, Robotics Technician, Electronics Mechanic, Machine Repair & Maintenance, Motor Installer, Instrumentation Calibration Technician, Industrial Programmer, PLC Programmer, and Field Service.

These jobs are found in a wide range of fields including: electrical utilities, oil refineries, water treatment, wastewater treatment, manufacturing plants, chemical, medical, electronics, agriculture, biotechnology and automotive industries.

Program Outcomes

1. Graduates will have the ability to communicate and conduct themselves in a professional manner with the customers and co-workers.
2. Graduates will be able to work on various styles of drives and pumps.
3. Graduates will be able to program using specialized industrial languages.
4. Graduates will have an understanding of machine logic and how electric, pneumatic, and hydraulic circuits interact with it.
5. Graduates will be able to work with various process control systems.

Program Delivery

Class work for this program consist of online course delivery with hands-on labs to reinforce that lessons learned as well as one-on-one with instructors.

Program Requirements

- Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> EMEC 2620 Mechanical Fundamentals 1	4
<input type="checkbox"/> EMEC 2625 Mechanical Fundamentals 2	4
<input type="checkbox"/> EMEC 2610 Fluid System Fund. - Pneumatics	3
<input type="checkbox"/> EMEC 2615 Fluid System Fund. - Hydraulics	3
<input type="checkbox"/> EMEC 2740 Electromechanical Troubleshooting & Maintenance	4
<input type="checkbox"/> EMEC 2751 Automated Process Control	4
<input type="checkbox"/> EMEC 2760 Programming for Robotic Manufacturing	4
<input type="checkbox"/> EMEC 2730 Advanced PLC Programming	4

Total Program Credits29

Additional Program Materials Costs

- Student must attend orientation.
- Textbooks are required the first day of class. Go to www.saintpaulcollegebookstore.com for textbook information.
- Students are responsible for having their own Personal Protective Equipment (PPE) to participate in the labs.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Travis Schachtner travis.schachtner@saintpaul.edu
651.403.4163

Program Start Dates

Fall, Spring

Course Sequence

The following part-time sequence is recommended; however, this sequence is not required.

Not all courses are offered each semester; a selection of courses is offered summer term.

Students should consult with the Program Advisor each semester.

First Semester

EMEC 2620 Mechanical Fundamentals 1	4
EMEC 2625 Mechanical Fundamentals 2	4
EMEC 2610 Fluid System Fund. - Pneumatics	3
EMEC 2615 Fluid System Fund. - Hydraulics	3
Total Semester Credits	14

Second Semester

EMEC 2740 Electromechanical Troubleshooting & Maintenance	3
EMEC 2751 Automated Process Control	4
EMEC 2760 Programming for Robotic Manufacturing	4
EMEC 2730 Advanced PLC Programming	4
Total Semester Credits	15

Total Program Credits29

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Score of 60+ or grade of "C" or better in ENGL 0921

Arithmetic: Score of 57+

Assessment Results and Prerequisites:

Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

349C

Pipefitting DIPLOMA

Program Overview

Pipefitters install, maintain, and repair high and low pressure steam systems, high and low pressure hot water systems, snow melting systems, refrigeration systems, heating, gas and oil piping, pneumatic, electronic controls, air conditioning and also provide instrumentation and valve repair. These skills are used working in residential, commercial, and industrial installations. These systems are installed in all types of weather conditions.

Applicants must be high school graduates or the equivalent and should enjoy working in a demanding trade that requires both mental alertness and physical stamina. Pipefitters do heavy lifting and are required to work both indoors and outside, often times in confined spaces.

Career Opportunities

Pipefitters, Steamfitters, and HVACR Technicians work in all aspects of the heating, air conditioning, refrigeration, and temperature control fields. They are also employed at oil refineries, chemical plants, food processing facilities, manufacturing plants, retail and wholesale food stores, and ice rinks.

Maintenance pipefitters work in a variety of environments such as universities, schools, government agencies and utility companies.

Program Outcomes

1. Graduates will have the science and math skills needed in the piping systems.
2. Graduates will have the basic knowledge and skills necessary to install piping systems in commercial and industrial buildings.
3. Graduates will have basic knowledge to properly install and operate low and high pressure steam systems.

Program Faculty

Greg French greg.french@saintpaul.edu

Restricted Enrollment

The Pipefitting Diploma is a restricted enrollment joint program offered through the St. Paul Pipefitters Local 455 and Saint Paul College. Admission to the Pipefitters Apprenticeship program is required for enrollment in this program. Contact Greg French at greg.french@saintpaul.edu for application information.

Student supplies and tools costs

Text rental \$100.00
PPE-Tools estimated at \$150.00

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> PIPE 1410 Pipe Science/Math	5
<input type="checkbox"/> PIPE 1420 Pipe Blueprint Reading	3
<input type="checkbox"/> PIPE 1430 Pipe Welding 1	5
<input type="checkbox"/> PIPE 1441 Basic Heating 1	3
<input type="checkbox"/> PIPE 1442 Basic Heating 2	3
<input type="checkbox"/> PIPE 1451 Pipe Shop 1	4
<input type="checkbox"/> PIPE 1452 Pipe Shop 2	4
<input type="checkbox"/> PIPE 1522 Basic Air Conditioning and Refrigeration	2
<input type="checkbox"/> PIPE 1530 Pipe Welding 2	5
<input type="checkbox"/> PIPE 1540 Electric Controls	3
<input type="checkbox"/> PIPE 1550 Basic Gas	3

Total Program Credits 40

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Pipefitting Diploma

BS Operations Management
Minnesota State University-Moorhead

Program Start Dates

Fall

Course Sequence

The following sequence is required. This program begins fall semester.

Fall Semester

PIPE 1410 Pipe Science/Math	5
PIPE 1420 Pipe Blueprint Reading	3
PIPE 1430 Pipe Welding 1	5
PIPE 1441 Basic Heating 1	3
PIPE 1451 Pipe Shop 1	4
Total Semester Credits	20

Spring Semester

PIPE 1442 Basic Heating 2	3
PIPE 1452 Pipe Shop 2	4
PIPE 1522 Basic Air Conditioning and Refrigeration	2
PIPE 1530 Pipe Welding 2	5
PIPE 1540 Electric Controls	3
PIPE 1550 Basic Gas	3
Total Semester Credits	20

Total Program Credits 40

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading Comprehension: Score of 85+

Arithmetic: Score of 72 or better

Spatial: 70% or better

Students must maintain a GPA of 2.5 to continue in the program.

Students are accepted through St. Paul Pipefitters Local 455 JAC; 651.846.1699 or www.local455jatc.com.

096D (7073)

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Plumbing DIPLOMA

Program Overview

The Plumbing program trains apprentices in commercial, residential and industrial plumbing.

Plumbers install and maintain the water, waste disposal, soil and vent, drainage and gas systems in homes and in commercial and industrial buildings. Plumbers also install faucets, bathtubs, sinks and toilets, and such appliances as dishwashers and water heaters. Plumbers often work from blueprints and specifications and are knowledgeable about building and plumbing codes which govern installations.

Applicants must be high school graduates or equivalent. High school courses in mathematics, science, mechanical drawing and wood or metal shop will be helpful.

Career Opportunities

According to the U.S. Department of Labor, employment of plumbers is expected to grow as fast as the average for all occupations.

Upon completion of the program, the graduate may enter into a five-year apprenticeship program that involves on-the-job training and 180 hours of related training each year. Before becoming a journeyman plumber, the apprentice must pass the Minnesota State Plumbing Examination. Licensing is by the State Board of Health.

Program Outcomes

1. Graduates will demonstrate safe and proper use of tools used in the plumbing field.
2. Graduates will have knowledge and skills to install piping in commercial, residential and industrial buildings.
3. Graduates will demonstrate knowledge in blueprint reading.
4. Graduates will demonstrate knowledge in code and proper installation practices.
5. Graduates will demonstrate science and math skills needed in the plumbing field.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Plumbing Diploma

BS Operations Management
Minnesota State University-Moorhead

Program Start Dates

This part-time, evening program starts each spring. Please check with Rick Gale, Program Coordinator, at 651.846.1641 for information on application deadlines for this program.

Program Faculty

Adjunct faculty members, who are experienced in plumbing and represent private practice, local government, and industry sectors.

Restricted Enrollment

The Plumbing Diploma program is a restricted enrollment program offered through the Plumbers and Gasfitters Local 34 and Saint Paul College. Admission to the Plumbing Apprenticeship program is required for enrollment in this diploma program. Those enrolled in the Plumbing Diploma program are subject to the St. Paul Plumbers & Gasfitters Apprenticeship Standards, as well as the Saint Paul College Student Code of Conduct and Academic Integrity Policy. Violations of these standards or policies may result in removal from both the apprenticeship program and the plumbing diploma classes. Concurrent enrollment in both the apprenticeship program and plumbing classes is required.

Contact Rick Gale at 651.846.1389 for application information.

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> PLMB 2610 Pre-Apprentice Plumbing	2
<input type="checkbox"/> PLMB 2612 Job Safety & Health	2
<input type="checkbox"/> PLMB 2614 Applied Math for Plumbing	4
<input type="checkbox"/> PLMB 2616 Plumbing Welding	4
<input type="checkbox"/> PLMB 2618 Basic Drawing	4
<input type="checkbox"/> PLMB 2621 Plumbing 1	4
<input type="checkbox"/> PLMB 2622 Plumbing 2	4
<input type="checkbox"/> PLMB 2623 Plumbing 3 Gas Installations and Gas Controls OR	4
<input type="checkbox"/> PLMB 2650 Industrial Plumbing	4
<input type="checkbox"/> PLMB 2624 Plumbing 4 Commercial and Residential Service	4
<input type="checkbox"/> PLMB 2640 Advanced Plan Reading and Heavy Rigging	4
<input type="checkbox"/> PLMB 2631 Plumbing Code 1	2
<input type="checkbox"/> PLMB 2632 Plumbing Code 2	2
<input type="checkbox"/> PLMB 2633 Plumbing Code 3	2
<input type="checkbox"/> PLMB 2634 Plumbing Code 4	2

Total Program Credits 44

Course Sequence

SPRING SEMESTER

Students must complete the Pre-Apprenticeship classes (PLMB 2610 and PLMB 2612) prior to work eligibility.

PLMB 2610 Pre-Apprentice Plumbing	2
PLMB 2612 Job Safety and Health	2

1st Year Apprentice

PLMB 2614 Applied Math for Plumbers	4
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2nd Year Apprentice

PLMB 2622 Plumbing 2	4
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3rd year Apprentice

PLMB 2618 Basic Drawing	4
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4th Year Apprentice

PLMB 2623 Plumbing 3 Gas Installations and Gas Controls OR	4
PLMB 2650 Industrial Plumbing	4

5th Year Apprentice

PLMB 2633 Plumbing Code 3	2
PLMB 2634 Plumbing Code 4	2

FALL SEMESTER

1st Year Apprentice

PLMB 2621 Plumbing 1	4
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2nd Year Apprentice

PLMB 2616 Plumbing Welding	4
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3rd year Apprentice

PLMB 2624 Plumbing 4 Commercial and Residential Service	4
---	---

4th Year Apprentice

PLMB 2640 Advanced Plan Reading and Heavy Rigging	4
---	---

5th Year Apprentice

PLMB 2631 Plumbing Code 1	2
PLMB 2632 Plumbing Code 2	2

Total Program Credits 44

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 74+

Writing: Any

Arithmetic: Score of 49+

Spatial assessment required: Score of 50+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

097D (7036)

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Sheet Metal-HVAC Ducts and Fittings AAS DEGREE

Program Overview

The sheet metal worker reads blueprints, prepares layouts and operates fabricating devices such as special hand tools, power shears, nibbler, brake, bar folder, turning machines, spot and arc welders, soldering equipment and plasma cutting systems. The skilled sheet metal worker gathers general information and specifications from blueprints for the fabrication and installation of ducts for heating, cooling, filtering and humidifying air. Also, sheet metal workers fabricate and install metal roofing and siding, stainless steel equipment for homes and industry, chutes for material transfer, signs and rain dispersal equipment.

Satisfactory preparation for the sheet metal program may include high school courses in algebra and geometry. Other helpful courses are mechanical drafting and metal shop. Much of the sheet metal work starts with two-dimensional objects and ends with a three-dimensional product. Sheet metal work requires good spatial perception.

Career Opportunities

According to the U.S. Department of Labor, employment of sheet metal workers in construction is expected to increase about as fast as the average for all occupations.

Graduates may go to work for firms that fabricate sheet metal products and become skilled production, precision, or construction sheet metal workers.

Program Outcomes

1. Graduates will have the knowledge and skills to layout, fabricate, and assemble all types of sheet metal products.
2. Graduates will have the ability to safely operate all types of sheet metal fabricating equipment.
3. Graduates will have the knowledge and skills to complete sheet metal welding and soldering processes.
4. Graduates will have the knowledge and skills to use computer aided drafting for the design and fabrication of sheet metal products.
5. Graduates will have the knowledge and skills to use Drafting and Blueprint Reading to design HVAC duct systems.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Sheet Metal/HVAC Ducts & Fittings AAS

- BA Individualized Studies
Metropolitan State University
- BS Operations Management
Minnesota State University-Moorhead

Program Faculty

Donaven Chase donaven.chase@saintpaul.edu
651.846.1367

Full-time enrollment is required

Students must be enrolled full time with a cohort of students. Technical courses only offered during days.

Special supplies, tools, and estimated costs

The list for required tools is supplied by the program advisor. The cost of tools for the program is approximately \$300. Contact program faculty for more information.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> SMET 1410 Sheet Metal Fitting Layout and Design	4
<input type="checkbox"/> SMET 1415 OSHA 30 HR Training	2
<input type="checkbox"/> SMET 1420 Sheet Metal Fitting Fabrication	4
<input type="checkbox"/> SMET 1430 Sheet Metal Drafting & Blueprint Reading	2
<input type="checkbox"/> SMET 1440 Sheet Metal Welding	5
<input type="checkbox"/> SMET 1450 Sheet Metal Practical Problem Solving	2
<input type="checkbox"/> SMET 1510 Duct System Layout & Design	4
<input type="checkbox"/> SMET 1520 Duct System Fabrication	4
<input type="checkbox"/> SMET 1530 Architectural Sheet Metal	4
<input type="checkbox"/> SMET 1540 Power Machine Operation	3
<input type="checkbox"/> SMET 1550 Sheet Metal CAD/CAM Systems	3
Subtotal	37

General Education/MnTC Requirements Cr

- Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (any Goal 1) – 3 cr
 - Goal 3 or Goal 4 6
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
 - Goal 5: History, Social Science and Behavioral Sciences 3
 - Goal 6: Humanities and Fine Arts. 3
Select a minimum of 4 additional credits
 - Goals 1 – 10 of the Minnesota Transfer Curriculum. . 4
Select a minimum of 4 additional credits

General Education Requirements 23
General Education requirement courses may be taken before, after or concurrently with Sheet Metal courses.

Total Program Credits 60

Program Start Dates

Fall, Summer

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Course Sequence (Fall)

The following sequence is recommended.

First Semester

SMET 1410 Sheet Metal Fitting Layout and Design	4
SMET 1415 OSHA 30 HR Training	2
SMET 1420 Sheet Metal Fitting Fabrication	4
SMET 1430 Sheet Metal Drafting & Blueprint Reading	2
SMET 1440 Sheet Metal Welding	5
SMET 1450 Sheet Metal Practical Problem Solving	2
SPCH XXXX (any Goal 1)	3
Total Semester Credits	22

Second Semester

SMET 1510 Duct System Layout & Design	4
SMET 1520 Duct System Fabrication	4
SMET 1530 Architectural Sheet Metal	4
SMET 1540 Power Machine Operation	3
SMET 1550 Sheet Metal CAD/CAM Systems	3
Total Semester Credits	18

Course Sequence (Summer)

First Semester

SMET 1410 Sheet Metal Fitting Layout and Design	4
SMET 1415 OSHA 30 Hour Training	2
SMET 1420 Sheet Metal Fitting Fabrication	4
SMET 1430 Sheet Metal Drafting & Blueprint Reading	2
SMET 1450 Sheet Metal Practical Problem Solving	2
Total Semester Credits	14

Second Semester

SMET 1440 Sheet Metal Welding	5
SPCH 1720 Interpersonal Communication	3
SMET 1510 Duct System Layout and Design	4
Total Semester Credits	12

Third Semester

SMET 1520 Duct System Fabrication	4
SMET 1530 Architectural Sheet Metal	4
SMET 1540 Power Machine Operation	3
SMET 1550 Sheet Metal CAD/DCAM Systems	3
Total Semester Credits	14

General Education Requirements (20 additional credits)

Total Program Credits 60

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Spatial assessment required: Score 50+ on spatial assessment

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

368A

Sheet Metal-HVAC Ducts and Fittings DIPLOMA

Program Overview

The sheet metal worker reads blueprints, prepares layouts, and operates fabricating devices such as special hand tools, power shears, nibbler, brake, bar folder, turning machines, spot and arc welders, soldering equipment, and plasma cutting systems. The skilled sheet metal worker gathers general information and specifications from blueprints for the fabrication and installation of ducts for heating, cooling, filtering, and humidifying air. Also, sheet metal workers fabricate and install metal roofing and siding, stainless steel equipment for homes and industry, chutes for material transfer, signs, and rain dispersal equipment.

Satisfactory preparation for the sheet metal program may include high school courses in algebra and geometry. Other helpful courses are mechanical drafting and metal shop. Much of the sheet metal work starts with two-dimensional objects and ends with a three-dimensional product. Sheet metal work requires good spatial perception.

Career Opportunities

According to the U.S. Department of Labor, employment of sheet metal workers in construction is expected to increase about as fast as the average for all occupations.

Graduates may go to work for firms that fabricate sheet metal products and become skilled production, precision, or construction sheet metal workers.

Program Outcomes

1. Graduates will have the knowledge and skills to layout, fabricate, and assemble all types of sheet metal products.
2. Graduates will have the ability to safely operate all types of sheet metal fabricating equipment.
3. Graduates will have the knowledge and skills to complete sheet metal welding and soldering processes.
4. Graduates will have the knowledge and skills to use computer aided drafting for the design and fabrication of sheet metal products.
5. Graduates will have the knowledge and skills to use Drafting and Blueprint Reading to design HVAC duct systems.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Sheet Metal-HVAC Ducts and Fittings Diploma
 BS Operations Management
 Minnesota State University-Moorhead

Program Faculty

Donaven Chase donaven.chase@saintpaul.edu
 651.846.1367

Full-time enrollment is required

Students must be enrolled full time with a cohort of students. Technical courses only offered during days.

Special supplies, tools, and estimated costs

The list for required tools is supplied by the program advisor. The cost of tools for the program is approximately \$300. Contact program faculty for more information.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> SMET 1410 Sheet Metal Fitting Layout and Design	4
<input type="checkbox"/> SMET 1415 OSHA 30 HR Training	2
<input type="checkbox"/> SMET 1420 Sheet Metal Fitting Fabrication	4
<input type="checkbox"/> SMET 1430 Sheet Metal Drafting & Blueprint Reading	2
<input type="checkbox"/> SMET 1440 Sheet Metal Welding	5
<input type="checkbox"/> SMET 1450 Sheet Metal Practical Problem Solving	2
<input type="checkbox"/> SMET 1510 Duct System Layout & Design	4
<input type="checkbox"/> SMET 1520 Duct System Fabrication	4
<input type="checkbox"/> SMET 1530 Architectural Sheet Metal	4
<input type="checkbox"/> SMET 1540 Power Machine Operation	3
<input type="checkbox"/> SMET 1550 Sheet Metal CAD/CAM Systems	3
Subtotal	37

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	Cr
<input type="checkbox"/> Goal 1: Communication	3
SPCH XXXX (any Goal 1) – 3 cr	
General Education Requirements	3

Total Program Credits 40

Program Start Dates

Fall, Summer

Course Sequence (Fall)

The following sequence is recommended.

First Semester

SMET 1410 Sheet Metal Fitting Layout and Design	4
SMET 1415 OSHA 30 HR Training	2
SMET 1420 Sheet Metal Fitting Fabrication	4
SMET 1430 Sheet Metal Drafting & Blueprint Reading	2
SMET 1440 Sheet Metal Welding	5
SMET 1450 Sheet Metal Practical Problem Solving	2
SPCH XXXX (any Goal 1)	3
Total Semester Credits	22

Second Semester

SMET 1510 Duct System Layout & Design	4
SMET 1520 Duct System Fabrication	4
SMET 1530 Architectural Sheet Metal	4
SMET 1540 Power Machine Operation	3
SMET 1550 Sheet Metal CAD/CAM Systems	3
Total Semester Credits	18

Total Program Credits 40

Course Sequence (Summer)

First Semester

SMET 1410 Sheet Metal Fitting Layout and Design	4
SMET 1415 OSHA 30 Hour Training	2
SMET 1420 Sheet Metal Fitting Fabrication	4
SMET 1430 Sheet Metal Drafting and Blueprint Reading	2
SMET 1450 Sheet Metal Practical Problem Solving	2
Total Semester Credits	14

Second Semester

SMET 1440 Sheet Metal Welding	5
SPCH 1720 Interpersonal Communication	3
SMET 1510 Duct System Layout and Design	4
Total Semester Credits	12

Third Semester

SMET 1520 Duct System Fabrication	4
SMET 1530 Architectural Sheet Metal	4
SMET 1540 Power Machine Operation	3
SMET 1550 Sheet Metal CAD/DCAM Systems	3
Total Semester Credits	14

Program Total Credits 40

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Spatial assessment required: Score 50+ on spatial assessment

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

368D

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Welding Technology AAS DEGREE

Program Overview

Welding and fabrication operations require skilled workers who are well-trained in the use of advanced arc welding process, layout fabrication techniques, blueprint reading and measuring devices. Skilled welding fabricators are thoroughly familiar with both welding and shop equipment, understanding the breakdown and setup procedures, test standards, and knowledge of the various types of metals.

Physical requirements include good eyesight, good hand and eye coordination and the ability to perform heavy, physical work.

Career Opportunities

According to the U.S. Department of Labor, it is projected within the next 10 years to see a 15% growth rate, adding 50,000 new jobs.

Welders and fabricators work in manufacturing plants both in structural and non-structural settings as production welders, maintenance welders, specialty welders, layout fabricators, press brake operators, CNC plasma/laser cutting operators, and robotic welding operators. Welding fabrication is widely used in the aircraft, automobile, trucking, shipbuilding, pipefitting, plumbing, sheetmetal, ironworking and other trades that use metals. Skilled welders may become layout specialists, engineers, technicians, supervisors, Certified Welding Inspectors or private shop owners.

Program Outcomes

1. Graduates will have the knowledge and skills in setup and break-down procedures, test standards, and different types of metals in the fabrication and welding industry.
2. Graduates will have knowledge and skills in OAC (Oxyacetylene Cutting) PAC (Plasma Arc Cutting), SMAW (Shielded Metal Arc Welding), GMAW (Gas Metal Arc Welding), GTAW (Gas Tungsten Arc Welding), FCAW (Flux Core Arc Welding).
3. Graduates will have acquired supervised hands-on experience in various welding processes.
4. Graduates will be prepared for entry level employment in the welding industry and related fields based on skills acquired in welding, blueprint reading, related math and measuring devices.
5. Graduates will have successfully completed the educational program requirements for welding & fabrication through discipline and hard work.
6. Graduates of Welding Technology Program will become critical thinkers in relationship to the welding trades as it pertains to real life roles.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

David Fitzgerald	david.fitzgerald@saintpaul.edu
Todd Hankel	todd.hankel@saintpaul.edu
William Schuldt	william.schuldt@saintpaul.edu
Caleb Paulson	caleb.paulson@saintpaul.edu
Victoria LeMay	victoria.lemay@saintpaul.edu

Supply costs

Estimated cost for student supplies \$520.

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> CMAE 1514 Safety Awareness	2
<input type="checkbox"/> CMAE 1518 Manufacturing Processes	2
<input type="checkbox"/> CMAE 1522 Quality Practices	2
<input type="checkbox"/> CMAE 1526 Maintenance Awareness	2
<input type="checkbox"/> WLDG 1401 Industrial Shop Practices 1	2
<input type="checkbox"/> WLDG 1410 Welding Basics	2
<input type="checkbox"/> WLDG 1420 SMAW: E6010	2
<input type="checkbox"/> WLDG 1430 SMAW: E7018	3
<input type="checkbox"/> WLDG 1440 GMAW Short Arc	2
<input type="checkbox"/> WLDG 1450 Intro to Blueprint/Measuring Devices	3
<input type="checkbox"/> WLDG 1501 Industrial Shop Practices 2	2
<input type="checkbox"/> WLDG 1510 GMAW Spray and Pulse Spray	3
<input type="checkbox"/> WLDG 1520 GMAW Core Wires	3
<input type="checkbox"/> WLDG 1530 Intro to GTAW	3
<input type="checkbox"/> WLDG 1540 Blueprint Welding Symbols/Math/ Welder Qualification	3
<input type="checkbox"/> WLDG 2401 Industrial Shop Practices 3	2
<input type="checkbox"/> WLDG 2410 GMAW Aluminum and SST	2
<input type="checkbox"/> WLDG 2420 GTAW Aluminum and SST	4
Subtotal	44

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
General Education Requirements	16

Total Program Credits 60

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Welding Technology AAS

BS Operations Management Minnesota State University-Moorhead

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student.

First Semester

CMAE 1514 Safety Awareness	2
WLDG 1401 Industrial Shop Practices 1	2
WLDG 1410 Welding Basics	2
WLDG 1420 SMAW: E6010	2
WLDG 1430 SMAW: E7018	3
WLDG 1440 GMAW Short Arc	2
WLDG 1450 Intro to Blueprint/Measuring Devices	3
Total Semester Credits	16

Second Semester

CMAE 1518 Manufacturing Processes	2
WLDG 1501 Industrial Shop Practices 2	2
WLDG 1510 GMAW Spray & Pulse Spray	3
WLDG 1520 GMAW Core Wires	3
WLDG 1530 Intro to GTAW	3
WLDG 1540 Blueprint Welding Symbols/Math/ Welder Qualification	3
Total Semester Credits	16

Third Semester

CMAE 1522 Quality Practices	2
CMAE 1526 Maintenance Awareness	2
WLDG 2401 Industrial Shop Practices 3	2
WLDG 2410 GMAW Aluminum and SST	2
WLDG 2420 GTAW Aluminum and SST	4
Total Semester Credits	12

Fourth Semester

Goal 1: Communication	7
Goal 3: Natural Sciences or Goal 4: Mathematical/ Logical Reasoning	3
Goal 5: History, Social Science and Behavioral Sciences	3
Goal 6: Humanities and Fine Arts	3
Total Semester Credits	16

Total Program Credits 60

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722 and ENGL 0922

Writing: Any

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

327A (7160)

Welding Technology DIPLOMA

Program Overview

Welding and fabrication operations require skilled workers who are well-trained in the use of advanced arc welding process, layout fabrication techniques, blueprint reading and measuring devices. Skilled welding fabricators are thoroughly familiar with both welding and shop equipment, understanding the breakdown and setup procedures, test standards, and knowledge of the various types of metals.

Physical requirements include good eyesight, good hand and eye coordination and the ability to perform heavy, physical work.

Career Opportunities

According to the U.S. Department of Labor, it is projected within the next 10 years to see a 15% growth rate, adding 50,000 new jobs.

Welders and fabricators work in manufacturing plants both in structural and non-structural settings as production welders, maintenance welders, specialty welders, layout fabricators, press brake operators, CNC plasma/laser cutting operators, and robotic welding operators. Welding fabrication is widely used in the aircraft, automobile, trucking, shipbuilding, pipefitting, plumbing, sheetmetal, ironworking and other trades that use metals. Skilled welders may become layout specialists, engineers, technicians, supervisors, Certified Welding Inspectors or private shop owners.

Program Outcomes

1. Graduates will have the knowledge and skills in setup and break-down procedures, test standards, and different types of metals in the fabrication and welding industry.
2. Graduates will have knowledge and skills in OAC (Oxyacetylene Cutting) PAC (Plasma Arc Cutting), SMAW (Shielded Metal Arc Welding), GMAW (Gas Metal Arc Welding), GTAW (Gas Tungsten Arc Welding), FCAW (Flux Core Arc Welding).
3. Graduates will have acquired supervised hands-on experience in various welding processes.
4. Graduates will be prepared for entry level employment in the welding industry and related fields based on skills acquired in welding, blueprint reading, related math and measuring devices.
5. Graduates will have successfully completed the educational program requirements for welding & fabrication through discipline and hard work.
6. Graduates of the Welding Technology Program will become critical thinkers in relationship to the welding trades as it pertains to real life roles.

Program Faculty

David Fitzgerald	david.fitzgerald@saintpaul.edu
Todd Hankel	todd.hankel@saintpaul.edu
William Schuldt	william.schuldt@saintpaul.edu
Caleb Paulson	caleb.paulson@saintpaul.edu
Victoria LeMay	victoria.lemay@saintpaul.edu

Supply costs

Estimated cost for student supplies \$520.

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> CMAE 1514 Safety Awareness	2
<input type="checkbox"/> CMAE 1518 Manufacturing Processes	2
<input type="checkbox"/> CMAE 1522 Quality Practices	2
<input type="checkbox"/> CMAE 1526 Maintenance Awareness	2
<input type="checkbox"/> WLDG 1401 Industrial Shop Practices 1	2
<input type="checkbox"/> WLDG 1410 Welding Basics	2
<input type="checkbox"/> WLDG 1420 SMAW: E6010	2
<input type="checkbox"/> WLDG 1430 SMAW: E7018	3
<input type="checkbox"/> WLDG 1440 GMAW Short Arc	2
<input type="checkbox"/> WLDG 1450 Intro to Blueprint/Measuring Devices	3
<input type="checkbox"/> WLDG 1501 Industrial Shop Practices 2	2
<input type="checkbox"/> WLDG 1510 GMAW Spray and Pulse Spray	3
<input type="checkbox"/> WLDG 1520 GMAW Core Wires	3
<input type="checkbox"/> WLDG 1530 Intro to GTAW	3
<input type="checkbox"/> WLDG 1540 Blueprint Welding Symbols/Math/ Welder Qualification	3
<input type="checkbox"/> WLDG 2401 Industrial Shop Practices 3	2
<input type="checkbox"/> WLDG 2410 GMAW Aluminum and SST	2
<input type="checkbox"/> WLDG 2420 GTAW Aluminum and SST	4
<input type="checkbox"/> WLDG 2430 Grinding and Finishing	2
<input type="checkbox"/> WLDG 2441 Intro to Robotic Welding & Fabrication	2
Total Program Credits	48

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Welding Technology Diploma

BS Operations Management
Minnesota State University-Moorhead

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended for a full-time student.

First Semester

CMAE 1514 Safety Awareness	2
WLDG 1401 Industrial Shop Practices 1	2
WLDG 1410 Welding Basics	2
WLDG 1420 SMAW: E6010	2
WLDG 1430 SMAW: E7018	3
WLDG 1440 GMAW Short Arc	2
WLDG 1450 Intro to Blueprint/Measuring Devices	3
Total Semester Credits	16

Second Semester

CMAE 1518 Manufacturing Processes	2
WLDG 1501 Industrial Shop Practices 2	2
WLDG 1510 GMAW, Spray and Pulse Spray	3
WLDG 1520 GMAW Core Wires	3
WLDG 1530 Intro to GTAW	3
WLDG 1540 Blueprint Welding Symbols/Math/ Welder Qualification	3
Total Semester Credits	16

Third Semester

CMAE 1522 Quality Practices	2
CMAE 1528 Career Success Skills	2
WLDG 2401 Industrial Shop Practices 3	2
WLDG 2410 GMAW Aluminum & Stainless Steel	2
WLDG 2420 GTAW Aluminum and SST	4
WLDG 2430 Grinding and Finishing	2
WLDG 2441 Intro to Robotic Welding & Fabrication	2
Total Semester Credits	16

Total Program Credits 48

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ on Reading Comprehension or grade of "C" or better in READ 0721

Arithmetic: Score of 20+

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this diploma.

324D (7187)

Robotic Welding CERTIFICATE

Program Overview

Professional fabricators and CNC operators are highly skilled individuals who excel in math, geometry, formulations, programing, critical thinking and blueprint reading. Physical requirements include good eyesight, good hand and eye coordination, standing for long periods of time and the ability to perform heavy, physical work.

Robotic welding is an exciting and growing part of the welding profession. Robotic tools can automate some high production applications, such as resistance spot welding and arc welding.

Students must be a graduate of the Welding Technology Diploma (WLDG) or have instructor approval.

Career Opportunities

Fabricators and CNC operators work in manufacturing plants as production welders, specialist welders, layout engineers, press brake and CNC operators both in structural and non-structural settings. Welding/fabricating is widely used in the aircraft, automotive, heavy equipment, sheet metal, and other trades that use fabrication and CNC equipment.

Program Outcomes

1. Graduates will have the knowledge and skills in setup and break-down procedures of CNC equipment including press brake, CNC plasma cutting and robotic welding.
2. Graduates will have knowledge and skills in sheet metal bend deduction formulation.
3. Graduates will have acquired supervised hands-on experience in using various welding and finishing processes and fabrication equipment.
4. Graduates will be prepared for employment in the welding industry and related fabrication fields.

Program Faculty

Todd Hankel todd.hankel@saintpaul.edu

Supply Costs

Estimated cost for student supplies \$520.

Program Requirements

Students must have a Welding Diploma/AAS or instructor approval.

Check off when completed

Course	Cr
<input type="checkbox"/> WLDG 2500 2D CAD	2
<input type="checkbox"/> WLDG 2510 Safety	1
<input type="checkbox"/> WLDG 2520 CNC Plasma	2
<input type="checkbox"/> WLDG 2530 Press Brake Operations	3
<input type="checkbox"/> WLDG 2540 Robotic Welding Operations	3
<input type="checkbox"/> WLDG 2550 Industrial Equipment	2
<input type="checkbox"/> WLDG 2560 Layout Practices	4

Total Program Credits 17

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended for a full-time student.

First Semester

WLDG 2500 2D CAD	2
WLDG 2510 Safety	1
WLDG 2520 CNC Plasma	2
WLDG 2530 Press Brake Operations	3
WLDG 2540 Robotic Welding Operations	3
WLDG 2550 Industrial Equipment	2
WLDG 2560 Layout Practices	4
Total Semester Credits	17

Total Program Credits 17

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

350C

*Information is subject to change.
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CNC Toolmaking DIPLOMA

Program Overview

This area produces skilled craftspeople who make precision metal parts that are highly specialized and not mass produced. Machinists produce parts from metal castings, forgings, stampings, or from solid metal stock. They make parts to exact specifications by removing excess metal with the aid of machine tools, numerically controlled machines, computer assisted machinery, and precise measuring and gauging equipment.

Career Opportunities

As the economy expands, so will the demand for manufactured goods that need machine metal parts. CNC Toolmaking graduates are hired by industries that manufacture automobiles, industrial machinery, military equipment, and other metal products. At many places of employment, graduates can apply training received at the College towards the completion of apprenticeship requirements.

Program Outcomes

1. Graduates will have the knowledge and skills to make precision-machined parts and tooling.
2. Graduates will have the knowledge and skills to program and operate CNC equipment using CAD and CAM.
3. Graduates will have the knowledge and skills to operate and set-up inspection and gauging equipment.
4. Graduates will have the knowledge and skills to meet national entry-level skills standards.
5. Graduates will have acquired shop communication skills such as blueprint reading, practical geometric dimensioning, and shop CAD/CAM skills.
6. Graduates will have successfully mastered the general education program requirements for work and life skills.
7. Graduates will use solidworks, design parts and collaborate with engineers.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

CNC Toolmaking Diploma

BS Operations Management
Minnesota State University-Moorhead

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Terry Murray	terry.murray@saintpaul.edu
Dave Widmyer	david.widmyer@saintpaul.edu
Scott Nordahl	scott.nordahl@saintpaul.edu
Garrett Byrne	garrett.byrne@saintpaul.edu
Allen Smith	allen.smith@saintpaul.edu

Estimated Cost for Student Supplies

The estimated cost for student supplies is \$950.

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> CMAE 1514 Safety Awareness	2
<input type="checkbox"/> CMAE 1518 Manufacturing Processes	2
<input type="checkbox"/> CMAE 1522 Quality Practice	2
<input type="checkbox"/> CMAE 1526 Maintenance Awareness	2
<input type="checkbox"/> CNCT 1412 Machine Tool Theory	2
<input type="checkbox"/> CNCT 1422 Blueprint/CAD	4
<input type="checkbox"/> CNCT 1430 Materials Processes 1	4
<input type="checkbox"/> CNCT 1431 Materials Processes 2	4
<input type="checkbox"/> CNCT 1710 Shop Calculations	2
<input type="checkbox"/> CNCT 1720 Geometric Dimensioning	2
<input type="checkbox"/> CNCT 1730 CNC 1	4
<input type="checkbox"/> CNCT 1731 CNC 2	4
<input type="checkbox"/> CNCT 1742 Computer Integrated Manufacturing	2
<input type="checkbox"/> CNCT 2412 Tool Design	4
<input type="checkbox"/> CNCT 2422 CNC Lathe	2
<input type="checkbox"/> CNCT 2430 Mold/Plastic Technology	4
<input type="checkbox"/> CNCT 2440 CNC Applications	4
<input type="checkbox"/> CNCT 2540 Computer Aided Manufacturing	4
<input type="checkbox"/> ENGL 1711 Composition 1	4
<input type="checkbox"/> MATH 1411 Applied Mathematics	3
<input type="checkbox"/> SPCH 1700 Speech Communications	3

Total Program Credits64

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required.

First Semester

CMAE 1514 Safety Awareness	2
CMAE 1518 Manufacturing Processes	2
CMAE 1522 Quality Practice	2
CMAE 1526 Maintenance Awareness	2
CNCT 1412 Machine Tool Theory	2
CNCT 1422 Blueprint/CAD	4
CNCT 1430 Materials Processes 1	4
MATH 1411 Applied Mathematics	3
Total Semester Credits	21

Second Semester

CNCT 1431 Materials Processes 2	4
CNCT 1710 Shop Calculations	2
CNCT 1730 CNC 1	4
CNCT 1731 CNC 2	4
CNCT 2540 Computer Aided Manufacturing	4
Total Semester Credits	18

Summer Term

ENGL 1711 Composition 1	4
SPCH 1700 Speech Communications	3
Total Credits	7

Third Semester

CNCT 1720 Geometric Dimensioning	2
CNCT 1742 Computer Integrated Manufacturing	2
CNCT 2412 Tool Design	4
CNCT 2422 CNC Lathe	2
CNCT 2430 Mold/Plastic Technology	4
CNCT 2440 CNC Applications	4
Total Semester Credits	18

Total Program Credits64

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

249D

Machine Operator CERTIFICATE

Right Skills Now for Manufacturing

Program Overview

The Right Skills Now (for Manufacturing) certificate is designed to provide training in the following areas: Job planning, benchwork, materials, manual milling, manual turning, blue print reading, CNC milling and CNC turning. This program was designed to address the current shortage of CNC operators. Graduates from this program are prepared to enter the industry as entry-level manual and CNC machine tool production operators with minimum skills.

The Right Skills Now (for Manufacturing) certificate will introduce manufacturing workplace safety, blueprint reading, general manufacturing processes, basic production manual machining skills, and introduction to operations.

The curriculum closely aligns with standards set forth by the National Institute of Metalworking Skills (NIMS). Students may choose to apply these credits towards a Machine Tool Diploma. The additional coursework will enhance the students' communication, mathematics, machining, CAD/CAM, and critical thinking skills.

Career Opportunities

Right Skills Now is a pathway of the National Association of Manufacturers (NAM)—Endorsed Manufacturing Skills Certification System, which includes nationally portable, industry-recognized certifications that are combined with for-credit education programs. These education pathways are directly aligned to career pathways in manufacturing, so students progressing through the programs earn college credit towards a degree, have an opportunity to earn a national certification with labor market value, and the hands-on technical experience to be successful on the job.

Program Outcomes

1. Students will have skills to operate computer-controlled machine tools; lathes, drills, and milling machines.
2. Graduates will acquire knowledge of workplace safety.
3. Graduates will have on the job learning opportunities through an internship.

Program Faculty

Terry Murray	terry.murray@saintpaul.edu
Dave Widmyer	david.widmyer@saintpaul.edu
Garrett Byrne	garrett.byrne@saintpaul.edu
Allen Smith	allen.smith@saintpaul.edu

Estimated Cost for Student Supplies

The estimated cost for student supplies is \$950.

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> CMAE 1514 Safety Awareness	2
<input type="checkbox"/> CMAE 1518 Manufacturing Processes	2
<input type="checkbox"/> CMAE 1522 Quality Practices	2
<input type="checkbox"/> CMAE 1526 Maintenance Awareness	2
<input type="checkbox"/> CNCT 1412 Machine Tool Theory	2
<input type="checkbox"/> CNCT 1422 Blueprint/CAD	4
<input type="checkbox"/> CNCT 1430 Material Processes 1	4

Total Program Credits 18

Program Start Date

Fall, Spring

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required.

First Semester

CMAE 1514 Safety Awareness	2
CMAE 1518 Manufacturing Processes	2
CMAE 1522 Quality Practices	2
CMAE 1526 Maintenance Awareness	2
CNCT 1412 Machine Tool Theory	2
CNCT 1422 Blueprint/CAD	4
CNCT 1430 Material Processes 1	4

Total Program Credits 18



*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites

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Individualized Studies AAS DEGREE

Program Overview

The Individualized Studies degree is a personalized degree which provides students the opportunity to fulfill a unique career goal that cannot be met through the completion of any single technical program offered by the College. An example would be the combination of a technical program (e.g. automotive technology) with technical coursework in business for those planning to open their own automotive repair business. In the first semester of the Individualized Studies degree, students work to design a degree plan that meets their individualized educational needs while also fulfilling 16 credits within the Minnesota Transfer Curriculum. Students will develop an individualized program sequence through a structured advising process with faculty and college advisor, to facilitate meeting the requirements of the AAS degree in Individualized Studies.

Career Opportunities

The Individualized Studies AAS degree is intended for students who select a unique degree that meets their career interests. Career opportunities include personally owned business; advancement to middle management, sales, and training in the area of their discipline.

Program Outcomes

1. Graduates will have designed an individualized studies learning plan that focuses on work and life goals.
2. Graduates will recognize the need for and develop an ability to engage in life-long professional development and learning.

Program Advisor

Business, Career and Technical Education
 Frank Braswell frank.braswell@saintpaul.edu

Health Sciences and Service
 Brendan Ashby brendan.ashby@saintpaul.edu

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> INDS 1400 Individualized Studies Planning	1
<input type="checkbox"/> CSCR 1406 Study Skills & College Success Strategies	2
Subtotal	3

Program Focus: Approved Course Plan

Specific plan will be determined during the INDS 1400 Individualized Studies Planning. Courses will be selected from existing technical coursework on campus.
Subtotal 41

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX – 3 cr	
<input type="checkbox"/> Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning.	3
<input type="checkbox"/> Goal 5 History, Social Science and Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities & Fine Arts	3
General Education Requirements	16

Total Program Credits 60

Note: Students will make use of the Transfer Center to modify their program plan as needed. Each modification should have the approval of the Transfer Center to maintain integrity of the degree.

Program Start Dates

Fall, Spring, Summer

Course Sequence

First Semester

CSCR 1406 Study Skills & College Success Strategies	2
INDS 1400 Individualized Studies Development	1
ENGL 1711 Composition 1	4
Goal 3 or 4 Elective	3
Goal 6 Elective	3
Total Semester Credits	13

Second, Third and Fourth Semesters

Specific plan will be determined during the INDS 1400 Individualized Studies Planning. Courses will be selected from existing technical coursework on campus.

Total Program Credits 60

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College
 Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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*Information is subject to change.
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Automation Technologies CERTIFICATE

An eTECH 360° Program

Program Overview

This certificate will provide students with knowledge of manufacturing processes and plant operations, along with an advanced skill set in electronic and automotive systems. Students will engage in coursework topics of technical mathematics, introductory computer skills, print interpretation, manufacturing processes, quality control, maintenance and safety. Also included in coursework is an advanced skill set of AC/DC power, digital electronics, analog circuits, and motor controls.

Career Opportunities

The nationwide Manufacturing Skills Standards Council (MSSC) System, based upon industry-defined and federally-endorsed national standards, offers both entry-level and incumbent workers the opportunity to demonstrate that they have acquired the skills increasingly needed in the high-growth, technology-intensive jobs of the 21st century. The MSSC System awards certificates to individuals who pass any of its four Production modules: Safety; Quality Practices & Measurement; Manufacturing Processes & Production; and Maintenance Awareness and a full Certified Production Technician (CPT) Certification to those who pass all four. Students completing this Certificate will have gained the knowledge required to pass the MSSC full-certified Production Technician Certification.

According to the Manufacturing Career Network, manufacturing is the second largest industry in Minnesota, second only to educational services, healthcare and social assistance. Minnesota manufacturers employ 390,435 people, which represents 14.4 percent of total employment. Further, manufacturing jobs in the state pay wages that are approximately 8 percent higher than those paid to the rest of the workforce. These numbers are evidence that a thriving manufacturing sector is critical to the state economy.

eTECH Programs

The eTECH programs are offered by a group of partner institutions working together integrates traditional classroom learning with partial on-site lab work for the online delivery of courses where learners can advance their skills in manufacturing and engineering, while continuing to work in their current profession. Many courses are available online. The programs are designed to offer entry-level and operator-level skills and knowledge, which prepares them for a career, instead of just an entry-level job. Because eTECH is part of the 360° consortium of two-year colleges and a four-year university, it provides a unique ability to implement seamless career pathways from secondary to two-year college to four-year university.

Program Outcomes

Graduates will be able to:

1. Identify and apply appropriate safety procedures.
2. Apply knowledge and skills in electrical systems.
3. Use and understand test equipment for analysis.
4. Design, build, and troubleshoot circuits.
5. Analyze and apply specific manufacturing process procedures.
6. Identify and apply specific quality procedures.
7. Interpret symbols and blueprints accurately for a variety of projects.

Program Faculty

This program is taught by a variety of faculty from consortium schools.

Frank Braswell frank.braswell@saintpaul.edu

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> CMAE 1502 Technical Math	3
<input type="checkbox"/> CMAE 1510 Print Reading	2
<input type="checkbox"/> CMAE 1550 DC Power	3
<input type="checkbox"/> CMAE 1518 Manufacturing Processes	2
<input type="checkbox"/> CMAE 1514 Safety Awareness	2
<input type="checkbox"/> CMAE 1552 AC Power	3
<input type="checkbox"/> CMAE 1506 Intro to Computers	2
<input type="checkbox"/> CMAE 1554 Digital Electronics	3
<input type="checkbox"/> CMAE 1556 Analog Circuits	3
<input type="checkbox"/> CMAE 1526 Maintenance Awareness	2
<input type="checkbox"/> CMAE 1522 Quality Practices	2
<input type="checkbox"/> CMAE 1558 Motor Controls	3

Total Program Credits 30

Program Start Date

Fall, Spring

Course Sequence

First Semester (First 8 weeks)

CMAE 1502 Technical Math	3
CMAE 1510 Print Reading	2
CMAE 1550 DC Power	3

(Second 8 weeks)

CMAE 1518 Manufacturing Processes	2
CMAE 1514 Safety Awareness	2
CMAE 1552 AC Power	3
Total Semester Credits	15

Second Semester (First 8 Weeks)

CMAE 1506 Intro to Computers	2
CMAE 1554 Digital Electronics	3
CMAE 1556 Analog Circuits	3

(Second 8 Weeks)

CMAE 1526 Maintenance Awareness	2
CMAE 1522 Quality Practices	2
CMAE 1558 Motor Controls	3
Total Semester Credits	15

Total Program Credits 30



Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 52+

Writing: Any

Arithmetic: Score of 45+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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*Information is subject to change.
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Machine Technologist CERTIFICATE

An eTECH 360° Program

Program Overview

This certificate will provide students with knowledge of manufacturing processes and plant operations, along with an advanced skill set in machine tool technology. Students will engage in topics of technical mathematics, introductory computer skills, print interpretation, manufacturing processes, quality control, maintenance, and safety. Also included in coursework, students will engage in topics of machine tool print reading, machine tool technology theory and lab principles, machining math, introduction to computer numerical control, and geometric dimensioning and tolerancing.

Career Opportunities

The nationwide Manufacturing Skills Standards Council (MSSC) System, based upon industry-defined and federally-endorsed national standards, offers both entry-level and incumbent workers the opportunity to demonstrate that they have acquired the skills increasingly needed in the high-growth, technology-intensive jobs of the 21st century. The MSSC System awards certificates to individuals who pass any of its four Production modules: Safety; Quality Practices & Production; and Maintenance Awareness and a full Certified Production Technician (CPT) Certification to those who pass all four. Students completing this Certificate will have gained the knowledge required to pass the MSSC full-certified Production Technician Certification.

According to the Manufacturing Career Network, manufacturing is the second largest industry in Minnesota, second only to educational services, healthcare and social assistance. Minnesota manufacturers employ 390,435 people, which represents 14.4 percent of total employment. Further, manufacturing jobs in the state pay wages that are approximately 8 percent higher than those paid to the rest of the workforce. These numbers are evidence that a thriving manufacturing sector is critical to the state economy.

eTECH Programs

The eTECH programs are offered by a group of partner institutions working together integrates traditional classroom learning with partial on-site lab work for the online delivery of courses where learners can advance their skills in manufacturing and engineering, while continuing to work in their current profession. Many courses are available online. The programs are designed to offer entry-level and operator-level skills and knowledge, which prepares them for a career, instead of just an entry-level job. Because eTECH is part of the 360° consortium of two-year colleges and a four-year university, it provides a unique ability to implement seamless career pathways from secondary to two-year college to four-year university.

Program Outcomes

Graduates will be able to:

1. Identify and apply appropriate safety procedures.
2. Apply knowledge and skills to make precision-machined parts and tooling.
3. Apply knowledge and skills to operate and set-up inspection and gauging equipment.
4. Demonstrate an understanding of computer numerically controlled machining centers.
5. Analyze and apply specific manufacturing process procedures.
6. Identify and apply specific quality procedures.
7. Interpret symbols and blueprints accurately for a variety of projects.

Program Faculty

This program is taught by a variety of faculty from consortium schools.

Frank Braswell frank.braswell@saintpaul.edu

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> CMAE 1502 Technical Math	3
<input type="checkbox"/> CMAE 1510 Print Reading	2
<input type="checkbox"/> CMAE 1518 Manufacturing Processes	2
<input type="checkbox"/> CMAE 1514 Safety Awareness	2
<input type="checkbox"/> CMAE 1530 Machining Math	2
<input type="checkbox"/> CMAE 1532 Machine Tool Print Reading	2
<input type="checkbox"/> CMAE 1506 Intro to Computers	2
<input type="checkbox"/> CMAE 1534 Machine Tool Technology Theory	2
<input type="checkbox"/> CMAE 1536 Machine Tool Technology Lab 1	2
<input type="checkbox"/> CMAE 1542 Geo Dimensioning and Tolerancing	2
<input type="checkbox"/> CMAE 1526 Maintenance Awareness	2
<input type="checkbox"/> CMAE 1522 Quality Practices	2
<input type="checkbox"/> CMAE 1538 Machine Tool Technology Lab 2	2
<input type="checkbox"/> CMAE 1540 Introduction to CNC	3

Total Program Credits30

*Information is subject to change.
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Program Start Date

Fall, Spring

Course Sequence

First Semester (First 8 weeks)

CMAE 1502 Technical Math	3
CMAE 1510 Print Reading	2

(Second 8 weeks)

CMAE 1518 Manufacturing Processes	2
CMAE 1514 Safety Awareness	2
CMAE 1530 Machining Math	2
CMAE 1532 Machine Tool Print Reading	2
Total Semester Credits	13

Second Semester (First 8 Weeks)

CMAE 1506 Intro to Computers	2
CMAE 1534 Machine Tool Technology Theory	2
CMAE 1536 Machine Tool Technology Lab 1	2
CMAE 1542 Geo Dimensioning and Tolerancing	2

(Second 8 Weeks)

CMAE 1526 Maintenance Awareness	2
CMAE 1522 Quality Practices	2
CMAE 1538 Machine Tool Technology Lab 2	2
CMAE 1540 Introduction to CNC	3
Total Semester Credits	17

Total Program Credits30



Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 52+

Writing: Any

Arithmetic: Score of 45+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

360C

Machining and Automation DIPLOMA

An eTECH 360° Program

Program Overview

This diploma will provide students with a valuable skill set designed to meet the needs of the advanced manufacturing industry. Students may choose the Machining and Automation emphasis. Through coursework, the student will develop fundamental knowledge of manufacturing processes, safety, quality, machine tool technology, and automation technology.

Career Opportunities

The nationwide Manufacturing Skills Standards Council (MSSC) System, based upon industry-defined and federally-endorsed national standards, offers both entry-level and incumbent workers the opportunity to demonstrate that they have acquired the skills increasingly needed in the high-growth, technology-intensive jobs of the 21st century. The MSSC System awards certificates to individuals who pass any of its four Production modules: Safety; Quality Practices & Measurement; Manufacturing Processes & Production; and Maintenance Awareness and a full Certified Production Technician (CPT) Certification to those who pass all four. Students completing this Diploma will have gained the knowledge required to pass the MSSC full-certified Production Technician Certification.

According to the Manufacturing Career Network, manufacturing is the second largest industry in Minnesota, second only to educational services, healthcare and social assistance. Minnesota manufacturers employ 390,435 people, which represents 14.4 percent of total employment. Further, manufacturing jobs in the state pay wages that are approximately 8 percent higher than those paid to the rest of the workforce. These numbers are evidence that a thriving manufacturing sector is critical to the state economy.

eTECH Programs

The eTECH programs are offered by a group of partner institutions working together integrates traditional classroom learning with partial on-site lab work for the online delivery of courses where learners can advance their skills in manufacturing and engineering, while continuing to work in their current profession. Many courses are available online. The programs are designed to offer entry-level and operator-level skills and knowledge, which prepares them for a career, instead of just an entry-level job. Because eTECH is part of the 360° consortium of two-year colleges and a four-year university, it provides a unique ability to implement seamless career pathways from secondary to two-year college to four-year university.



Program Outcomes

Graduates will be able to:

1. Identify and apply appropriate safety procedures.
2. Apply knowledge and skills in electrical systems.
3. Apply knowledge and skills to make precision-machined parts and tooling.
4. Apply knowledge and skills to operate and set-up inspection and gauging equipment.
5. Analyze and apply specific manufacturing process procedures.
6. Identify and apply specific quality procedures.
7. Interpret symbols and blueprints accurately for a variety of projects.
8. Demonstrate effective oral and written communications.

Program Faculty

This program is taught by a variety of faculty from consortium schools.

Frank Braswell frank.braswell@saintpaul.edu

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> CMAE 1502 Technical Math	3
<input type="checkbox"/> CMAE 1510 Print Reading	2
<input type="checkbox"/> CMAE 1550 DC Power	3
<input type="checkbox"/> CMAE 1518 Manufacturing Processes	2
<input type="checkbox"/> CMAE 1514 Safety Awareness	2
<input type="checkbox"/> CMAE 1552 AC Power	3
<input type="checkbox"/> CMAE 1506 Intro to Computers	2
<input type="checkbox"/> CMAE 1554 Digital Electronics	3
<input type="checkbox"/> CMAE 1556 Analog Circuits	3
<input type="checkbox"/> CMAE 1526 Maintenance Awareness	2
<input type="checkbox"/> CMAE 1522 Quality Practices	2
<input type="checkbox"/> CMAE 1558 Motor Controls	3
<input type="checkbox"/> CMAE 1530 Machining Math	2
<input type="checkbox"/> CMAE 1532 Machine Tool Print Reading	2
<input type="checkbox"/> CMAE 1534 Machine Tool Technology Theory	2
<input type="checkbox"/> CMAE 1536 Machine Tool Technology Lab 1	2
<input type="checkbox"/> CMAE 1542 Geo Dimensioning and Tolerancing	2
<input type="checkbox"/> CMAE 1538 Machine Tool Technology Lab 2	2
<input type="checkbox"/> CMAE 1540 Introduction to CNC	3
Subtotal	45
General Education	
<input type="checkbox"/> MATH 1730 College Algebra	3
<input type="checkbox"/> ENGL 1711 Composition 1	3
Total General Education	6
Total Program Credits	51

*Information is subject to change.
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Program Start Date

Fall, Spring

Course Sequence

First Semester (First 8 weeks)

CMAE 1502 Technical Math	3
CMAE 1510 Print Reading	2
CMAE 1550 DC Power	3

(Second 8 weeks)

CMAE 1518 Manufacturing Processes	2
CMAE 1514 Safety Awareness	2
CMAE 1552 AC Power	3
Total Semester Credits	15

Second Semester (First 8 Weeks)

CMAE 1506 Intro to Computers	2
CMAE 1554 Digital Electronics	3
CMAE 1556 Analog Circuits	3

(Second 8 Weeks)

CMAE 1526 Maintenance Awareness	2
CMAE 1522 Quality Practices	2
CMAE 1558 Motor Controls	3
Total Semester Credits	15

Third Semester (First 8 Weeks)

MATH 1730 College Algebra	3
ENGL 1711 Composition 1	3

(Second 8 Weeks)

CMAE 1530 Machining Math	2
CMAE 1532 Machine Tool Print Reading	2
Total Semester Credits	10

Fourth Semester (First 8 Weeks)

CMAE 1534 Machine Tool Technology Theory	2
CMAE 1536 Machine Tool Technology Lab 1	2
CMAE 1542 Geo Dimensioning and Tolerancing	2

(Second 8 Weeks)

CMAE 1538 Machine Tool Technology Lab 2	2
CMAE 1540 Introduction to CNC	3
Total Semester Credits	11

Total Program Credits 51

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 52+

Writing: Any

Arithmetic: Score of 45+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Production Technologies CERTIFICATE

An eTECH 360° Program

Program Overview

This certificate will provide students with the training, education, and skills to build a base knowledge of manufacturing processes and plant operations, generally for entry-level positions. Graduates can use the knowledge gained in this Certificate to build upon a manufacturing career path leading to higher-level careers like Automation, Machining, and Welding. Students will engage in coursework topics of career success skills, technical mathematics, introductory computer skills, print interpretation, manufacturing processes, quality control, maintenance, and safety.

Career Opportunities

The nationwide Manufacturing Skills Standards Council (MSSC) System, based upon industry-defined and federally-endorsed national standards, offers both entry-level and incumbent workers the opportunity to demonstrate that they have acquired the skills increasingly needed in the high-growth, technology-intensive jobs of the 21st century. The MSSC System awards certificates to individuals who pass any of its four Production modules: Safety; Quality Practices & Measurement; Manufacturing Processes & Production; and Maintenance Awareness and a full Certified Production Technician (CPT) Certification to those who pass all four. Students completing the Production Technologies Certificate will have gained the knowledge required to pass the MSSC full-certified Production Technician Certification.

According to the Manufacturing Career Network, manufacturing is the second largest industry in Minnesota, second only to educational services, healthcare and social assistance. Minnesota manufacturers employ 390,435 people, which represents 14.4 percent of total employment. Further, manufacturing jobs in the state pay wages that are approximately 8 percent higher than those paid to the rest of the workforce. These numbers are evidence that a thriving manufacturing sector is critical to the state economy.

eTECH Programs

The eTECH programs are offered by a group of partner institutions working together integrates traditional classroom learning with partial on-site lab work for the online delivery of courses where learners can advance their skills in manufacturing and engineering, while continuing to work in their current profession. Many courses are available online. The programs are designed to offer entry-level and operator-level skills and knowledge, which prepares them for a career, instead of just an entry-level job. Because eTECH is part of the 360° consortium of two-year colleges and a four-year university, it provides a unique ability to implement seamless career pathways from secondary to two-year college to four-year university.

Program Outcomes

Graduates will be able to:

1. Identify and apply appropriate safety procedures.
2. Use technical mathematics to solve problems.
3. Demonstrate use of common computer software.
4. Analyze and apply specific manufacturing process procedures.
5. Identify and apply specific quality procedures.
6. Interpret symbols and blueprints accurately for a variety of projects.
7. Identify appropriate and inappropriate professional behavior.

Program Faculty

This program is taught by a variety of faculty from consortium schools.

Frank Braswell frank.braswell@saintpaul.edu

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> CMAE 1502 Technical Math	3
<input type="checkbox"/> CMAE 1510 Print Reading	2
<input type="checkbox"/> CMAE 1518 Manufacturing Processes	2
<input type="checkbox"/> CMAE 1514 Safety Awareness	2
<input type="checkbox"/> CMAE 1506 Intro to Computers	2
<input type="checkbox"/> CMAE 1528 Career Success Skills	2
<input type="checkbox"/> CMAE 1526 Maintenance Awareness	2
<input type="checkbox"/> CMAE 1522 Quality Practices	2

Total Program Credits 16

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Program Start Date

Fall, Spring

Course Sequence

First Semester (First 8 weeks)

CMAE 1502 Technical Math	3
CMAE 1510 Print Reading	2

(Second 8 weeks)

CMAE 1518 Manufacturing Processes	2
CMAE 1514 Safety Awareness	2
Total Semester Credits	9

Second Semester (First 8 Weeks)

CMAE 1506 Intro to Computers	2
CMAE 1528 Career Success Skills	2

(Second 8 Weeks)

CMAE 1526 Maintenance Awareness	2
CMAE 1522 Quality Practices	2
Total Semester Credits	7

Total Program Credits 16



Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 52+

Writing: Any

Arithmetic: Score of 45+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

361C

Welding Technology CERTIFICATE

An eTECH 360° Program

Program Overview

This certificate will provide students with knowledge of manufacturing processes and plant operations, along with an advanced skill set in welding technology and processes. Students will engage in topics of technical mathematics, introductory computer skills, print interpretation, manufacturing processes, quality control, maintenance, and safety. Also included in coursework, students will engage in topics of welding symbols, metallurgy, Plasma Arc Cutting and Air Carbon Arc Cutting (OxyFuel), Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW) and Flux Cord Arc Welding (FCAW), and Gas Tungsten Arc Welding (GTAW).

Career Opportunities

The nationwide Manufacturing Skills Standards Council (MSSC) System, based upon industry-defined and federally-endorsed national standards, offers both entry-level and incumbent workers the opportunity to demonstrate that they have acquired the skills increasingly needed in the high-growth, technology-intensive jobs of the 21st century. The MSSC System awards certificates to individuals who pass any of its four Production modules: Safety; Quality Practices & Measurement; Manufacturing Processes & Production; and Maintenance Awareness and a full Certified Production Technician (CPT) Certification to those who pass all four. Students completing this Certificate will have gained the knowledge required to pass the MSSC full-certified Production Technician Certification.

According to the Manufacturing Career Network, manufacturing is the second largest industry in Minnesota, second only to educational services, healthcare and social assistance. Minnesota manufacturers employ 390,435 people, which represents 14.4 percent of total employment. Further, manufacturing jobs in the state pay wages that are approximately 8 percent higher than those paid to the rest of the workforce. These numbers are evidence that a thriving manufacturing sector is critical to the state economy.

eTECH Programs

The eTECH programs are offered by a group of partner institutions working together integrates traditional classroom learning with partial on-site lab work for the online delivery of courses where learners can advance their skills in manufacturing and engineering, while continuing to work in their current profession. Many courses are available online. The programs are designed to offer entry-level and operator-level skills and knowledge, which prepares them for a career, instead of just an entry-level job. Because eTECH is part of the 360° consortium of two-year colleges and a four-year university, it provides a unique ability to implement seamless career pathways from secondary to two-year college to four-year university.

Program Outcomes

Graduates will be able to:

1. Identify and apply appropriate safety procedures.
2. Analyze and apply specific manufacturing process procedures.
3. Identify and apply specific quality procedures.
4. Identify and select the proper filler metal dependent on base metal to be welded.
5. Troubleshoot and solve common problems involved with everyday use of a welding machine.
6. Fabricate several different welding projects to demonstrate expected skills required by industry standards.
7. Interpret symbols and blueprints accurately for a variety of projects.

Program Faculty

This program is taught by a variety of faculty from consortium schools.

Frank Braswell frank.braswell@saintpaul.edu

Program Requirements

Check off when completed

Certain classes must be taken concurrently and certain classes are prerequisites to other classes.

Course	Cr
<input type="checkbox"/> CMAE 1502 Technical Math	3
<input type="checkbox"/> CMAE 1510 Print Reading	2
<input type="checkbox"/> CMAE 1518 Manufacturing Processes	2
<input type="checkbox"/> CMAE 1562 Oxy Fuel	2
<input type="checkbox"/> CMAE 1506 Intro to Computers	2
<input type="checkbox"/> CMAE 1564 SMAW	3
<input type="checkbox"/> CMAE 1526 Maintenance Awareness	2
<input type="checkbox"/> CMAE 1570 Metallurgy	1
<input type="checkbox"/> CMAE 1566 GMAW/FCAW	3
<input type="checkbox"/> CMAE 1514 Safety Awareness	2
<input type="checkbox"/> CMAE 1560 Interpreting Symbols	2
<input type="checkbox"/> CMAE 1568 GTAW	3
<input type="checkbox"/> CMAE 1522 Quality Practices	2

Total Program Credits 30

Program Start Date

Fall, Spring

Course Sequence

First Semester (First 8 weeks)

CMAE 1502 Technical Math	3
CMAE 1510 Print Reading	2

(Second 8 weeks)

CMAE 1518 Manufacturing Processes	2
CMAE 1562 Oxy Fuel	2
Total Semester Credits	10

Second Semester (First 8 Weeks)

CMAE 1506 Intro to Computers	2
CMAE 1564 SMAW	3

(Second 8 Weeks)

CMAE 1526 Maintenance Awareness	2
CMAE 1570 Metallurgy	1
Total Semester Credits	8

Third Semester (First 8 Weeks)

CMAE 1566 GMAW/FCAW	3
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(Second 8 Weeks)

CMAE 1514 Safety Awareness	2
CMAE 1560 Interpreting Symbols	2
Total Semester Credits	7

Fourth Semester (First 8 Weeks)

CMAE 1568 GTAW	3
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(Second 8 Weeks)

CMAE 1522 Quality Practices	2
Total Semester Credits	5

Total Program Credits 30



Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 52+

Writing: Any

Arithmetic: Score of 45+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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*Information is subject to change.
This Program Requirements Guide is not a contract.*

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Esthetician Spa AAS DEGREE

Program Overview

Esthetician services include specialized work with skin care products, analysis of skin, skin exfoliation, massage techniques and facials. Students learn to tint brows and lashes, apply makeup, provide temporary hair removal, and use machines designed to administer skin treatments.

The Esthetician Spa AAS Degree is designed for future employment in a spa/resort setting. This program also prepares the student for the CIDESCO examination.

Career Opportunities

After esthetician students complete 600 hours of skills and theory training and pass the written exam through the State designated testing service and skills certification, they are eligible for licensure through the Minnesota Board of Cosmetologist Examiners. Estheticians work in a variety of settings including salons, spas, fitness centers, as well as dermatologist, plastic surgeon's offices and hospitals. CIDESCO certification holders are able to license as an esthetician technician, certify as a massage therapist and license as a nail technician upon completion of clinic nail hours. Cross trained therapists are able to work in spas, medical offices, cruise ships and 5 star resorts.

Licensing or certification exams are independent of graduation requirements.

Program Outcomes

1. Graduates will be prepared to take the esthetician skills certification.
2. Graduates will be prepared to take the Minnesota State Esthetician written exam and state law test administered through the state designated testing service (access through www.bceboard.state.mn.us).
3. Graduates will have knowledge and skills in esthetician (skin) services.
4. Graduates will have knowledge and skills in salon operations focusing on skin services.
5. Graduates will possess knowledge and skills for personal care of the skin.
6. Graduates will be prepared for employment as an esthetician.
7. Graduates will have the knowledge and skills for work and life roles.
8. Graduates will have knowledge in cosmetic care product ingredients.
9. Graduates will be prepared to take the CIDESCO exam.
10. Graduates will have knowledge and skills in spa operations focusing on therapeutic skin and body services.
11. Graduates will be prepared for employment as a CIDESCO diploma holder.

Program Faculty

Lyubov Babina lyubov.babina@saintpaul.edu

Textbook and Supply Costs

Students should expect to spend approximately \$1900.00 for esthetics books and supplies (first semester). Tuition, college fees and books for remaining courses are not included in this cost. Items can be purchased in the College Bookstore. Be prepared to purchase all Esthetics kits with the instructor on the second day of class.

Financial aid must have been completed. In addition, there is a fee to take the Minnesota licensure exam.

Program Requirements

Check off when completed

Required Program Seminar

All Cosmetology, Esthetics and Nail Technician applicants must attend a program seminar prior to enrollment as a full-time student. Please call the Clinic receptionist at 651.846.1329 to reserve your space at a seminar. Seminar dates and times are posted online at www.saintpaul.edu/CosEsthSeminar

Course	Cr
<input type="checkbox"/> CHSN 1407 Preclinic Nail Care	3
<input type="checkbox"/> CHSN 1410 Preclinic Introduction (online)	4
<input type="checkbox"/> CHSN 1420 Body Systems & Diseases (online)	4
<input type="checkbox"/> CHSN 1442 Clinic 1 for Estheticians	4
<input type="checkbox"/> CHSN 1443 Clinic 2 for Estheticians	4
<input type="checkbox"/> CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
<input type="checkbox"/> CHSN 1450 Skin Analysis & Massage	4
<input type="checkbox"/> CHSN 2411 CIDESCO Exam Student Preparation	3
<i>Class offered only summer term</i>	
<input type="checkbox"/> HLTH 1410 Medical Terminology	1
<input type="checkbox"/> HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
<input type="checkbox"/> MASS 1400 Introduction to Therapeutic Massage	4
<input type="checkbox"/> MASS 1421 Massage Spa Techniques	2
<input type="checkbox"/> MASS 1422 Massage Clinical Techniques	4
<input type="checkbox"/> MASS 1480 Massage Therapy Practicum	4
Subtotal	49

General Education/MnTC Requirements Cr

- Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
 - Goal 3: Natural Sciences 7
BIOL 1760 Nutrition – 3 cr
CHEM 1711 Principles of Chemistry – 4 cr
 - Goal 5: History, Social Science and Behavioral Sciences 3
- General Education Requirements 17**

Total Program Credits 66

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Start Dates

Fall, Spring,
Summer – online CHSN 1410 & CHSN 1420 only

Course Sequence

The course sequence listed on the back of this guide is recommended for a full-time student. Not all courses are offered during summer session.

Continued on next page

CIDESCO

Saint Paul College – A Community and Technical College Esthetician Program is a CIDESCO school. This means the program is allowed to prepare candidates for the CIDESCO examination.

- CIDESCO is the World's Major International Beauty Therapy Association:
- Founded in 1946 with its Head Office in Zurich, Switzerland.
- CIDESCO is represented in over 37 countries.
- The CIDESCO Diploma is the world's most prestigious qualification in the field of Aesthetics and Beauty Therapy.
- Since 1957, the CIDESCO qualification has set standards that have been initiated over the five continents of the globe.

Comite International d' Esthetique et de Cosmetologie
e-mail: info@cidesco.com
Web site: www.cidesco.com



Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+

Assessment Results and Prerequisites: Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Esthetician Spa AAS DEGREE *(continued)*

Course Sequence

The following course sequence is required. Not all courses are offered during summer session.

First Semester

CHSN 1410 Preclinic Introduction (online)	4
<i>This course is a prerequisite to or must be taken concurrently with CHSN 1442, CHSN 1443, CHSN 1445 and CHSN 1450</i>	
CHSN 1420 Body Systems & Diseases (online)	4
<i>This course is a prerequisite to or must be taken concurrently with CHSN 1442, CHSN 1443, CHSN 1445 and CHSN 1450</i>	
CHSN 1442 Clinic 1 for Estheticians	4
CHSN 1443 Clinic 2 for Estheticians	4
CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
<i>This course is a prerequisite to CHSN 1450</i>	
CHSN 1450 Skin Analysis and Massage	4
Total Semester Credits.	24

Second Semester

BIOL 1760 Nutrition (meets Goal 3)	3
CHSN 1407 Preclinic Nail Care	3
HLTH 1410 Medical Terminology	1
HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
MASS 1400 Introduction to Therapeutic Massage	4
SPCH XXXX (Goal 1 only)	3
Total Semester Credits.	18

Third Semester

MASS 1421 Massage Spa Techniques	2
MASS 1422 Massage Clinical Techniques	4
MASS 1480 Massage Therapy Practicum	4
Total Semester Credits.	10

Fourth Semester

Goal 1: ENGL 1711 Composition 1	4
CHEM 1711 Principles of Chemistry	4
CHSN 2411 CIDESCO Exam Student Prep	3
<i>Offered summer semester only</i>	
Goal 5: History, Social Science, Behavioral Sciences	3
Total Semester Credits.	14

Total Program Credits 66

Cosmetology Student Handbook/ Agreement Form

All new and returning students will need to access D2L Brightspace PRIOR to the first day of classes to read the Cosmetology student handbook. After you have read the handbook, you MUST print and sign: Student Agreement Form, Hepatitis B Vaccination/Declination Form, Property and Equipment Form, and Rollabout Form and return them to your instructor on the FIRST DAY of class before you will be admitted to class. You will need to perform this task prior to the first day of each semester. Please direct questions to the assigned instructor of your first class.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Esthetician AAS

- BS Allied Healthcare Management
Saint Mary's University-Twin Cities Campus
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BA Health Care Administration
Concordia University, St. Paul

Esthetician Medical Setting AAS DEGREE

Program Overview

Esthetician services include specialized work with skin care products, analysis of skin, skin exfoliation, massage techniques, and facials. Students learn to tint brows and lashes, apply makeup, provide temporary hair removal, and to use machines designed to administer skin treatments.

The Esthetician Medical Setting AAS degree is designed for work in medical clinics or treatment centers. **Program enrollment requires current Minnesota Esthetics or Cosmetology license.**

Career Opportunities

After esthetician students complete 600 hours of skills and theory training and pass the written exam through the State designated testing service and skills certification, they are eligible for licensure through the Minnesota Board of Cosmetologist Examiners. Estheticians work in a variety of settings including salons, spas, fitness centers, as well as dermatologist, plastic surgeon's offices and hospitals.

Licensing or certification exams are independent of graduation requirements.

Program Outcomes

1. Graduate will be prepared to take the esthetician skills certification.
2. Graduates will be prepared to take the Minnesota State Esthetician written exam and state law test administered through the State designated testing service (access through www.bceboard.state.mn.us).
3. Graduates will have knowledge and skills in esthetician (skin) services.
4. Graduates will have knowledge and skills in salon operations focusing on skin services.
5. Graduates will possess knowledge and skills for personal care of the skin.
6. Graduates will be prepared for employment as an esthetician.
7. Graduates will have the knowledge and skills for work and life roles.
8. Graduates will have knowledge in cosmetic care product ingredients.

Program Faculty

Lyubov Babina lyubov.babina@saintpaul.edu

Textbook and Supply Costs

Students should expect to spend approximately \$1900.00 for esthetics books and supplies (first semester). Tuition, college fees and books for remaining courses are not included in this cost. Items can be purchased in the College Bookstore. Be prepared to purchase all Esthetics kits with the instructor on the second day of class.

Financial aid must have been completed. In addition, there is a fee to take the Minnesota licensure exam.

Program Requirements

Check off when completed

Required Program Seminar

All Cosmetology, Esthetics and Nail Technician applicants must attend a program seminar prior to enrollment as a full-time student. Please call the Clinic receptionist at 651.846.1329 to reserve your space at a seminar. Seminar dates and times are posted online at www.saintpaul.edu/CosEsthSeminar

Course	Cr
<input type="checkbox"/> CHSN 1410 Preclinic Introduction (online)	4
<input type="checkbox"/> CHSN 1420 Body Systems & Diseases (online)	4
<input type="checkbox"/> CHSN 1442 Clinic 1 for Estheticians	4
<input type="checkbox"/> CHSN 1443 Clinic 2 for Estheticians	4
<input type="checkbox"/> CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
<input type="checkbox"/> CHSN 1450 Skin Analysis & Massage	4
<input type="checkbox"/> CHSN 1510 Legal Risk Management for Estheticians	2
<input type="checkbox"/> CHSN 1512 Peels and Chemical Exfoliation	3
<input type="checkbox"/> CHSN 1514 Advanced Skin Treatments	3
<input type="checkbox"/> HLTH 1440 Medical Terminology	1
<input type="checkbox"/> HLTH 1421 Anatomy & Physiology for the Somatic Practitioner.	4
Subtotal	37

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication.	7
ENGL 1711 Composition 1 – 4 cr SPCH XXXX (SPCH 1720 Interpersonal Communication - 3cr recommended)	
<input type="checkbox"/> Goal 3: Natural Sciences	7
BIOL 1760 Nutrition – 3 cr CHEM 1711 Principles of Chemistry – 4 cr	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
PSYC 1720 Psychology throughout the Lifespan	
<input type="checkbox"/> Goal 6: Humanities & Fine Arts	3
<input type="checkbox"/> Goals 1-10 of the Minnesota Transfer Curriculum	3
Select a minimum of 3 additional credits	
General Education Requirements	23

Total Program Credits 60

Program Start Dates

Fall, Spring,
Summer – online CHSN 1410 & CHSN 1420 only

Course Sequence

The course sequence listed on the back of this guide is required.

Cosmetology Student Handbook/ Agreement Form

All new and returning students will need to access D2L Brightspace PRIOR to the first day of classes to read the Cosmetology student handbook. After you have read the handbook, you MUST print and sign Student Agreement Form, Hepatitis B Vaccination/Declination Form, Property and Equipment Form, and Rollabout Form and return them to your instructor on the FIRST DAY of class before you will be admitted to class. You will need to perform this task prior to the first day of each semester. Please direct questions to the assigned instructor of your first class.

Current Minnesota Esthetics or Cosmetology License:

Students must bring a copy of their license on the first day of class. A copy will be added to the students' permanent file.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Esthetician AAS

- BS Allied Healthcare Management
Saint Mary's University-Twin Cities Campus
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BA Health Care Administration
Concordia University, St. Paul

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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*Information is subject to change.
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Esthetician Medical Setting AAS DEGREE *(continued)*

Course Sequence

The following course sequence is required.

First Semester

Clinical experience conducted at our affiliate location

CHSN 1410 Preclinic Introduction (online)	4
<i>This course is a prerequisite to or must be taken concurrently with CHSN 1442, CHSN 1443, CHSN 1445 and CHSN 1450</i>	
CHSN 1420 Body Systems & Diseases (online).	4
<i>This course is a prerequisite to or must be taken concurrently with CHSN 1442, CHSN 1443, CHSN 1445 and CHSN 1450</i>	
CHSN 1442 Clinic 1 for Estheticians	4
CHSN 1443 Clinic 2 for Estheticians	4
CHSN 1445 Cosmetic Chemistry & Makeup Applications.	4
<i>This course is a prerequisite to CHSN 1450</i>	
CHSN 1450 Skin Analysis and Massage	4
Total Semester Credits.	24

Second Semester

BIOL 1760 Nutrition (Goal 3)	3
HLTH 1410 Medical Terminology	1
HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
SPCH XXXX (Goal 1 only)	3
SPCH 1720 Interpersonal Communication (recommended)	
Total Semester Credits.	11

Third Semester

CHSN 1510 Legal Risk Management (Online)	2
CHSN 1512 Peels and Chemical Exfoliation (Hybrid) . . .	3
CHSN 1514 Advanced Skin Treatments (Hybrid)	3
PSYC 1720 Psychology Throughout the Lifespan (Goal 5).	3
Total Semester Credits.	11

Fourth Semester

CHEM 1711 Principles of Chemistry 1	4
Goal 1: ENGL 1711 Composition 1.	4
Goal 6: Humanities and Fine Arts	3
Goals 1-10: General Education Electives	3
Total Semester Credits.	14

Total Program Credits60

Esthetician DIPLOMA

Program Overview

Esthetician services include specialized work with skin care products, analysis of skin, massage techniques and facials. Students learn to tint brows and lashes, apply makeup, provide temporary hair removal and to use machines designed to administer skin treatments.

The Esthetic diploma program prepares the student for the CIDESCO examination.

Career Opportunities

After esthetician students complete 600 hours of skills and theory training and pass the written exam through the State designated testing service and skills certification, they are eligible for licensure through the Minnesota Board of Cosmetologist Examiners. Estheticians work in a variety of settings including salons, spas, fitness centers, dermatologist, plastic surgeon offices and hospitals.

CIDESCO certification holders are able to license as an esthetician technician, certify as a massage therapist, and license as a nail technician upon completion of clinic nail hours. Cross trained therapists are able to work in Spas, Medical Offices, Cruise Ships and 5 Star Resorts.

Licensing or certification exams are independent of graduation requirements.

Program Outcomes

1. Graduates will be prepared to take the esthetician skills certification.
2. Graduates will be prepared to take the Minnesota State Esthetician written exam and state law test administered through the state designated testing service (access through www.bceboard.state.mn.us).
3. Graduates will have knowledge and skills in esthetician (skin) services.
4. Graduates will have knowledge and skills in salon operations focusing on skin services.
5. Graduates will possess knowledge and skills for personal care of the skin.
6. Graduates will be prepared for employment as an esthetician.
7. Graduates will have the knowledge and skills for work and life roles.
8. Graduates will have knowledge in cosmetic care product ingredients.
9. Graduates will be prepared to take the CIDESCO exam.
10. Graduates will have knowledge and skills in spa operations focusing on therapeutic skin and body services.
11. Graduates will be prepared for employment as a CIDESCO certification holder.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Lyubov Babina lyubov.babina@saintpaul.edu
Peg Flicek peg.flicek@saintpaul.edu

Textbook and Supply Costs

Students should expect to spend approximately \$1,900.00 for esthetics books and supplies (first semester). Tuition, college fees and books for remaining courses are not included in this cost. Items can be purchased in the College Bookstore. In addition, there is a fee to take the Minnesota licensure exam.

Be prepared to purchase all Esthetics kits with the instructor on the second day of class. Financial aid must have been completed.

CIDESCO Certification Exam

Graduates of this diploma program are eligible to take the CIDESCO certification exam. The cost of this exam is approximately \$350.00 for under graduate students and approximately \$650.00 for post graduate students. After passing the CIDESCO exam a fee of \$65.00 is charged for the CIDESCO diploma and pin. CHSN 2411 CIDESCO Exam Student Preparation class and the CIDESCO exam is offered summer semester only.

The Esthetician Diploma will meet the criteria for the CIDESCO exam requirement of 1200 hours of training in skin, massage and nail services.

The CIDESCO examination includes:

- a facial examination
- a body examination
- a waxing examination
- a make-up examination
- a tinting examination
- a massage examination
- an additional subject, and
- a written examination.

CIDESCO

Saint Paul College – A Community and Technical College Esthetician Program is a CIDESCO school. This means the program is allowed to prepare candidates for the CIDESCO examination.

CIDESCO is the World's Major International Beauty Therapy Association:

- Founded in 1946 with its Head Office in Zurich, Switzerland.
- CIDESCO is represented in over 37 countries.
- The CIDESCO Diploma is the world's most prestigious qualification in the field of Aesthetics and Beauty Therapy.
- Since 1957, the CIDESCO qualification has set standards that have been initiated over the five continents of the globe.

Comite International d' Esthetique et de Cosmetologie
e-mail: info@cidesco.com
Web site: www.cidesco.com



Program Start Dates

Fall, Spring,
Summer – online CHSN 1410 & CHSN 1420 only

Course Sequence

The course sequence listed on the back of this guide is required.

Cosmetology Student Handbook/ Agreement Form

All new and returning students will need to access D2L Brightspace PRIOR to the first day of classes to read the Cosmetology student handbook. After you have read the handbook, you must print and sign Student Agreement Form, Hepatitis B Vaccination/Declination Form, Property and Equipment Form, and Rollabout Form and return them to your instructor on the first day of class before you will be admitted to class. You will need to perform this task prior to the first day of each semester. Please direct questions to the assigned instructor of your first class.

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 60+ on Reading Comprehension or grade "C" or better in ENGL 0921

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Esthetician DIPLOMA *(continued)*

Program Requirements

- Check off when completed
- Required Program Seminar
All Cosmetology, Esthetics and Nail Technician applicants must attend a program seminar prior to enrollment as a part-time or full-time student. Please call the Clinic receptionist at 651.846.1329 to reserve your space at a seminar. Seminar dates and times are posted online at www.saintpaul.edu/CosEsthSeminar.

Course	Cr
<input type="checkbox"/> CHSN 1410 Preclinic Introduction (online)	4
<input type="checkbox"/> CHSN 1420 Body Systems & Diseases (online)	4
<input type="checkbox"/> CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
<input type="checkbox"/> CHSN 1450 Skin Analysis and Massage	4
<input type="checkbox"/> CHSN 1442 Clinic 1 for Estheticians	4
<input type="checkbox"/> CHSN 1443 Clinic 2 for Estheticians	4
<input type="checkbox"/> CHSN 1407 Preclinic Nail Care	3
<input type="checkbox"/> CHSN 1461 Clinic 1 for Nail Technicians	3
<input type="checkbox"/> CHSN 2411 CIDESCO Exam Student Preparation	3
<i>This course is offered only Summer Term</i>	
<input type="checkbox"/> HLTH 1410 Medical Terminology	1
<input type="checkbox"/> HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
<input type="checkbox"/> HLTH 1425 Clinical Applications in Kinesiology	3
<input type="checkbox"/> MASS 1400 Introduction to Therapeutic Massage	4
<input type="checkbox"/> MASS 1421 Massage Spa Techniques	2
<input type="checkbox"/> MASS 1422 Massage Clinical Techniques	4
<input type="checkbox"/> MASS 1480 Massage Therapy Practicum	4
Subtotal	55
<input type="checkbox"/> General Education Requirements	9
SPCH 1720 Interpersonal Communication	3
(recommended)	
BIOL 1760 Nutrition	3
General Education course 17XX	3
<input type="checkbox"/> Select from the following electives if needed:	
CHSN 1551 Salon Ops 1 for Estheticians	1
CHSN 1552 Salon Ops 2 for Estheticians	2
CHSN 1553 Salon Ops 3 for Estheticians	3
Total Program Credits	64

Course Sequence

The following course sequence is required.
Not all courses are offered each semester.

First Semester

CHSN 1410 Preclinic Introduction (online)	4
<i>This course is a prerequisite to or must be taken concurrently with CHSN 1442, CHSN 1443, CHSN 1445 and CHSN 1450</i>	
CHSN 1420 Body Systems & Diseases (online)	4
<i>This course is a prerequisite to or must be taken concurrently with CHSN 1442, CHSN 1443, CHSN 1445 and CHSN 1450</i>	
CHSN 1442 Clinic 1 for Estheticians	4
CHSN 1443 Clinic 2 for Estheticians	4
CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
<i>This course is a prerequisite to CHSN 1450</i>	
CHSN 1450 Skin Analysis and Massage	4
Total Semester Credits	24

Second Semester

CHSN 1461 Clinic 1 for Nail Technicians	3
CHSN 1407 Preclinic Nail Care	3
HLTH 1410 Medical Terminology	1
HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
BIOL 1760 Nutrition	3
SPCH 1720 Interpersonal Communication	3
MASS 1400 Introduction to Therapeutic Massage	4
Total Semester Credits	21

Third Semester

CHSN 2411 CIDESCO Exam Student Prep	3
<i>This course is offered only Summer Term</i>	
HLTH 1425 Clinical Applications in Kinesiology	3
MASS 1421 Massage Spa Techniques	2
MASS 1422 Massage Clinical Techniques	4
MASS 1480 Massage Therapy Practicum	4
General Education course 17XX	3
Total Semester Credits	19

Total Program Credits 64

Esthetician CERTIFICATE

Program Overview

Esthetician services include specialized work with skin care products, analysis of skin, skin exfoliation, massage techniques, and facials. Students learn to tint brows and lashes, apply makeup, provide temporary hair removal, and use machines designed to administer skin treatments.

Career Opportunities

After esthetician students complete 600 hours of skills and theory training and pass the written exam through the State designated testing service and skills certification, they are eligible for licensure through the Minnesota Board of Cosmetologist Examiners. Estheticians work in a variety of settings including salons, spas, fitness centers, as well as dermatology and plastic surgeon's offices and hospitals.

Licensing or certification exams are independent of graduation requirements.

Program Outcomes

1. Graduates will be prepared to take the esthetician skills certification.
2. Graduates will be prepared to take the Minnesota State Esthetician written exam and state law test administered through the state designated testing service (access through www.bceboard.state.mn.us).
3. Graduates will have knowledge and skills in esthetician (skin) services.
4. Graduates will have knowledge and skills in salon operations focusing on skin services.
5. Graduates will possess knowledge and skills for personal care of the skin.
6. Graduates will be prepared for employment as an esthetician.
7. Graduates will have the knowledge and skills for work and life roles.
8. Graduates will have knowledge in cosmetic care product ingredients.

Saint Paul College – A Community and Technical College Esthetician Program is a CIDESCO school. This means the program is allowed to prepare candidates for the CIDESCO examination.

Comite International d' Esthetique et de Cosmetologie
 e-mail: info@cidesco.com
 Web site: www.cidesco.com



*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Program Faculty

Lyubov Babina lyubov.babina@saintpaul.edu
 Peg Flicek peg.flicek@saintpaul.edu

Program Length

Full-time students can complete the program in one semester provided the 3-credit General Education requirement has also been met.

Full-time Options

Full-time students can complete the program in one semester by attending 32 hours per week (Tuesday – Friday, 8:00am–4:30pm).

Textbook and Supply Costs

Students should expect to spend approximately \$1,900.00 for books and supplies. This cost is beyond the cost of tuition and fees. In addition, there is a fee to take the Minnesota licensure exam.

Items can be purchased in the College Bookstore. Be prepared to purchase all esthetics kits with the instructor on the second day of class. Financial aid must have been completed.

Program Requirements

Check off when completed

Required Program Seminar

All Cosmetology, Esthetics and Nail Technician applicants must attend a program seminar prior to enrollment as a part-time or full-time student. Please call the Clinic receptionist at 651.846.1329 to reserve your space at a seminar. Seminar dates and times are posted online at www.saintpaul.edu/CosEsthSeminar

Course	Cr
<input type="checkbox"/> CHSN 1410 Preclinic Introduction (online)	4
<input type="checkbox"/> CHSN 1420 Body Systems & Diseases (online)	4
<input type="checkbox"/> CHSN 1442 Clinic 1 for Estheticians	4
<input type="checkbox"/> CHSN 1443 Clinic 2 for Estheticians	4
<input type="checkbox"/> CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
<input type="checkbox"/> CHSN 1450 Skin Analysis & Massage	4
Subtotal	24
General Education Requirements	3
(General education requirements must be completed and passed before paperwork for licensure will be released)	
<input type="checkbox"/> SPCH 1720 Interpersonal Communication (recommended)	
<input type="checkbox"/> Select from the following electives if needed:	
CHSN 1551 Salon Ops 1 for Estheticians	1
CHSN 1552 Salon Ops 2 for Estheticians	2
CHSN 1553 Salon Ops 3 for Estheticians	3
Total Program Credits	27

Program Start Dates

Fall, Spring,
 Summer – online CHSN 1410 & CHSN 1420 only

Course Sequence

The following sequence is required. Not all courses are offered during summer session.

1 Semester – Day Full-time

CHSN 1410 Preclinic Introduction (online)	4
<i>This course is a prerequisite to or must be taken concurrently with CHSN 1442, CHSN 1443, CHSN 1445 and CHSN 1450</i>	
CHSN 1420 Body Systems & Diseases (online)	4
<i>This course is a prerequisite to or must be taken concurrently with CHSN 1442, CHSN 1443, CHSN 1445 and CHSN 1450</i>	
CHSN 1442 Clinic 1 for Estheticians	4
CHSN 1443 Clinic 2 for Estheticians	4
CHSN 1445 Cosmetic Chemistry and Makeup Applications	4
<i>This course is a prerequisite to CHSN 1450</i>	
CHSN 1450 Skin Analysis and Massage	4
General Education Requirements	3
(General education requirements must be completed and passed before paperwork for licensure will be released)	
Total Semester Credits	27

Total Program Credits 27

Cosmetology Student Handbook/ Agreement Form

All new and returning students will need to access D2L Brightspace PRIOR to the first day of classes to read the Cosmetology student handbook.

After you have read the handbook, you must print and sign Student Agreement Form, Hepatitis

B Vaccination/Declination Form, Property and Equipment Form, and Rollabout Form and return them to your instructor on the first day of class before you will be admitted to class. You will need to perform this task prior to the first day of each semester. Please direct questions to the assigned instructor of your first class.

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Writing: Score of 60+ on Reading Comprehension or grade of "C" or better in ENGL 0921

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

056C (7042)

Esthetics Medical Setting CERTIFICATE

Program Overview

Esthetician services in a medical setting include work with skin care products, analysis of skin, skin exfoliation, facials, pre and post treatment skin care, and home product recommendation. The use of Advanced Skin Treatments, Pharmaceutical Grade Chemical Peels and Risk Management for this industry will be covered.

This certificate is designed for the licensed esthetician or licensed cosmetologist who will seek employment in a medical setting. **Program enrollment requires current Minnesota Esthetics or Cosmetology license.**

Career Opportunities

Licensed estheticians and licensed cosmetologists completing this advanced certificate are able to work in a plastic surgeon's office, a dermatologist's office, medical spas within 5 star resorts, hotels, and fitness centers.

Program Outcomes

1. Graduates will have knowledge and skills in esthetician services.
2. Graduates will have knowledge in cosmetic product ingredients.
3. Graduates will have knowledge and skills in Advanced Skin Treatments.
4. Graduates will have knowledge of Legal Risk Management.
5. Graduates will have knowledge of Pharmaceutical Grade Chemical Peels.
6. Graduates will have knowledge and skills for work and life roles.
7. Graduates will be prepared for employment in a medical setting.

Program Faculty

Lyubov Babina lyubov.babina@saintpaul.edu
 Peg Flicek peg.flicek@saintpaul.edu

Textbook and Supply Costs

Students should expect to spend approximately \$1900.00 for esthetics books and supplies (CHSN 1442, 1445 & 1450). Tuition, college fees and books for remaining courses are not included in this cost. Items can be purchased in the College Bookstore. Financial aid must have been completed.

Program Requirements

Check off when completed

Required Program Seminar

All Cosmetology, Esthetics and Nail Technician applicants must attend a program seminar prior to enrollment as a part-time or full-time student. Please call the Clinic receptionist at 651.846.1329 to reserve your space at a seminar. Seminar dates and times are posted online at www.saintpaul.edu/CosEsthSeminar

Course	Cr
<input type="checkbox"/> BIOL 1760 Nutrition	.3
<input type="checkbox"/> CHSN 1442 Clinic 1 for Estheticians	.4
<input type="checkbox"/> CHSN 1445 Cosmetic Chemistry & Makeup Applications	.4
<input type="checkbox"/> CHSN 1450 Skin Analysis & Massage	.4
<input type="checkbox"/> CHSN 1510 Legal Risk Management for Estheticians	.2
<input type="checkbox"/> CHSN 1512 Peels and Chemical Exfoliation	.3
<input type="checkbox"/> CHSN 1514 Advanced Skin Treatments	.3
<input type="checkbox"/> HLTH 1410 Medical Terminology	.1
<input type="checkbox"/> HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	.4

Total Program Credits28

Program Start Dates

Fall, Spring

Course Sequence

The following course sequence is recommended. Not all courses are offered during summer session.

Full-time students can complete the program in two semesters.

First Semester

CHSN 1442 Clinic 1 for Estheticians	.4
CHSN 1445 Cosmetic Chemistry & Makeup Applications	.4
CHSN 1450 Skin Analysis & Massage	.4
CHSN 1510 Legal Risk Management for Estheticians (online)	.2
Total Semester Credits	14

Second Semester

BIOL 1760 Nutrition	.3
HLTH 1410 Medical Terminology	.1
HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	.4
CHSN 1512 Peels and Chemical Exfoliation (hybrid)	.3
CHSN 1514 Advanced Skin Treatments (hybrid)	.3
Total Semester Credits	14

Total Program Credits28

Current Minnesota Esthetics or Cosmetology License:

Students must bring a copy of their license on the first day of class. A copy will be added to the students' permanent file.

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 60+ or grade of "C" or better in ENGL 0921

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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*Information is subject to change.
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Esthetics for Cosmetologist CERTIFICATE

Program Overview

This certificate will provide advanced education for the licensed cosmetologist who would like to expand their knowledge of skin care services. The certificate can be completed within one semester. **Program enrollment requires current Minnesota Esthetics or Cosmetology license.**

Career Opportunities

The licensed cosmetologist would now be able to seek employment in a setting specializing in skin care. Employment opportunities include: salons, spas, fitness centers, dermatology and plastic surgeon's offices and hospitals.

Program Outcomes

1. Graduates will have accrued an additional 320 hours of education focused on skin care.
2. Graduates will have demonstrated knowledge of skin care services.
3. Graduates will have demonstrated practical application of skin care services.
4. Graduates will have knowledge of cosmetic product ingredients.
5. Graduates will be prepared for employment offering skin care services.

Program Faculty

Lyubov Babina lyubov.babina@saintpaul.edu
 Peg Flicek peg.flicek@saintpaul.edu

Textbook and Supply Costs

Students should expect to spend approximately \$1850.00 for books and supplies. This cost is beyond the cost of tuition and fees. Items can be purchased in the College Bookstore.

Program Requirements

Check off when completed

Required Program Seminar

All Cosmetology, Esthetics and Nail Technician applicants must attend a program seminar prior to enrollment as full-time student. Please call the Clinic receptionist at 651.846.1329 to reserve your space at a seminar. Seminar dates and times are posted online at www.saintpaul.edu/CosEsthSeminar

Course	Cr
<input type="checkbox"/> CHSN 1442 Clinic 1 for Estheticians	4
<input type="checkbox"/> CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
<input type="checkbox"/> CHSN 1450 Skin Analysis & Massage	4

Total Program Credits 12

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended.

Full-time students can complete the program in one semester.

First Semester

CHSN 1442 Clinic 1 for Estheticians	4
CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
CHSN 1450 Skin Analysis & Massage	4

Total Program Credits 12

Current Minnesota Esthetics or Cosmetology License:

Students must bring a copy of their license on the first day of class. A copy will be added to the students' permanent file.

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 60+ or grade of "C" or better in ENGL 0921

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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CIDESCO Readiness CERTIFICATE

Program Overview

This certificate is designed for the licensed esthetician or licensed cosmetologist who wants to examine for the International CIDESCO certification. It provides the course work to support the CIDESCO exam prep class and CIDESCO examination. With CIDESCO certification, the licensed esthetician is able to complete a massage program, certify as a massage therapist, complete a nail technician program and obtain a nail technician license. CIDESCO is the world's largest major International Beauty Association. **Program enrollment requires a current Minnesota Cosmetology or Esthetics license.**

Career Opportunities

The CIDESCO certification holder is cross trained and able to offer potential employers, skills in esthetics, massage therapy, body assessment and treatment and nail care. Cross trained therapists are able to work in spas, medical offices, fitness centers, 5 star resort spas, and on cruise ships.

Program Outcomes

1. Graduates will have knowledge and skills in esthetician services.
2. Graduates will have knowledge and skills needed for body assessment and body treatments.
3. Graduates will have knowledge and skills to assist clients with diet and exercise.
4. Graduates will have knowledge in cosmetic product ingredients.
5. Graduates will have knowledge and skills for work and life roles.
6. Graduates will have determined a topic for the CIDESCO special project.
7. Graduates will have prepared their CIDESCO special project for presentation during the exam.
8. Graduates will be prepared to take the International CIDESCO practical and written exam.

Program Faculty

Lyubov Babina lyubov.babina@saintpaul.edu

Program Requirements

Check off when completed

Required Program Seminar

All Cosmetology, Esthetics and Nail Technician applicants must attend a program seminar prior to enrollment as a part-time or full-time student. Please call the Clinic receptionist at 651.846.1329 to reserve your space at a seminar. Seminar dates and times are posted online at www.saintpaul.edu/CosEsthSeminar


Course	Cr
<input type="checkbox"/> BIOL 1760 Nutrition	3
<input type="checkbox"/> CHSN 1407 Preclinic Nail Care	3
<input type="checkbox"/> CHSN 1442 Clinic 1 for Estheticians	4
<input type="checkbox"/> CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
<input type="checkbox"/> CHSN 1450 Skin Analysis & Massage	4
<input type="checkbox"/> CHSN 2411 CIDESCO Exam Student Preparation	3
<i>Class offered only summer term</i>	
<input type="checkbox"/> HLTH 1410 Medical Terminology	1
<input type="checkbox"/> HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
<input type="checkbox"/> MASS 1400 Introduction to Therapeutic Massage	4
Total Program Credits	30

Textbook and Supply Costs

Students should expect to spend approximately \$1900.00 for esthetics books and supplies (CHSN 1442, 1445 & 1450). Tuition, college fees, and books required for remaining courses are not included in this cost. Items can be purchased in the College Bookstore. Financial aid must have been completed.

Saint Paul College – A Community and Technical College Esthetician Program is a CIDESCO school. This means the program is allowed to prepare candidates for the CIDESCO examination.

Comite International d' Esthetique et de Cosmetologie
 e-mail: info@cidesco.com
 Web site: www.cidesco.com



Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended. Not all courses are offered during summer session.

Full-time students can complete the program in two semesters.

First Semester

CHSN 1442 Clinic 1 for Estheticians	4
CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
CHSN 1450 Skin Analysis & Massage	4
BIOL 1760 Nutrition	3
Total Semester Credits	15

Second Semester

CHSN 1407 Preclinic Nail Care	3
CHSN 2411 CIDESCO Exam Student Prep*	3
HLTH 1410 Medical Terminology	1
HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
MASS 1400 Introduction to Therapeutic Massage	4
Total Semester Credits	15

Total Program Credits 30

*This course is only offered summer term.

Current Minnesota Esthetics or Cosmetology License:

Students must bring a copy of their license on the first day of class. A copy will be added to the students' permanent file.

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 60+ or grade of "C" or better in ENGL 0921

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

This advanced certificate is designed for the licensed esthetician or licensed cosmetologist.

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*Information is subject to change.
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Health Information Technology AAS DEGREE

Program Overview

Health Information Technicians play a vital role in the health care industry by participating in the creation, completion, distribution and retention of medical record documentation according to policies and procedures outlined by several regulating bodies such as the Joint Commission on Accreditation of Healthcare Organization (JCAHO) and Medicare.

Individuals enrolled in the program will obtain a broad body of knowledge that will allow them to become employed in many capacities within a health information department. Some of the positions include such tasks as: release of information, various registries, incomplete chart room, processing of medical documentation, coding and abstracting, and may include supervisory or leadership roles based on skill and ability. Students who successfully complete the Health Information Technology degree are allowed to sit for the national examination given by the American Health Information Management Association to become a Registered Health Information Technician upon successful completion of the examination.

Career Opportunities

Graduates of the Health Information Technology degree will find positions in various health care settings such as private physician offices, clinics, specialty clinics, hospitals, long-term care facilities, and rehabilitation facilities. Employment can also be found in government offices, the insurance industry, dental and chiropractic clinics, and information technology suppliers.

Program Outcomes

1. Graduates will apply policies and procedures to assure the accuracy of health information.
2. Graduates will use specialized software in the completion of HIM processes such as record tracking, release of information, coding, grouping, registries, billing, and quality improvement.
3. Graduates will apply procedure codes using ICD-10 PCS & CM and CPT/HCPCS.
4. Graduates will apply policies and procedures to comply with the changing regulations among various payment systems for healthcare services.
5. Graduates will possess a knowledge base which will allow them to find employment in the health care industry.
6. Graduates of a Commission on Accreditation of Health Informatics and Information Management accredited Health Information Technology program are eligible to apply to write the American Health Information Management Association, Registered Health Information Technician (RHIT) certificate examination.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Advisor

Jennifer Anglin jennifer.anglin@saintpaul.edu
Kelly Dale kelly.dale@saintpaul.edu

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, and Saturday courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> BTEC 1421 Business Information Applications 1	3
<input type="checkbox"/> BUSN 1480 Business Career Resources	1
<input type="checkbox"/> MEDS 1420 Health Information Foundations	3
<input type="checkbox"/> MEDS 1470 Anatomy & Physiology/Medical Office	3
<input type="checkbox"/> MEDS 1480 Medical Terminology	3
<input type="checkbox"/> MEDS 1560 Computerized Health Information	3
<input type="checkbox"/> MEDS 1562 Billing and Reimbursement	2
<input type="checkbox"/> MEDS 1570 Human Disease	3
<input type="checkbox"/> MEDS 2430 Pharmacology for the Medical Office	2
<input type="checkbox"/> MEDS 2432 Alternative Health Record Systems	2
<input type="checkbox"/> MEDS 2434 Legal and Ethical Aspects of Health Information	2
<input type="checkbox"/> MEDS 2440 Supervision of Health Information	2
<input type="checkbox"/> MEDS 2461 ICD-10-CM Coding	3
<input type="checkbox"/> MEDS 2462 ICD-10-PCS Coding	4
<input type="checkbox"/> MEDS 2470 CPT-4 Coding	3
<input type="checkbox"/> MEDS 2480 Advanced Coding	3
<input type="checkbox"/> MEDS 2510 Quality Management and Health Statistics	3
<input type="checkbox"/> MEDS 2590 HIT Internship/Capstone Project	3
Subtotal	48

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
General Education Requirements	16

Total Program Credits 64

The Health Information Technology AAS Degree Program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (www.cahim.org).



Program Start Dates

Fall, Spring

Application Deadline

Application deadline is September 1

Course Sequence

The course sequence listed on the back of this guide is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Health Information Technology AAS

- BS Health Information Management
College of St. Scholastica
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BS Health Information Management
Herzing University
- BA Health Care Administration
Concordia University, St. Paul

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+; Visit the Transfer Center to determine if Transfer programs require college-level math.

Keyboarding Skills: Minimum of 40 WPM with 3 errors or less or a grade of "C" or better in BTEC 1400.

Computer Skills: Basic computer skills such as word processing, spreadsheets, and Internet usage or a grade of "C" or better in BTEC 1418.

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Health Information Technology AAS DEGREE *(continued)*

Course Sequence

Recommended course sequence is dependent upon which Semester/Term the student starts the Health Information Technology AAS Degree program. Follow the appropriate sequence listed as indicated below.

All classes must be successfully completed with a grade of "C" or better.

First Semester

ENGL 1711 Composition 1	4
MEDS 1420 Health Information Foundations	3
MEDS 1470 Anatomy & Physiology/Medical Office	3
MEDS 1480 Medical Terminology	3
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	16

Second Semester

BTEC 1421 Business Information Applications 1	3
MEDS 1560 Computerized Health Information	3
MEDS 1570 Human Disease	3
MEDS 2430 Pharmacology for the Medical Office	2
General Education Course (Goal 3 or Goal 4)	3
Total Semester Credits	16

Third Semester

MEDS 2432 Alternative Health Record Systems	2
MEDS 2434 Legal Aspects of Health Information	2
MEDS 2461 ICD-10-CM Coding	3
MEDS 2462 ICD-10-PCS Coding	4
MEDS 2470 CPT-4 Coding	3
General Education Course (Goal 5)	3
Total Semester Credits	15

Fourth Semester

BUSN 1480 Business Career Resources	1
MEDS 1562 Billing and Reimbursement	2
MEDS 2440 Supervision of Health Information	2
MEDS 2480 Advanced Coding	3
MEDS 2510 Quality Management and Health Statistics	3
General Education Course (Goal 6)	3
Total Semester Credits	14

Fifth Semester

MEDS 2590 HIT Internship/Capstone Project	3
Total Semester Credits	3

Total Program Credits64

Application Process

After completion of the Saint Paul College application and admission process, students interested in the Health Information Technology Degree must submit a completed Application to Health Information Technology Degree form and meet the following criteria:

Completion of the following required General Education courses:

- ENGL 1711 English Composition
- SPCH 17XX Communication Course

Complete the following required courses with a "C" or better:

- MEDS 1420 Health Information Foundations
- MEDS 1470 Anatomy/Physiology/Medical Office
- MEDS 1480 Medical Terminology

Admission into the Program

Applying by the application deadline (listed on the application) does not guarantee admission to the Health Information Technology Program.

Being admitted to Saint Paul College does not imply admission into the Health Information Technology Program.

The Health Information Technology Admissions Committee will review each application on the basis of overall academic ability, GPA of college level courses, assessment scores, and meeting the above criteria. Notification of acceptance into the Health Information Technology Program will be sent by mail 6-weeks after the application deadline stated on the Health Information Technology Program Application form.

Students admitted into the Health Information Technology Program must attend a mandatory Seminar to complete documentation to enter the program.

Healthcare Informatics AAS DEGREE

Program Overview

The Healthcare Informatics program integrates education from health information, computer science and information technology.

Healthcare informaticists work and support healthcare organizations in a multifaceted methodology by providing support directly related to industry practices and procedures regarding complex electronic health record systems.

Responsibilities may include supporting tasks and roles relating to data analysis, database design and administration, support of numerous software applications, implementation of data standards, knowledge of interoperability, and maintenance of clinical decision support protocols supported by evidence based medicine, routine system upgrades and preservation, system architecture, hardware, system networking, and legal knowledge to support information privacy and security.

Career Opportunities

Individuals enrolled in the program will obtain a broad body of knowledge of health information, computer science, and information technology that will allow them to become employed in many capacities within a healthcare system. Employment opportunities may include: data and information technology support personnel, analytics staff, data standards personnel, documentation integrity specialists, health information privacy and security personnel, electronic health record trainer or educator, implementation and data systems upgrade specialist and may include supervisory or leadership roles based on skill and ability.

Graduates of the Healthcare Informatics degree will find positions in various health care settings such as private physician offices, clinics, specialty clinics, hospitals, long-term care facilities, and rehabilitation facilities. Employment can also be found in government offices, the insurance industry, dental and chiropractic clinics, and information technology suppliers/vendors.

According to the Bureau of Labor Statistics, Computer User Support Specialists Occupations are anticipated to increase by +/- 20% between 2012 and 2022 (www.bls.gov).

Program Outcomes

1. Graduates will apply policies and procedures to assure the accuracy and integrity of information management based systems directly related to healthcare.
2. Graduates will use specialized software in the completion of health informatics and information management processes that include, working with practice management systems, data abstraction and analytics, record tracking, release of information, registries, and quality improvement initiatives.

3. Graduates will apply knowledge and skill set to manage and maintain healthcare related information systems.
4. Graduates will apply policies and procedures to comply with the changing regulations among various information systems within healthcare.
5. Graduates will possess a knowledge base, which will allow them to find employment in the healthcare industry.

Program Advisor

Jennifer Anglin jennifer.anglin@saintpaul.edu
 Kelly Dale kelly.dale@saintpaul.edu

Program Requirements

Check off when completed

All classes must be successfully completed with grade "C" or better.

Course	Cr
<input type="checkbox"/> MEDS 1420 Health Information Foundations	3
<input type="checkbox"/> MEDS 1470 Anatomy & Physiology/ Medical Office	3
<input type="checkbox"/> MEDS 1480 Medical Terminology	3
<input type="checkbox"/> MEDS 1560 Computerized Health Information	3
<input type="checkbox"/> MEDS 2432 Alternative Health Record Systems	2
<input type="checkbox"/> MEDS 2434 Legal and Ethical Aspects of Health Information	2
<input type="checkbox"/> MEDS 2440 Supervision of Health Information	2
<input type="checkbox"/> MEDS 2510 Quality Management and Health Statistics	3
<input type="checkbox"/> CSCI 1410 Computer Science and Information Systems	4
<input type="checkbox"/> CSCI 1440 Networking Fundamentals	4
<input type="checkbox"/> CSCI 1523 Introduction to Computing and Programming Concepts	4
<input type="checkbox"/> CSCI 1550 Database Management Fundamentals	4
<input type="checkbox"/> CSCI 2410 Management Information Systems	3
<input type="checkbox"/> CSCI 2570 Machine Architecture and Organization	4
Subtotal	44

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning	3
MATH 1730 College Algebra (or higher) – 3 cr	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
General Education Requirements	16

Total Program Credits 60

*Information is subject to change.
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Program Start Dates

Fall, Spring

Course Sequence

The Course Sequence listed on the back of this guide is recommended for full-time and part-time students. Students should consult with the program advisor to develop an appropriate educational plan.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Healthcare Informatics AAS

- BA Individualized Studies
Metropolitan State University
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BA Health Care Administration
Concordia University, St. Paul

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Keyboarding Skills: Minimum of 40 WPM with 3 errors or less or a grade of "C" or better in BTEC 1400.

Computer Skills: Basic computer skills such as word processing, spreadsheets, and Internet usage or a grade of "C" or better in BTEC 1418.

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Healthcare Informatics AAS DEGREE *(continued)*

**Course Sequence
for Full-Time Schedule**

The following sequence is recommended for full-time students. Students should consult with the program advisor to develop an appropriate educational plan.

All classes must be successfully completed with a grade of "C" or better.

Fall Semester (Year 1)

MEDS 1420 Health Information Foundations 3

MEDS 1470 Anatomy and Physiology of the Medical Office 3

MEDS 1480 Medical Terminology 3

CSCI 1410 Computer Science and Information Systems 4

SPCH XXXX (Goal 1) 3

Total Semester Credits 16

Spring Semester (Year 1)

MEDS 1560 Computerized Health Information 3

CSCI 1523 Introduction to Computing and Programming Concepts 4

CSCI 1550 Database Management Fundamentals 4

ENGL 1711 Composition 1 4

Total Semester Credits 15

Fall Semester (Year 2)

MEDS 2432 Alternative Health Record Systems 2

MEDS 2440 Supervision of Health Information 2

CSCI 2410 Management Information Systems 3

CSCI 2570 Machine Architecture and Organization 4

MATH 1730 College Algebra (Goal 4) 3

Total Semester Credits 14

Spring Semester (Year 2)

MEDS 2434 Legal and Ethical Aspects of Health Information 2

MEDS 2510 Quality Management and Health Statistics 3

CSCI 1440 Networking Fundamentals 4

History, Social Science, Behavioral Sciences (MnTC) (Goal 5) 3

Humanities and Fine Arts (MnTC) (Goal 6) 3

Total Semester Credits 15

Total Program Credits 60

**Course Sequence
for Part-Time Schedule**

The following sequence is recommended for part-time students. Students should consult with the program advisor to develop an appropriate educational plan.

All classes must be successfully completed with a grade of "C" or better.

Fall Semester (Year 1)

MEDS 1470 Anatomy and Physiology of the Medical Office 3

MEDS 1480 Medical Terminology 3

CSCI 1410 Computer Science and Information Systems 4

Total Semester Credits 10

Spring Semester (Year 1)

MEDS 1420 Health Information Foundations 3

CSCI 1523 Introduction to Computing and Programming Concepts 4

SPCH XXXX (Goal 1 only) 3

Total Semester Credits 10

Fall Semester (Year 2)

MEDS 1560 Computerized Health Information 3

MEDS 2432 Alternative Health Record Systems 2

ENGL 1711 Composition 1 4

Total Semester Credits 9

Spring Semester (Year 2)

MEDS 2434 Legal and Ethical Aspects of Health Information 2

CSCI 1550 Database Management Fundamentals 4

MATH 1730 College Algebra (or higher) (Goal 4) 3

Total Semester Credits 9

Fall Semester (Year 3)

MEDS 2440 Supervision of Health Information 2

CSCI 2410 Management Information Systems 3

CSCI 2570 Machine Architecture and Organization 4

History, Social Science, Behavioral Sciences (MnTC) (Goal 5) 3

Total Semester Credits 12

Spring Semester (Year 3)

MEDS 2510 Quality Management and Health Statistics 3

CSCI 1440 Networking Fundamentals 4

Humanities and Fine Arts (MnTC) (Goal 6) 3

Total Semester Credits 10

Total Program Credits 60

Medical Office Professional AAS DEGREE

Program Overview

Medical Office Professionals are critical to the support of clinical staff in the health care industry. Physicians, nurses and other direct patient-contact professionals rely on well-trained medical office professionals to assist them in the creation, maintenance, and retention of quality medical documentation based on patient care. The medical office professional's job may include transcribing medical documents, creating and processing correspondence, scheduling patient appointments, scanning documents into digital health records, releasing patient information, collecting or abstracting medical data, understanding reimbursement methodologies, meeting physician documentation needs, and other related duties.

Applicants should possess excellent communication skills, meticulous attention to detail, good spelling, finger dexterity, and extreme accuracy in their work. Candidates considering this field should be comfortable reading and analyzing data for long periods of time, listening to dictated material for extended periods, assisting the patient documentation needs, and working on an independent basis.

Career Opportunities

Medical Office Professionals enjoy salaries in the top bracket of office professionals. Some may advance to office supervisors or managers with further education; and some may develop their own business based on their medical office specialty, such as transcription.

The Medical Office Professional may work in a physician's office, surgery center, specialty clinic, hospital, insurance company, government agency, research foundation, long-term care facility, dental office, consulting firm, rehabilitation center or other health care facility.

According to the Bureau of Labor Statistics, Medical Secretarial Occupations are anticipated to increase by +/- 36% between 2012 and 2022 (www.bls.gov).

Program Outcomes

1. Graduates will possess the knowledge and skills needed for employment as a Medical Office Professional.
2. Graduates will be proficient in the use of computer software applications, including advanced spreadsheet and database knowledge.
3. Graduates will possess an understanding of medical terminology, human disease, pharmacology, anatomy and physiology, patient confidentiality including HIPAA privacy rules, and will be able to professionally interact with healthcare providers and patients.
4. Graduates will transcribe/edit medical reports and related office correspondence.
5. Graduates of Medical Office Professional program are eligible to apply to write the Association for Healthcare Documentation Integrity, Registered Healthcare Documentation Specialist (RHDS) examination.

Program Advisor

Jennifer Anglin jennifer.anglin@saintpaul.edu
 Kelly Dale kelly.dale@saintpaul.edu

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, and Saturday courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

All classes must be successfully completed with grade "C" or better.

Course	Cr
<input type="checkbox"/> BTEC 1421 Business Information Applications 13	
<input type="checkbox"/> BTEC 1423 Business Information Applications 24	
<input type="checkbox"/> BTEC 2410 Business Procedures4	
<input type="checkbox"/> BUSN 1410 Introduction to Business3	
<input type="checkbox"/> BUSN 1480 Business Career Resources1	
<input type="checkbox"/> MEDS 1420 Health Information Foundations.3	
<input type="checkbox"/> MEDS 1470 Anatomy & Physiology/ Medical Office3	
<input type="checkbox"/> MEDS 1480 Medical Terminology3	
<input type="checkbox"/> MEDS 1551 Medical Formatting/Transcription 13	
<input type="checkbox"/> MEDS 1552 Medical Transcription 23	
<input type="checkbox"/> MEDS 1553 Medical Transcription 33	
<input type="checkbox"/> MEDS 1560 Computerized Health Information3	
<input type="checkbox"/> MEDS 1570 Human Disease.3	
<input type="checkbox"/> MEDS 2430 Pharmacology for the Medical Office2	
Subtotal.	41

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication7	
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3 or Goal 43	
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences3	
<input type="checkbox"/> Goal 6: Humanities and Fine Arts.3	
<input type="checkbox"/> Goals 1-10 of the Minnesota Transfer Curriculum3	
Select a minimum of 3 additional credits	
General Education Requirements	19

Total Program Credits60

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Program Start Dates

Fall, Spring, Summer

Course Sequence

The course sequence listed on the back of this guide is required.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Medical Office Professional AAS

- BA Individualized Studies
Metropolitan State University
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BA Health Care Administration
Concordia University, St. Paul

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+

Keyboarding Skills: Minimum of 40 WPM with 3 errors or less or a grade of "C" or better in BTEC 1400.

Computer Skills: Basic computer skills such as word processing, spreadsheets, and Internet usage or a grade of "C" or better in BTEC 1418.

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

024A (7028)

Medical Office Professional AAS DEGREE *(continued)*

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term.

All classes must be successfully completed with a grade of "C" or better.

First Semester

BTEC 1421 Business Information Applications 1	3
BUSN 1410 Introduction to Business	3
MEDS 1420 Health Information Foundations	3
MEDS 1470 Anatomy & Physiology/Medical Office	3
MEDS 1480 Medical Terminology	3
Total Semester Credits	15

Second Semester

BTEC 1423 Business Information Applications 2	4
ENGL 1711 Composition 1 (Goal 1)	4
MEDS 1570 Human Disease	3
SPCH XXXX (Goal 1 only)	3
Humanities and Fine Arts (Goal 6)	3
Total Semester Credits	17

Third Semester

BTEC 2410 Business Procedures	4
MEDS 1551 Medical Formatting/Transcription 1	3
MEDS 1552 Medical Transcription 2	3
Natural Sciences (Goal 3) OR	
Mathematical/Logical Reasoning (Goal 4)	3
History, Social Science, Behavioral Sciences (Goal 5)	3
Total Semester Credits	16

Fourth Semester

BUSN 1480 Business Career Resources	1
MEDS 1553 Medical Transcription 3	3
MEDS 1560 Computerized Health Information	3
MEDS 2430 Pharmacology for the Medical Office	2
Mn Transfer Curriculum (Goals 1-10)	3
Total Semester Credits	12

Total Program Credits	60
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Medical Coding DIPLOMA

Program Overview

Graduates of the Medical Coding Diploma program are proficient in coding diagnoses and procedures, abstracting medical data, meeting physician documentation needs, and other related duties. Coders work closely with billing personnel at healthcare facilities, and proficiency in billing and reimbursement procedures is included in the Medical Coding Diploma program. Courses taken to meet requirements for the Medical Coding Diploma also prepare a student to continue into the Health Information Technology AAS degree program.

Applicants should possess excellent communication skills, meticulous attention to detail, good spelling, finger dexterity, and extreme accuracy in their work. Candidates considering this field should be comfortable reading and analyzing data for long periods of time, abstracting information from patient health records, assisting billers and other reimbursement personnel, and using critical thinking skills.

Career Opportunities

Graduates of the Medical Coding Diploma program may work in a physician's office, surgery center, specialty clinic, hospital, insurance company, government agency, research foundation, long-term care facility, dental office, consulting firm, rehabilitation center or other health care facility. Medical coding may be done at home through use of a secure Internet connection. Working from one's home is generally for employees who have completed training in an office setting for a period of time.

According to the Bureau of Labor Statistics, the Job Outlook for Medical Record and Health Information Technology careers is projected to increase 22% between 2012 and 2022, which is much faster than average. (www.bls.gov)

Program Outcomes

1. Graduates will possess the knowledge and skills for employment as a medical coding specialist.
2. Graduates will be proficient in the use of computer software applications to assist in assigning diagnoses and procedures.
3. Graduates will possess a knowledge of medical terminology, anatomy and physiology, patient confidentiality, ethical standards of coding, and electronic health record applications to perform in a healthcare environment.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Advisor

Jennifer Anglin jennifer.anglin@saintpaul.edu
 Kelly Dale kelly.dale@saintpaul.edu

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, and Saturday courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

All classes must be successfully completed with a grade of "C" or better.

Technical Requirements	Cr
<input type="checkbox"/> MEDS 1420 Health Information Foundations	3
<input type="checkbox"/> MEDS 1470 Anatomy & Physiology/ Medical Office	3
<input type="checkbox"/> MEDS 1480 Medical Terminology	3
<input type="checkbox"/> MEDS 1560 Computerized Health Information	3
<input type="checkbox"/> MEDS 1562 Billing and Reimbursement	2
<input type="checkbox"/> MEDS 1570 Human Disease	3
<input type="checkbox"/> MEDS 2430 Pharmacology for the Medical Office	2
<input type="checkbox"/> MEDS 2434 Legal and Ethical Aspects of Health Information	2
<input type="checkbox"/> MEDS 2461 ICD-10-CM Coding	3
<input type="checkbox"/> MEDS 2462 ICD-10-PCS Coding	4
<input type="checkbox"/> MEDS 2470 CPT-4 Coding	3
<input type="checkbox"/> MEDS 2480 Advanced Coding	3
<input type="checkbox"/> MEDS 2594 Medical Coding Capstone	3
<input type="checkbox"/> SPCH XXXX (Goal 1 only)	3

Total Program Credits 40

Program Start Dates

Fall

Course Sequence

The following sequence is recommended; however, this sequence is not required. Not all courses are offered each semester.

First Semester

MEDS 1420 Health Information Foundations	3
MEDS 1470 Anatomy & Physiology/Medical Office	3
MEDS 1480 Medical Terminology	3
MEDS 1562 Billing and Reimbursement	2
SPCH XXXX (Goal 1)	3
Total Semester Credits	14

Second Semester

MEDS 1570 Human Disease	3
MEDS 2434 Legal Aspects of Health Information	2
MEDS 2461 ICD-10-CM Coding	3
MEDS 2462 ICD-10-PCS Coding	4
MEDS 2470 CPT-4 Coding	3
Total Semester Credits	15

Third Semester

MEDS 1560 Computerized Health Information	3
MEDS 2430 Pharmacology for the Medical Office	2
MEDS 2480 Advanced Coding	3
MEDS 2594 Medical Coding Capstone	3
Total Semester Credits	11

Total Program Credits 40

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+

Keyboarding Skills: Minimum of 40 WPM with 3 errors or less or a grade of "C" or better in BTEC 1400.

Computer Skills: Basic computer skills such as word processing, spreadsheets, and Internet usage or a grade of "C" or better in BTEC 1418.

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

330D (7189)

Medical Office CERTIFICATE

Program Overview

Graduates of the Medical Office certificate assist with scanning information into electronic health records, releasing patient information, meeting physician documentation needs, scheduling patients, and other related duties.

High school graduation or equivalent is required. Applicants should possess excellent communication skills, meticulous attention to detail, good spelling, finger dexterity, and extreme accuracy in their work. Candidates considering this field should be comfortable reading and analyzing data, assisting with patient concerns, and working with computer programs.

Career Opportunities

Medical Office Professionals work in physician offices, surgery centers, specialty clinics, hospital, insurance companies, government agencies, research foundations, long-term care facilities, dental offices, consulting firms, rehabilitation centers or other health care facilities. Other places of employment include working for vendors of computer software.

According to the Bureau of Labor Statistics, Medical Secretarial Occupations are anticipated to increase by +/- 36% between 2012 and 2022 (www.bls.gov).

Program Outcomes

1. Graduates will possess the knowledge and skills for employment as a Medical Office Professional.
2. Graduates will be proficient in the use of computer software applications, including patient scheduling and electronic health record applications.
3. Graduates will possess a knowledge of medical terminology, anatomy and physiology, and confidentiality of patient health information to perform in a healthcare environment.

Program Advisor

Jennifer Anglin jennifer.anglin@saintpaul.edu
 Kelly Dale kelly.dale@saintpaul.edu

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, and Saturday courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

- Check off when completed
- All classes must be successfully completed with grade "C" or better.

Course	Cr
<input type="checkbox"/> BTEC 1421 Business Information Applications 1	3
<input type="checkbox"/> BTEC 1530 Communication Technology	4
<input type="checkbox"/> BUSN 1480 Business Career Resources	1
<input type="checkbox"/> MEDS 1420 Health Information Foundations.	3
<input type="checkbox"/> MEDS 1470 Anatomy & Physiology/ Medical Office	3
<input type="checkbox"/> MEDS 1480 Medical Terminology	3
<input type="checkbox"/> MEDS 1560 Computerized Health Information	3
Total Program Credits	20

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term.

First Semester

BTEC 1421 Business Information Applications 1	3
MEDS 1420 Health Information Foundations	3
MEDS 1470 Anatomy & Physiology/Medical Office	3
MEDS 1480 Medical Terminology	3
Total Semester Credits.	12

Second Semester

BTEC 1530 Communication Technology.	4
BUSN 1480 Business Career Resources	1
MEDS 1560 Computerized Health Information	3
Total Semester Credits.	8

Total Program Credits 20

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements prior to beginning the program:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+

Keyboarding Skills: Minimum of 40 WPM with 3 errors or less or a grade of "C" or better in BTEC 1400.

Computer Skills: Basic computer skills such as word processing, spreadsheets, and Internet usage or a grade of "C" or better in BTEC 1418.

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

329C (7188)

*Information is subject to change.
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Medical Transcription/Healthcare Documentation Specialist CERTIFICATE

Program Overview

Graduates of a certificate program in transcription/healthcare documentation are proficient in transcribing medical documents, creating and processing correspondence, assisting with release of information, meeting medical provider documentation needs, and other duties. Courses from the certificate are applicable toward the Medical Office Professional AAS degree.

Applicants should possess excellent communication skills, meticulous attention to detail, good spelling, finger dexterity, and extreme accuracy in their work. Candidates considering this field should be comfortable listening to dictated material for an extended period, editing documents created through the use of voice recognition software, and possess knowledge of patient confidentiality regarding health information.

Career Opportunities

Medical transcriptionists/healthcare documentation specialists may work in a physician's office, surgery center, specialty clinic, hospital, insurance company, government agency, research foundation, long-term care facility, dental office, consulting firm, rehabilitation center or other health care facility.

According to the Bureau of Labor Statistics, Medical Transcriptionist Occupations are anticipated to increase by +/-8% between 2012 and 2022 (www.bls.gov).

Program Outcomes

1. Graduates will possess the knowledge and skills for employment as a medical transcriptionist/healthcare documentation specialist.
2. Graduates will be proficient in the use of computer software applications to create and edit medical documentation.
3. Graduates will transcribe reports and documents for a variety of healthcare specialties using knowledge of pharmacology, pathophysiology, laboratory and radiology testing.
4. Graduates will use knowledge of medical terminology, anatomy and physiology, and HIPAA guidelines on patient confidentiality to produce medical documentation in a healthcare environment.
5. Graduates of Medical Transcription/Healthcare Documentation Specialist program are eligible to apply to write the Association for Healthcare Documentation Integrity, Registered Healthcare Documentation Specialist (RHDS) examination.

Program Advisor

Jennifer Anglin jennifer.anglin@saintpaul.edu
 Kelly Dale kelly.dale@saintpaul.edu

Part-time/Full-time Options

This program can be completed by using a combination of day, evening, and Saturday courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

All classes must be successfully completed with grade of "C" or better.

Course	Cr
<input type="checkbox"/> BTEC 1421 Business Information Applications 1	3
<input type="checkbox"/> BUSN 1480 Business Career Resources	1
<input type="checkbox"/> MEDS 1420 Health Information Foundations.	3
<input type="checkbox"/> MEDS 1470 Anatomy & Physiology/ Medical Office	3
<input type="checkbox"/> MEDS 1480 Medical Terminology	3
<input type="checkbox"/> MEDS 1511 Medical Formatting/Transcription 1	3
<input type="checkbox"/> MEDS 1552 Medical Transcription 2	3
<input type="checkbox"/> MEDS 1553 Medical Transcription 3	3
<input type="checkbox"/> MEDS 1560 Computerized Health Information	3
<input type="checkbox"/> MEDS 1570 Human Disease	3
<input type="checkbox"/> MEDS 2430 Pharmacology for the Medical Office	2
Total Program Credits	30

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended; however, this sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term.

First Semester

BTEC 1421 Business Information Applications 1	3
MEDS 1420 Health Information Foundations	3
MEDS 1470 Anatomy & Physiology/Medical Office	3
MEDS 1480 Medical Terminology.	3
Total Semester Credits.	12

Second Semester

MEDS 1511 Medical Formatting/Transcription 1	3
MEDS 1552 Medical Transcription 2	3
MEDS 1570 Human Disease	3
MEDS 2430 Pharmacology for the Medical Office	2
Total Semester Credits	11

Third Semester

BUSN 1480 Business Career Resources	1
MEDS 1553 Medical Transcription 3	3
MEDS 1560 Computerized Health Information	3
Total Semester Credits	7

Total Program Credits 30

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+

Keyboarding Skills: Minimum of 40 WPM with 3 errors or less or a grade of "C" or better in BTEC 1400.

Computer Skills: Basic computer skills such as word processing, spreadsheets, and Internet usage or a grade of "C" or better in BTEC 1418.

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

367C (7205)

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Health Unit Coordinator CERTIFICATE

Program Overview

Health Unit Coordinators work at the nursing station in health care facilities. As the center of communications on the nursing unit, Health Unit Coordinators are responsible for reading doctor's orders for patient treatments, medications and tests and accurately relaying those orders to the appropriate department. The Health Unit Coordinator is responsible for performing clerical tasks with emphasis on customer service on the nursing unit including answering the telephone, operating the computer, assisting visitors, filing, and maintaining patient records. Recent changes in healthcare with electronic medical records and computerized physician order entry will be introduced. Adequate computer keyboarding skills are required to be accepted into the program. Please see "Minimum Program Entry Requirements."

Health Unit Coordinators must be able to complete detailed tasks with a high degree of accuracy, while working in a busy environment. They must be self-motivated and conscientious to complete work independently and be able to solve problems logically.

Excellent written and verbal communication skills are essential. All health care workers must have a high degree of ethics in maintaining the confidentiality of patient information. Health Unit Coordinators must be professional in: interactions with others, performance of job responsibilities and appearance, as well as be proficient in the English language.

Career Opportunities

Health Unit Coordinators are employed in front desk positions at various metropolitan hospitals, healthcare centers and clinics. The National Association of Health Unit Coordinators conducts an optional certification exam for Health Unit Coordinators. Certification exams are independent of graduation requirements.

Program Outcomes

1. Graduates will possess the knowledge necessary to process physicians' orders.
2. Graduates will have the ability to manage the clerical aspects of the nursing unit.
3. Graduates will have the ability to function in the receptionist role on the nursing unit.
4. Graduates will demonstrate their knowledge and skills by performing as a HUC via Internship.
5. Graduates will be prepared for immediate employment as a HUC.
6. Graduates will be prepared for the National HUC certification exam.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Anita Mills anita.mills@saintpaul.edu

Part-Time/Full-time Options

Part-time and full-time options are available.

Textbook and Supply Costs

Students should expect to spend approximately \$300 beyond the cost of tuition and fees for books, supplies and parking.

Required Internship

Students in this program must complete an internship. When on internship, students are responsible for appropriate business attire or uniforms, parking fees, and any other expenses associated with the internship. Liability insurance is included in the cost of tuition.

- Satisfactory completion of all coursework is required for internship.
- Students must submit specified immunization records and receive a background study clearance through the Minnesota Department of Human Services before they can be placed in an internship facility.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> HLUC 1410 Diagnostic & Therapeutic Procedures	4
<input type="checkbox"/> HLUC 1420 Health Unit Coordinator Fundamentals	4
<input type="checkbox"/> HLUC 1510 Processing Physicians' Orders 1	3
<input type="checkbox"/> HLUC 1511 Processing Physicians' Orders 2	3
<input type="checkbox"/> HLUC 2491 Health Unit Coordinator Internship.	3
Total Program Credits	17

This program meets National Association of HUC Standards and prepares students for the National HUC certification exam.



NAHUC Web site: www.NAHUC.org

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. All courses are offered spring and fall; the HLUC Internship is offered spring semester and summer term.

First Semester

HLUC 1410 Diagnostic & Therapeutic Procedures	4
HLUC 1420 Health Unit Coordinator Fundamentals.	4
HLUC 1510 Processing Physicians' Orders 1	3
HLUC 1511 Processing Physicians' Orders 2	3
Total Semester Credits.	14

Second Semester

HLUC 2491 Health Unit Coordinator Internship.	3
Total Semester Credits.	3

Total Program Credits 17

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 60+ on Reading Comprehension or grade of "C" or better in ENGL 0721

Arithmetic: Score of 31+

Keyboarding: Keyboarding assessment of 30 wpm and 5 or fewer errors or grade of "C" or better in BTEC 1400 Keyboarding.

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

155C (7019)

Nursing Station Technician CERTIFICATE

Program Overview

The Nursing Station Technician program is designed for Health Unit Coordinators who wish to acquire the necessary skills to assist nurses with hands-on patient care. This program will provide Health Unit Coordinator and Nursing Assistant/Home Health Aide training. It includes Health Unit Coordinator courses and internship and basic nursing assistant skills in the laboratory setting and a clinical experience in a long term care facility. Graduates of this program are eligible to take the National Nurse Aid Assessment Program test (NNAAP) /Home Health Aide test to be placed on the Minnesota State Nursing Assistant Registry.

Students are required to enroll in the Health Unit Coordinator Certificate program first. These classes must be completed before being accepted into the Nursing Station Technician Certificate program. Adequate computer keyboarding skills are required to be accepted into the program. Please see "Minimum Program Entry Requirements."

Career Opportunities

Positions are available as HUC/NA/HHA, Patient Care Technician (PCT), Nursing Station Technician (NST), and Unit Coordinators (UC) in hospitals, healthcare centers, clinics, and home health care setting.

Program Outcomes

1. Graduates will possess the knowledge necessary to process physicians' orders.
2. Graduates will have the ability to manage the clerical aspects of the nursing unit.
3. Graduates will have the ability to function in the receptionist role on the nursing unit.
4. Graduates will demonstrate their knowledge and skills by performing as a HUC via Internship.
5. Graduates will be prepared for the National HUC certification exam.
6. Graduates will be prepared to provide direct patient care in hospitals, healthcare centers, and home health care setting.
7. Graduates will be prepared to meet the requirements to be placed on the Minnesota State Nursing Assistant Registry.
8. Graduates will be prepared for immediate employment in the HUC/NA/HHA role.

Students must submit specified immunization records and receive a background study clearance through the Minnesota Department of Human Services before they can be placed in an internship facility.

Program Faculty

Anita Mills anita.mills@saintpaul.edu
Health Unit Coordinator Instructor

Part-Time/Full-time Options

Part-time and full-time options are available.

Textbook and Supply Costs

Students should expect to spend approximately \$400 beyond the cost of tuition and fees for books, supplies and parking. Fees do not include the National Nurse Aide Assessment Program Test (NNAAP)/Home Health Aide, or uniforms.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> HLUC 1410 Diagnostic & Therapeutic Procedures	4
<input type="checkbox"/> HLUC 1420 Health Unit Coordinator Fundamentals	4
<input type="checkbox"/> HLUC 1510 Processing Physicians' Orders 1	3
<input type="checkbox"/> HLUC 1511 Processing Physicians' Orders 2	3
<input type="checkbox"/> HLUC 2491 Health Unit Coordinator Internship	3
<input type="checkbox"/> NAST 1111 Nursing Assistant & Home Health Aide	4
<input type="checkbox"/> NAST 1112 Nursing Assistant – Clinical	1

Total Program Credits 22

Program Start Dates

Fall and Spring

Course Sequence

The following course sequence is recommended; however, the sequence is not required.

First Semester

HLUC 1410 Diagnostic & Therapeutic Procedures	4
HLUC 1420 Health Unit Coordinator Fundamentals	4
HLUC 1510 Processing Physicians' Orders 1	3
HLUC 1511 Processing Physicians' Orders 2	3
Total Semester Credits	14

Second Semester

Follow special enrollment instructions for the NAST 1111/1112 Courses

HLUC 2491 Health Unit Coordinator Internship	3
NAST 1111 Nursing Assistant & Home Health Aide	4
NAST 1112 Nursing Assistant – Clinical	1
Total Semester Credits	8

Total Program Credits 22

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 60+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 31+

Keyboarding: Keyboarding assessment of 30 wpm and 5 or fewer errors or grade of "C" or better in BTEC 1400 Keyboarding.

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

320C

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Health Sciences Broad Field AS DEGREE

Program Overview

The Health Sciences Broad Field AS Degree is designed to provide general education courses for students interested in health sciences, but have not yet decided which specific health care field they intend to pursue.

Career Opportunities

Students enrolled in the Health Sciences Broad Field AS degree will acquire all of the skills and knowledge needed to provide a smooth transition into baccalaureate health-related programs such as:

- Community Health
- Nursing
- Dental Hygiene
- Social Work
- Health Education
- Food and Nutrition
- Exercise Science

Program Outcomes

1. Utilize the English language effectively to read, write, speak, and listen critically.
2. Develop the capacity to identify, discuss, and reflect upon social and behavioral issues.
3. Demonstrate comprehension of human and biological systems.
4. Enhance mathematical and logical thinking techniques.
5. Improve their awareness and understanding of health, wellness, and liberal arts.

Academic Advisors

Transfer Specialists are the Academic Advisors for the Health Sciences Broad Field AS degree and are located in the Transfer Center, Room 1320, Main Floor. For assistance or additional information, please call or email: 651.846.1739 or transfer.center@saintpaul.edu

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Health Sciences Broad Field AS

- BS Community Health, Exercise Science, Nursing (limited)
Bemidji State University
- BSN Nursing (limited)
Metropolitan State University

- BS Exercise Science, Health Teacher Education
Minnesota State University-Moorhead
- BS Communication Disorders, Foods and Nutrition, Dental Hygiene (limited), Therapeutic Recreation, Dietetics, Nursing (limited), Corrections, Psychology, Health Science, Social Work
Minnesota State University, Mankato
- BS Human Biology
Northwestern Health Sciences University
- BS Athletic Training, Community Health, Social Work
St. Cloud State University
- BS Exercise Science
Southwest Minnesota State University
- BS Biology, Health, Exercise and Rehabilitative Sciences, Movement Sciences, Exercise Science, Health Promotion, Community Health, Nursing (limited)
Winona State University
- BA Health Care Administration
Concordia University, St. Paul

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> BIOL 1740 General Biology 1: The Living Cell	5
<input type="checkbox"/> BIOL 1760 Nutrition	3
<input type="checkbox"/> BIOL 2721 Human Anatomy and Physiology 1	4
<input type="checkbox"/> BIOL 2722 Human Anatomy and Physiology 2	4
<input type="checkbox"/> BIOL 2750 General Microbiology	4
<input type="checkbox"/> CHEM 1711 Principles of Chemistry 1	4
<input type="checkbox"/> ENGL 1711 Composition 1	4
<input type="checkbox"/> MATH 1730 College Algebra	3
<input type="checkbox"/> MATH 1740 Introduction to Statistics	4
<input type="checkbox"/> PHIL 1722 Health Care Ethics	3
<input type="checkbox"/> PSYC 1710 General Psychology	4
<input type="checkbox"/> PSYC 1720 Psychology throughout the Lifespan	3
<input type="checkbox"/> SOCI 1710 Introduction to Sociology	4
<input type="checkbox"/> SPCH 1720 Interpersonal Communication	3
Subtotal	52
Liberal Arts or Science Electives (MnTC only)	8
Select a minimum of 8 additional credits from Goals 1-10 of the Minnesota Transfer Curriculum.	

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester, a section of courses is offered summer term.

First Semester

BIOL 1740 General Biology 1: The Living Cell	5
MATH 1730 College Algebra	3
BIOL 1760 Nutrition	3
ENGL 1711 Composition 1	4
Total Semester Credits	15

Second Semester

BIOL 2721 Human Anatomy & Physiology 1	4
CHEM 1711 Principles of Chemistry 1	4
PHIL 1722 Healthcare Ethics	3
SPCH 1720 Interpersonal Communication	3
Total Semester Credits	14

Third Semester

BIOL 2722 Human Anatomy & Physiology 2	4
PSYC 1710 General Psychology	4
MATH 1740 Introduction to Statistics	4
Any MnTC Elective	4
Total Semester Credits	16

Fourth Semester

BIOL 2750 General Microbiology	4
PSYC 1720 Psychology throughout the Lifespan	3
SOCI 1710 Introduction to Sociology	4
Any MnTC Elective	4
Total Semester Credits	15

Total Program Credits 60

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or a grade of "C" or better in READ 0722.

Writing: Score of 78+ or a grade of "C" or better in ENGL 0922.

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, BIOL, and CHEM courses have additional prerequisites.

341S (7194)

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Sterile Processing CERTIFICATE

Program Overview

The Saint Paul College Sterile Processing certificate is a 24-credit program in collaboration with Anoka Technical College that prepares graduates to work in medical facilities that prepare surgical instruments, supplies and equipment necessary for healthcare. This program includes a broad introduction to health sciences, as well as medical language, communication and computers. The program curriculum includes decontamination, preparation, packing, sterilization and sterile storage.

Students who successfully complete the certificate program are prepared for entry-level employment in a sterile processing position, eligible to take the certification examination following 400 hours of professional employment, and eligible to apply to the AAS Surgical Technology Program at Anoka Technical College.

Career Opportunities

The work environment is dynamic and fast-paced. The work is challenging, highly technical, and complex. The performance of this vital department had a major impact on the smooth operation of the many departments to which it provides products and services. Employment opportunities may be within hospitals, outpatient centers, and instrument processing centers.

Wage information is available from the Minnesota Department of Education and the Minnesota Department of Employment and Economic Development.

Program Outcomes

1. Utilize the English language effectively to read, write, speak, and listen critically.
2. Develop the capacity to identify, discuss, and reflect upon social and behavioral issues.
3. Demonstrate comprehension of human and biological systems.
4. Enhance mathematical and logical thinking techniques.
5. Improve their awareness and understanding of health and wellness.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Advisor

Rita Schutz rschutz@anokatech.edu
Joseph Buhain joe.buhain@saintpaul.edu

Additional Program Materials

Students should expect to spend approximately \$135 for supplies. This cost is beyond the cost of tuition and fees.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> BIOL 1471 Medical Terminology	2
<input type="checkbox"/> BIOL 2721 Human Anatomy and Physiology 1	4
<input type="checkbox"/> BIOL 2722 Human Anatomy and Physiology 2	4
<input type="checkbox"/> BTEC 1418 Computer Fundamentals.	3
<input type="checkbox"/> PSYC 1720 Psychology throughout the Lifespan	3
<input type="checkbox"/> SPCH 1720 Interpersonal Communication.	3
<input type="checkbox"/> SURG 1003 Sterile Processing*	3
<i>(Course is offered through Anoka Technical College)</i>	
<input type="checkbox"/> SURG 1005 Surgical Microbiology*	2
<i>(Course is offered through Anoka Technical College)</i>	
Total Program Credits	24

*Sterile Processing certificate is a prerequisite for Surgical Technology Associate in Applied Science (AAS) degree at Anoka Technical College.

Program Start Dates

Fall, Spring

Course Sequence

This course sequence is recommended for a full-time student; however, this sequence is not required.

Not all courses are offered each semester; a selection of courses is offered summer term.

Students should consult with the Program Advisor each semester.

First Semester

BTEC 1418 Computer Fundamentals	3
BIOL 1471 Medical Terminology	2
BIOL 2721 Human Anatomy and Physiology 1	4
PSYC 1720 Psychology throughout the Lifespan	3
Total Semester Credits.	12

Second Semester

BIOL 2722 Human Anatomy and Physiology 2.	4
SPCH 1720 Interpersonal Communication	3
SURG 1003 Sterile Processing*.	3
SURG 1005 Surgical Microbiology*	2
Total Semester Credits.	12

*These courses are not taught on the Saint Paul College campus

Total Program Credits 24

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of C or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of C or better in ENGL 0922

Arithmetic: Score of 52+ or grade of "C" or better in MATH 0745

BIOL 1740 is a prerequisite for BIOL 2721.

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

370C

Medical Laboratory Technician AAS DEGREE

Program Overview

The Medical Laboratory Technician program is a combination of classroom, laboratory and applied experiences that will provide students with training needed for employment in Medical Laboratory careers. Following the didactic coursework, which includes hands-on training in campus student laboratories, students are assigned to a clinical affiliate for the clinical experience. This required portion of the curriculum provides realistic experiences and an opportunity for further learning and demonstration of technical and affective skill competency. The Associate of Applied Science Degree earned prepares graduates to enter employment as a Medical Laboratory Technician or continue their education to earn a baccalaureate degree as a Medical Laboratory Scientist. Medical Laboratory Technicians collect blood, examine and analyze body fluids, tissues and cells. They look for bacteria, parasites, or other microorganisms; count cells and look for abnormal cells; analyze the chemical content of fluids; match blood for transfusions and test for drug levels in the blood to demonstrate how a patient is responding to treatment. They also prepare specimens for examination. They use automated equipment and instruments that perform a number of tests simultaneously, as well as microscopes, cell counters and other kinds of sophisticated laboratory equipment to perform tests. They then analyze the results and relay them to physicians. Qualifications include an interest in science and mathematics, accuracy and attention to detail, strong communication skills, moral and intellectual integrity, self-discipline, an ability to multitask and prioritize workload, and desire to contribute to quality health care. Laboratory workers must have the skills to perform and master a variety of tasks.

Career Opportunities

Laboratory tests are of vital importance to modern medical practice. The need for clinical laboratory workers is expected to remain strong. Increased job openings are expected due to the increased need for laboratory testing in an aging population and also due to vacancies created through retirements of current employees. Employment of medical laboratory professionals is projected to grow 16% from 2014 to 2024 (according to the U.S. Bureau of Labor Statistics). Medical Laboratory Technicians are employed in hospital laboratories, clinics, doctor's offices, public health agencies and pharmaceutical, industrial, and medical research laboratories.

Program Outcomes

1. The graduate will demonstrate proper use, calibration, adjustment, and operation of most laboratory precision instrumentation including clinical microscopes, spectrophotometers, centrifuges, computers, and automated laboratory analyzers.

2. The graduate will demonstrate standard safety practices in the medical laboratory designed to prevent injury, illness, or loss of life to those working in and/or around medical laboratory equipment with particular emphasis on the skills required for collection and testing of numerous body fluids and specimens using Standard Precautions (including the use of personal protective equipment).
3. The graduate will correlate pathological conditions of the human body, including cause and symptoms, to the laboratory's role in diagnosis and treatment.
4. The graduate will demonstrate organized work skills as reflected in efficient time and material utilization while performing proficiently and safely in the clinical environment.
5. The graduate will perform a wide variety of testing procedures employed in a medical laboratory and relate the principles of quality assurance and the importance of these procedures to patient safety and the diagnosis and treatment of disease processes in the following areas: clinical chemistry, hematology and hemostasis, urinalysis, microbiology, immunohematology (transfusion medicine) and immunology.
6. The graduate will be prepared to take the examination administered by the Board of Certification under the direction of the American Society for Clinical Pathology (ASCP).
7. The graduate will demonstrate preparedness for entry level employment as a Medical Laboratory Technician, including both technical expertise and professionalism.

National Certification Exam

Upon completion of the program, the student is eligible to take an examination administered by the Board of Certification under the direction of the American Society for Clinical Pathology (ASCP).

Textbook and Supply Costs

Students should expect to spend approximately \$2,400.00, beyond the cost of tuition and fees, for books, supplies, certification exam, and liability insurance.

Part-time and Full-time Options

Many students attend part-time, which usually increases the program length to 3 years. Part-time students take required general education courses prior to enrolling in the MDLT courses. Once admitted to the MLT Major, students must take all of the required MDLT courses in sequence as prescribed. Students completing the required General Education, developmental or ESL courses and who have not been officially admitted to the MLT program are considered Pre-Medical Laboratory Technician.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Medical Laboratory Technician AAS

- BS Clinical Laboratory Science
Winona State University
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BS Medical Laboratory Science
University of North Dakota
- BA Health Care Administration
Concordia University, St. Paul

Application Process

After completing the Saint Paul College application and admission process, students interested in the Medical Laboratory Technician program must submit to Enrollment Services a completed Application to the Medical Laboratory Technician Program form available on the Medical Laboratory Technician Web page: www.saintpaul.edu/MLT. Applicants must meet the following criteria to submit the form:

- Documented readiness for, or completion of, the following required General Education Courses: ENGL 1711 English Composition and CHEM 1711 Principles of Chemistry 1
- Achieve a cumulative GPA of 2.8 or better with a minimum grade of "C" in all college level courses.

*Program Requirements and Course Sequence
Continued on next page*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Medical Laboratory Technician AAS DEGREE *(continued)*

Program Requirements

All classes must be successfully completed with a grade of "C" or better.

Check off when completed

MDLT Core Courses	Cr
MDLT Core Courses can only be taken by students who have been officially accepted and admitted into the Medical Laboratory Technician Program.	
<input type="checkbox"/> HLTH 1410 Medical Terminology	1
<input type="checkbox"/> MDLT 1400 Orientation	1
<input type="checkbox"/> MDLT 1410 Laboratory Techniques	3
<input type="checkbox"/> MDLT 1421 Hematology 1	2
<input type="checkbox"/> MDLT 1422 Hematology 2	4
<input type="checkbox"/> MDLT 1430 Urinalysis/Body Fluids	3
<input type="checkbox"/> MDLT 1441 Clinical Chemistry 1	2
<input type="checkbox"/> MDLT 1442 Clinical Chemistry 2	4
<input type="checkbox"/> MDLT 1446 Phlebotomy	1
<input type="checkbox"/> MDLT 1510 Immunology	2
<input type="checkbox"/> MDLT 2400 Mycology/Parasitology	2
<input type="checkbox"/> MDLT 2410 Immunohematology	3
<input type="checkbox"/> MDLT 2420 Clinical Microbiology	4
<input type="checkbox"/> MDLT 2430 Clinical Practice Orientation	1
<input type="checkbox"/> MDLT 2591 Clinical Practice	9
<input type="checkbox"/> MDLT 2593 Comprehensive Examinations	1
MDLT Core Credits Subtotal	43

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH 1710 Fundamentals of Public Speaking – 3 cr	
OR SPCH 1720 Interpersonal Communications – 3 cr	
<input type="checkbox"/> Goal 3: Natural Sciences	16
BIOL 1730 Human Body Systems – 3 cr	
BIOL 1740 General Biology 1: The Living Cell – 5 cr	
CHEM 1711 Principles of Chemistry 1 – 4 cr	
CHEM 1712 Principles of Chemistry 2 – 4 cr	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
PSYC 1710 General Psychology OR	
SOCI 1720 Social Problems (recommended)	
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
PHIL 1722 Health Care Ethics (recommended)	

General Education Requirements 29

Total Program Credits 72

Recommended Supplemental Courses

The following optional Learning Lab courses reinforce the basic skills required for attaining proficiency in performing medical laboratory procedures:

MDLT 1451 Learning Lab 1 – Introductory Skills	1
MDLT 1452 Learning Lab 2 – Introductory Skills	1
MDLT 1453 Learning Lab 3 – Intermediate Skills	1
MDLT 1454 Learning Lab 4 – Intermediate Skills	1
MDLT 2455 Learning Lab 5 – Advanced Skills	1
MDLT 2456 Learning Lab 6 – Advanced Skills	1

Course Sequence

The following Course Sequence is required for full-time students. MDLT Core Courses can only be taken by students who have been officially accepted and admitted into the Medical Laboratory Technician program and who have attended the Mandatory Medical Lab Technician Seminar.

Accepted students progress through the major as a cohort and must take MDLT courses in sequence in the semester indicated. Non-MDLT coursework can be taken prior to acceptance into the MLT Major or during the semester indicated in the presented course sequence.

Students should consult with the program advisor to develop an appropriate educational plan. HLTH 1410 Medical Terminology must be completed by the end of the first semester in the MLT Major.

Not all courses are offered each semester. MDLT coursework can be started only Fall semester.

Fall Semester

HLTH 1410 Medical Terminology	1
MDLT 1400 Orientation	1
MDLT 1410 Laboratory Techniques	3
MDLT 1421 Hematology 1	2
MDLT 1430 Urinalysis/Body Fluids	3
MDLT 1446 Phlebotomy	1
MDLT 1441 Clinical Chemistry 1	2
BIOL 1730 Human Body Systems (Goal 3)	3
CHEM 1711 Principles of Chemistry 1 (Goal 3)	4
Total Semester Credits	20

Recommended Supplemental Courses First Semester:

MDLT 1451 Learning Lab 1 (Optional)	1
MDLT 1452 Learning Lab 2 (Optional)	1

Spring Semester

MDLT 1422 Hematology 2	4
MDLT 1442 Clinical Chemistry 2	4
MDLT 1510 Immunology	2
CHEM 1712 Principles of Chemistry 2 (Goal 3)	4
BIOL 1740 General Biology (Goal 3)	5
Total Semester Credits	19

Recommended Supplemental Courses Second Semester:

MDLT 1453 Learning Lab 3 (Optional)	1
MDLT 1454 Learning Lab 4 (Optional)	1

Summer Term

SPCH 1710 Fundamentals of Public Speaking (Goal 1) OR	
SPCH 1720 Interpersonal Communications	3
ENGL 1711 Composition 1 (Goal 1)	4
Total Summer Term Credits	7

Fall Semester (Year 2)

MDLT 2400 Mycology/Parasitology	2
MDLT 2410 Immunohematology	3
MDLT 2420 Clinical Microbiology	4
MDLT 2430 Clinical Practice Orientation	1
PSYC 1710 or SOCI 1720 (Goal 5)*	3
PHIL 1722 Health Care Ethics (Goal 6)*	3
Total Semester Credits	16

Recommended Supplemental Courses Fourth Semester:

MDLT 2455 Learning Lab 5 (Optional)	1
MDLT 2456 Learning Lab 6 (Optional)	1

Spring Semester (Year 2)

MDLT 2591 Clinical Practice	9
Total Semester Credits	9

Summer Term

MDLT 2593 Comprehensive Examinations	1
Total Summer Term Credits	1

Total Program Credits 72

*Refer to the Minnesota Transfer Curriculum Course List.

Program Start Dates

Fall

Program Faculty

Michelle Briski michelle.briski@saintpaul.edu
Lynn Poth lynn.poth@saintpaul.edu

Students should consult with the program advisor to develop an appropriate educational plan.

Admission into the Program

Applying by the priority application deadline (listed on the application) does not guarantee admission to the Medical Laboratory Technician Program.

Being admitted to Saint Paul College does not imply admission into the Medical Laboratory Technician Program.

After the priority review deadline indicated on the Application to the Medical Laboratory Technician Major, the Medical Laboratory Technician Admissions Committee will review each application in the order submitted on the basis of overall academic ability, GPA of college level courses, and assessment scores. Notification of acceptance into the Medical Laboratory Technician Major will be sent by mail 6 weeks after the deadline date listed on the Application to the Medical Laboratory Technician form.

Students admitted into the Medical Laboratory Technician program must attend a mandatory Seminar to complete documentation to enter the program.

This program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS):

NAACLS
5600 N River RD, Suite 720
Rosemount, IL 60018-5119
Telephone: 773.714.8880
Fax: 773.714.8886
E-mail: info@naacils.org
Web site: www.naacils.org

Phlebotomy Technician CERTIFICATE

Program Overview

The Phlebotomy Technician program is a combination of classroom, laboratory and applied experiences that will provide students with the training needed for employment in phlebotomy careers. Following the on-campus phlebotomy didactic coursework, students are assigned to a clinical affiliate for the clinical experience. This required portion of the curriculum provides an opportunity for demonstration of technical and affective skill competency. Students spend 100 hours at the affiliate where they must perform a minimum of 100 successful blood collection procedures, under the supervision of affiliate staff.

After program completion, graduates are eligible to take the Phlebotomy Technician Certification examination administered through the American Society of Clinical Pathology (ASCP) Board of Certification.

Phlebotomy technicians serve an integral role as members of the healthcare team. Phlebotomy is an entry level position in healthcare. Trained to collect blood specimens from patients, Phlebotomy technicians are skilled professionals who assist physicians in diagnosis and treatment of disease by ensuring the high quality of the specimen they provide for laboratory analysis. They practice safety to protect themselves and the patients they serve. Additionally, because phlebotomy involves significant direct patient contact, these laboratory professionals become the face of the laboratory and must adhere to standards of professional behavior and appearance.

Qualifications include an ability to work accurately under pressure, and to communicate effectively. Phlebotomy technicians like challenge and responsibility and are committed to providing high quality care to patients.

Employment growth in this field is faster than average and is expected to increase by 27% from 2012 – 2022 according to the National Bureau of Labor Statistics.

Career Opportunities

Phlebotomy technicians are employed in a variety of settings including hospitals, clinics, blood donation centers and other outpatient care centers.

Program Outcomes

1. The graduate will demonstrate proper selection and use of phlebotomy equipment for safe specimen procurement that maintains optimal specimen integrity.
2. The graduate will demonstrate awareness of and ability to respond to complications or special considerations.
3. The graduate will demonstrate standard safety practices designed to prevent injury or illness using Standard Precautions (including the use of Personal Protective Equipment).
4. The graduate will demonstrate effective interpersonal/professional/self-management skills to fulfill his/her job responsibilities in

interactions with patients, colleagues and other members of the health care team.

5. The graduate will be prepared to take the examination administered by the Board of Certification under the direction of the American Society for Clinical Pathology (ASCP).
6. The graduate will demonstrate preparedness for entry level employment as a phlebotomy technician.

This program meets standards set by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS):

NAACLS
5600 N River Rd., Suite 720
Rosemount, IL 60018-5119
Telephone: 773.714.8880
Fax: 773.714.8886
Email: info@naacils.org
Website: www.naacils.org

Program Advisor

Lynn Poth lynn.poth@saintpaul.edu

Program Requirements

All classes must be completed with a grade of "C" or better.

- Check off when completed
 - Students must attend a mandatory Phlebotomy Seminar to complete documentation to enter the program.
- | Course | Cr |
|---|----|
| <input type="checkbox"/> BIOL 1730 Human Body Systems | 3 |
| <input type="checkbox"/> HLTH 1410 Medical Terminology | 1 |
| <input type="checkbox"/> HLTH 1432 Basic life support for Health Care Provider | 1 |
| <input type="checkbox"/> PHIL 1722 Health Care Ethics | 3 |
| <input type="checkbox"/> PHLB 1405 Phlebotomy | 4 |
| (Registration occurs following mandatory phlebotomy seminar) | |
| <input type="checkbox"/> PHLB 1410 Phlebotomy Clinical Experience | 2 |
| (Registration occurs following mandatory phlebotomy seminar) | |
| <input type="checkbox"/> SPCH 1710 Fundamentals of Public Speaking OR SPCH 1720 Interpersonal Communication | 3 |

Total Program Credits 17

Additional Program Requirements

- Grade of "C" (2.0) or higher in all courses with A/F grading criteria
- Pass (P) grade demonstrating satisfactory performance in meeting skill competencies in the PHLB clinical experience course
- Evidence of immunity to specified diseases
- Passing of a criminal background study prior to being placed in a PHLB clinical experience.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

The College cannot guarantee placement in clinical experiences for students who do not have a clear background study. For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services at 651.296.3802.

Textbook and Supply Costs

Students should expect to spend approximately \$680.00 beyond the cost of tuition and fees, for books, supplies (gloves), certification exam and liability insurance. Students are responsible for parking and transportation costs for the clinical experience portion of the program.

Required Phlebotomy Technician Certificate Seminar

Students must attend a mandatory information seminar to learn about program requirements and to complete documentation to enter the program.

Admission to the Program

Students who intend to begin PHLB courses must submit a letter of Intent during the semester preceding enrollment in order to be admitted into the Phlebotomy program. The Letter of Intent form can be accessed from the program website. Completed Letters of Intent should be submitted to Enrollment Services. These will be accepted until the beginning of the next semester, but students who submit their letter of intent before the priority deadline are given preferences for admission to the major. The priority deadline is indicated on the program website. Students will be admitted to the program on a first-ready, first-served basis in the order that the Letters of Intent are received.

Being admitted to Saint Paul College does not imply admission to the Phlebotomy Technician Certificate program.

The Phlebotomy Technician Admissions Committee will review each letter of intent on the basis of overall academic ability, assessment scores, and completion of co-requisite courses.

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ on Reading Comprehension or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 31+

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Phlebotomy Technician CERTIFICATE *(continued)*

Program Start Dates

Fall, Spring

Course Sequence

This certificate can be completed in one semester as shown in the following sequence; however, this sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term.

Students must enroll in PHLB 1405 Phlebotomy and PHLB 1410 Phlebotomy Clinical Experience within the same semester to allow immediate progression to the Phlebotomy Clinical Experience following completion of on campus training. PHLB courses must be taken concurrently with or following successful completion of all other program course requirements with a grade of "C" or better.

The clinical experience typically occurs during the daytime operational hours of our affiliate clinical sites. Students must schedule their courses accordingly with evening or online course offerings.

Sequence for Full-Time Schedule

HLTH 1410 Medical Terminology	1
HLTH 1432 Basic life support for Health Care Provider	1
PHLB 1405 Phlebotomy	4
(Registration occurs following the mandatory information session)	
PHLB 1410 Phlebotomy Clinical Experience.	2
(Registration occurs following the mandatory information session)	
BIOL 1730 Human Body Systems.	3
PHIL 1722 Health Care Ethics	3
SPCH 1710 Fundamentals of Public Speaking OR	
SPCH 1720 Interpersonal Communication	3
Total Program Credits	17

Nursing Assistant Home Health Aide CERTIFICATE

Program Overview

Nursing assistants and Home Health Aides provide direct client care under the direction of a nurse or doctor in a variety of health care settings. Using technical skills learned in both the classroom and clinical setting, nursing assistants and home health aides perform such tasks as feeding, bathing, positioning, ambulating and comfort measures for the client. Students explore and discuss legal, ethical and safety issues in client care. Students are prepared to take the National Nurse Aide Assessment Program (NNAAP) test to be placed on the Minnesota State Nursing Assistant Registry.

Qualifications include achieving appropriate assessment scores as indicated in Minimum Program Entry Requirements.

Licensing certification or registry status are independent of graduation requirements.

Career Opportunities

Graduates of the Nursing Assistant/Home Health Aide Program must successfully take and complete the nursing assistant test exam administered through the designated State testing service to be placed on the Minnesota State Nursing Assistant Registry. Nursing assistants must be on the registry to be employed in the long term care setting.

In Minnesota, employment for nursing assistants is expected to grow at an average rate. Nationally, the number of jobs is expected to grow faster than average.

Upon completion of this course, certified nursing homes or certified boarding care homes are required to reimburse for training and testing expenses paid by the student. This is to be done 90 days from the date of employment.

Note: reimbursement is not paid to third parties.

Licensing or certification exams are independent of graduation requirements.

Program Outcomes

1. Graduates will be prepared to provide direct client care in a long term care facility or home health care setting.
2. Graduates will be prepared to meet the requirements to be placed on the Minnesota State Nursing Assistant Registry.

Program Faculty

Please contact the Health Programs Administrative Assistant at 651.846.1413.

Additional Program Material Costs

Students should expect to spend approximately \$327.00 beyond the cost of tuition and fees for Minnesota registry test, books, supplies or uniforms.

Program Start Dates

Fall, Spring, Summer

Program Requirements

Check off when completed

Course	Cr
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Students must take both NAST 1111 and NAST 1112 in the same term. Classes are offered fall, spring and summer.

- NAST 1111 Nursing Assistant & Home Health Aide 4
- NAST 1112 Nursing Assistant – Clinical 1

Total Program Credits 5

*Information is subject to change.
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Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+ or grade of "C" or better in READ 0721

OR

ESL Reading: Score of 81 or better

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

270C

Pharmacy Technician AAS DEGREE

Program Overview

Pharmacy technicians play an integral role in assisting pharmacists with medication dispensing. Pharmacy technicians work in hospitals, drug stores, and other medical settings. Pharmacy technicians perform a variety of duties that require strong attention to detail. Pharmacy Technicians perform duties such as, entering prescription orders into the computer, preparing medications for pharmacist verification (including measuring and sometimes mixing the medication), maintaining accurate patient records, performing calculations, and providing customer service.

This program prepares students to take the Pharmacy Technician Certification Exam.

Career Opportunities

Pharmacy technicians work in hospitals, drug stores, specialty pharmacies, and insurance company settings. Employment projections indicate an increase of 32% from 2010 to 2020, according to the U.S. Bureau of Labor Statistics.

Program Outcomes

1. Graduates will have skills to provide medications to patients including ordering stocking and packaging.
2. Graduates will understand and apply skills in institutional setting in sterile product processing.
3. Graduates will have mastered the general education requirements for work and life.
4. Graduates will be able to perform administrative duties in a variety of pharmacy related workplace settings.
5. Graduates will apply appropriate customer service skills in a hospital or retail based pharmacy.
6. Graduates will be prepared to take the Pharmacy Technician Certification Exam.
7. Graduates will demonstrate an understanding of all regulations that govern pharmacy technicians.
8. Graduates will perform duties as a pharmacy technician in retail and hospital environments.
9. Graduates will demonstrate the ability to prepare and interpret pharmacy orders accurately.
10. Graduates will exhibit work ethic characteristics of professionalism, responsibility and dependability.
11. Graduates will apply knowledge of basic sciences to the practice of pharmacy technology.
12. Graduates will demonstrate ability to communicate with patients, health care providers and colleagues.

Program Advisor

Hannah Kokesh hannah.kokesh@saintpaul.edu

Additional Program Material Costs

Students should expect to spend approximately \$750.00 beyond the cost of tuition and fees for books, supplies, uniforms, parking at internship site, and liability insurance fee. There are additional fees for the certification exam and board of pharmacy registration (see below).

Licenses/Testing

- Certification Exam \$120.00
- Minnesota Board of Pharmacy Registration \$35.00

Application Process

After completing the Saint Paul College application and admission process, students interested in the Pharmacy Technician program must submit a completed Application to Pharmacy Technician Program form available on the Pharmacy Technician Web page: www.saintpaul.edu/PharmacyTech and meet the following criteria:

- Completion of BIOL1730 – Human Body Systems (Must earn a grade of “C” or better in this course)
- Completion of HLTH1410 – Medical Terminology (Must earn a grade of “C” or better in this course)
- Achieve a cumulative GPA of 2.8 or better

Admission to the Program

Applying by the priority application deadline (listed on the application) does not guarantee admission to the Pharmacy Technician Program. Being admitted to Saint Paul College does not imply admission into the Pharmacy Technician Program. The Pharmacy Technician Admissions Committee will review each application on the basis of overall academic ability, GPA of college level courses, and performance in BIOL1730 and HLTH 1410. Students admitted into the Pharmacy Technician Program must attend a mandatory seminar to complete documentation to enter the program.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Pharmacy Technician AAS

- BA Individualized Studies
Metropolitan State University
- BS Healthcare and Human Service Management
Saint Mary’s University-Twin Cities Campus
- BA Health Care Administration
Concordia University, St. Paul

Program Requirements

All courses must be successfully completed with a grade of “C” or better.

Course	Cr
<input type="checkbox"/> PHAR 1710 Pharmacy Law and Ethics	3
<input type="checkbox"/> PHAR 1715 Fundamentals of Pharm Tech 1	5
<input type="checkbox"/> PHAR 1720 Foundations of Pharmaceutical Calculations	4
<input type="checkbox"/> PHAR 1730 Principles of Pharmacy	5
<input type="checkbox"/> PHAR 1735 Pharmacy Medication Tech	1
<input type="checkbox"/> PHAR 1750 Pharmacy Internship 1 - Retail	3
<input type="checkbox"/> PHAR 2710 Fundamentals of Pharm Tech 2	5
<input type="checkbox"/> PHAR 2720 Pharmacy Sterile Products Lab	5
<input type="checkbox"/> PHAR 2740 Pharmacotherapy of Disease Processes	4
<input type="checkbox"/> PHAR 2750 Pharmacy Internship 2 - Hospital	4
<input type="checkbox"/> HLTH 1410 Medical Terminology	1
Subtotal	40

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3	7
Goal 3: Natural Sciences	
BIOL 1730 Human Body Systems – 3 cr	
CHEM 1711 Principles of Chemistry – 4 cr	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
PSYC 1720 Psychology throughout the Lifespan – 3 cr	
<input type="checkbox"/> Goal 6: Humanities & Fine Arts	3
PHIL 1722 Healthcare Ethics – 3 cr	
General Education Requirements	20

Total Program Credits 60

Continued on next page

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or a grade of “C” or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or a grade of “C” or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of “C” or better in MATH 0920

Assessment Results and Prerequisites: Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

310A (6109)

Pharmacy Technician AAS DEGREE *(continued)*

Program Start Dates

Fall

Course Sequence

The following course sequence is recommended for a full-time student; however, the sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term. Students should consult with Program Advisor each semester.

All courses must be successfully completed with a grade of "C" or better. Students must meet minimum program entry requirements.

First Semester

PSYC 1720 Psychology throughout the Lifespan	3
HLTH 1410 Medical Terminology	1
BIOL 1730 Human Body Systems	3
SPCH XXXX (Goal 1 only)	3
CHEM 1711 Principles of Chemistry	4
Total Semester Credits	14

Second Semester

PHAR 1710 Pharmacy Law and Ethics	3
PHAR 1715 Fundamentals of Pharmacy Technology 1	5
PHAR 1720 Foundations of Pharmaceutical Calculations	4
ENGL 1711 Composition 1	4
Total Semester Credits	16

Third Semester

PHAR 1730 Principles of Pharmacy	5
PHAR 1735 Pharmacy Medication Technology	1
PHAR 1750 Pharmacy Internship 1 – Retail	3
PHAR 2710 Fundamentals of Pharmacy Technology 2	5
Total Semester Credits	14

Fourth Semester

PHAR 2720 Pharmacy Sterile Products Lab	5
PHAR 2740 Pharmacotherapy of Disease Processes	4
PHAR 2750 Pharmacy Internship 2 - Hospital	4
PHIL 1722 Healthcare Ethics	3
Total Semester Credits	16

Total Program Credits 60



Saint Paul College's Pharmacy Technician program is accredited by the American Society of Health-System Pharmacists (ASHP) and the Accreditation Council for Pharmacy Education (ACPE).

Pharmacy Technician DIPLOMA

Program Overview

Pharmacy technicians play an integral role in assisting pharmacists with medication dispensing. Pharmacy technicians work in hospitals, drug stores, and other medical settings. Pharmacy technicians perform a variety of duties that require strong attention to detail. Pharmacy Technicians perform duties such as, entering prescription orders into the computer, preparing medications for pharmacist verification (including measuring and sometimes mixing the medication), maintaining accurate patient records, performing calculations, and providing customer service.

This program prepares students to take the Pharmacy Technician Certification Exam.

Career Opportunities

Pharmacy technicians work in hospitals, drug stores, specialty pharmacies, and insurance company settings. Employment projections indicate an increase of 32% from 2010 to 2020, according to the U.S. Bureau of Labor Statistics.

Program Outcomes

1. Graduates will have skills to provide medications to patients including ordering stocking and packaging.
2. Graduates will understand and apply skills in institutional setting in sterile product processing.
3. Graduates will have mastered the general education requirements for work and life.
4. Graduates will be able to perform administrative duties in a variety of pharmacy related workplace settings.
5. Graduates will apply appropriate customer service skills in a hospital or retail based pharmacy.
6. Graduates will be prepared to take the Pharmacy Technician Certification Exam.
7. Graduates will demonstrate an understanding of all regulations that govern pharmacy technicians.
8. Graduates will perform duties as a pharmacy technician in retail and other practice settings.
9. Graduates will demonstrate the ability to prepare and interpret pharmacy orders accurately.
10. Graduates will exhibit work ethic characteristics of professionalism, responsibility and dependability.
11. Graduates will apply knowledge of basic sciences to the practice of pharmacy technology.
12. Graduates will demonstrate ability to communicate with patients, health care providers and colleagues.



Saint Paul College's Pharmacy Technician program is accredited by the American Society of Health-System Pharmacists (ASHP) and the Accreditation Council for Pharmacy Education (ACPE).

Program Advisor

Hannah Kokesh hannah.kokesh@saintpaul.edu

Additional Program Material Costs

Students should expect to spend approximately \$450.00 beyond the cost of tuition and fees for books, supplies, uniforms and liability insurance fee. There are additional fees for the certification exam and Board of Pharmacy Registration (see below).

Licenses/Testing

- Certification Exam \$120.00
- Minnesota Board of Pharmacy Registration \$35.00

Application Process

After completing the Saint Paul College application and admission process, students interested in the Pharmacy Technician program must submit a completed Application to Pharmacy Technician Program form available on the Pharmacy Technician Web page: www.saintpaul.edu/PharmacyTech and meet the following criteria:

- Completion of BIOL1730 – Human Body Systems (Must earn a grade of "C" or better in this course)
- Completion of HLTH1410 – Medical Terminology (Must earn a grade of "C" or better in this course)
- Achieve a cumulative GPA of 2.8 or better

Admission to the Program

Applying by the priority application deadline (listed on the application) does not guarantee admission to the Pharmacy Technician Program. Being admitted to Saint Paul College does not imply admission into the Pharmacy Technician Program. The Pharmacy Technician Admissions Committee will review each application on the basis of overall academic ability, GPA of college level courses, and performance in BIOL1730 and HLTH 1410. Students admitted into the Pharmacy Technician Program must attend a mandatory seminar to complete documentation to enter the program.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> PHAR 1710 Pharmacy Law and Ethics	3
<input type="checkbox"/> PHAR 1715 Fundamentals of Pharm Tech 1	5
<input type="checkbox"/> PHAR 1720 Foundations of Pharmaceutical Calculations	4
<input type="checkbox"/> PHAR 1730 Principles of Pharmacy	5
<input type="checkbox"/> PHAR 1735 Pharmacy Medication Tech	1
<input type="checkbox"/> PHAR 1750 Pharmacy Internship 1 - Retail	3
<input type="checkbox"/> PHAR 2740 Pharmacotherapy of Disease Processes	4
<input type="checkbox"/> HLTH 1410 Medical Terminology	1
<input type="checkbox"/> PSYC 1720 Psychology throughout the Lifespan	3
<input type="checkbox"/> BIOL 1730 Human Body Systems	3
<input type="checkbox"/> SPCH XXXX (Goal 1 only)	3

Total Program Credits 35

Program Start Dates

Fall

Course Sequence

The following course sequence is recommended for a full-time student; however, the sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term. Students should consult with Program Advisor each semester.

All courses must be successfully completed with a grade of "C" or better. Must meet minimum program entry requirements.

First Semester

PSYC 1720 Psychology throughout the Lifespan	3
HLTH 1410 Medical Terminology	1
BIOL 1730 Human Body Systems	3
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	10

Second Semester

PHAR 1710 Pharmacy Law and Ethics	3
PHAR 1715 Fundamentals of Pharmacy Technology 1	5
PHAR 1720 Foundations of Pharmaceutical Calculations	4
Total Semester Credits	12

Third Semester

PHAR 1730 Principles of Pharmacy	5
PHAR 1735 Pharmacy Medication Technology	1
PHAR 1750 Pharmacy Internship 1 – Retail	3
PHAR 2740 Pharmacotherapy of Disease Processes	4
Total Semester Credits	13

Total Program Credits 35

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or a grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or a grade of "C" or better in ENGL 1415

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites: Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

364D (7199)

Practical Nursing DIPLOMA

Program Overview

Under the supervision of registered nurses and physicians, licensed practical nurses provide bedside care, monitor patients, gather information, evaluate patient needs and contribute to the patient's care. Licensed practical nurses administer medications and perform treatments. Licensed practical nurses utilize observation, critical thinking, decision-making and communication skills in caring for patients.

The Practical Nursing Diploma is designed to meet the requirements to become licensed as a Practical Nurse.

Career Opportunities

Employment of LPN's is expected to increase faster than the average for all occupations. The best opportunities will occur in nursing care facilities and home health care services. This is in response to the long-term care needs of an increasing elderly population.

Graduates may be employed in long-term care centers, clinics, home care agencies, hospice, hospitals and transitional care units. Upon completion of the program, the graduate will be prepared to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN).

Licensing or certification exams are independent of graduation requirements.

Program Outcomes

1. The graduate will participate in the nursing process of assessment, planning, implementation and evaluation to provide basic safe and effective nursing care to patients.
2. The graduate will communicate effectively with patients, families, significant others and health care personnel.
3. The graduate will meet the student learning outcomes of the Nursing program.
4. The graduate will be prepared to take the NCLEX-PN licensure exam.
5. The graduate will be prepared for job placement in nursing care.

This program is accredited by the Accreditation Commission for Education in Nursing (ACEN)

3343 Peachtree Road NE
Suite 850
Atlanta, Georgia 30326

Phone: 404.975.5000
Fax: 404.975.5020
Web site: www.acenursing.org

Program Faculty

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Part-time/Full-time Options

Part-time and full-time options are available. PRNS theory courses are scheduled days and evenings. Clinical experiences may be scheduled both days and evenings due to clinical site availability. Costs differ depending on part-time or full-time enrollment.

Application Process

Prior to submitting the Application to Practical Nursing Major form, an applicant must:

1. Complete the ACCUPLACER assessment and meet Minimum Program Entry Requirements (see below box).
2. Complete all pre-requisites prior to PRNS courses (listed on the back of this guide) The overall cumulative GPA of 2.8 or better.
3. Attend a Practical Nursing Information Session. An overview of the program is presented that includes: expectations, schedule of classes/clinical, and requirements for admission.
4. Complete the Test of Essential Academic Skills (TEAS V).
5. Submit a record of the required immunizations prior to the semester in which the student registers for clinical courses.

The nursing admissions committee will review each application and determine admission on the basis of overall academic performance, including all previous college course work, GPA, ACCUPLACER assessment scores and Test of Essential Academic Skills (TEAS V) scores. Notification of acceptance into the Practical Nursing major will be sent approximately 2-3 weeks after the admissions committee has met.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Required CPR course

Students are required to successfully complete a cardiopulmonary resuscitation (CPR) course prior to registering for PRNS 1482 Clinical 2.

*Program Requirements and
Course Sequence information on next page*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on ACCUPLACER assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Practical Nursing DIPLOMA *(continued)*

Program Requirements

All classes must be successfully completed with a grade of “C” or better.

Preliminary courses and requirements:

The following four (4) courses, required Practical Nursing Information Session and TEAS Test, must be completed prior to submitting your Application to Practical Nursing Major form.

- Check off when completed
- HLTH 1410 Medical Terminology1
Health Core Credits1
- BIOL 1730 Human Body Systems3
- ENGL 1711 Composition 1 (Fulfills Gen. Ed. Requirement - Goal 1)4
- PSYC 1720 Psychology throughout the Lifespan3
 (Fulfills Gen. Ed. Requirement – Goal 5)
- General Education Requirements**10
- Information Session: Attend required Practical Nursing Information Session to receive ticket to take Test of Essential Academic Skills (TEAS)
- TEAS Test: Complete Test of Essential Academic Skills (TEAS)

PRNS Core Courses	Cr
<input type="checkbox"/> PRNS 1425 Essentials of Clinical Pharmacology	.2
<input type="checkbox"/> PRNS 2410 Psycho/Social Nursing	.2
<input type="checkbox"/> PRNS 1435 Foundations of Nursing	.4
<input type="checkbox"/> PRNS 1521 Nursing Care of Adults 1	.4
<input type="checkbox"/> PRNS 1481 Clinical 1	.3
<input type="checkbox"/> Evidence of current CPR certification must be presented prior to taking PRNS 1482 Clinical 2.	
<input type="checkbox"/> PRNS 1482 Clinical 2	.3
<input type="checkbox"/> PRNS 1483 Clinical 3	.3
<input type="checkbox"/> PRNS 1524 Nursing Care of Adults 2	.3
<input type="checkbox"/> PRNS 1530 Maternal/Child Health	.3
<input type="checkbox"/> PRNS 2491 Transition to Practice	.2
PRNS Core Credits	.29
Health Core Credits	.1
General Education Requirements	.10
Total Program Credits	40

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended; however, this sequence is not required.

First Semester	
HLTH 1410 Medical Terminology	1
BIOL 1730 Human Body Systems	3
ENGL 1711 Composition 1 (Fulfills Gen. Ed. Requirement - Goal 1)	4
PSYC 1720 Psychology throughout the Lifespan (Fulfills Gen. Ed. Requirement – Goal 5)	3
Pre-Nursing Credits	11
Second Semester	
Practical Nursing Courses	
PRNS 1425 Essentials of Clinical Pharmacology	2
PRNS 1435 Foundations of Nursing	4
PRNS 1481 Clinical 1	3
PRNS 1521 Nursing Care of Adults 1	4
PRNS 2410 Psycho/Social Nursing	2
Evidence of current CPR certification must be presented prior to taking PRNS 1482 Clinical 2.	
PRNS Core Credits	15
Third Semester	
Practical Nursing Courses	
PRNS 1482 Clinical 2	3
PRNS 1483 Clinical 3	3
PRNS 1524 Nursing Care of Adults 2	3
PRNS 1530 Maternal/Child Health	3
PRNS 2491 Transition to Practice	2
PRNS Core Credits	14
Total Program Credits	40

Public Health AS DEGREE

Program Overview

The Public Health AS degree is designed for students who plan to pursue a bachelor's degree in public health, health education, community health, epidemiology, health administration, or environmental health. The program builds upon foundational knowledge of the biological sciences and emphasizes communication, cultural competency, and the ability to interpret qualitative and quantitative research. Students admitted to the program will explore the public health system, population health challenges, biometric and social determinants of health, and public health preparedness through a variety of applied learning and community service opportunities.

Career Opportunities

Want to help change lives? Public Health professionals work in federal, state, and non-profit agencies, as well as in academic institutions, hospitals, and clinics. They influence change through education, health promotion, research, and policy. Specific job titles may include; health educator, healthcare administrator, emergency preparedness specialist, field investigator, food-safety inspector, epidemiologist, public health nurse, WIC nutrition specialist, or refugee coordinator. According to the U.S. Department of Labor on Occupational Outlooks, public health related fields will experience between 19-23% growth in 2012-2022 (www.bls.gov)

Program Outcomes

1. Identify concepts of personal and population health and disease, including evidence-based interventions that address health-related needs.
2. Discuss concepts of marketing, analysis, selection, and decision-making regarding health care, products, services, and health providers.
3. Describe key concepts of public health, including the history, core values, and practice.
4. Explain the key concepts, purpose and theories of public health education and promotion.
5. Define major components in health care management and administration, including the characteristics and organizational structure of the public health systems.
6. Discuss the historical development of environmental health, focusing on the basic relationships between the physical environment and human health.
7. Describe key concepts of global health, including demographic and epidemiological transitions, measures of health status, and the burden of disease.
8. Explain the ways in which public health core competencies are used in public health work.
9. Compare methods for assessing individual and population determinants of health, disease, and health disparities.

Program Faculty

Heidie Lish, MPH, RD heidie.lish@saintpaul.edu

Program Advisor

Transfer Specialists are the Academic Advisors for the Public Health Associates. They are located in the Transfer Center, Room 1320 - main floor. For assistance or additional information about the specific articulation agreements, please call or email the Transfer Center at 651.846.1739 or transfer.center@saintpaul.edu

Program Requirements

Check off when completed

Core required Courses	Cr
<input type="checkbox"/> PUBH 1700 Personal & Community Health	3
<input type="checkbox"/> PUBH 1710 Consumer Health	3
<input type="checkbox"/> PUBH 2700 Public Health Overview	3
<input type="checkbox"/> PUBH 2710 Public Health Education	3
<input type="checkbox"/> PUBH 2720 Global Health	3
<input type="checkbox"/> PUBH 2770 Public Health Practicum	2

Choose 1 course for your focus area	Cr
<input type="checkbox"/> PUBH 2730 Public Health Administration	3
<input type="checkbox"/> PUBH 2740 Environmental Health	3
<input type="checkbox"/> PUBH 2750 Public Health Advocacy & Leadership in Action	3

Subtotal 20

MnTC Requirement Courses Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	12
ENGL 1711 Composition 1 - 4cr	
ENGL 1712 Composition 2 - 2cr	
SPCH 1710 Fundamentals of Public Speaking - 3cr	
SPCH 1730 Intercultural Communications - 3cr	
<input type="checkbox"/> Goal 3 Natural Science	16
BIOL 1740 General Biology - 5 cr	
BIOL 1760 Nutrition - 3 cr	
BIOL 2721 Anatomy & Physiology 1 - 4 cr	
BIOL 2722 Anatomy & Physiology 2 OR	
CHEM 1711 Principles of Chemistry - 4cr	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning	4
MATH 1740 Statistics - 4 cr	
<input type="checkbox"/> Goal 5: History, Social Science, and Behavioral Sciences	8
PSYC 1710 General Psychology - 4cr	
SOC 1710 Intro to Sociology - 4cr	

General Education Requirements 40

Total Program Credits 60

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Transfer Opportunities

Saint Paul College has transfer articulation agreements between this program(s) and post-secondary institution(s) for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Public Health AS Degree

- BA Community Health Science
Concordia University
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BS Community Health
Saint Cloud State University
- BA Health Care Administration
Concordia University, St. Paul

Program Start Dates

Fall, Spring, Summer

Additional Requirements

- At least 60 earned college-level credits (40 MnTC credits and 20 additional MnTC, pre-major or elective credits)
- A grade of "C" or better in ENGL 1711
- Cumulative GPA of 2.0
- Minnesota Transfer Curriculum (MnTC) cumulative GPA of 2.0
- Meet Saint Paul College residency requirement: 20 credits. This requirement may be reduced to 12 credits with transfer of at least 12 college-level credits from another Minnesota State College and University or the University of Minnesota.

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Public Health AS DEGREE *(continued)***Course Sequence**

The following sequence is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester and some may be offered summer term.

First Semester

PUBH 1700 Personal & Community Health	3
ENGL 1711 Composition 1	4
SPCH 1710 Fundamentals of Public Speaking	3
BIOL 1740 General Biology 1	5
Total Semester Credits	15

Second Semester

PUBH 1710 Consumer Health	3
SPCH 1730 Intercultural Communications	3
MATH 1740 Intro to Statistics	4
ENGL 1712 Composition 2	2
BIOL 2721 Anatomy & Physiology I	4
Total Semester Credits	16

Third Semester

PUBH 2700 Public Health Overview	3
PUBH 2710 Public Health Education	3
BIOL 2722 Anatomy & Physiology 2 OR CHEM 1711 Principles of Chemistry	4
PSYC 1710 General Psychology	4
Total Semester Credits	14

Fourth Semester

PUBH 2720 Global Health	3
PUBH 2XXX Focus area course	3
BIOL 1760 Nutrition	3
SOCI 1710 Introduction to Sociology	4
PUBH 2770 Public Health Practicum	2
Total Semester Credits	15

Total Program Credits60

Respiratory Therapist AAS DEGREE

Program Overview

Under the supervision of registered nurses Respiratory Therapists administer gas therapy, aerosol medications, various breathing treatments, and chest physiotherapy. They provide mechanical ventilation, special diagnostic and therapeutic procedures, and cardiopulmonary resuscitation. Laboratory procedures including pulmonary function testing and arterial blood-gas analysis are also performed.

Preparation best suited for this program includes excellent reading skills, biology, chemistry and physics. High school algebra is required for this program. Further, one should have good manual dexterity and an ability to lift fifty pounds.

Upon completion of the program the student is eligible to take the National Certification exam. Certification is independent of graduation requirements and licensure.

Career Opportunities

Employment of respiratory therapists is expected to increase much faster than the average for all occupations because of substantial growth of the middle-aged and elderly population, a development that will heighten the incidence of cardiopulmonary disease. Respiratory Therapists are employed by hospitals, clinics or laboratories and home care agencies. Graduates may find employment through contacts made during the clinical training experiences and employment requests received by the instructional staff.

Licensing or certification exams are independent of graduation requirements.

Program Outcomes

1. Graduates will have demonstrated knowledge and skills in Respiratory Therapy clinical experiences.
2. Graduates will have demonstrated knowledge and skills in Respiratory Therapy clinical simulations.
3. Graduates will be prepared to take the National Certification Exam.
4. Graduates will be prepared for employment as Respiratory Therapists.
5. Graduates will have successfully mastered the general education program requirements for work and life roles.

Program Faculty

Joseph Buhain joseph.buhain@saintpaul.edu
 Kathy Ross kathy.ross@saintpaul.edu
 Judy Russell judy.russell@saintpaul.edu

Full-Time Only


Students in this program must be enrolled full-time with a cohort of students. Technical courses are offered only during the day.

Textbook and Supply Costs

Students should expect to spend approximately \$2,000, beyond the cost of tuition and fees, for books, for lab coat and other supplies. Additional costs include an ACLS, PALS, BLS course.

Saint Paul College's Respiratory Therapist Program is accredited by the Commission on Accreditation for Respiratory Care (www.coarc.com).

Commission on Accreditation for Respiratory Care
 1248 Harwood Road
 Bedford, TX 76021-4244
 Phone: 817.283.2835



Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Respiratory Therapist AAS

- BS Pulmonary Science
Concordia University
- BAH Applied Health
University of Minnesota, Crookston
- BAS Healthcare Leadership & Administration
Winona State University
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BA Individualized Studies
Metropolitan State University
- BA Health Care Administration
Concordia University, St. Paul

Application Process

In addition to completing the regular Saint Paul College application and admission process, students interested in the Respiratory Therapist program must submit a completed Application to Respiratory Therapist Major form and meet the following criteria:

- Completion of the following required General Education courses:
 BIOL 1740 General Biology 1: The Living Cell
 ENGL 1711 English Composition
- Documented readiness for, or completion of, the following required General Education course:
 CHEM 1711 Principles of Chemistry 1
 Prerequisite for Chemistry 1 is MATH 1520 Intermediate Algebra or appropriate assessment score.
- GPA of 3.0 or above
- Meet with Respiratory Therapist Clinical Director or Program Director prior to application deadline.

The Respiratory Therapist Admissions Committee will review each application on the basis of overall academic ability, GPA of college level courses, assessment scores, and meeting the above criteria. Notification of acceptance into the Respiratory Therapist Major will be sent by mail 6-weeks after the deadline date stated on the Application to Respiratory Therapist Major form.

The Application to Respiratory Therapist Major form is available on the Respiratory Therapist Program Web page www.saintpaul.edu/RespTher

Continued on next page

*Information is subject to change.
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Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites:
 Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Respiratory Therapist AAS DEGREE *(continued)*

Program Requirements

All classes must be successfully completed with a grade of "C" or better.

Check off when completed

Program Prerequisite

HLTH 1410 Medical Terminology (1cr)

Preliminary courses and requirements:

Pre-Application to Respiratory Therapist Courses Cr

The following two (2) General Education courses must be completed prior to submitting your Application to Respiratory Therapist Major form.

- BIOL 1740 General Biology 1: The Living Cell (MnTC Goal 4) 5
- ENGL 1711 Composition 1 (MnTC Goal 1) 4
- General Education Requirements Subtotal 9**

Preliminary Courses Cr

The following courses must be completed before you will be allowed to register for the remaining Core RESP courses.

- CHEM 1711 Principles of Chemistry I (Goal 3) 4
Prerequisite for Chemistry I is MATH 1520 Intermediate Algebra or appropriate assessment score.
- BIOL 1730 Human Body Systems. 3
- SPCH 1720 Interpersonal Communication. 3
- General Education Requirements Subtotal 10**

- Completion of American Heart Association BLS with AED (CPR) course, grade of "C" or better. Will be completed during the first fall semester of Respiratory Therapist major. (American Red Cross training does not fulfill the requirement).
- Completion of American Heart Association, ACLS, PALS, AMLS course, grade of "C" or better will be completed within second year of college program.

RESP Core Courses Cr

- RESP 1411 Respiratory Care Essentials 2
- RESP 1412 Respiratory Care Essentials Lab 1
- RESP 1510 Cardiopulmonary Pathophysiology 1 3
- RESP 1521 Respiratory Care Therapeutics. 4
- RESP 1522 Respiratory Care Therapeutics Lab 1
- RESP 1540 Respiratory Care Pharmacology. 2
- RESP 1591 Respiratory Care Clinical 1 2
- RESP 1592 Respiratory Care Clinical 2 3
- RESP 1593 Respiratory Care Clinical 3 4
- RESP 1597 Respiratory Care Clinical 4 5
- RESP 1598 Respiratory Care Clinical 5 5
- RESP 2411 Mechanical Ventilation 3
- RESP 2412 Mechanical Ventilation Lab 1
- RESP 2420 Cardiopulmonary Pathophysiology 2 1
- RESP 2430 Neonatal/Pediatric Respiratory Care 2
- RESP 2440 Management of the Critically Ill Patient 4
- RESP 2450 Cardiopulmonary Diagnostics 1
- RESP 2470 Registry Review 3
- RESP 2510 Survey of Human Disease 2
- RESP 2572 Advanced Clinical Life Support Simulation Training 4
- RESP Core Credits Subtotal 53**

General Education/MnTC Requirements Cr

Must complete at least 25 total credits from the Minnesota Transfer Curriculum-MnTC. Below are the final two required MnTC courses.

- Goal 5: History, Social Science and Behavioral Sciences 3
- Goal 6: Humanities and Fine Arts
PHIL 1722 Health Care Ethics 3
- General Education Requirements Subtotal 6**

General Education Requirements Total 25

RESP Core Courses Total 53

Total Program Credits 78

Program Start Dates

Fall

Course Sequence

The following Course Sequence is required for the remaining RESP Core Courses and General Education Courses:

Program Major Begins

First Semester Fall (RESP Core Courses – Year 1)

- RESP 1411 Respiratory Care Essentials. 2
- RESP 1412 Respiratory Care Essentials Lab 1
- History, Social Science, Behavioral Sciences (Goal 5) . . . 3
- PHIL 1722 Health Care Ethics (Goal 6) 3
- Total Semester Credits. 9**

Second Semester Spring

- RESP 1510 Cardiopulmonary Pathophysiology 1 3
- RESP 1521 Respiratory Care Therapeutics 4
- RESP 1522 Respiratory Care Therapeutics Lab. 1
- RESP 1540 Respiratory Care Pharmacology 2
- RESP 1591 Respiratory Care Clinical 1 2
- Total Semester Credits. 12**

Third Semester Summer

(Program Major – Year 1)

- RESP 1592 Respiratory Care Clinical 2 3
- RESP 2411 Mechanical Ventilation 3
- RESP 2412 Mechanical Ventilation Lab 1
- RESP 2420 Cardiopulmonary Pathophysiology 2 1
- Total Summer Term Credits 8**

Fourth Semester Fall

(RESP Core Courses – Year 2)

- RESP 1593 Respiratory Care Clinical 3 4
- RESP 2430 Neonatal/Pediatric Respiratory Care 2
- RESP 2440 Management of the Critically Ill Patient . . . 4
- RESP 2510 Survey of Human Disease 2
- Total Semester Credits. 12**

Fifth Semester Spring

(RESP Core Courses – Year 2)

- RESP 1597 Respiratory Care Clinical 4 5
- RESP 2450 Cardiopulmonary Diagnostics. 1
- RESP 2470 Registry Review. 3
- RESP 2572 Advanced Clinical Life Support
Simulation Training 4
- Total Semester Credits. 13**

Sixth Semester Summer

(RESP Core Courses – Year 2)

- RESP 1598 Respiratory Care Clinical 5 5
- Total Summer Term Credits 5**

Total Program Credits 78

Clinical Sports Massage AAS DEGREE

Program Overview

The AAS in Clinical Sports Massage builds upon the existing Massage Therapy Certificate Program. Graduates perform thorough patient assessments and develop care plans based on assessments. Students implement care plans using carefully selected techniques for the given disorders, including recommended exercises to the client. Clinical Sports Massage techniques include, but are not limited to, friction therapy, trigger point therapy, active and passive engagement techniques, scraping techniques, fascial release techniques, manual lymphatic drainage and advanced stretching modalities.

Career Opportunities

Huge growth in age group sports such as triathlon, running, skiing, soccer, rugby and hockey, have led to more people returning to a sporting lifestyle than ever before. The direct correlation is an increase in injuries and/or need for prevention of injury. With increased proven results utilizing various soft tissue manual therapies, more people are relying on well trained Clinical Sports Massage Therapists to alleviate and/or prevent injury. There is a large demand for Clinical Sports Massage Therapists in rehabilitation facilities, sports chiropractic offices, onsite sports events, health clubs, and with self-employment. The Clinical Sports Massage Advanced Certificate qualifies graduates to apply for board certification. All classes within this curriculum qualify as continuing education for massage therapy.

Program Outcomes

1. Graduates will provide application of manual techniques to positively contribute to the well-being of the client in a safe and skillful manner.
2. Graduates will be prepared to take the national certification exam in massage therapy.
3. Graduates will be prepared for employment in an entry-level capacity.
4. Graduates will be prepared to take the Board Certification through the National Certification Board for Therapeutic Massage & Bodywork (NCTMB).
5. Graduates will be prepared for employment in a sports and rehabilitation environment.

Program Faculty

Jeremy Sartain jeremy.sartain@saintpaul.edu
 Nick Bohrer nick.bohrer@saintpaul.edu

Day and Evening Classes

Classes may be offered day and evening.

Textbook and Supply Costs

Students should expect to spend approximately \$1,900.00 for books and supplies. (Does not include massage table.) This cost is in addition to tuition and fees.

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Clinical Sports Massage AAS

- BA Kinesiology
Concordia University
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BAS Healthcare Leadership & Administration
Winona State University
- BA Health Care Administration
Concordia University, St. Paul
- BA Exercise Science (Traditional)
Concordia University, St. Paul
- BA Exercise Science (Cohort)
Concordia University, St. Paul

Program Requirements

All technical courses (HLTH, MASS) must be successfully completed with a grade of "C" or better.

Check off when completed

Course	Cr
<input type="checkbox"/> HLTH 1418 Somatic Practitioner: Business & Ethics	2
<input type="checkbox"/> HLTH 1421 Anatomy & Physiology for Somatic Practitioners	4
<input type="checkbox"/> HLTH 1422 Wellness Coaching	4
<input type="checkbox"/> HLTH 1425 Clinical Applications in Kinesiology	3
<input type="checkbox"/> HLTH 1465 Functional Holistic Nutrition	4
<input type="checkbox"/> HLTH 1485 Therapeutic Exercise	5
<input type="checkbox"/> HLTH 1900 Pathology for the Somatic Practitioner	4
<input type="checkbox"/> MASS 1400 Introduction to Therapeutic Massage	4
<input type="checkbox"/> MASS 1421 Massage Spa Techniques	2
<input type="checkbox"/> MASS 1422 Massage Clinical Techniques	4
<input type="checkbox"/> A CPR course/certificate must be completed prior to taking MASS 1480 Massage Therapy Practicum	
<input type="checkbox"/> MASS 1423 Advanced Clinical Sports Massage Techniques	5
<input type="checkbox"/> MASS 1480 Massage Therapy Practicum	4
<input type="checkbox"/> MASS 1490 Clinical Massage Internship	5
Subtotal	50

General Education/MnTC Requirements Cr

- Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
 - Goal 3: Natural Sciences 3
BIOL 1760 Nutrition – 3 cr (recommended)
 - Goal 5: History, Social Science and Behavioral Sciences 3
PSYC 1750 Introduction to Health Psychology – 3 cr (recommended)
 - Goal 6: Humanities and Fine Arts 3
- General Education Requirements 16**

Total Program Credits 66

Program Start Dates

Fall, Spring, Summer

Course Sequence

For part-time or customized course sequence please contact program faculty.

First Semester

HLTH 1418 Somatic Practitioner: Business & Ethics	2
HLTH 1421 Anatomy and Physiology for Somatic Practitioners	4
MASS 1400 Introduction to Therapeutic Massage	4
MASS 1421 Massage Spa Techniques	2
MASS 1422 Massage Clinical Techniques	4
Total Semester Credits	16

Second Semester

HLTH 1425 Clinical Applications in Kinesiology	3
HLTH 1465 Functional Holistic Nutrition	4
A CPR course/certificate must be completed prior to taking MASS 1480 Massage Therapy Practicum	
MASS 1480 Massage Therapy Practicum	4
PSYC 1750 Intro to Health Psychology (recommended)	3
Total Semester Credits	14

Third Semester

MASS 1423 Advanced Clinical Sports Massage	5
HLTH 1485 Therapeutic Exercise	5
HLTH 1422 Wellness Coaching	4
HLTH 1900 Pathology for the Somatic Practitioner	4
Total Semester Credits	18

Fourth Semester

MASS 1490 Clinical Massage Internship	5
ENGL 1711 Composition 1	4
SPCH XXXX (Goal 1 only)	3
BIOL 1760 Nutrition (recommended)	3
PSYC 1750 Introduction to Health Psychology (recommended)	3
Total Semester Credits	18

Total Program Credits 66

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

316A (7088)

Massage Therapy CERTIFICATE

Program Overview

The Massage Therapy Certificate program exceeds the minimum requirement of 600 technical hours of study required for accreditation by the American Massage Therapy Association Commission on Massage Therapy Accreditation and 600 hours of study for state licensure required in surrounding states.

Massage Therapists manipulate soft tissue structures of the body to prevent and alleviate pain, using techniques such as Swedish Massage, Reflexology, Sports Massage, Neuromuscular Therapy, Myofascial Release, Lymphatic Drainage, Proprioceptive Neuromuscular Facilitation (PNF) and Active Isolated Stretching (AIS) techniques, and Travel Trigger Point Therapy. Graduates of the certificate program integrate manual massage techniques to positively contribute to the well-being of the client in a safe and skillful manner.

Career Opportunities

The employment outlook for massage therapists is projected to be better than average in the upcoming years. The increasing population, increasing personal incomes, longer life spans, and an increasing recognition that massage is beneficial to reduce stress, relieve pain, and improve overall health all contribute to an increased demand for these workers. Factors affecting long term growth include economic well-being and the degree to which insurance companies and HMOs will reimburse for this service. Graduates perform massage therapy in health spas, resorts, health clubs, retirement residences, country clubs, hospitals, chiropractic offices, long-term care facilities, and clinics, or may be self-employed.

Licensing or certification exams are independent of graduation requirements.

Program Outcomes

1. Graduates will provide application of manual techniques to positively contribute to the well-being of the client in a safe and skillful manner.
2. Graduates will be prepared to take the national certification exam in massage therapy.
3. Graduates will be prepared for employment in an entry-level capacity.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Jeremy Sartain jeremy.sartain@saintpaul.edu
Nick Bohrer nick.bohrer@saintpaul.edu

Day and Evening Classes

Day and evening options are available to complete the program.

Textbook and Supply Costs

Students should expect to spend approximately \$900.00 for books and supplies. (Does not include massage table.) This cost is in addition to tuition and fees.

Program Requirements

All technical courses (HLTH, MASS) must be successfully completed with a grade of "C" or better.

Check off when completed

Course	Cr
<input type="checkbox"/> HLTH 1418 Somatic Practitioner: Business & Ethics	2
<input type="checkbox"/> HLTH 1421 Anatomy and Physiology for Somatic Practitioners	4
<input type="checkbox"/> HLTH 1425 Clinical Applications in Kinesiology	3
<input type="checkbox"/> HLTH 1465 Functional Holistic Nutrition	4
<input type="checkbox"/> MASS 1400 Introduction to Therapeutic Massage	4
<input type="checkbox"/> MASS 1421 Massage Spa Techniques	2
<input type="checkbox"/> MASS 1422 Massage Clinical Techniques	4
<input type="checkbox"/> A CPR course/certificate must be completed prior to taking MASS 1480 Massage Therapy Practicum	
<input type="checkbox"/> MASS 1480 Massage Therapy Practicum	4
Subtotal	27
<input type="checkbox"/> General Education Requirement	3
PSYC 1750 Intro to Health Psychology (recommended)	
Total Program Credits	30

Program Start Dates

Fall, Spring

Course Sequence

First Semester

HLTH 1418 Somatic Practitioner: Business & Ethics	2
HLTH 1421 Anatomy and Physiology for Somatic Practitioners	4
MASS 1400 Introduction to Therapeutic Massage	4
MASS 1421 Massage Spa Techniques	2
MASS 1422 Massage Clinical Techniques	4
Total Semester Credits	16

Second Semester

HLTH 1425 Clinical Applications in Kinesiology	3
HLTH 1465 Functional Holistic Nutrition	4
A CPR course/certificate must be completed prior to taking MASS 1480 Massage Therapy Practicum	
MASS 1480 Massage Therapy Practicum	4
PSYC 1750 Intro to Health Psychology (recommended)	3
Total Semester Credits	14

Total Program Credits 30

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Massage Therapy Certificate

BA Kinesiology
Concordia University

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Arithmetic: Score of 20+

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

197C (7085)

Clinical Sports Massage CERTIFICATE

Program Overview

Designed for Massage Therapists who have graduated from a 600 hour or more program, the Clinical Sports Massage Advanced Certificate builds on basic foundational massage therapy skills. Graduates of the Clinical Sports Massage Advanced Certificate perform thorough patient assessments and develop care plans based on assessments. Students implement care plans utilizing carefully selected techniques for the given disorders, including recommended exercises for the client. Clinical Sports Massage techniques include, but are not limited to, friction therapy, trigger point therapy, active and passive engagement techniques, scraping technique, cupping with drag, fascial release techniques, manual lymphatic drainage and advanced stretching modalities.

Career Opportunities

Huge growth in age group sports such as triathlon, running, skiing, soccer, rugby and hockey, have lead to more people returning to a sporting lifestyle than ever before. The direct correlation is an increase in injuries and/or need for prevention of injury. With increased proven results utilizing various soft tissue manual therapies, more people are relying on well trained Clinical Sports Massage Therapists to alleviate and/or prevent injury. There is a large demand for Clinical Sports Massage Therapists in rehabilitation facilities, sports chiropractic offices, onsite sports events, health clubs, and with self-employment. The Clinical Sports Massage Certificate qualifies graduates to apply for the National Certification for Advanced Practice (NCAP) exam. All classes within this curriculum qualify as continuing education for massage therapy.

Program Outcomes

1. Graduates will provide application of manual techniques to positively contribute to the well-being of the client in a safe and skillful manner.
2. Graduates will be prepared to take the national certification exam in massage therapy.
3. Graduates will be prepared for employment in an entry-level capacity.
4. Graduates will be prepared to take the Board Certification through the National Certification Board for Therapeutic Massage & Bodywork (NCTMB).
5. Graduates will be prepared for employment in a sports and rehabilitation environment.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Jeremy Sartain jeremy.sartain@saintpaul.edu
Nick Bohrer nick.bohrer@saintpaul.edu

Day Classes Only

Currently offered as day classes only.
Web enhanced does limit seat time.

Textbook and Supply Costs

Students should expect to spend approximately \$1300.00 for books and supplies. (Does not include massage table) This cost is in addition to tuition and fees.

Program Requirements

All technical courses (HLTH, MASS) must be successfully completed with a grade of "C" or better.

Check off when completed

Course	Cr
<input type="checkbox"/> HLTH 1422 Wellness Coaching	4
<input type="checkbox"/> HLTH 1485 Therapeutic Exercise	5
<input type="checkbox"/> HLTH 1900 Pathology for the Somatic Practitioner.	4
<input type="checkbox"/> MASS 1423 Advanced Clinical Sports Massage Techniques.	5
<input type="checkbox"/> MASS 1490 Internship	5

Total Program Credits 23

Program Start Dates

Fall, Spring, Summer

Course Sequence

For individual course sequence recommendations, contact Jeremy Sartain at 651.846.1619 or email jeremy.sartain@saintpaul.edu.

First Semester

HLTH 1485 Therapeutic Exercise	5
HLTH 1900 Pathology for the Somatic Practitioner	4
MASS 1423 Advanced Clinical Sports Massage Techniques	5
Total Semester Credits.	14

Second Semester

HLTH 1422 Wellness Coaching	4
MASS 1490 Internship.	5
Total Semester Credits.	9

Total Program Credits 23

Minimum Program Entry Requirements

Completion of a minimum 600 hour massage therapy program that is recognized by the National Certification Board for Therapeutic Massage and Bodywork (NCTMB). Faculty instructor permission required. Contact Jeremy Sartain at 651.846.1619 or email jeremy.sartain@saintpaul.edu. Note that admitted students do not need to be nationally certified but the program previously completed must qualify for national certification.

Degree option may have a greater requirement than this certificate.

319C (7168)

Personal Trainer AAS DEGREE

Program Overview

Personal Trainers instruct clientele in the betterment of their health through an integrated approach using sound knowledge of appropriate exercises. Functional training techniques, aerobic exercises, advanced stretching modalities (such as Proprioceptive Neuromuscular Facilitation (PNF) and Active Isolated Stretching (AIS)) are implemented appropriately based on initial fitness testing. Graduates from the program perform patient assessments and build customized fitness plans for individuals including clients with special needs. Methods of teaching various group fitness classes and nutritional consulting are also utilized.

Career Opportunities

The US Bureau of Labor and Statistics listed Personal Fitness Trainer as above average growth. IHRSA shows growth of fitness memberships from 41.3 million in 2005 to 50.2 million in 2012. Graduates perform personal training duties at fitness centers, health clubs, private clubs, sports rehabilitation facilities, or may work in private practice.

Program Outcomes

1. Graduates will provide application of personal training techniques to positively contribute to the well-being of the client in a safe and skillful manner.
2. Graduates will be prepared to take a national exam for Certification in Personal Training (CPT).
3. Graduates will be prepared to take the National Academy of Sports Medicine (NASM) exam for Corrective Exercise Specialist (CES).
4. Graduates may obtain membership with the National Association of Nutrition Professionals (NANP).
5. Graduates will be prepared to perform Health & Wellness Coaching services.
6. Graduates will be prepared for employment as Personal Trainers.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Personal Trainer AAS

- BA Kinesiology
Concordia University
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BAS Healthcare Leadership & Administration
Winona State University
- BA Health Care Administration
Concordia University, St. Paul

Program Faculty

Jeremy Sartain jeremy.sartain@saintpaul.edu

Day and Evening Classes

Classes may be offered day and evening.

Textbook and Supply Costs

Students should expect to spend approximately \$1,300.00 for books and supplies. This cost is in addition to tuition and fees.

Program Requirements

All technical courses (HLTH, PTRN) must be successfully completed with a grade of "C" or better.

Check off when completed

Course	Cr
<input type="checkbox"/> HLTH 1418 Somatic Practitioner: Business & Ethics	2
<input type="checkbox"/> HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
<input type="checkbox"/> HLTH 1422 Wellness Coaching	4
<input type="checkbox"/> HLTH 1425 Clinical Applications in Kinesiology	3
<input type="checkbox"/> HLTH 1900 Pathology for the Somatic Practitioner	4
<input type="checkbox"/> HLTH 1465 Functional Holistic Nutrition	4
<input type="checkbox"/> HLTH 1485 Therapeutic Exercise	5
<input type="checkbox"/> PTRN 1410 Personal Training 1	5
<input type="checkbox"/> PTRN 1420 Personal Training 2	5
<input type="checkbox"/> PTRN 1430 Functional Exercise Physiology	3
<input type="checkbox"/> PTRN 1490 Personal Training Internship	5
Subtotal	44

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	Cr
<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3: Natural Sciences	3
BIOL 1760 Nutrition - 3 cr (recommended)	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
PSYC 1750 Introduction to Health Psychology – 3 cr (recommended)	
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
General Education Requirements	16

Total Program Credits 60

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Start Dates

Fall, Spring

Course Sequence

For individual course sequence recommendations, contact Jeremy Sartain at 651.846.1619 or e-mail jeremy.sartain@saintpaul.edu.

First Semester

HLTH 1418 Somatic Practitioner: Business & Ethics	2
HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
HLTH 1422 Wellness Coaching	4
PTRN 1410 Personal Training 1	5
Total Semester Credits	15

Second Semester

HLTH 1425 Clinical Applications in Kinesiology	3
HLTH 1485 Therapeutic Exercise	5
PTRN 1420 Personal Training 2	5
Total Semester Credits	13

Third Semester

HLTH 1465 Functional Holistic Nutrition	4
HLTH 1900 Pathology for the Somatic Practitioner	4
PTRN 1430 Functional Exercise Physiology	3
PTRN 1490 Personal Training Internship	5
PSYC 1750 Introduction to Health Psychology (recommended)	3
Total Semester Credits	19

Fourth Semester

ENGL 1711 Composition 1	4
SPCH XXXX (Goal 1 only)	3
BIOL 1760 Nutrition (recommended)	3
Goal 6: Humanities and Fine Arts	3
Total Semester Credits	13

Total Program Credits 60

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

275A (7139)

Personal Trainer DIPLOMA

Program Overview

Personal Trainers instruct clientele in the betterment of their health through an integrated approach using sound knowledge of appropriate exercises. Functional training techniques, aerobic exercises, and advanced stretching modalities (such as Proprioceptive Neuromuscular Facilitation (PNF) and Active Isolated Stretching (AIS)) are implemented appropriately based on initial fitness testing. Graduates from the program perform patient assessments and build customized fitness plans for individuals including clients with special needs. Methods of teaching various group fitness classes and nutritional consulting are also utilized.

Career Opportunities

The US Bureau of Labor and Statistics listed Personal Fitness Trainer as above average growth. Employment of fitness trainers and instructors is expected to grow by 24 percent from 2010 to 2020, faster than the average for all occupations according to the U.S. Bureau of Labor Statistics. Graduates perform personal training duties at fitness centers, health clubs, private clubs, sports rehabilitation facilities, or may work in private practice.

Program Outcomes

1. Graduates will provide application of personal training techniques to positively contribute to the well-being of the client in a safe and skillful manner.
2. Graduates will be prepared to take a national exam for Certification in Personal Training (CPT).
3. Graduates will be prepared to take the National Academy of Sports Medicine (NASM) exam for Corrective Exercise Specialist (CES).
4. Graduates may obtain membership with the National Association of Nutrition Professionals (NANP).
5. Graduates will be prepared to perform Health & Wellness Coaching services.
6. Graduates will be prepared for employment as Personal Trainers.

Program Faculty

Jeremy Sartain jeremy.sartain@saintpaul.edu

Day and Evening Classes

Classes may be offered day and evening.

Textbook and Supply Costs

Students should expect to spend approximately \$1,000.00 for books and supplies. This cost is in addition to tuition and fees.

Program Requirements

All technical courses (HLTH, PTRN) must be successfully completed with a grade of "C" or better.

Check off when completed

Course	Cr
<input type="checkbox"/> HLTH 1418 Somatic Practitioner: Business & Ethics	2
<input type="checkbox"/> HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
<input type="checkbox"/> HLTH 1422 Wellness Coaching	4
<input type="checkbox"/> HLTH 1425 Clinical Applications in Kinesiology	3
<input type="checkbox"/> HLTH 1465 Functional Holistic Nutrition	4
<input type="checkbox"/> HLTH 1485 Therapeutic Exercise	5
<input type="checkbox"/> HLTH 1900 Pathology for the Somatic Practitioner	4
<input type="checkbox"/> PTRN 1410 Personal Training 1	5
<input type="checkbox"/> PTRN 1420 Personal Training 2	5
<input type="checkbox"/> PTRN 1430 Functional Exercise Physiology	3
<input type="checkbox"/> PTRN 1490 Personal Training Internship	5
Subtotal	44

General Education Requirements	Cr
<input type="checkbox"/> SPCH 17XX (Goal 1 only)	3
<input type="checkbox"/> PSYC 1750 Introduction to Health Psychology (recommended)	3
General Education Requirements	6

Total Program Credits 50

Program Start Dates

Fall, Spring

Course Sequence

For individual course sequence recommendations, contact Jeremy Sartain at 651.846.1619 or e-mail jeremy.sartain@saintpaul.edu.

First Semester

HLTH 1418 Somatic Practitioner: Business & Ethics	2
HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
HLTH 1422 Wellness Coaching	4
PTRN 1410 Personal Training 1	5
Total Semester Credits	15

Second Semester

HLTH 1425 Clinical Applications in Kinesiology	3
HLTH 1485 Therapeutic Exercise	5
PTRN 1420 Personal Training 2	5
SPCH 17XX (Goal 1 only)	3
Total Semester Credits	16

Third Semester

HLTH 1465 Functional Holistic Nutrition	4
HLTH 1900 Pathology for the Somatic Practitioner	4
PTRN 1430 Functional Exercise Physiology	3
PTRN 1490 Personal Training Internship	5
PSYC 1750 Introduction to Health Psychology (recommended)	3
Total Semester Credits	19

Total Program Credits 50

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Personal Trainer Diploma

BA Kinesiology
Concordia University

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this diploma.

274D (7138)

Information is subject to change.
This Program Requirements Guide is not a contract.

Personal Trainer CERTIFICATE

Program Overview

Personal Trainers instruct clientele in the betterment of their health through an integrated approach using sound knowledge of appropriate exercises. Functional training techniques, aerobic exercises and advanced stretching modalities (such as Proprioceptive Neuromuscular Facilitation (PNF) and Active Isolated Stretching (AIS)) are implemented appropriately based on initial and continuous fitness testing. Graduates from the Personal Trainer Certificate program perform patient assessments and build customized fitness plans for individuals.

Career Opportunities

The US Bureau of Labor and Statistics listed the Personal Fitness Trainer as one of the top overall job openings requiring Post- Secondary Vocational School training. Employment of fitness trainers and instructors is expected to grow by 24 percent from 2010 to 2020, faster than the average for all occupations. As businesses and insurance organizations continue to recognize the benefits of health and fitness programs for their employees, incentives to join gyms or other fitness facilities will increase the need for workers in these areas.

Graduates perform personal training duties at fitness centers, health clubs, private clubs, sports rehabilitation facilities, or may work in a private practice.

Licensing or certification exams are independent of graduation requirements.

Program Outcomes

1. Graduates will provide application of personal training techniques to positively contribute to the well-being of the client in a safe and skillful manner.
2. Graduates will be prepared to take a national exam for Certification in Personal Training (CPT).
3. Graduates will be prepared to take the National Academy of Sports Medicine (NASM) exam for Corrective Exercise Specialist (CES).

Program Faculty

Jeremy Sartain jeremy.sartain@saintpaul.edu

Day and Evening Classes

Classes may be offered day and evening.

Textbook and Supply Costs

Students should expect to spend approximately \$1,000.00 for books and supplies. This cost is in addition to tuition and fees.

Program Requirements

All technical courses (HLTH, PTRN) must be successfully completed with a grade of "C" or better.

Check off when completed

Course	Cr
<input type="checkbox"/> HLTH 1418 Somatic Practitioner: Business and Ethics	2
<input type="checkbox"/> HLTH 1421 Anatomy and Physiology for the Somatic Practitioner	4
<input type="checkbox"/> HLTH 1422 Wellness Coaching	4
<input type="checkbox"/> HLTH 1425 Clinical Applications in Kinesiology	3
<input type="checkbox"/> HLTH 1465 Functional Holistic Nutrition	4
<input type="checkbox"/> HLTH 1485 Therapeutic Exercise	5
<input type="checkbox"/> PTRN 1410 Personal Trainer 1	5
Subtotal	27
<input type="checkbox"/> General Education Requirement	3
PSYC 1750 Introduction to Health Psychology (recommended)	

Total Program Credits 30

Program Start Dates

Fall, Spring

Course Sequence

For individual course sequence recommendations, contact Jeremy Sartain at 651.846.1619 or e-mail jeremy.sartain@saintpaul.edu.

First Semester

HLTH 1418 Somatic Practitioner: Business & Ethics	2
HLTH 1421 Anatomy & Physiology for the Somatic Practitioner	4
HLTH 1422 Wellness Coaching	4
PTRN 1410 Personal Training 1	5
Total Semester Credits	15

Second Semester

HLTH 1425 Clinical Applications in Kinesiology	3
HLTH 1465 Functional Holistic Nutrition	4
HLTH 1485 Therapeutic Exercise	5
PSYC 1750 Introduction to Health Psychology (recommended)	3
Total Semester Credits	15

Total Program Credits 30

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

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*Information is subject to change.
This Program Requirements Guide is not a contract.*

Registered Yoga Teacher CERTIFICATE

Program Overview

Yoga is recognized by health professionals worldwide as an effective way to increase flexibility, develop strength and reduce stress. This program focuses on four key aspects of yoga: alignment and form of the yoga postures, history and philosophy of yoga, relaxation and meditation, and teaching techniques. This program is recognized by the Yoga Alliance and upon completion qualifies graduates to be 200 hour Registered Yoga Teachers.

Career Opportunities

Yoga instructors are listed under the main category of fitness workers with the Department of Labor. Training for yoga instructors is ever changing. According to the U.S. Department of Labor Statistics, demand for teachers of yoga has grown faster than the ability to train them properly as the interest in yoga exercise has exploded in recent years. Saint Paul College's program is designed to meet the Yoga Alliance 200 hour standards.

As health clubs strive to provide more personalized service to keep their members motivated, they continue to offer a wide variety of group exercise classes. The aging population, in particular, demand low-impact forms of exercise which yoga provides.

Yoga instructors work in: HMOs in the areas of heart health and pregnancy, wellness centers, studios with massage therapists, fitness centers, educational institutions, conference centers, chiropractic offices, spas, community education, yoga studios and cruise ships.

Program Outcomes

1. Graduates will demonstrate a clear understanding of alignment within the standing poses, seated poses, inversions, backbends, forward bends, twists and arm-balances covered in this class.
2. Graduates will demonstrate coordination of breath and movement and the correct use of the diaphragm in yogic breathing.
3. Graduates will demonstrate an understanding of the scientific evidence behind the effects of stress and relaxation.
4. Graduates will identify the mental, emotional, and physical benefits of a consistent mindfulness/meditation practice.
5. Graduates will demonstrate the ability to plan a sequence of postures to lengthen the spine and open the major joints of the body to support relaxation and healing.
6. Graduates will meet the Yoga Alliance Standards of Yoga Teacher Training.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Jeremy Sartain jeremy.sartain@saintpaul.edu

Equipment Needed

Students should expect to bring to class a yoga mat and blanket, yoga strap and blocks if necessary. The blanket is used to sit on and should be a firm Mexican blanket or a wool yoga blanket.

Program Length

Full-time students can complete the program in one semester.

Part-time Options

For part-time options, discuss with program faculty.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> HLTH 1421 Anatomy and Physiology for the Somatic Practitioner	4
<input type="checkbox"/> HLTH 1454 Yoga Postures/Asanas	3
<input type="checkbox"/> HLTH 1458 Relaxation Techniques	3
<input type="checkbox"/> HLTH 1459 Yoga Asana/Teaching Methodology	3
<input type="checkbox"/> HLTH 1541 Yoga History/Philosophy	3

Total Program Credits 16

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Students must take HLTH 1454 before taking HLTH 1459.

First Semester

HLTH 1421 Anatomy and Physiology for the Somatic Practitioner	4
HLTH 1454 Yoga Postures/Asanas	3
HLTH 1458 Relaxation Techniques	3
HLTH 1459 Yoga Asana/Teaching Methodology	3
HLTH 1541 Yoga History/Philosophy	3

Total Program Credits 16

This is a Yoga Alliance Accredited Program.



Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

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Service Programs

Child Development

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Cosmetology

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Cosmetology Diploma (59 Credits)	153
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Culinary Arts

Culinary Arts AAS Degree (68 Credits)	156
Culinary Arts Diploma (58 Credits)	158
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Sign Language Interpreter/Transliterater

Sign Language Interpreter/Transliterater AAS Degree (67 Credits)	165
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Child Development Careers AS DEGREE

Program Overview

This program is intended primarily for students who plan to transfer to another college or university to complete a bachelor's degree in Early Childhood or related field. It also prepares individuals for employment as a Teacher in a variety of early childhood settings.

Students will learn about child development, guidance, health and safety, cultural sensitivity, professional relations, and curriculum planning, as well as liberal arts education. Internship opportunities are provided which allow students to apply their skills and knowledge in a practical experience. All students must meet all reading and writing program entry requirements prior to entering courses beyond the Certificate.

Students must have a high school diploma, or GED, and pass a criminal background study. Respect for cultural differences is essential. Good judgment and absolute integrity are also necessary for success in the field of child development.

Career Opportunities

Graduates of the Child Development AS program may seek further education to earn a degree in early childhood education, early childhood special education, child development and family studies, psychology, or social work, but will also qualify to work at a child care center or preschool program, a family child care home or nanny, as well as a teacher in a Head Start program, a teacher assistant or education assistant in the public schools, Early Childhood Family Education, Early Childhood Special Education, or Child Life Assistant (hospital setting). If students go on for more education, the career opportunities (and pay scale) continue to increase.

The demand for trained child development professionals is increasing as more parents seek quality care and educational programs for their children. Our job placement rate is well over 95% and the Bureau of Labor Statistics estimates that the employment outlook will grow faster than average through 2018.

Program Outcomes

1. Graduates will demonstrate knowledge of child safety, health and nutrition.
2. Graduates will demonstrate knowledge in the fundamental principles of child development and developmentally appropriate practices.
3. Graduates will demonstrate knowledge and skills in positive child guidance techniques.
4. Graduates will demonstrate the knowledge and skills in positive family, community, and staff relations.
5. Graduates will demonstrate the knowledge and skills in developing and implementing early childhood curriculum.
6. Graduates will have hands-on training in a variety of Child Development settings.
7. Graduates will possess the knowledge and skills for immediate employment in the Child Development field.
8. Graduates will have successfully mastered the general education program requirements for work and life roles.

Program Faculty

Students should consult with the Program Advisor each semester.

Kelly McKown kelly.mckown@saintpaul.edu
Janet Massa janet.massa@saintpaul.edu

Part-time/Full-time Options

Evening, Saturday, and online courses are also available. Costs vary depending on part-time or full-time enrollment.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Child Development Careers AS

- BS Human Development & Family Studies
University of Wisconsin-Stout
- BAS Early Childhood Studies
Metropolitan State University
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BA Child Development
Concordia University, St. Paul
- BA Family Science
Concordia University, St. Paul
- BA Health Care Administration
Concordia University, St. Paul

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CDEV 1200 Introduction to Early Childhood Education	3
<input type="checkbox"/> CDEV 1210 Child Growth and Development	3
<input type="checkbox"/> CDEV 1220 Health, Safety and Nutrition	3
<input type="checkbox"/> CDEV 1230 Guiding Children's Behavior	3
<input type="checkbox"/> CDEV 1240 Learning Environment and Curriculum	4
<input type="checkbox"/> CDEV 1610 Observation and Assessment	3
<i>Not offered every semester, see Advisor</i>	
<input type="checkbox"/> CDEV 1640 Curriculum Planning	3
<i>Not offered every semester, see Advisor</i>	
<input type="checkbox"/> CDEV 1910 Practicum 1	3
<input type="checkbox"/> CDEV 2320 Children with Differing Abilities (Fall)	3
<input type="checkbox"/> CDEV 2600 Organizational Leadership and Management (Spring)	2
Subtotal	30

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
 - Goal 3 or Goal 4 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
 - Goal 5: History, Social Science and Behavioral Sciences 4
any may be taken, however ANTH 1710, PSYC 1710, SOCI 1710 OR SOCI 1760 (recommended)
 - Goal 6: Humanities and Fine Arts 3
 - Goals 1-10 of the Minnesota Transfer Curriculum 13
Select a minimum of 13 additional credits
- General Education Requirements 30**

Total Program Credits 60

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+ or grade of "C" or better in MATH 0745

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

247S (7131)

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Child Development Careers AS DEGREE *(continued)*

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term.

First Semester

CDEV 1200 Introduction to Early Childhood Education	3
CDEV 1210 Child Growth and Development	3
CDEV 1220 Health, Safety and Nutrition	3
CDEV 1230 Guiding Children's Behavior	3
CDEV 1240 Learning Environment & Curriculum	4
Total Semester Credits.	16

All students must meet all reading and writing program entry requirements prior to entering courses beyond the Certificate. CDEV 1200, 1210, 1220, 1230, and 1240 must be completed before taking second semester courses.

Second Semester

CDEV 1610 Observation and Assessment	3
<i>Not offered every semester, see Advisor</i>	
CDEV 1640 Curriculum Planning	3
<i>Not offered every semester, see Advisor</i>	
CDEV 1910 Practicum 1	3
General Education Requirement	7
Total Semester Credits.	16

Third Semester

CDEV 2320 Children with Differing Abilities	3
<i>Not offered every semester, see Advisor</i>	
General Education Requirements	12
Total Semester Credits.	15

Fourth Semester

CDEV 2600 Organizational Leadership and Management	2
<i>Not offered every semester, see Advisor</i>	
General Education Requirements	11
Total Semester Credits.	13

Total Program Credits60

Child Development Careers ASL AS DEGREE

Program Overview

This program is intended primarily for students who plan to transfer to another college or university to complete a bachelor's degree in Early Childhood or related field. Students will learn about child development, guidance, health and safety, cultural sensitivity, professional relations, and curriculum planning, as well as liberal arts education. Lab and Practicum opportunities are provided which allow students to apply their skills and knowledge in a practical experience. All students must meet all reading and writing program entry requirements prior to entering courses beyond the Certificate.

Students must have a high school diploma, or GED, and pass a criminal background study. Respect for cultural differences is essential. Good judgment and absolute integrity are also necessary for success in the field of child development.

Career Opportunities

Graduates of the Child Development Careers ASL AS Degree program may seek further education to earn a degree in early childhood education, early childhood special education, child development and family studies, psychology, or social work, but will also qualify to work at a child care center or preschool program, a family child care home or nanny, as well as a teacher in a Head Start program, a teacher assistant or education assistant in the public schools, Early Childhood Family Education, Early Childhood Special Education, or Child Life Assistant (working with children in a hospital setting).

Since this degree has a focus on using ASL in an early childhood setting, it increases employability for our graduates. If students go on for more education, the career opportunities (and pay scale) also increase. The demand for trained child development professionals continues to increase as more parents seek quality care and educational programs for their children. Our job placement rate is well over 95% and the Bureau of Labor Statistics estimates that the employment outlook will grow faster than average through 2018.

Program Outcomes

1. Graduates will demonstrate knowledge of child safety, health and nutrition.
2. Graduates will demonstrate knowledge in the fundamental principles of child development and developmentally appropriate practices.
3. Graduates will demonstrate knowledge and skills in positive child guidance techniques.
4. Graduates will demonstrate the knowledge and skills in positive family, community, and staff relations.
5. Graduates will demonstrate the knowledge and skills in developing and implementing early childhood curriculum.
6. Graduates will have hands-on training in a variety of Child Development settings.
7. Graduates will possess the knowledge and skills for immediate employment in the Child Development field.
8. Graduates will have successfully mastered the general education program requirements for work and life roles.

Program Faculty

Students should consult with the Program Advisor each semester.

Kelly McKown kelly.mckown@saintpaul.edu
Janet Massa janet.massa@saintpaul.edu

Part-Time/Full-time Options

Part-time and full-time options are available. Evening, Saturday, and online courses are also available. Costs vary depending on part-time or full-time enrollment.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Child Development Careers ASL AS

- BA Individualized Studies
Metropolitan State University
- BS Human Development & Family Studies
University of Wisconsin-Stout
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BA Health Care Administration
Concordia University, St. Paul

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CDEV 1200 Introduction to Early Childhood Education	3
<input type="checkbox"/> CDEV 1210 Child Growth and Development.	3
<input type="checkbox"/> CDEV 1220 Health, Safety and Nutrition	3
<input type="checkbox"/> CDEV 1230 Guiding Children's Behavior	3
<input type="checkbox"/> CDEV 1240 Learning Environment and Curriculum.	4
<input type="checkbox"/> CDEV 2320 Children with Differing Abilities (Fall)	3
<input type="checkbox"/> CDEV 2560 Language & Literature Learning Experiences (Fall)	3
<input type="checkbox"/> CDEV 2599 Practicum 1: Special Settings/ASL	2
<input type="checkbox"/> ASLS 1411 American Sign Language 1	3
<input type="checkbox"/> ASLS 1412 American Sign Language 2	3
Subtotal.	30

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

- Goal 1: Communication 7
ENGL 1711 Composition 1 – 4 cr
SPCH XXXX (Goal 1 only) – 3 cr
- Goal 3 or Goal 4 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
- Goal 5: History, Social Science and Behavioral Sciences 4
any may be taken, however ANTH 1710, PSYC 1710, SOCI 1710 OR SOCI 1760 (recommended)
- Goal 6: Humanities and Fine Arts. 3
- Goals 1-10 of the Minnesota Transfer Curriculum . 13
Select a minimum of 13 additional credits

General Education Requirements 30

Total Program Credits 60

Continued on next page

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+ or grade of "C" or better in MATH 0745

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

271S (7140)

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Child Development Careers ASL AS DEGREE *(continued)*

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term. Students should consult with the program advisor each semester.

First Semester

CDEV 1200 Introduction to Early Childhood Education	3
CDEV 1210 Child Growth and Development	3
CDEV 1220 Health, Safety and Nutrition	3
CDEV 1230 Guiding Children's Behavior	3
ASLS 1411 American Sign Language 1	3
Total Semester Credits	15

All students must meet all reading and writing program entry requirements prior to entering courses beyond the Certificate. CDEV 1200, 1210, 1220, 1230, and 1240 must be completed before taking second semester courses.

Second Semester

CDEV 1240 Learning Environment and Curriculum	4
ASLS 1412 American Sign Language 2	3
General Education Requirements	9
Total Semester Credits	16

Third Semester

CDEV 2320 Children with Differing Abilities (Fall)	3
CDEV 2560 Language & Literature Learning Experiences (Fall)	3
ASLS 1413 American Sign Language 3	3
General Education Requirements	6
Total Semester Credits	15

Fourth Semester

CDEV 2599 Practicum 1: Special Settings/ASL	2
ASLS 1414 American Sign Language 4	3
General Education Requirements	9
Total Semester Credits	14

NOTE: ASLS 1413 & ASLS 1414 are counted towards fulfilling MnTC Electives

Total Program Credits	60
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Child Development Careers AAS DEGREE

Program Overview

This program is designed to prepare individuals for employment as a teacher in a variety of early childhood settings. Students will learn how to promote and communicate knowledge of child development; create healthy, respectful and challenging learning environments; create and maintain respectful and supportive relationships with children, families, staff, and community members; use observation skills to enhance teaching; and design and implement developmentally and culturally appropriate activities and curriculum. Lab and Practicum opportunities are provided which allow students to apply their skills and knowledge in a practical experience. All students must meet all reading and writing program entry requirements prior to entering courses beyond the Certificate.

Students must have a high school diploma, or GED, and pass a criminal background study. Respect for cultural differences is essential. Good judgment and absolute integrity are also necessary for success in the field of child development.

Career Opportunities

Graduates of the Child Development AAS program will qualify to teach at a child care center, preschool program, before/after-school program, a family child care home or nanny, as well as a Lead Teacher in a Head Start program, a teacher assistant or education assistant (paraprofessional) in the public schools, Early Childhood Family Education, Early Childhood Special Education, or Child Life Assistant (in a hospital setting). The AAS degree meets Minnesota Department of Human Services educational requirements for child care workers. The demand for trained child development professionals continues to increase as more parents seek quality care and educational programs for their children. Our job placement rate is well over 95% and the Bureau of Labor Statistics estimates that the employment outlook will grow faster than average through 2018.

Program Outcomes

1. Graduates will demonstrate knowledge of child safety, health, and nutrition.
2. Graduates will demonstrate knowledge on the principles of child development and developmentally appropriate practices.
3. Graduates will demonstrate knowledge and skills in positive child guidance techniques.
4. Graduates will demonstrate the knowledge and skills in positive family, community, and staff relations.
5. Graduates will demonstrate the knowledge and skills in developing and implementing early childhood curriculum.
6. Graduates will have hands-on training in a variety of Child Development settings.
7. Graduates will possess the knowledge and skills for immediate employment in the Child Development field.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CDEV 1200 Introduction to Early Childhood Education	3
<input type="checkbox"/> CDEV 1210 Child Growth and Development	3
<input type="checkbox"/> CDEV 1220 Health, Safety and Nutrition	3
<input type="checkbox"/> CDEV 1230 Guiding Children's Behavior	3
<input type="checkbox"/> CDEV 1240 Learning Environment and Curriculum	4
<input type="checkbox"/> CDEV 1610 Observation and Assessment	3
<i>Not offered every semester, see Advisor</i>	
<input type="checkbox"/> CDEV 1640 Curriculum Planning	3
<i>Not offered every semester, see Advisor</i>	
<input type="checkbox"/> CDEV 1910 Practicum 1	3
<input type="checkbox"/> CDEV 2320 Children with Differing Abilities (Fall)	3
<input type="checkbox"/> CDEV 2600 Organizational Leadership and Management (Spring)	2
<input type="checkbox"/> CDEV 2560 Language & Literature Learning Experiences OR	
CDEV 2550 Math, Science, and Technology for Young Children	3
<input type="checkbox"/> CDEV 2620 Practicum 2	4
Subtotal	37

Electives: Choose a minimum of 3 credits

from the following Technical Electives:	Cr
<input type="checkbox"/> CDEV 2520 The Peaceful Classroom	3
<input type="checkbox"/> CDEV 2530 Children with Challenging Behaviors	3
<input type="checkbox"/> CDEV 2550 Math, Science, and Technology for Young Children	3
<input type="checkbox"/> CDEV 2560 Language & Literature Learning Experiences	3
<input type="checkbox"/> CDEV 2570 Working with Diverse Children and Families	3
<input type="checkbox"/> CDEV 2580 Creative Development & Learning Experiences	3
<input type="checkbox"/> CDEV 2590 Social-Emotional Development and Learning Experiences	3
<input type="checkbox"/> CDEV 2597 Special Topics	1-4

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	Cr
<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
any may be taken, however SOCI 1720 Social Problems OR SOCI 1730 Sociology of Families & Relationships (recommended)	
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
<input type="checkbox"/> Goals 1-10 of the Minnesota Transfer Curriculum	4
4 Select a minimum of 4 additional credits	
General Education Requirements	20

Total Program Credits 60

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Students should consult with the Program Advisor each semester.

Kelly McKown kelly.mckown@saintpaul.edu
Janet Massa janet.massa@saintpaul.edu

Part-time/Full-time Options

Part-time and full-time options are available. Evening, Saturday, and online courses are also available. Costs vary depending on part-time or full-time enrollment.

Program Start Dates

Fall, Spring, Summer

Course Sequence

The course sequence on the back of this guide is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Child Development Careers AAS

BS	Human Development & Family Studies University of Wisconsin-Stout
BAS	Early Childhood Studies Metropolitan State University
BS	Healthcare and Human Service Management Saint Mary's University-Twin Cities Campus
BA	Child Development Concordia University, St. Paul
BA	Family Science Concordia University, St. Paul
BA	Health Care Administration Concordia University, St. Paul

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722 and ENGL 0922

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

053A (7009)

Child Development Careers AAS DEGREE *(continued)*

Course Sequence

The course sequence is recommended for a full-time student; however, this sequence is not required.

Not all courses are offered each semester; a selection of courses is offered summer term.

Students should consult with the Program Advisor each semester.

First Semester

CDEV 1200 Introduction to Early Childhood Education	3
CDEV 1210 Child Growth and Development	3
CDEV 1220 Health, Safety and Nutrition	3
CDEV 1230 Guiding Children's Behavior	3
CDEV 1240 Learning Environment and Curriculum	4
Total Semester Credits	16

All students must meet all reading and writing program entry requirements prior to entering courses beyond the Certificate. CDEV 1200, 1210, 1220, 1230, and 1240 must be completed before taking second semester courses.

Second Semester

CDEV 1610 Observation and Assessment	3
<i>Not offered every semester, see Advisor</i>	
CDEV 1640 Curriculum Planning	3
<i>Not offered every semester, see Advisor</i>	
CDEV 25XX Technical Elective	3
CDEV 2550 offered in Spring semester only	
CDEV 2560 offered in Fall semester only	
General Education Requirements	7
Total Semester Credits	16

Third Semester

CDEV 2320 Children with Differing Abilities	3
<i>Offered in Fall semester only</i>	
CDEV 25XX Technical Elective	3
CDEV 2550 offered in Spring semester only	
CDEV 2560 offered in Fall semester only	
CDEV 1910 Practicum 1	3
General Education Requirements	6
Total Semester Credits	15

Fourth Semester

CDEV 2600 Organizational Leadership and Management	2
<i>Offered in Spring semester only</i>	
CDEV 2620 Practicum 2	4
General Education Requirements	7
Total Semester Credits	13

Total Program Credits60

Child Development Careers DIPLOMA

Program Overview

This program is designed to prepare individuals for employment in entry-level early childhood education positions. Students will learn about child development, guidance, health and safety, professional relations, and strategies for promoting learning in young children. Lab and Practicum opportunities are provided which allow students to apply their skills and knowledge in a practical experience. All students must meet all reading and writing program entry requirements prior to entering courses beyond the Certificate.

Students must have a high school diploma or GED and pass a criminal background study. Respect for cultural differences is essential. Good judgment and absolute integrity are also necessary for success in the field of child development.

Career Opportunities

Graduates of the Child Development Diploma program will qualify to work at a child care center, preschool program, before/after-school program, a family child care home or nanny. This diploma meets Minnesota Department of Human Services educational requirements for child care workers. The demand for trained child development professionals continues to increase as more and more parents seek quality care and educational programs for their children. Our job placement rate is well over 95% and the Bureau of Labor Statistics estimates that the employment outlook will grow faster than average through 2018.

Program Outcomes

1. Graduates will demonstrate knowledge of child safety, health and nutrition.
2. Graduates will demonstrate knowledge in the fundamental principles of child development and developmentally appropriate practices.
3. Graduates will demonstrate knowledge and skills in positive child guidance techniques.
4. Graduates will demonstrate the knowledge and skills in positive family, community, and staff relations.
5. Graduates will demonstrate the knowledge and skills in developing and implementing early childhood curriculum.

Program Faculty

Students should consult with the Program Advisor each semester.

Kelly McKown kelly.mckown@saintpaul.edu
Janet Massa janet.massa@saintpaul.edu

Part-time/Full-time Options

Part-time and full-time options are available. Evening, Saturday, and online courses are also available. Costs vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CDEV 1200 Introduction to Early Childhood Education	3
<input type="checkbox"/> CDEV 1210 Child Growth and Development	3
<input type="checkbox"/> CDEV 1220 Health, Safety and Nutrition	3
<input type="checkbox"/> CDEV 1230 Guiding Children's Behavior	3
<input type="checkbox"/> CDEV 1240 Learning Environment and Curriculum.	4
<input type="checkbox"/> CDEV 1610 Observation and Assessment	3
<input type="checkbox"/> CDEV 1640 Curriculum Planning	3
<input type="checkbox"/> CDEV 1910 Practicum 1	3
Subtotal.	25
General Education Requirements	
<input type="checkbox"/> ENGL 1711 Composition 1.	4
<input type="checkbox"/> SOCI 17XX	3
Any SOCI may be taken however, SOCI 1720 Social Problems (3 cr) OR SOCI 1730 Sociology of Families and Relationships is recommended (3 cr)	
General Education Requirements	7
Total Program Credits	32

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term.

First Semester

CDEV 1200 Introduction to Early Childhood Education.	3
CDEV 1210 Child Growth and Development	3
CDEV 1220 Health, Safety and Nutrition	3
CDEV 1230 Guiding Children's Behavior	3
CDEV 1240 Learning Environment & Curriculum	4
Total Semester Credits.	16

All students must meet all reading and writing program entry requirements prior to entering courses beyond the Certificate. CDEV 1200, 1210, 1220, 1230, and 1240 must be completed before taking second semester courses.

Second Semester

CDEV 1610 Observation and Assessment	3
CDEV 1640 Curriculum Planning.	3
<i>Not offered every semester, see Advisor</i>	
CDEV 1910 Practicum 1	3
ENGL 1711 Composition (Goal 1).	4
SOCI 1720 Social Problems OR SOCI 1730 Sociology of Families and Relationships is recommended (Goal 5)	3
Total Semester Credits.	16

Total Program Credits 32

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 60+ on Reading Comprehension or grade of "C" or better in ENGL 0921

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

052D (7007)

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Child Development Careers CERTIFICATE

Program Overview

This program is designed to give students an introduction to the field of Early Childhood Education and the variety of career opportunities. Each of our other programs begin with the Certificate-level courses. Students will learn about child development, guidance, health and safety, professional relations, and strategies for promoting learning in young children.

Students must have a high school diploma, or GED, and pass a criminal background study. Respect for cultural differences is essential. Good judgment and absolute integrity are also necessary for success in the field of child development.

Career Opportunities

Graduates of the Child Development Certificate program will qualify to work at a child care center, preschool program, before/after-school program, a family child care home or nanny. This certificate meets Minnesota Department of Human Services educational requirements for child care provider. The demand for trained child development professionals continues to increase as more and more parents seek quality care and educational programs for their children. Our job placement rate is well over 95% and the Bureau of Labor Statistics estimates that the employment outlook will grow faster than average through 2018.

Program Outcomes

1. Graduates will demonstrate knowledge of child safety, health and nutrition.
2. Graduates will demonstrate knowledge in the fundamental principles of child development and developmentally appropriate practices.
3. Graduates will demonstrate knowledge and skills in positive child guidance techniques.
4. Graduates will demonstrate the knowledge and skills in positive family, community, and staff relations.

Program Faculty

Students should consult with the Program Advisor each semester.

Kelly McKown kelly.mckown@saintpaul.edu
Janet Massa janet.massa@saintpaul.edu

Part-time/Full-time Options

Part-time and full-time options are available. Evening, Saturday, and online courses are also available. Costs vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CDEV 1200 Introduction to Early Childhood Education	3
<input type="checkbox"/> CDEV 1210 Child Growth and Development	3
<input type="checkbox"/> CDEV 1220 Health, Safety and Nutrition	3
<input type="checkbox"/> CDEV 1230 Guiding Children's Behavior	3
<input type="checkbox"/> CDEV 1240 Learning Environment and Curriculum	4
Total Program Credits	16

Program Start Dates

Fall, Spring, Summer

Course Sequence

This certificate can be completed in one semester as shown in the following sequence; however, this sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term.

First Semester

CDEV 1200 Introduction to Early Childhood Education	3
CDEV 1210 Child Growth and Development	3
CDEV 1220 Health, Safety and Nutrition	3
CDEV 1230 Guiding Children's Behavior	3
CDEV 1240 Learning Environment and Curriculum	4
Total Semester Credits	16

Total Program Credits 16

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ on Reading Comprehension or grade of "C" or better in READ 0721

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

051C (7006)

*Information is subject to change.
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Cosmetology AAS DEGREE

Program Overview

The Cosmetology AAS degree meets the requirements for licensure by the Minnesota Board of Cosmetologist Examiners and provides transferrable credits towards a two- or four-year degree in liberal arts and sciences.

Cosmetology services include the cleaning, conditioning, shaping, reinforcing, coloring and enhancing of the body surface in the areas of head, scalp, face, arms, hands, legs and feet.

Science courses provide a good background for the skills taught in hair analysis and treatment. Physical requirements include finger dexterity, negative allergic reaction to cosmetic preparations and artistic flair for creative design. The professional cosmetologist should enjoy working with the public and in a team atmosphere. People skills and time management skills are essential.

Licensing or certification exams are independent of graduation requirements.

Career Opportunities

The job outlook is good for cosmetologists, estheticians and nail technicians. Increasing population, incomes, and demand for cosmetology services will stimulate job growth. In addition, numerous job openings will stem from rapid turnover in salons and the large size of the occupation. The rapid growth of nail salons and full-service spas will generate numerous job openings for cosmetologists skilled in hair, skin, and nails.

After cosmetology students complete 1550 hours of skills and theory training and pass the written exam given through the State designated testing service and skills certification, they are eligible for licensure through the Minnesota Board of Cosmetologist Examiners. Cosmetologists work in a variety of settings including beauty salons and full service spas.

Program Outcomes

1. Graduates will be prepared to take the skills certification.
2. Graduates will be prepared to take the Minnesota State Cosmetology written exam and state law test administered through the State designated testing service (access through www.bceboard.state.mn.us).
3. Graduates will have knowledge and skills in cosmetology services (hair, nails and skin).
4. Graduates will have knowledge and skills in salon operations.
5. Graduates will be prepared for employment as Cosmetologists.
6. Graduates will have successfully mastered the general education program requirements for work and life roles.

Program Faculty

Marcie Smith-Fields
marcie.smith-fields@saintpaul.edu

Elizabeth Hamp
beth.hamp@saintpaul.edu

Kunthea Thoeut-Nhim
kunthea.thoeut@saintpaul.edu

Full-time

Students attend full-time and can complete the program in three semesters.

Licensure

This program meets Minnesota Board of Cosmetologist Examiners requirements.

Textbook and Supply Costs

Students should expect to spend approximately \$3,700.00 for cosmetology kits, supplies, and books. This cost is in addition to tuition and fees.

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www.pivot-point.com

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Cosmetology AAS

- BA Individualized Studies
Metropolitan State University
- BA Health Care Administration
Concordia University, St. Paul

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Additional Requirements

Be prepared to purchase student cosmetology kits the first day of class from the book store. Financial aid must have been completed.

All books MUST be purchased before classes begin.

Cosmetology Student Handbook/ Agreement Form

All new and returning students will need to access D2L Brightspace PRIOR to the first day of classes to read the Cosmetology student handbook. After you have read the handbook, you must print and sign Student Agreement Form, Hepatitis B Vaccination/Declination Form and Rollabout Form and return them to your instructor on the first day of class before you will be admitted to class. You will need to perform this task prior to the first day of each semester.

Please direct questions to the assigned instructor of your first class.

Program Start Dates

Fall, Spring,
Summer – online only CHSN 1410 & CHSN 1420

Course Sequence

See back of guide for Program Requirements and Course Sequence. Required course sequence is dependent upon which Semester/Term the student starts the Cosmetology AAS Degree Program. The General Education Courses (16 credits) may be taken during the Semester/Term of student's choice or after completion of Technical Requirement courses.

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 31+

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

135A (7123)

Cosmetology AAS DEGREE *(continued)*

Program Requirements

- Check off when completed
- Required Program Seminar
All Cosmetology, Esthetics and Nail Technician applicants must attend a program seminar prior to enrollment as a full-time student. Please call the Clinic receptionist at 651.846.1329 to reserve your space at a seminar. Seminar dates and times are posted online at www.saintpaul.edu/CosEsthSeminar.

Courses	Cr
<input type="checkbox"/> CHSN 1410 Preclinic Introduction	4
<input type="checkbox"/> CHSN 1420 Body Systems & Diseases	4
<input type="checkbox"/> CHSN 1405 Preclinic Hair Care 1	3
<input type="checkbox"/> CHSN 1406 Preclinic Hair Care 2	3
<input type="checkbox"/> CHSN 1407 Preclinic Nail Care	3
<input type="checkbox"/> CHSN 1409 Preclinic Chemical Control	3
<input type="checkbox"/> CHSN 1413 Preclinic Hair Color	3
<input type="checkbox"/> CHSN 1418 Advanced Hair Care	4
<input type="checkbox"/> CHSN 1445 Cosmetic Chemistry & Makeup Applications	4
<input type="checkbox"/> CHSN 1450 Skin Analysis & Massage	4
<input type="checkbox"/> CHSN 1431 Clinic 1 for Cosmetology Majors	3
<input type="checkbox"/> CHSN 1432 Clinic 2 for Cosmetology Majors	3
<input type="checkbox"/> CHSN 1433 Clinic 3 for Cosmetology Majors	3
<input type="checkbox"/> CHSN 1434 Clinic 4 for Cosmetology Majors	3
<input type="checkbox"/> CHSN 1435 Clinic 5 for Cosmetology Majors	3
<input type="checkbox"/> CHSN 1436 Clinic 6 for Cosmetology Majors	3
Subtotal	53
<input type="checkbox"/> Required Technical Electives	3
Select 3 credits from the following Technical Electives to complete the required 1550 hours needed for licensure:	
CHSN 1451 Salon Operations 1 for Cosmetology/Nail Technician Majors	1
CHSN 1452 Salon Operations 2 for Cosmetology/Nail Technician Majors	2
CHSN 1453 Salon Operations 3 for Cosmetology/Nail Technician Majors	3
CHSN 1454 Salon Operations 4 for Cosmetology/Nail Technician Majors	4
CHSN 1455 Salon Operations 5 for Cosmetology/Nail Technician Majors	5
CHSN 1456 Salon Operations 6 for Cosmetology/Nail Technician Majors	6

General Education/MnTC Requirements	Cr
Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	
<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH 1720 Interpersonal Communication (recommended) – 3 cr	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
General Education Requirements	16
Total Program Credits	72

Course Sequence

Required course sequence is dependent upon which Semester/Term the student starts the Cosmetology AAS Degree Program. The General Education courses (16 credits) may be taken during the Semester/Term of student's choice or after completion of Technical Requirement courses.

If you start the program Fall or Spring Semester:

Course	Cr	Hrs
First Semester		
CHSN 1410 Preclinic Introduction	4	80
CHSN 1420 Body Systems & Diseases	4	80
CHSN 1445 Cosmetic Chemistry & Makeup Applications	4	80
CHSN 1450 Skin Analysis & Massage	4	112
CHSN 1405 Preclinic Hair Care 1	3	96
CHSN 1406 Preclinic Hair Care 2	3	80
CHSN 1407 Preclinic Nail Care	3	80
CHSN 1431 Clinic 1 for Cosmetology Majors	3	96
CHSN 1451 Salon Operations 1 for Cosmetology/ Nail Technician Majors	1	32
Total Semester Credits/Hours	29	736
Second Semester		
CHSN 1413 Preclinic Hair Color	3	80
CHSN 1409 Preclinic Chemical Control	3	80
CHSN 1418 Advanced Hair Care	4	112
CHSN 1432 Clinic 2 for Cosmetology Majors	3	96
CHSN 1433 Clinic 3 for Cosmetology Majors	3	96
CHSN 1434 Clinic 4 for Cosmetology Majors	3	96
CHSN 1452 Salon Operations 2 for Cosmetology/ Nail Technician Majors	2	64
Total Semester Credits/Hours	21	624
Third Semester		
CHSN 1435 Clinic 5 for Cosmetology Majors	3	96
CHSN 1436 Clinic 6 for Cosmetology Majors	3	96
Total Semester Credits/Hours	6	192
Subtotal Program Credits Hours	56	1552
Any Semester		
General Education Requirements (Semester of Choice)		
ENGL 1711 Composition 1 (Goal 1)	4	
SPCH 1720 Interpersonal Communication (recommended) (Goal 1)	3	
Natural Sciences (Goal 3) OR		
Mathematical/Logical Reasoning (Goal 4)	3	
History, Social Science and Behavioral Sciences (Goal 5)	3	
Humanities and Fine Arts (Goal 6)	3	
General Education Requirements	16	
Total Program Credits:	72	1552

Cosmetology DIPLOMA

Program Overview

The Cosmetology Diploma program meets the requirements for licensure by the Minnesota Board of Cosmetologist Examiners.

Cosmetology services include the cleaning, conditioning, shaping, reinforcing, coloring and enhancing of the body surface in the areas of head, scalp, face, arms, hands, legs and feet.

Science courses provide a good background for the skills taught in hair analysis and treatment. Physical requirements include finger dexterity, negative allergic reaction to cosmetic preparations and artistic flair for creative design. The professional cosmetologist should enjoy working with the public and in a team atmosphere. People skills and time management skills are essential.

Licensing or certification exams are independent of graduation requirements.

Career Opportunities

The job outlook is good for cosmetologists. Increasing population, incomes, and demand for cosmetology services will stimulate job growth. In addition, numerous job openings will stem from rapid turnover in salons and the large size of the occupation. The rapid growth of nail salons and full-service spas will generate numerous job openings for cosmetologists skilled in hair, skin, and nails.

After cosmetology students complete 1550 hours of skills and theory training and pass the written exam given through the State designated testing service and skills certification, they are eligible for licensure through the Minnesota Board of Cosmetologist Examiners. Cosmetologists work in a variety of settings including beauty salons and full service spas.

Program Outcomes

1. Graduates will be prepared to take the skills certification.
2. Graduates will be prepared to take the Minnesota State Cosmetology written exam and state law test administered through the State designated testing service (access through www.bceboard.state.mn.us).
3. Graduates will have knowledge and skills in cosmetology services (hair, nails and skin).
4. Graduates will have knowledge and skills in salon operations.
5. Graduates will be prepared for employment as Cosmetologists.
6. Graduates will have successfully mastered the general education program requirements for work and life roles.

Program Faculty

Marcie Smith-Fields
marcie.smith-fields@saintpaul.edu

Elizabeth Hamp
beth.hamp@saintpaul.edu

Kunthea Thoeut-Nhim
kunthea.thoeut@saintpaul.edu

Full-time

Students attend full-time and can complete the program in three semesters.

Licensure

This program meets Minnesota Board of Cosmetologist Examiners requirements.

Textbook and Supply Costs

Students should expect to spend approximately \$3,700.00 for cosmetology kits, supplies, and books. This cost is in addition to tuition and fees.

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Evanston, IL 60201
1.800.886.4247
www.pivot-point.com

Additional Requirements

Purchase Kits

Be prepared to purchase student cosmetology kits the first day of class from the book store. Financial aid must have been completed.

All books MUST be purchased before classes begin.

Cosmetology Student Handbook/ Agreement Form

All new and returning students will need to access D2L Brightspace PRIOR to the first day of classes to read the Cosmetology student handbook. After you have read the handbook, you must print and sign Student Agreement Form, Hepatitis B Vaccination/Declination Form and Rollabout Form and return them to your instructor on the first day of class before you will be admitted to class. You will need to perform this task prior to the first day of each semester. Please direct questions to the assigned instructor of your first class.

Program Start Dates

Fall, Spring,
Summer – online only CHSN 1410 & CHSN 1420

Course Sequence

See back of guide for Program Requirements and Course Sequence. Required course sequence is dependent upon which Semester/Term the student starts the Cosmetology Diploma program. The General Education Requirement (3 credits) may be taken during the Semester/Term of student's choice.

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ on Reading Comprehension or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 31+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

054D (7012)

*Information is subject to change.
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Cosmetology DIPLOMA *(continued)*

Program Requirements

- Check off when completed
- Required Program Seminar
All Cosmetology, Esthetics and Nail Technician applicants must attend a program seminar prior to enrollment as a full-time student. Please call the Clinic receptionist at 651.846.1329 to reserve your space at a seminar. Seminar dates and times are posted online at www.saintpaul.edu/CosEsthSeminar.

Courses	Cr
<input type="checkbox"/> CHSN 1410 Preclinic Introduction	4
<input type="checkbox"/> CHSN 1420 Body Systems and Disease	4
<input type="checkbox"/> CHSN 1405 Preclinic Hair Care 1	3
<input type="checkbox"/> CHSN 1406 Preclinic Hair Care 2	3
<input type="checkbox"/> CHSN 1407 Preclinic Nail Care	3
<input type="checkbox"/> CHSN 1409 Preclinic Chemical Control	3
<input type="checkbox"/> CHSN 1413 Preclinic Hair Color	3
<input type="checkbox"/> CHSN 1418 Advanced Hair Care	4
<input type="checkbox"/> CHSN 1445 Cosmetic Chemistry & Makeup Application	4
<input type="checkbox"/> CHSN 1450 Skin Analysis & Massage	4
<input type="checkbox"/> CHSN 1431 Clinic 1 for Cosmetology Majors	3
<input type="checkbox"/> CHSN 1432 Clinic 2 for Cosmetology Majors	3
<input type="checkbox"/> CHSN 1433 Clinic 3 for Cosmetology Majors	3
<input type="checkbox"/> CHSN 1434 Clinic 4 for Cosmetology Majors	3
<input type="checkbox"/> CHSN 1435 Clinic 5 for Cosmetology Majors	3
<input type="checkbox"/> CHSN 1436 Clinic 6 for Cosmetology Majors	3
Subtotal	53
<input type="checkbox"/> Required Technical Electives	3
Select 3 credits from the following technical electives to complete the required 1550 hours needed for licensure:	
CHSN 1451 Salon Operations 1 for Cosmetology/Nail Technician Majors	1
CHSN 1452 Salon Operations 2 for Cosmetology/Nail Technician Majors	2
CHSN 1453 Salon Operations 3 for Cosmetology/Nail Technician Majors	3
CHSN 1454 Salon Operations 4 for Cosmetology/Nail Technician Majors	4
CHSN 1455 Salon Operations 5 for Cosmetology/Nail Technician Majors	5
CHSN 1456 Salon Operations 6 for Cosmetology/Nail Technician Majors	6
<input type="checkbox"/> General Education Requirement	3
SPCH 1720 Interpersonal Communication (recommended)	
Total Program Credits	59

Course Sequence

Required course sequence is dependent upon which Semester/Term the student starts the Cosmetology Diploma Program. The General Education Requirement (3 credits) may be taken during the Semester/Term of student's choice.

If you start the program Fall or Spring Semester:

Course	Cr	Hrs
First Semester		
CHSN 1410 Preclinic Introduction on-line	4	80
CHSN 1420 Body Systems & Diseases on-line	4	80
CHSN 1445 Cosmetic Chemistry & Makeup Applications	4	80
CHSN 1450 Skin Analysis & Massage	4	112
CHSN 1405 Preclinic Hair Care 1	3	96
CHSN 1406 Preclinic Hair Care 2	3	80
CHSN 1407 Preclinic Nail Care	3	80
CHSN 1431 Clinic 1 for Cosmetology Majors	3	96
CHSN 1451 Salon Operations 1 for Cosmetology/ Nail Technician Majors	1	32
Total Semester Credits/Hours	29	736
Second Semester		
CHSN 1413 Preclinic Hair Color	3	80
CHSN 1409 Preclinic Chemical Control	3	80
CHSN 1418 Advanced Hair Care	4	112
CHSN 1432 Clinic 2 for Cosmetology Majors	3	96
CHSN 1433 Clinic 3 for Cosmetology Majors	3	96
CHSN 1434 Clinic 4 for Cosmetology Majors	3	96
CHSN 1452 Salon Operations 2 for Cosmetology/ Nail Tech Majors	2	64
Total Semester Credits/Hours	21	624
Third Semester		
CHSN 1435 Clinic 5 for Cosmetology Majors	3	96
CHSN 1436 Clinic 6 for Cosmetology Majors	3	96
Total Semester Credits/Hours	6	192
Subtotal Program Credits/Hours	56	1552
Any Semester		
General Education Requirements (Semester of Choice)		
SPCH 1720 Interpersonal Communication (recommended)	3	
General Education Requirement	3	
Total Program Credits:	59	1552

Nail Care Technician CERTIFICATE

Program Overview

Nail Technician services include the cleaning, shaping, conditioning and care for the fingers, hands, toes and feet as well as the preparation and application of artificial nails.

Physical requirements include finger dexterity, negative allergic reaction to cosmetic preparations, and artistic flair for creative design. The nail technician should enjoy working with the public and in a team atmosphere. People skills and time management skills are essential.

Licensing or certification exams are independent of graduation requirements.

Career Opportunities

The job outlook is very good for nail technicians. Increasing population, incomes, and demand for cosmetology services will stimulate job growth. In addition, numerous job openings will stem from rapid turnover in salons and the large size of the occupation. The rapid growth of nail salons and full service spas will generate numerous job openings for nail technicians.

After Nail Care Technician students complete 350 hours of skills and theory training and pass the written exam given through the State designated testing service, and skills certification they are eligible for licensure from the Minnesota Board of Cosmetologist Examiners. Nail technicians work in beauty salons, nail salons and spas.

Program Outcomes

1. Graduates will be prepared to take the skills certification.
2. Graduates will be prepared to take the Minnesota State written exam and state law test administered through the State designated testing service (access through www.lcbeboard.state.mn.us).
3. Graduates will possess knowledge and skills for manicures, pedicures and application of artificial nails.

Program Faculty

Marcie Smith-Fields
marcie.smith-fields@saintpaul.edu

Full-time

Students may complete the program in one semester. Consult with Cosmetology Instructor to develop a plan.

Additional Costs

Students should expect to spend approximately \$700.00 for nail care kits, supplies and books. This cost is in addition to tuition and fees. There is an additional fee to take the licensure exam.

Program Requirements

Check off when completed

Required Program Seminar

All Cosmetology, Esthetics and Nail Technician applicants must attend a program seminar prior to enrollment. Please call the Clinic receptionist at 651.846.1329 to reserve your space at a seminar. Seminar dates and times are posted online at www.saintpaul.edu/CosEsthSeminar.

Course	Cr
<input type="checkbox"/> CHSN 1410 Preclinic Introduction on-line	4
<input type="checkbox"/> CHSN 1420 Body Systems & Diseases on-line	4
<input type="checkbox"/> CHSN 1407 Preclinic Nail Care	3
<input type="checkbox"/> CHSN 1452 Salon Operations 2 for Cosmetology/ Nail Technician Majors	2
<input type="checkbox"/> CHSN 1461 Clinic 1 for Nail Technicians	3

Total Program Credits 16

Select from the following electives as needed:

CHSN 1451 Salon Operations 1 for Cosmetology/ Nail Technician Majors	1
CHSN 1453 Salon Operations 3 for Cosmetology/ Nail Technician Majors	3

Additional Requirements

Be prepared to purchase kits the first day of class from the book store with the instructor. Financial aid must have been completed.

All books **MUST** be purchased before classes begin.

Cosmetology Student Handbook/ Agreement Form

All new and returning students will need to access D2L Brightspace PRIOR to the first day of classes to read the Cosmetology student handbook.

After you have read the handbook, you must print and sign: Student Agreement Form, Hepatitis B Vaccination/Declination Form and Rollabout Form and return them to your instructor on the first day of class before you will be admitted to class. You will need to perform this task prior to the first day of each semester. Please direct questions to the assigned instructor of your first class.

Program Start Dates

Summer, Fall, Spring

Course Sequence

This certificate can be completed in one semester as shown in the following sequence.

First Semester

CHSN 1410 Preclinic Introduction on-line	4
CHSN 1420 Body Systems & Diseases on-line	4
CHSN 1407 Preclinic Nail Care	3
CHSN 1452 Salon Operations 2 for Cosmetology/ Nail Technician Majors	2
CHSN 1461 Clinic 1 for Nail Technicians	3
Total Semester Credits	16

Total Program Credits 16

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

057C (7078)

Culinary Arts AAS DEGREE

Program Overview

The Culinary Arts AAS degree prepares individuals for career opportunities in hotels, restaurants, clubs and institutional food service facilities. Responsibilities may include menu planning, purchasing food, equipment, and supplies, selecting, and developing recipes, selecting and using various food preparation methods and techniques. Management duties may include, but are not limited to financial planning, hiring, training and supervising employees. Graduates will be eligible for Certified Culinarian award from the American Culinary Federation as well as more advanced certificates with requisite culinary industry work experience.

Career Opportunities

According to the U.S. Bureau of Labor Statistics and the National Restaurant Association, meal preparation continues to shift out of the home, providing plentiful opportunities for chefs, cooks, and other food service workers. Americans spend more than \$300 billion each year on meals eaten outside the home. The service industry currently employs 9,631,900 individuals and is projected to swell by 7.7% by 2018.

Opportunities are available in hotels, restaurants, resorts, clubs, catering and corporate dining, government and school kitchens. Institutional opportunities include health care, schools, corporations, and government facilities. Culinary Arts careers can lead in many different directions such as hospitality management, sales, product development, or owning your own business.

Program Outcomes

1. Graduates will have knowledge and skills in culinary arts.
2. Graduates will demonstrate knowledge and skills in restaurant operations.
3. Graduates will be experienced in food preparation and presentation for business and industry.
4. Graduates will be prepared for immediate employment in the food service industry.
5. Graduates will have mastered the general education program requirements for work and life roles.
6. Graduates will be eligible for Minnesota Food Manager Certification.
7. Graduates will be eligible for certification by ACF as a "Certified Culinarian."
8. Graduates will create a professional career plan.
9. Graduates will apply analysis and problem solving to food production.

Information is subject to change.
This Program Requirements Guide is not a contract.

Program Faculty

Sean Jones sean.jones@saintpaul.edu
 Manfred Krug manfred.krug@saintpaul.edu
 Nathan Sartain nathan.sartain@saintpaul.edu

Textbook and Supply Costs

Students should expect to spend approximately \$1,300.00 for books, uniform and culinary supplies. This cost is in addition to the cost of tuition and fees.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CULA 1405 Culinary Arts Foundations 1	2*
<input type="checkbox"/> CULA 1415 Culinary Arts Foundations 2	4*
<input type="checkbox"/> CULA 1425 Fundamentals of Pastry	1*
<input type="checkbox"/> CULA 1435 Butchery and Charcuterie	2*
<input type="checkbox"/> CULA 1445 Food Service Practicum	2
<input type="checkbox"/> CULA 1455 Food Safety and Sanitation	2
<input type="checkbox"/> CULA 1465 Culinary Nutrition Theory	2
<input type="checkbox"/> CULA 1505 Contemporary Bake Shop Production	2*
<input type="checkbox"/> CULA 1515 Contemporary Pantry Production	2*
<input type="checkbox"/> CULA 1525 Contemporary Range Production	2*
<input type="checkbox"/> CULA 1545 Contemporary Quick Fare Production	2*
<input type="checkbox"/> CULA 1555 Culinary Career Portfolio	1
<input type="checkbox"/> CULA 1565 Principles of Culinary Leadership	2
<input type="checkbox"/> CULA 1575 Artisan Baking and Pastry	2*
<input type="checkbox"/> CULA 1585 Introduction to Dining Room Service	1
<input type="checkbox"/> CULA 1590 Café Dining Practicum	2
<input type="checkbox"/> CULA 1700 Culinary Externship	3
<input type="checkbox"/> CULA 1705 Sustainable Foods Practicum	1
<input type="checkbox"/> CULA 2100 Menu Composition and Analysis	2
<input type="checkbox"/> CULA 2105 Applied Restaurant Operations 1	3*
<input type="checkbox"/> CULA 2110 Applied Restaurant Operations 2	3*
<input type="checkbox"/> CULA 2115 Contemporary Dining Room Service	1
<input type="checkbox"/> CULA 2220 Sensory Evaluation & Wine Pairing	2*
<input type="checkbox"/> CULA 2225 Garde Manger	1*
<input type="checkbox"/> CULA 2230 Food, Beverage, Labor Cost Control	3
<input type="checkbox"/> CULA 2235 Event Based Dining Capstone	2
Subtotal	52

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) SPCH 1720 Interpersonal Communication – 3 cr (recommended)	
Must be completed prior to starting 3rd Semester.	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
General Education Requirements	16

Total Program Credits 68

*Course has a differential tuition rate. Check the Course Schedule at www.saintpaul.edu/CourseSchedule for current course costs.

Program Start Dates

Fall, Spring

Course Sequence

The course sequence listed on the back is required for a full-time student.

Accreditation

This program is accredited by the American Culinary Federation Education Foundation's Accrediting Commission. (ACFEF)



Programmatic Accreditation by ACFEF Accrediting Commission

Exemplary Status

Saint Paul College's Culinary Arts AAS degree program is the only exemplary culinary program in public education in Minnesota. Exemplary Programs symbolize the highest educational standards recognized by the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC). The award is presented to programs that have proven full compliance with all ACFEFAC accreditation requirements in the last visiting team report along with excellent management of the program.



Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

183A 58PA (7114)

Culinary Arts AAS DEGREE *(continued)*

Course Sequence

The following sequence is required for a full-time student starting in Fall semester.

First Semester

CULA 1405 Culinary Arts Foundations 1	2
CULA 1415 Culinary Arts Foundations 2	4
CULA 1425 Fundamentals of Pastry	1
CULA 1435 Butchery and Charcuterie	2
CULA 1445 Food Service Practicum	2
CULA 1455 Food Safety and Sanitation	2
CULA 1465 Culinary Nutrition Theory	2
SPCH XXXX (Goal 1 only)	3
SPCH 1720 Interpersonal Communication (recommended) must be completed prior to starting Third Semester Coursework	
Total Semester Credits	18

Second Semester

CULA 1505 Contemporary Bake Shop Production	2
CULA 1515 Contemporary Pantry Production	2
CULA 1525 Contemporary Range Production	2
CULA 1545 Contemporary Quick Fare Production	2
CULA 1555 Culinary Career Portfolio	1
CULA 1565 Principles of Culinary Leadership	2
CULA 1575 Artisan Baking and Pastry	2
CULA 1585 Introduction to Dining Room Service	1
CULA 1590 Café Dining Practicum	2
Goal 6 Humanities & Fine Arts	3
Total Semester Credits	19

Third Semester (Summer)

CULA 1700 Culinary Externship	3
CULA 1705 Sustainable Foods Practicum	1
ENGL 1711 Composition 1 (Goal 1)	4
Goal 3 Natural Sciences OR	
Goal 4 Mathematical/Logical Reasoning	3
Total Semester Credits	11

Fourth Semester

CULA 2100 Menu Composition and Analysis	2
CULA 2105 Applied Restaurant Operations 1	3
CULA 2110 Applied Restaurant Operations 2	3
CULA 2115 Contemporary Dining Room Service	1
CULA 2220 Sensory Evaluation & Wine Pairing	2
CULA 2225 Garde Manger	1
CULA 2230 Food, Beverage, Labor Cost Control	3
CULA 2235 Event Based dining Capstone	2
Goal 5 History, Social, and Behavioral Science	3
Total Semester Credits	20

Total Program Credits68

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Culinary Arts AAS

BA Individualized Studies
Metropolitan State University

Culinary Arts DIPLOMA

Program Overview

The Culinary Arts Diploma prepares individuals for career opportunities in hotels, restaurants, clubs and institutional food service facilities. Responsibilities may include menu planning, purchasing food, equipment, and supplies, selecting, and developing recipes, selecting and using various food preparation methods and techniques. Management duties may include, but are not limited to financial planning, hiring, training and supervising employees.

Career Opportunities

According to the U.S. Bureau of Labor Statistics and the National Restaurant Association, meal preparation continues to shift out of the home, providing plentiful opportunities for chefs, cooks, and other food service workers. Americans spend more than \$300 billion each year on meals eaten outside the home. The service industry currently employs 9,631,900 individuals and is projected to swell by 7.7% by 2018.

Opportunities are available in hotels, restaurants, resorts, clubs, catering and corporate dining, government and school kitchens. Institutional opportunities include health care, schools, corporations, and government facilities. Culinary Arts careers can lead in many different directions such as hospitality management, sales, product development, or owning your own business.

Program Outcomes

1. Graduates will have knowledge and skills in culinary arts.
2. Graduates will demonstrate knowledge and skills in restaurant operations.
3. Graduates will be experienced in food preparation and presentation for business and industry.
4. Graduates will be prepared for immediate employment in the food service industry.
5. Graduates may be eligible for Minnesota Food Manager Certification.
6. Graduates will create a professional career plan.
7. Graduates will apply analysis and problem solving to food production.

Program Faculty

Sean Jones sean.jones@saintpaul.edu
 Manfred Krug manfred.krug@saintpaul.edu
 Nathan Sartain nathan.sartain@saintpaul.edu

Textbook and Supply Costs

Students should expect to spend approximately \$1,300.00 for books, uniform, and culinary supplies. This cost is in addition to the cost of tuition and fees.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CULA 1405 Culinary Arts Foundations 1	2*
<input type="checkbox"/> CULA 1415 Culinary Arts Foundations 2	4*
<input type="checkbox"/> CULA 1425 Fundamentals of Pastry	1*
<input type="checkbox"/> CULA 1435 Butchery and Charcuterie	2*
<input type="checkbox"/> CULA 1445 Food Service Practicum	2
<input type="checkbox"/> CULA 1455 Food Safety and Sanitation	2
<input type="checkbox"/> CULA 1465 Culinary Nutrition Theory	2
<input type="checkbox"/> CULA 1505 Contemporary Bake Shop Production	2*
<input type="checkbox"/> CULA 1515 Contemporary Pantry Production	2*
<input type="checkbox"/> CULA 1525 Contemporary Range Production	2*
<input type="checkbox"/> CULA 1545 Contemporary Quick Fare Production	2*
<input type="checkbox"/> CULA 1555 Culinary Career Portfolio	1
<input type="checkbox"/> CULA 1565 Principles of Culinary Leadership	2
<input type="checkbox"/> CULA 1575 Artisan Baking and Pastry	2*
<input type="checkbox"/> CULA 1585 Introduction to Dining Room Service	1
<input type="checkbox"/> CULA 1590 Café Dining Practicum	2
<input type="checkbox"/> CULA 1700 Culinary Externship	3
<input type="checkbox"/> CULA 1705 Sustainable Foods Practicum	1
<input type="checkbox"/> CULA 2100 Menu Composition and Analysis	2
<input type="checkbox"/> CULA 2105 Applied Restaurant Operations 1	3*
<input type="checkbox"/> CULA 2110 Applied Restaurant Operations 2	3*
<input type="checkbox"/> CULA 2115 Contemporary Dining Room Service	1
<input type="checkbox"/> CULA 2220 Sensory Evaluation & Wine Pairing	2*
<input type="checkbox"/> CULA 2225 Garde Manger	1*
<input type="checkbox"/> CULA 2230 Food, Beverage, Labor Cost Control	3
<input type="checkbox"/> CULA 2235 Event Based Dining Capstone	2
Subtotal	52

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	3
SPCH XXXX (Goal 1 only) SPCH 1720 Interpersonal Communication – 3 cr (recommended)	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical /Logical Reasoning	
General Education Requirements	6

Total Program Credits58

*Course has a differential tuition rate. For current course costs go to www.saintpaul.edu/CourseSchedule

**Refer to the Minnesota Transfer Curriculum (MnTC) course list for specific course options.

Program Start Dates

Fall, Spring

Course Sequence

The course sequence listed on the back is required for a full-time student.

Accreditation

This program is accredited by the American Culinary Federation Education Foundation's Accrediting Commission. (ACFEF)



Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ on Reading Comprehension or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 52+

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Culinary Arts DIPLOMA *(continued)***Course Sequence**

The following sequence is required for a full-time student.

First Semester

CULA 1405 Culinary Arts Foundations 1	2
CULA 1415 Culinary Arts Foundations 2	4
CULA 1425 Fundamentals of Pastry	1
CULA 1435 Butchery and Charcuterie	2
CULA 1445 Food Service Practicum	2
CULA 1455 Food Safety and Sanitation	2
CULA 1465 Culinary Nutrition Theory	2
SPCH XXXX (Goal 1 only)	3
SPCH 1720 Interpersonal Communication (recommended) must be completed prior to starting Third Semester Coursework	3
Total Semester Credits	18

Second Semester

CULA 1505 Contemporary Bake Shop Production	2
CULA 1515 Contemporary Pantry Production	2
CULA 1525 Contemporary Range Production	2
CULA 1545 Contemporary Quick Fare Production	2
CULA 1555 Culinary Career Portfolio	1
CULA 1565 Principles of Culinary Leadership	2
CULA 1575 Artisan Baking and Pastry	2
CULA 1585 Introduction to Dining Room Service	1
CULA 1590 Café Dining Practicum	2
Total Semester Credits	16

Third Semester (Summer)

CULA 1700 Culinary Externship	3
CULA 1705 Sustainable Foods Practicum	1
Goal 3 Natural Sciences OR Goal 4 Mathematical/Logical Reasoning	3
Total Semester Credits	7

Fourth Semester

CULA 2100 Menu Composition and Analysis	2
CULA 2105 Applied Restaurant Operations 1	3
CULA 2110 Applied Restaurant Operations 2	3
CULA 2115 Contemporary Dining Room Service	1
CULA 2220 Sensory Evaluation & Wine Pairing	2
CULA 2225 Garde Manger	1
CULA 2230 Food, Beverage, Labor Cost Control	3
CULA 2235 Event Based Dining Capstone	2
Total Semester Credits	17

Total Program Credits58

Culinary Foundations CERTIFICATE

Program Overview

Graduates will have completed training in cooking, baking, and pastry fundamentals, learning techniques in the production of various hot and cold foods as well as butchery.

Graduates will be prepared for positions in casual dining, quick service, cafeteria, healthcare institutional/commercial foods, butchery, and as pastry assistants. Course work will also provide the nutrition, sanitation, and food safety training necessary for entry level and managerial food service positions.

Career Opportunities

According to the U.S. Bureau of Labor Statistics and the National Restaurant Association, meal preparation continues to shift out of the home, providing plentiful opportunities for chefs, cooks, and other food service workers. Americans spend more than \$300 billion each year on meals eaten outside the home. The service industry currently employs 9,631,900 individuals and is projected to swell by 7.7% by 2018.

Opportunities are available in restaurants, catering/corporate dining, government and school kitchens. Institutional opportunities include health care, schools, corporations, and government facilities. Pastry assistant positions are available in hotels, casinos, private clubs, and resorts.

Program Outcomes

1. Graduates will have knowledge and skills in restaurant production line service and commercial food operations.
2. Graduates will demonstrate knowledge of pastry, hot and cold food preparations.
3. Graduates will be prepared for immediate employment in the food service industry.
4. Graduates will demonstrate knowledge of culinary nutrition as applied to all facets of the food service and hospitality industry.
5. Graduates will have demonstrated and applied proper sanitation, food and kitchen safety.
6. Graduates will be eligible for ServSafe Certification and Minnesota Food Manager Certification.

Program Faculty

Sean Jones sean.jones@saintpaul.edu
 Manfred Krug manfred.krug@saintpaul.edu
 Nathan Sartain nathan.sartain@saintpaul.edu

Textbook and Supply Costs

Students should expect to spend approximately \$1,000.00 for books, uniform, and culinary supplies. This cost is in addition to the cost of tuition and fees.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CULA 1405 Culinary Arts Foundations 1	2*
<input type="checkbox"/> CULA 1415 Culinary Arts Foundations 2	4*
<input type="checkbox"/> CULA 1425 Fundamentals of Pastry	1*
<input type="checkbox"/> CULA 1435 Butchery and Charcuterie	2*
<input type="checkbox"/> CULA 1445 Food Service Practicum	2
<input type="checkbox"/> CULA 1455 Food Safety and Sanitation	2
<input type="checkbox"/> CULA 1465 Culinary Nutrition Theory	2
Subtotal	15

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

Must be completed prior to starting third semester

<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences – 3 cr OR	
Goal 4: Mathematical /Logical Reasoning – 3 cr	
General Education Requirements	3

Total Program Credits

*Course has a differential tuition rate. Check the Course Schedule at www.saintpaul.edu/CourseSchedule for current course costs.

**Refer to the Minnesota Transfer Curriculum (MnTC) course list for specific course options.

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended; however, this sequence is not required.

First Semester

CULA 1405 Culinary Arts Foundations 1	2
CULA 1415 Culinary Arts Foundations 2	4
CULA 1425 Fundamentals of Pastry	1
CULA 1435 Butchery and Charcuterie	2
CULA 1445 Food Service Practicum	2
CULA 1455 Food Safety and Sanitation	2
CULA 1465 Culinary Nutrition Theory	2
General Education Requirements (Goal 4)	3
Total Semester Credits	18

Total Program Credits

18

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ on Reading Comprehension or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 52+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

371C (7208)

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Pastry and Baking CERTIFICATE

Program Overview

Chefs and cooks prepare a variety of foods in many different environments, from preparation of a la carte (prepared to order) to banquets for hundreds of people. Responsibilities include sanitation, maintaining an accounting and inventory control system, estimating the amount of food needed, purchasing food supplies, and planning menus. Nutritional aspects of healthy cooking are increasingly incorporated into the chefs menu.

This certificate will allow the student to gain sufficient knowledge and skill to become employable in a commercial baking and cake decorating environment. Bakeries, pastry shops and candy shops are potential employers. Many large department stores, grocery stores, hotels and private clubs also hire our graduates. Entrepreneurs that are interested in having these skills to support their own plan are also welcome.

A good general education, good reading ability, and a working knowledge of mathematics is important so that students can interpret weights and measures, calculate recipes, and understand cost control, inventory control and forecasting.

Career Opportunities

According to the U.S. Bureau of Labor Statistics and the National Restaurant Association, meal preparation continues to shift out of the home, providing plentiful opportunities for chefs, cooks, and other food service workers. Americans spend more than \$300 billion each year on meals eaten outside the home. The service industry currently employs 9,631,900 individuals and is projected to swell by 7.7% by 2018.

Opportunities are available in hotels, restaurants, resorts, clubs, catering and corporate dining, government and school kitchens. Institutional opportunities include health care, schools, corporations, and government facilities. Culinary Arts careers can lead in many different directions such as hospitality management, sales, product development, or owning your own business.

Program Outcomes

1. Graduates will be proficient in the preparation of various cakes, pastries and icings.
2. Graduates will demonstrate skilled use of piping bag and decorating technique.
3. Graduates will be eligible for Minnesota Food Manager Certification.
4. Graduates will be prepared for immediate employment in bakery.

Program Faculty

Sean Jones sean.jones@saintpaul.edu
 Manfred Krug manfred.krug@saintpaul.edu
 Nathan Sartain nathan.sartain@saintpaul.edu

Professional Focus

This program offers a focused, hands-on, professional approach to baking breads, cakes and pastries, including development of marketable cake decorating skills.

Transferable Credits

Credits completed in the Pastry and Baking Certificate program apply to the Culinary Arts Diploma and AAS Degree programs.

Textbook and Supply Costs

Students should expect to spend approximately \$400.00 for books, uniform, and culinary supplies. This cost is in addition to the cost of tuition and fees.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CULA 1405 Culinary Arts Foundations 1	2*
<input type="checkbox"/> CULA 1425 Fundamentals of Pastry	1*
<input type="checkbox"/> CULA 1455 Food Safety and Sanitation	2
<input type="checkbox"/> CULA 1465 Culinary Nutrition Theory	2
<input type="checkbox"/> CULA 1565 Principles of Culinary Leadership	2
<input type="checkbox"/> CULA 1575 Artisan Baking and Pastry	2*
<input type="checkbox"/> CULA 2230 Food, Beverage, Labor Cost Control	3
Subtotal	14

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

Must be completed prior to starting third semester

<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences – 3 cr OR	
Goal 4: Mathematical /Logical Reasoning – 3 cr	
General Education Requirements	3

Total Program Credits 17

*Course has a differential tuition rate. Check the Course Schedule at www.saintpaul.edu/CourseSchedule for current course costs.

Program Start Dates

Fall, Spring

Course Sequence

This certificate can be completed in a variety of ways. Courses may be offered in the day or evening.

First Semester

CULA 1405 Culinary Arts Foundations 1	2*
CULA 1425 Fundamentals of Pastry	1*
CULA 1455 Food Safety and Sanitation	2
CULA 1465 Culinary Nutrition Theory	2
CULA 1565 Principles of Culinary Leadership	2
CULA 1575 Artisan Baking and Pastry	2*
CULA 2230 Food, Beverage, Labor Cost Control	3
Goal 4: Mathematical/Logical Reasoning	3
Total Semester Credits	17

Total Program Credits 17

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 60+ on Reading Comprehension or grade of "C" or better in READ 0721

Writing: Any

Arithmetic: Score of 52+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Restaurant Management CERTIFICATE

Program Overview

The Restaurant Management curriculum introduces students to the management of today's exciting hospitality and entertainment industries with a focus on restaurant management. Students will receive a solid foundation in business practice related to the growing food and beverage industry. Courses will examine areas of food service operations including supervision, management and labor, and cost control.

Career Opportunities

According to the Minnesota Department of Revenue and the Minnesota Department of Employment and Economic Development, there are 245,000 full and part-time jobs and

4.3 billion dollars in wages in the Leisure and Hospitality sector. There are a wide variety of employment opportunities in restaurant and catering management. Restaurants are listed by MN DEED as one of the industries adding the most jobs in 2012-2022.

Program Outcomes

1. Graduates will demonstrate safe food preparation and sanitation training.
2. Graduates will demonstrate effective communication skills in interactions with staff and guests.
3. Graduates will have knowledge of wine terminology and describe various wine classifications.
4. Graduates will describe how food and beverages contribute to the success of special events.

Program Faculty

Craig Maus craig.maus@saintpaul.edu
651.846.1531

Part-time/Full-time Options

These programs can be completed by using a combination of day, evening, and Web-enhanced courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> ACCT 1411 Principles of Accounting 1	4
<input type="checkbox"/> BUSN 2450 Management Fundamentals	3
<input type="checkbox"/> CULA 1455 Food Safety and Sanitation	2
<input type="checkbox"/> CULA 1565 Principles of Culinary Leadership	2
<input type="checkbox"/> CULA 1600 Professional Introduction to Wine	2
<input type="checkbox"/> CULA 2230 Food/Beverage/Labor Cost Control	3
<input type="checkbox"/> HMRS 1490 Talent Management	3
<input type="checkbox"/> HSPM 2440 Hospitality Marketing and Sales	3
<input type="checkbox"/> HSPM 1440 Event Management and Planning	3

Total Program Credits 25

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

BUSN 2450 Management Fundamentals	3
CULA 1455 Food Safety and Sanitation	2
CULA 1565 Principles of Culinary Leadership	2
CULA 1600 Professional Introduction to Wine	2
HSPM 2440 Hospitality Marketing and Sales	3
Total Semester Credits	12

Second Semester

ACCT 1411 Principles of Accounting 1	4
CULA 2230 Food/Beverage/Labor Cost Control	3
HMRS 1490 Talent Management	3
HSPM 1440 Event Management and Planning	3
Total Semester Credits	13

Total Program Credits 25

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements in addition to having acquired previous technical computer skills:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Arithmetic: Score of 20+

Degree option may have a greater requirement than this certificate.

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Wine Professional CERTIFICATE

Program Overview

The Wine Professional Certificate provides the graduate with a strong knowledge of wine, wine service skills, and wine marketing strategies.

Career Opportunities

The wine industry is rapidly expanding within the United States, where wine sales represent the largest wine consumer market in the world. Global wine consumption is predicted to grow another 6.2 percent through 2015, an increase of two billion bottles. Wine sales have now surpassed beer sales, with millennials rapidly adapting to wine over beer. Wine sales are an important profit center for the restaurant/hospitality industry, and thus a comprehensive knowledge of wine is critical for maximizing outcomes.

Opportunities are available in hotels, restaurants, resorts, clubs, catering and corporate dining.

Graduates of the Wine Professional Certificate will be prepared for careers in the restaurant/hospitality industry, wine distribution, and wholesale/retail wine trade.

Program Outcomes

1. Graduates will have knowledge and skills in professional tasting techniques for assessment and evaluation of wine.
2. Graduates will have knowledge and skills in wine service techniques.
3. Graduates will have knowledge and skills in wine business considerations.
4. Graduates will have knowledge and skills in wine merchandising, marketing and public relations.

Program Faculty

Nikki Erpelding nikki.erpelding@saintpaul.edu

Program Requirements

- Check off when completed
- All credits must be completed in one semester.
- Must be 21 years of age**

Course	Cr
<input type="checkbox"/> CULA 1600 Professional Introduction to Wine . . .	2
<input type="checkbox"/> CULA 1610 Flavor Dynamics of Wine.	2*
<input type="checkbox"/> CULA 1620 Professional Wine Service**	1**
<input type="checkbox"/> CULA 1630 Strategies for Pairing Food and Wine	2
<input type="checkbox"/> CULA 1640 Wine Marketing	2

Total Program Credits 9

*Course has a differential tuition rate. Check the Course Schedule at www.saintpaul.edu/CourseSchedule for current course costs.

**Alcohol awareness/server training is part of CULA 1620

Program Start Dates

Fall

Course Sequence

The following sequence is required.

- All courses must be completed within the same semester.
- Program is not eligible for financial aid.

One Semester

CULA 1600 Professional Introduction to Wine	2
CULA 1610 Flavor Dynamics of Wine	2
CULA 1620 Professional Wine Service	1
CULA 1630 Strategies for Pairing Food and Wine . . .	2
CULA 1640 Wine Marketing	2
Total Semester Credits.	9

Total Program Credits 9

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:
Degree option may have a greater requirement than this certificate.
Must be 21 years of age.

236C

Wine and Artisan Foods CERTIFICATE

Program Overview

The Wine and Artisan Foods certificate provides the graduate with a strong knowledge of wine, wine service skills and wine marketing strategies in addition to current trends in food and wine pairing and preparing Artisan Foods.

Career Opportunities

The wine industry is rapidly expanding within the United States, where wine sales represent the largest wine consumer market in the world. Global wine consumption is predicted to grow another 6.2 percent through 2015, an increase of two billion bottles. Wine sales have now surpassed beer sales, with millennials rapidly adapting to wine over beer. Wine sales are an important profit center for the restaurant/hospitality industry, and thus a comprehensive knowledge of wine is critical for maximizing outcomes.

Opportunities are available in hotels, restaurants, wine bars, resorts, clubs, catering and corporate dining.

Program Outcomes

1. Graduates will have knowledge and skills in professional tasting techniques for assessment and evaluation of wine.
2. Graduates will have knowledge and skills in wine service techniques.
3. Graduates will have knowledge and skills in wine business considerations.
4. Graduates will have knowledge and skills in wine merchandising, marketing and public relations.
5. Graduates will have the knowledge and skills of artisan foods preparation and wine pairing skills necessary for a full service restaurant.

Program Faculty

Nikki Erpelding nikki.erpelding@saintpaul.edu
Program Advisor

Sean Jones sean.jones@saintpaul.edu
Artisan Courses

Program Requirements

- Check off when completed
- Must be 21 years of age**

Course	Cr
<input type="checkbox"/> CULA 1600 Professional Introduction to Wine . . .	2
<input type="checkbox"/> CULA 1610 Flavor Dynamics of Wine	2*
<input type="checkbox"/> CULA 1620 Professional Wine Service	1**
<input type="checkbox"/> CULA 1630 Strategies for Pairing Food and Wine	2
<input type="checkbox"/> CULA 1640 Wine Marketing	2
<input type="checkbox"/> CULA 3630 Artisan Baking	3
<input type="checkbox"/> CULA 3635 Artisan Cheese	3
<input type="checkbox"/> CULA 3641 Charcuterie	2

Total Program Credits 17

* Course has a differential tuition rate. Check the Course Schedule at www.saintpaul.edu/CourseSchedule for current course costs.

** Alcohol awareness/server training is part of CULA 1620

Program Start Dates

Fall – Wine Courses
Summer – Artisan Courses

Course Sequence

Not all courses are offered each semester. Students should consult with the Program Advisor each semester.

First Semester (Spring or Fall)

CULA 1600 Professional Introduction to Wine	2
CULA 1610 Flavor Dynamics of Wine	2
CULA 1620 Professional Wine Service**.	1
CULA 1630 Strategies for Pairing Food and Wine	2
CULA 1640 Wine Marketing	2
Total Semester Credits.	9

Second Semester (Summer only)

CULA 3630 Artisan Baking	3
CULA 3635 Artisan Cheese	3
CULA 3641 Charcuterie	2
Total Semester Credits.	8

Total Program Credits 17

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 60+ on Reading Comprehension or grade of "C" or better in ENGL 0921

Arithmetic: Score of 52+

Must be 21 years of age.

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Sign Language Interpreter/Transliterater AAS DEGREE

Program Overview

The Sign Language Interpreter/Transliterater AAS Degree program prepares individuals to work as interpreter transliterators facilitating and mediating communication between Deaf/Hard of Hearing/Deaf-Blind and hearing people. Interpreters must convey accurate messages, feelings and attitudes of participants, whether those messages are spoken or signed. To accomplish this, competency in English and in American Sign Language are necessary. A strong academic background, traits that demonstrate maturity, responsibility, flexibility, and the ability to work well under pressure, are assets.

The curriculum requires both general education courses as well as courses specifically related to the Deaf Community and interpreting. The program covers a variety of subject areas which include: ASL linguistics and language development, interpreting process theory and application, interpreter roles/responsibilities, interpreter's Code of Professional Conduct, history of deaf people and their culture, and the historical evolution of the interpreting profession. Interpreting and Transliterating skills courses provide guided practice in developing the skills necessary to effectively interpret/transliterate.

Students will experience a variety of learning environments including classroom work, laboratory practice and field placement. Students will be required to have both in-class and out-of-class experiences with members of the Deaf Community to further develop ASL fluency and cultural awareness.

Career Opportunities

Graduates will be qualified for careers as entry-level sign language interpreters with social service agencies, educational programs, community-based settings, or recreational situations. The employment outlook, due to accessibility legislation, has increased the need for interpreters.

Graduates will have opportunities to further their education and to specialize in their work through professional affiliations or by obtaining national certification. Graduates who plan to work in K-12 educational settings must hold a Provisional Certificate which allows them to become a practitioner for a maximum of two years or until they obtain national certification.

Program Outcomes

1. Graduates will have an understanding and knowledge about the theoretical, ethical, and practical foundations of the interpreting field needed to pass the NAD-RID National Interpreter Certification (NIC) written test.

2. Graduates will have the knowledge and skills to interpret between American Sign Language and English.
3. Graduates will have the knowledge and skills to transliterate between spoken English and a signed form of English.
4. Graduates will have the knowledge and skills to function as cross-cultural mediators in order to transmit and transfer culturally-based linguistic and non-linguistic information.
5. Graduates will be informed of the necessary employment knowledge, and professional behaviors that are requisite for employment as Sign Language Interpreters/Transliteraters.
6. Graduates will sit for national certification within two years of graduation.

Program Faculty

Linda Gill linda.gill@saintpaul.edu
 Patty O'Connell patricia.oconnell@saintpaul.edu

Special Features

The Sign Language Interpreter/Transliterater Program is one of the original six interpreter programs in the United States. It was established in 1972.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between the following program and post-secondary institutions for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Sign Language Interpreter/Transliterater AAS

- BA Individualized Studies
Metropolitan State University
- BS Applied Organizational Studies
Minnesota State University, Mankato
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BA Health Care Administration
Concordia University, St. Paul

Program Start Dates

Fall

Program-Specific Admission Process

The Sign Language Interpreter/Transliterater program has a program-specific admission process.

Admission requirements include completing the following course work before submitting the Program Major Application:

- American Sign Language 1 with a "C" or better
- American Sign Language 2 with a "C" or better
- American Sign Language 3 with a combined GPA of 3.0 in ASL 3 & ASL 4
- American Sign Language 4 with a combined GPA of 3.0 in ASL 3 & ASL 4
- English Composition 1 (ENGL 1711 or comparable course) with a "C" or better
- Psychology Throughout the Lifespan (PSYC 1720) preferred; General Psychology (PSYC 1710) accepted. Course must be completed with a "C" or better

Program Major Application Form Submission

The Program Major Application form is called the "Application to Sign Language Interpreter/Transliterater AAS Degree Major" and is available on the program Web page. On the Program Major Application form, students verify satisfactory completion or courses in progress of the above requirements.

Above average skills on college assessment tests for reading and writing English are used to determine entry into the program.

ASL Courses must have been taken within the past 18 months:

Students who have not had recent ASL courses (within the past 18 months) at date of application will need to refresh their skills by repeating their last ASL course or by taking ASL 5 during the summer term prior to beginning the Sign Language Interpreter/Transliterater Program.

The Credit by Examination/Test-Out is available for ASL 1 and ASL 2 only. Credit by Examination/Test-Out are not transferable from another educational institution.

Continued on next page

Minimum Program Entry Requirements

Complete prerequisite ASL 1 and ASL 2 with grade of "C" or better, ASL 3 and ASL 4 with a combined GPA of 3.0. Complete prerequisite of Composition 1 (ENGL 1711) and Psychology Throughout the Lifespan (PSYC 1720) preferred; General Psychology (PSYC 1710) accepted. Course must be completed with "C" grade or better.

It is necessary for students in the Sign Language Interpreter/Transliterater Program to be able to process auditory and visual information.

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 52+

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

(7056) 049A

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Sign Language Interpreter/Transliterator AAS DEGREE *(continued)*

Program Requirements

Check off when completed

Program Prerequisites

- ASLS 1411 American Sign Language 1 (3 cr) with a grade of "C" or better
- ASLS 1412 American Sign Language 2 (3 cr) with a grade of "C" or better
- ASLS 1413 American Sign Language 3 (3 cr) with a combined GPA of 3.0 in ASL 3 & ASL 4
- ASLS 1414 American Sign Language 4 (3 cr) with a combined GPA of 3.0 in ASL 3 & ASL 4

Pre-Core Program General Education Courses

Prior to Official Acceptance into Program: Cr

- In addition to completing the Program Prerequisites above, the following two General Education courses must be completed, or in progress with, a "C" or better grade prior to submitting your Program Major Application called the Application to Sign Language Interpreter/Transliterator AAS Degree Major form.
- ENGL 1711 English Composition 1 (or comparable course) (MnTC - Goal 1) 4
 - PSYC 1720 Psychology Throughout the Lifespan preferred; (PSYC 1710 General Psychology accepted) (MnTC - Goal 1-10) 3
 - Pre-Core General Education Requirements 7**

Core Courses Cr

The following Core courses can only be taken after official acceptance into the Sign Language Interpreter/Transliterator program.

- ASLS 1420 ASL Linguistics 4
- ASLS 1430 Classifiers 3
- ASLS 1435 Deaf Studies/Culture 3
- INTP 1440 Orientation to Interpreting 3
- INTP 1442 English Grammar for Sign Language Interpreters 2
- INTP 1500 Interpreting Process 2
- INTP 1512 Consecutive Interpreting 1 4
- INTP 1513 Consecutive Interpreting 2 2
- INTP 2411 Sign to Voice Interpreting 1 4
- INTP 2412 Sign to Voice Interpreting 2 2
- INTP 2421 Voice to Sign Interpreting 1 4
- INTP 2422 Voice to Sign Interpreting 2 2
- INTP 2431 Transliterating 1 4
- INTP 2432 Transliterating 2 2
- INTP 2585 Internship Seminar 1
- INTP 2592 Interpreter Internship 5
- Technical Electives 4

Select 2 credits from the following electives:

- ASLS 1415 American Sign Language 5 3
- ASLS 1443 ASL Fingerspelling and Numbers 3
- ASLS 1446 ASL Non-Manual Markers 2
- ASLS 1448 American Sign Language Semantics 2
- INTP 1465 Special Topics: Interpreting 1-5

2 credits must be taken from the following electives:

- INTP 2410 Video Relay/Video Remote Interpreting OR 2
- INTP 2450 Deaf/Blind Interpreting 2

Core Credits 51

Remaining General Education/MnTC Requirements Cr

Must complete at least 9 remaining credits from the Minnesota Transfer Curriculum (MnTC)

- Goal 1: Communication 3
SPCH XXXX (Goal 1 only) – 3 cr
- Goal 3 or Goal 4 3
Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning
- Goal 6: Humanities and Fine Arts 3

Remaining General Education Requirements 9

Core Credits 51

Pre-Core General Education Requirements 7

Total Program Credits 67

Course Sequence

The following sequence is recommended for a full-time student. Students are encouraged to take a portion of their general education requirements in the summer term during their program in order to lessen their academic load during the school year.

Part-time day and evening courses are available during the fall and spring of the first year of the 2-year program. The summer course between first and second year begins day programming. The second year of the program must be taken full-time, days. Not all courses are offered each semester; a selection of courses is offered summer term.

Required General Education Courses to be taken prior, or in progress, to submitting Program Major Application:

- ENGL 1711 English Composition 1 4
- PSYC 1720 Psychology Throughout the Lifespan preferred; (PSYC 1710 General Psychology accepted) 3
- Any Semester prior to Program Acceptance 7**

With Official Acceptance into the Program, students begin taking INTP/ASLS Core Courses as follows:

Fall Semester (First Term)

- ASLS 1420 ASL Linguistics 4
must be taken concurrently with or previous to INTP 1500 and INTP 1442
- ASLS 1435 Deaf Studies/Culture 3
can be taken concurrently with ASL 1-4
- INTP 1442 English Grammar for Sign Language Interpreters 2
must be taken concurrently with or previous to ASLS 1420 and INTP 1500
- INTP 1500 Interpreting Process 2
must be taken concurrently with ASLS 1420 and INTP 1442
- Goal 1: Communication SPCH XXXX (Goal 1 only) 3
- Total Semester Credits 14**

Spring Semester (Second Term)

- ASLS 1430 Classifiers 3
- INTP 1440 Orientation to Interpreting 3
- INTP 1512 Consecutive Interpreting 1 4
- Goal 3: Natural Sciences OR Goal 4: Mathematical/Logical Reasoning 3
- Total Semester Credits 13**

Summer Term (Third Term)

- INTP 1513 Consecutive Interpreting 2 2
- Technical Electives 2
- Goal 6: Humanities and Fine Arts 3
- Total Semester Credits 7**

Fall Semester (Fourth Term)

- INTP 2411 Sign to Voice Interpreting 1 4
- INTP 2421 Voice to Sign Interpreting 1 4
- INTP 2431 Transliterating 1 4
- INTP 2585 Internship Seminar 1
- Total Semester Credits 13**

Spring Semester (Fifth Term)

- INTP 2412 Sign to Voice Interpreting 2 2
- INTP 2422 Voice to Sign Interpreting 2 2
- INTP 2432 Transliterating 2 2
- INTP 2592 Interpreter Internship 5
- Technical Electives 2
- Total Semester Credits 13**

Total Program Credits 67

All INTP core courses as well as ASLS courses require a grade of "C" or better.

STEM: Science, Technology, Engineering & Mathematics

Science & Mathematics Courses

Science

Biochemistry	168
Biology	168
Chemistry	168
Natural Sciences	168
Physics	169

Mathematics

Mathematics	169
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Science, Technology and Engineering Programs

Science

Science Technician AS Degree (60 Credits)	170
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Nanoscience

Nanoscience Technology AAS Degree (72 Credits)	171
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Engineering

Engineering Broad Field AS Degree (60 Credits)	172
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Computer Graphics and Visualization

Computer Graphics and Visualization AS Degree (60 Credits)	174
Visualization Technology AAS Degree (60 Credits)	175
Visualization Technology Certificate (21 Credits)	176
Computer Animation Certificate (18 Credits)	177
Web Design Certificate (18 Credits)	178

Computer Science

CyberSecurity AAS Degree (60 Credits)	179
CyberSecurity Certificate (24 Credits) NEW!	181
Computer Science AS Degree (60 Credits)	182
Management Information Systems AS Degree (60 Credits)	184
Computer Network Engineering AAS Degree (60 Credits)	186
Computer Programming AAS Degree (60 Credits)	188
Enterprise Computing Certificate (28 Credits) NEW!	190
Network Administration Certificate (24 Credits)	191
Java Programming Certificate (24 Credits)	193
Web Based 2D Game Development Certificate (24 Credits) NEW!	195
Web Development Certificate (24 Credits)	197
Mobile Development Certificate (24 Credits)	199

STEM: Science, Technology, Engineering & Mathematics Courses

Course delivery methods change on a semester basis. Please check the current course schedule for the most up-to-date information at www.saintpaul.edu/CourseSchedule.

Science

Biochemistry

Biochemistry is the study of the chemical reactions in living organisms, and it contains aspects of organic and inorganic chemistry as well as biology. Topics covered in biochemistry include protein structure and function, as well as cell metabolic processes that include lipids, carbohydrates, proteins, and nucleic acids. Biochemistry includes fundamental concepts that can be applied to molecular biology, immunochemistry, neurochemistry, and biophysical chemistry. It has a wide range of applications which can be applied to fields such as medicine, agriculture, toxicology, and engineering to name a few. Biochemists often work in modern research laboratories and participate in stimulating, creative work. They interact with scientists from other fields because their research is intertwined. The application of biochemistry to other fields focuses on improving the quality of life. Opportunities for employment in this field are expected to grow in industry, medicine, and genetic research.

Course		Cr
BIOC 1730	Biochemical Laboratory Exploration	4
BIOC 1790	Special Topics in Biochemistry	1-6
BIOC 2700	Biochemistry	4
BIOC 2790	Biochemistry Internship/Research Project	1-4

Biology

The Biology department provides high quality educational experiences in the biological sciences including: environmental science, general biology for majors and non-majors, nutrition, medical terminology, forensic science, biology of men and women, human anatomy and physiology for majors and non-majors, and microbiology. The faculty believe biology occupies a central position in the physical sciences and that an understanding of fundamental biological principles enables students to make better-informed decisions for work and life roles. The biology faculty promote active learning in lecture and lab activities, interacting closely with students at various levels of academic development. Biology courses serve the College and students by providing offerings that satisfy requirements for general education, allied health and pre-professional transfer programs. Biology faculty are committed to excellence in teaching and scholarship providing a variety of lab/field experiences and online applications.

Course		Cr
BIOL 1471	Medical Terminology	2
BIOL 1725	Environmental Science	4
BIOL 1730	Human Body Systems	3
BIOL 1735	Understanding Biology	4
BIOL 1740	General Biology 1: The Living Cell	5
BIOL 1745	General Biology 2: The Living World	5
BIOL 1760	Nutrition	3
BIOL 1782	Introduction to Forensic Science	4
BIOL 1785	Biology of Men and Women	3
BIOL 1790	Special Topics in Biology	1-6
BIOL 2721	Human Anatomy and Physiology 1	4
BIOL 2722	Human Anatomy and Physiology 2	4
BIOL 2750	General Microbiology	4
BIOL 2760	Cell and Molecular Biology	5
BIOL 2770	Biology Internship	1-4

Chemistry

The Chemistry department offers courses that provide an understanding of chemical principles across the discipline. The chemistry faculty believe that an understanding of fundamental chemical principles enables students to make better-informed decisions on a wide variety of issues related to work and life roles. The faculty interact closely with students, a diverse population at various levels of academic development, to help them develop capabilities in science and become lifelong learners. Chemistry courses fulfill requirements for general education and various graduation requirements.

Course		Cr
CHEM 1700	Chemistry Concepts	4
CHEM 1711	Principles of Chemistry 1	4
CHEM 1712	Principles of Chemistry 2	4
CHEM 2720	Organic Chemistry 1	5
CHEM 2721	Organic Chemistry 2	5
CHEM 2730	Instrumental Analysis	4
CHEM 2790	Chemical Technology Laboratory Research Project	1-4
CHEM 2791	Cleanroom Lab Research Project	1-4
CHEM 2795	Special Topics in Chemistry	1-6

Natural Sciences

The Natural Sciences department offers courses in the areas of earth science, geology, oceanography, and meteorology. Natural Science courses fulfill Goals 3, 9 & 10 of the Minnesota Transfer Curriculum, as well as various graduation requirements.

Course		Cr
NSCI 1710	Earth Science	4
NSCI 1721	Introduction to Geology	4
NSCI 1730	Introduction to Oceanography	3
NSCI 1740	Introduction to Meteorology	3
NSCI 1750	Natural Disasters	3
NSCI 1770	Introduction to Energy and the Environment	3
NSCI 1780	Contemporary Issues in Science	3
NSCI 1782	Minnesota Geology	3
NSCI 1790	Special Topics in Natural Science	1-6
NSCI 2770	Natural Sciences Internship	1-4

Physics

The study of Physics involves the study of matter and motion, energy and forces. The Physics department offers Principles of Physics 1 and 2 as well as General Physics 1 and 2 with a calculus base. Students enroll in physics courses to fulfill the Minnesota Transfer Curriculum requirements and various graduation requirements.

Course		Cr
PHYS 1720	Principles of Physics 1	4
PHYS 1722	Principles of Physics 2	4
PHYS 1760	Descriptive Astronomy (no lab)	3
PHYS 2700	General Physics 1 (with Calculus)	5
PHYS 2710	General Physics 2 (with Calculus)	5
PHYS 2760	Introductory Astronomy (with lab)	4
PHYS 2790	Special Topics in Physics	1-6

Mathematics

Mathematics

The study of mathematics provides foundational knowledge for understanding other disciplines, as well as logical reasoning and problem solving skills for work and life roles. The department offers a full curriculum to meet the educational needs of our students such as developmental offerings, mathematics courses specific to majors and a range of general education courses including Statistics, College Algebra, Calculus, and Ordinary Differential Equations. Courses fulfill Minnesota Transfer Curriculum requirements and graduation requirements.

Course		Cr
MATH 0910*	Introductory Algebra	3
MATH 0920*	Intermediate Algebra	3
MATH 1411*	Applied Mathematics	3
MATH 1420*	Trade Algebra and Trigonometry	3
MATH 1710	Liberal Arts Mathematics	3
MATH 1730	College Algebra	3
MATH 1740	Introduction to Statistics	4
MATH 1750	Trigonometry	3
MATH 1762	Pre-Calculus	5
MATH 1790	Special Topics in Mathematics	1-6
MATH 2749	Calculus 1	4
MATH 2750	Calculus 2	4
MATH 2753	Multivariable Calculus	4
MATH 2760	Differential Equations and Linear Algebra	4

* Does not meet Minnesota Transfer Curriculum (MnTC) Distribution Requirements

Science Technician AS DEGREE

Program Overview

The Science Technician degree is designed for students who are seeking employment in a science laboratory and/or who are seeking to transfer to a four-year program.

Career Opportunities

Science technicians can work in many aspects of the laboratory process industry from basic research to clean room facility skills. Technicians operate many kinds of equipment and instrumentation, prepare samples for processing, monitor commercial production, test for product quality and collect and analyze samples. Technicians will conduct a variety of laboratory procedures, from routine process of laboratory procedures to complex research projects. A solid background in science and math along with the skills in using advanced equipment is vital for success as a Science Technician.

Program Outcomes

1. Design and conduct experiments as well as analyze and interpret the results.
2. Identify, formulate, and solve science technology problems.
3. Understand professional and ethical responsibility.
4. Apply knowledge of mathematics, science, and technology in the solution of chemical technology problems.
5. Solve science technology problems within realistic constraints such as economic, environmental, social, political, ethical, and health and safety, manufacturability, and sustainability.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between this program(s) and post-secondary institution(s) for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Science Technician AS

BS Chemistry
Metropolitan State University

Program Faculty

Travis Mills travis.mills@saintpaul.edu
Penny Starkey penny.starkey@saintpaul.edu

Transfer Advisor

Transfer Center transfer.center@saintpaul.edu

Program Requirements

- Check off when completed
- Science and Engineering Core: Required

Course	Cr
<input type="checkbox"/> BIOC 1730 Biochemical Laboratory Exploration	4
<input type="checkbox"/> CHEM 1712 Principles of Chemistry 2	4
<input type="checkbox"/> CHEM 2730 Instrumental Analysis	4
<input type="checkbox"/> ENGR 1706 Principles of Engineering	2
<input type="checkbox"/> Science Capstone Course	3
Subtotal	17

Science and Engineering Focus: Select one focus area.

Chemistry

- CHEM 2721 Organic Chemistry 2 5
- Science or Engineering Elective 8

Biochemistry

- BIOC 2700 Biochemistry 4
- Science or Engineering Electives 9

Physics

- PHYS 2710 General Physics 2 5
- Science or Engineering Elective 8

Engineering

- ENGR 2700 Intro to Problem Solving & Engineering Design 2
- Science or Engineering Elective(s) 11
- Subtotal 13**

Note: All science electives may be taken from: BIOC, BIOL, CHEM, CSCI, ENGR, NSCI, PHYS. Consult with your advisor for information about 2, 3, and 4 credit course options.

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

- Goal 1: Communication 7-9
ENGL 1711 Composition 1 – 4cr
SPCH 17XX (Goal 1 only) – 3cr
- Goal 3: Natural Science 4
CHEM 1711 Principles of Chemistry 1 – 4cr
- Goal 4: Mathematical /Logical Reasoning 8
MATH 2749 Calculus 1 – 4cr
MATH 2750 Calculus 2 – 4cr
- Goal 5: History, Social Science, and Behavior Sciences 3
- Goal 6: Humanities & Fine Arts 3
- Goals 1-10 of the MnTC 3-5
Students must select a minimum of 5 additional credits such that courses from at least six (6) goal areas of the Minnesota Transfer Curriculum are met.
- General Education Requirements 30**

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

This course sequence is recommended for a full-time (part-time) student; however, this sequence is not required.

Not all courses are offered each semester; a selection of courses is offered summer term.

Students should consult with the Program Advisor each semester.

First Semester

CHEM 1711 Principles of Chemistry 1	4
ENGR 1706 Principles of Engineering	2
ENGL 1711 Composition 1	4
History, Social, and Behavioral (Goal 5)	3
Humanities and Fine Arts (Goal 6)	3
Total Semester Credits	16

Second Semester

CHEM 1712 Principles of Chemistry 2	4
BIOC 1730 Biochemical Laboratory Exploration	4
MATH 2749 Calculus 1	4
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	15

Third Semester

CHEM 2730 Instrumental Analysis	4
MATH 2750 Calculus 2	4
MnTC Elective	3
Focus Area: Chemistry/Biochemistry: CHEM 2720 Organic Chemistry 1	5

OR

Focus Area: Physics & Engineering PHYS 2700 General Physics 1	5
Total Semester Credits	16

Fourth Semester

Capstone Course	3
MnTC Elective (ENGL 1712 Comp. 2 - recommended)	2
Focus Area	13
Total Semester Credits	18

Total Program Credits 60

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Information is subject to change.
This Program Requirements Guide is not a contract.

Nanoscience Technology AAS DEGREE

Program Overview

This program prepares students for careers in nanobiotech, nanomaterials and nanoelectronics industries. The program also provides a strong foundation applicable to environmental, energy and agricultural industries. The curriculum is a combination of classroom and laboratory experiences, with hands on use of nanoscale equipment in all 4 semesters. Students have several opportunities for individual research and exploration of nanoscale concepts. Offered in partnership with the University of Minnesota, the program provides skills and knowledge required for employment in a large number of companies. The DCTC program also provides a starting point to four year degrees at multiple institutions in many degree programs. Processes of scientific inquiry, experiment and research design, critical thinking, and communication are aspects that are woven into each course.

Career Opportunities

Nanoscience technologists work in multiple business environments including research, production, testing, training and marketing. Often this role is a bridge between scientists, engineers and other technicians. Program graduates may work independently in some aspects but most often are part of a team. Your job will include some desk work but most of your time will be spent in a laboratory environment preparing test samples, microscope operation and testing, documentation and analysis and communication of your results. These technologists do not usually do the same thing for many months at a time. Finally, although nanoelectronics related jobs may occur in a clean room, most of these jobs are in traditional company research environments and labs. The options and work environments are varied and expanding with the United States nanotech market expected to reach \$1 trillion by 2015.

Program Outcomes

1. Solve nanoscience technology problems within economic, environmental, social, political, ethical, and manufacturability constraints.
2. Explain the potential of nanoscience in multiple biological applications including nanopore, nanoparticle and nanochannel structures, diagnostics and treatment.
3. Relate nanoscale principles to imprint lithography, etching, nanotransistors, quantum computing, magnetic and electron spin memory, and holographic memory devices.
4. Fabricate structures such as nanowires, cantilevers and nanochannels.
5. Create nanomaterials, particles and crystals by various processes including colloidal suspensions, deposition, evaporation and plating

Information is subject to change.
This Program Requirements Guide is not a contract.

Program Faculty

Travis Mills travis.mills@saintpaul.edu
Deb Newberry deb.newberry@dctc.edu

Program Start Dates

Fall, Spring, Summer

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> NANO 1100 Fundamentals of Nanotechnology 1	.3
<input type="checkbox"/> NANO 1110 Student Lab Experience and Research	.3
<input type="checkbox"/> NANO 1200 Fundamentals of Nanotechnology 2	.3
<input type="checkbox"/> NANO 1210 Computer Simulation	.1
<input type="checkbox"/> NANO 2101 Nanoelectronics	.3
<input type="checkbox"/> NANO 2111 Nanobiotechnology/Agriculture	.3
<input type="checkbox"/> NANO 2121 Nanomaterials	.3
<input type="checkbox"/> NANO 2131 Manufacturing Quality Assurance	.2
<input type="checkbox"/> NANO 2140 Interdisciplinary Lab	.3
<input type="checkbox"/> NANO 2151 Career Planning and Industry Tours	.1
<input type="checkbox"/> NANO 2970 Industry Internship	.1
Subtotal	26

Second Year – Second Semester

At the University of Minnesota

<input type="checkbox"/> MT 3111 Elements of Micro Manufacturing	.3
<input type="checkbox"/> MT 3112 Elements of Micro & Nano Man Lab	.1
<input type="checkbox"/> MT 3121 Thin Films Deposition	.3
<input type="checkbox"/> MT 3131 Intro to Materials Characterization	.3
<input type="checkbox"/> MT 3132 Materials Characterization Lab	.1
<input type="checkbox"/> MT 3141 Prin & Apps of Bionanotech	.3
<input type="checkbox"/> MT 3142 Nanoparticles & Biotech Lab	.1
Subtotal	15

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	.7
ENGL 1711 Composition 1 – 4 cr	
SPCH 1720 Interpersonal Communications – 3 cr	
<input type="checkbox"/> Goal 3 Natural Sciences	.17
BIOL 1740 General Biology 1 – 5 cr	
CHEM 1700 Chemistry Concepts – 4 cr	
PHYS 1720 Principles of Physics 1 – 4 cr	
PHYS 1722 Principles of Physics 2 – 4 cr	
<input type="checkbox"/> Goal 4: Mathematics/Logical Reasoning	.7
MATH 1730 College Algebra – 3 cr	
MATH 1740 Intro to Statistics – 4 cr	
General Education Requirements	31

Total Program Credits

NANO courses may be offered at Saint Paul College or Dakota County Technical College

Course Sequence

This course sequence is recommended for a full-time (part-time) student; however, this sequence is not required.

Not all courses are offered each semester; a selection of courses is offered summer term. Students should consult with the Program Advisor each semester.

First Semester

NANO 1100 Fundamentals of Nanotechnology 1	.3
PHYS 1720 Principles of Physics 1	.4
BIOL 1740 General Biology 1	.5
ENGL 1711 Composition 1	.4
MATH 1730 College Algebra	.3
Total Semester Credits	19

Second Semester

NANO 1110 Student Lab Experience and Research	.3
NANO 1200 Fundamentals of Nanotechnology 2	.3
NANO 1210 Computer Simulation	.1
CHEM 1700 Chemistry Concepts	.4
MATH 1740 Introduction to Statistics	.4
PHYS 1722 Principles of Physics 2	.4
SPCH 1720 Interpersonal Communication	.3
Total Semester Credits	22

Third Semester

NANO 2101 Nanoelectronics	.3
NANO 2111 Nanobiotechnology/Agriculture	.3
NANO 2121 Nanomaterials	.3
NANO 2131 Manufacturing Quality Assurance	.2
NANO 2140 Interdisciplinary Lab	.3
NANO 2151 Career Planning and Industry Tours	.1
Total Semester Credits	15

Fourth Semester – At the University of Minn.

MT 3111 Elements of Microelectronic Manufacturing	.3
MT 3112 Elements of Micro & Nano Manufacturing Lab	.1
MT 3121 Thin Films Deposition	.3
MT 3131 Intro to Materials Characterization	.3
MT 3132 Materials Characterization Lab	.1
MT 3141 Principles & Applications of Bionanotech	.3
MT 3142 Nanoparticles & Biotech Lab	.1
NANO 2970 Industry Internship & Observation	.1
Total Semester Credits	16

Total Program Credits

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain courses in the program have additional prerequisites.

380A

Engineering Broad Field AS DEGREE

Program Overview

Engineering is a profession that uses basic knowledge from the mathematical and natural sciences and utilizes the materials and forces of nature to develop systems that will perform optimally and economically for the benefit of mankind. The Engineering Broad Field program is designed to provide for a student's first two years of a four-year Engineering degree. The curriculum is designed to meet the needs of those students who have not yet decided on a specific engineering field. The program focuses on developing a fundamental knowledge of physics, chemistry, and mathematics.

Career Opportunities

Engineering occupations are expected to grow by more than 10% through 2020 according to the Bureau of Labor Statistics. Engineering includes careers with branches in civil, agricultural, chemical, electrical, mechanical, and aerospace sciences to name a few. This degree is part of a state-wide articulation program and designed to transfer easily.

Program Outcomes

1. Apply knowledge of mathematics, science, and engineering in the solution of engineering problems.
2. Design and conduct experiments as well as analyze and interpret results.
3. Design and engineering system, component, or process to meet the desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. Understand professional and ethical responsibility.
5. Recognize the need for and develop an ability to engage in life-long professional development and learning.
6. Utilize techniques, skills, and modern engineering tools necessary for engineering practice.

Information is subject to change.
This Program Requirements Guide is not a contract.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> ENGR 1707 Introduction to Engineering	3

Choose a focus:

Electrical

<input type="checkbox"/> ENGR 1717 Circuit Analysis 1	4
<input type="checkbox"/> ENGR1709 Digital Electronics	3
<input type="checkbox"/> ENGR 2705 Statics	3
<input type="checkbox"/> ENGR 2710 Dynamics	3
<input type="checkbox"/> CHEM 1712 Principles of Chemistry 2	4

Mechanical or Manufacturing or Composite

<input type="checkbox"/> ENGR 2705 Statics	3
<input type="checkbox"/> ENGR 2710 Dynamics	3
<input type="checkbox"/> ENGR 2712 Deformable Body Mechanics	3
<input type="checkbox"/> ENGR 1717 Circuit Analysis 1	4
<input type="checkbox"/> CHEM 1712 Principles of Chemistry 2	4

Civil

<input type="checkbox"/> ENGR 2705 Statics	3
<input type="checkbox"/> ENGR 2710 Dynamics	3
<input type="checkbox"/> ENGR 2712 Deformable Body Mechanics	3
<input type="checkbox"/> CHEM 1712 Principles of Chemistry 2	4
<input type="checkbox"/> ENGR 2715 Thermodynamics	3
<input type="checkbox"/> ENGR Elective	1

Computer

<input type="checkbox"/> ENGR 1717 Circuit Analysis 1	4
<input type="checkbox"/> ENGR1709 Digital Electronics	3
<input type="checkbox"/> CSCI 1410 Comp. Science & Info Systems	4
<input type="checkbox"/> CSCI Elective	3
<input type="checkbox"/> CSCI Elective	3

Integrated

<input type="checkbox"/> ENGR 2705 Statics	3
<input type="checkbox"/> ENGR 2710 Dynamics	3
<input type="checkbox"/> ENGR 1717 Circuit Analysis 1	4
<input type="checkbox"/> CHEM 1712 Principles of Chemistry 2	4
<input type="checkbox"/> ENGR Elective	3
Subtotal	20

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	4
ENGL 1711 Composition 1 – 4cr	
<input type="checkbox"/> Goal 3: Natural Sciences	14
CHEM 1711 Principles of Chemistry – 4 cr	
PHYS 2700 General Physics – 5 cr	
PHYS 2710 General Physics – 5 cr	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning	16
MATH 2749 Calculus 1 – 4 cr	
MATH 2750 Calculus 2 – 4 cr	
MATH 2753 Multivariable Calculus – 4 cr	
MATH 2760 Differential Equations & Linear Algebra – 4 cr	
<input type="checkbox"/> Goal 5: History, Social Science, and Behavior Sciences	3
<input type="checkbox"/> Goal 6: Humanities & Fine Arts	3
*The course selected for goal area 5 or 6 must also satisfy goal 7, 8, 9, or 10.	
General Education Requirements	40

Total Program Credits60

Program Faculty

Pam Schumacher pam.schumacher@saintpaul.edu

Transfer Advisor

Transfer Center transfer.center@saintpaul.edu

Part-Time/Full-Time Options

This program can be completed by using a combination of day, evening, Saturday, hybrid, and online courses. Part-time and full-time options are available. Costs will vary depending on part-time or full-time enrollment.

Course Sequence

The course sequence listed on the back of this guide is recommended for a full-time student. Not all courses are offered every semester. Students should consult with the Program Advisor each semester.

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain courses in the program have additional prerequisites.

382S (7211)

Engineering Broad Field AS DEGREE *(continued)*

Program Start Dates

Fall, Spring, Summer

Course Sequence

This course sequence is recommended for a full-time student. Not all courses are offered every semester. Students should consult with the Program Advisor each semester.

First Semester

MATH 2749 Calculus 1	4
CHEM 1711 Principles of Chemistry 1	4
ENGR 1707 Introduction to Engineering	3
ENGL 1711 Composition 1	4
Total Semester Credits	15

Second Semester

MATH 2750 Calculus 2	4
PHYS 2700 Gen Physics 1	5
CHEM 1712 Principles of Chemistry 2	4
Goal 5	3
Total Semester Credits	16

Third Semester

MATH 2753 Multivariable Calculus	4
PHYS 2710 Gen Physics 2	5
ENGR 2705 Statics	3
Goal 6	3
Total Semester Credits	15

Fourth Semester

MATH 2760 Differential Equations & Linear Algebra	4
ENGR 1717 Circuit Analysis	4
ENGR 2710 Dynamics	3
ENGR 2712 Deformable Body Mechanics	3
Total Semester Credits	14

Total Program Credits60

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Engineering Broad Field

BSC	Civil Engineering	Minnesota State University-Mankato
BSEC	Computer Engineering	Minnesota State University-Mankato
BSEE	Electrical Engineering	Minnesota State University-Mankato
BSE	General Engineering	Minnesota State University-Mankato
BSME	Mechanical Engineering	Minnesota State University-Mankato
BSE	Integrated Engineering	Minnesota State University-Mankato *offered at Normandale location
BS	Computer Engineering	Saint Cloud State University
BS	Electrical Engineering	Saint Cloud State University
BS	Manufacturing Engineering	Saint Cloud State University
BS	Mechanical Engineering	Saint Cloud State University
BS	Composite Materials Engineering	Winona State University

Computer Graphics and Visualization AS DEGREE

Program Overview

This program prepares students for jobs in the exciting computer graphics and animation field. Students will learn how to take an idea from concept through production including computer graphics, computer animation, sound and video.

Computer Graphics Specialists can work in a wide variety of creative jobs including web design, film and animation production, CD ROM production and any organization that can benefit from these special talents. With more and more animation moving to the desktop, the computer graphics specialist is becoming a high demand career.

The student should be creative and have excellent communication skills. Students should exhibit qualities of patience, and preciseness, and should enjoy working independently and on team projects.

Career Opportunities

The computer graphics field relates to many jobs in the multimedia area including but not limited to:

- Web Designer
- Computer Animator
- Computer Game Designer and Developer
- Multimedia Developer

Program Outcomes

1. Graduates will have knowledge and skills in web design.
2. Graduates will have knowledge and skills in computer animation.
3. Graduates will have knowledge and skills in digital sound and video production.
4. Graduates will have knowledge and skills in digital photography.
5. Graduates of this program may choose to continue their education at a four-year institution in computer graphics, technical communication or a related field.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between this program(s) and post-secondary institution(s) for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Computer Graphics and Visualization AS

- BS Information Technology
Saint Mary's University-Twin Cities Campus
- BA Technical Communication and Professional Writing
Metropolitan State University

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Advisor

Darren Pearson darren.pearson@saintpaul.edu

Recommended Equipment

Digital Camera, USB Drive, Adobe Software

Estimated Book Cost

\$50 - \$75 per class

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1450 Web Fundamentals/HTML	4
<input type="checkbox"/> DGIM 1400 Introduction to Computer Graphics	4
<input type="checkbox"/> DGIM 1443 Graphical Web Design 1	2
<input type="checkbox"/> DGIM 1448 Flash 1	2
<input type="checkbox"/> DGIM 1483 Photoshop 1	2
<input type="checkbox"/> DGIM 1484 Photoshop 2	2
<input type="checkbox"/> DGIM 1540 Blogging Applications	2
<input type="checkbox"/> DGIM 2586 Digital Sound	2
<input type="checkbox"/> DGIM 2587 Digital Video 1	2
<input type="checkbox"/> Technical Electives	8
Any 8 credits in DGIM or CSCI	
Subtotal	30

General Education/MnTC Requirements

Students must select courses from at least six (6) different Goal Areas of the MnTC.

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning	3
MATH 17XX – 3 cr OR	
PHIL 1710 Logic – 3 cr	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	4
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	7
ARTS 1713 Photography 1 – 3 cr highly recommended	
<input type="checkbox"/> Goals 1-10 of the Minnesota Transfer Curriculum	9
Select a minimum of 9 additional credits	
General Education Requirements	30

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

DGIM 1400 Introduction to Computer Graphics	4
CSCI 1450 Web Fundamentals/HTML	4
DGIM 1443 Graphical Web Design 1	2
ENGL 1711 Composition I	4
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	17

Second Semester

DGIM 1448 Flash 1	2
DGIM 1483 Photoshop 1	2
DGIM 1540 Blogging Applications	2
Humanities and Fine Arts (Goal 6)	3
History, Social Science/Behavioral Science (Goal 5)	4
Total Semester Credits	13

Third Semester

DGIM 1484 Photoshop 2	2
DGIM 2586 Digital Sound	2
Technical Electives	4
Mathematical/Logical Reasoning (Goal 4)	3
Humanities and Fine Arts (Goal 6)	4
Total Semester Credits	15

Fourth Semester

DGIM 2587 Digital Video 1	2
Technical Electives	4
Mn Transfer Curriculum	9
Total Semester Credits	15

Total Program Credits 60

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

(7116) 255S

Visualization Technology AAS DEGREE

Program Overview

This program prepares students for jobs in the exciting computer graphics and animation field. Students will learn how to take an idea from concept through production, including computer graphics, computer animation, sound and video.

Computer Graphics Specialists can work in a wide variety of creative jobs including web design, film and animation production, CD ROM production and any organization that can benefit from these special talents. With more and more animation moving to the desktop, the computer graphics specialist is becoming a high demand career.

The student should be creative and have excellent communication skills. Students should exhibit qualities of patience and precision and enjoy working both independently and on team projects.

Career Opportunities

The computer graphics field relates to many jobs in the multimedia area including but not limited to:

- Web Designer
- Computer Animator
- Computer Game Designer and Developer
- Multimedia Developer

Program Outcomes

1. Graduates will have knowledge and skills in web design.
2. Graduates will have knowledge and skills in digital photography.
3. Graduates will have knowledge and skills in digital sound and video production.
4. Graduates will have developed an online portfolio of work
5. Graduates will have knowledge of freelancing and self-employment business practices

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Visualization Technology AAS

- BS Operations Management
Minnesota State University-Moorhead
- BS Marketing
Saint Mary's University-Twin Cities Campus
- BS Information Technology
Saint Mary's University-Twin Cities Campus

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Advisor

Darren Pearson darren.pearson@saintpaul.edu

Part-Time/Full-time Options

This program can be completed by using a combination of day, evening, and Saturday courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Recommended Equipment

USB Drive, Digital Camera, Adobe Software

Estimated Book Cost

\$50 - \$75 per class

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1450 Web Fundamentals/HTML	4
<input type="checkbox"/> DGIM 1400 Introduction to Computer Graphics	4
<input type="checkbox"/> DGIM 1448 Flash 1	2
<input type="checkbox"/> DGIM 1449 Flash 2	2
<input type="checkbox"/> DGIM 2560 Illustrator	4
<input type="checkbox"/> DGIM 2569 Digital Portfolio Development	2
<input type="checkbox"/> DGIM 2587 Digital Video 1	2
<input type="checkbox"/> DGIM 2588 Digital Video 2	2
<input type="checkbox"/> Technical Electives	6
Subtotal	28
Select one of the emphases listed below	12

Web Emphasis

<input type="checkbox"/> CSCI 1470 Web Design	4
<input type="checkbox"/> DGIM 1443 Graphical Web Design 1	2
<input type="checkbox"/> DGIM 1444 Graphical Web Design 2	2
<input type="checkbox"/> DGIM 1483 Photoshop 1	2
<input type="checkbox"/> DGIM 1484 Photoshop 2	2
Total Emphasis Credits	12

Animation Emphasis

<input type="checkbox"/> DGIM 1490 3D Animation Fundamentals	4
<input type="checkbox"/> DGIM 2520 3D Character Animation	4
<input type="checkbox"/> DGIM 2704 3D Animation Capstone	4
Total Emphasis Credits	12

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 4: Mathematics/Logical Reasoning	3
MATH 1730 College Algebra – 3 cr OR	
PHIL 1710 Logic – 3 cr	
<input type="checkbox"/> Goal 5: History, Social Science & Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
<input type="checkbox"/> Goals 1-10 of the Minnesota Transfer Curriculum	4
Select a minimum of 4 additional credits	
General Education Requirements	20
Total Program Credits	60

Program Start Dates

Fall, Spring

Course Sequence

The following course sequence is recommended; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

DGIM 1400 Introduction to Computer Graphics	4
CSCI 1450 Web Fundamentals/HTML	4
DGIM 1448 Flash 1	2
Emphasis Course	2
ENGL 1711 Composition I	4
Total Semester Credits	16

Second Semester

DGIM 1449 Flash 2	2
DGIM 2560 Illustrator	4
SPCH XXXX (Goal 1 only)	3
Mn Transfer Curriculum	3
Emphasis Course	3
Total Semester Credits	15

Third Semester

DGIM 2569 Digital Portfolio Development	2
DGIM 2587 Digital Video 1	2
Mn Transfer Curriculum	3
Emphasis Course	4
Technical Elective	4
Total Semester Credits	15

Fourth Semester

DGIM 2588 Digital Video 2	2
Technical Elective	2
Emphasis Course	3
Mn Transfer Curriculum	7
Total Semester Credits	14

Total Program Credits **60**

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

215A (7093)

Visualization Technology CERTIFICATE

Program Overview

This certificate program is a series of entry level courses that are part of the Visualization Technology AAS degree at Saint Paul College.

This certificate option is available for students who may choose not to complete the entire AAS degree and gain some experience with courses used in computer graphics, particularly courses in the Adobe software suite.

Career Opportunities

The computer graphics field relates to many jobs in the multimedia area including but not limited to:

- Web Designer
- Computer Animator
- Computer Game Designer and Developer
- Multimedia Developer

Program Outcomes

1. Graduates will have basic skills to create documents with Adobe Illustrator.
2. Graduates will have basic skills to create web sites using Adobe Dreamweaver.
3. Graduates will have basic skills for using Adobe Photoshop as a creative media.
4. Graduates will have the basic skills to create basic animations.
5. Graduates of this certificate may choose to continue with the AA or AAS degree in Visualization or a 4-year transfer opportunity is available.

Program Advisor

Darren Pearson darren.pearson@saintpaul.edu

Course Offering Options

This program can be completed by using a combination of day, evening, and Saturday courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Recommended Equipment

Digital Camera, USB Drive, Adobe Software

Estimated Book Cost

\$50 - \$75 per class

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> DGIM 1400 Introduction to Computer Graphics . . .	4
<input type="checkbox"/> DGIM 1443 Graphical Web Design 1	2
<input type="checkbox"/> DGIM 1448 Flash 1	2
<input type="checkbox"/> DGIM 1483 Photoshop 1	2
<input type="checkbox"/> DGIM 2560 Illustrator	4
Subtotal	14
<input type="checkbox"/> Technical Electives	4
Any 2 - 2 credit DGIM or CSCI	
<input type="checkbox"/> General Education Requirements	3
(Select any ARTS course)	
Total Program Credits	21

Program Start Dates

Fall, Spring

Course Sequence

The following sequence is recommended; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

DGIM 1400 Introduction to Computer Graphics	4
DGIM 1443 Graphical Web Design 1	2
DGIM 1448 Flash 1	2
DGIM 1483 Photoshop 1	2
Total Semester Credits	10

Second Semester

DGIM 2560 Illustrator	4
Technical Elective	2
Technical Elective	2
General Education Requirements	3
Total Semester Credits	11

Total Program Credits 21

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

289C (7153)

Computer Animation CERTIFICATE

Program Overview

The Computer Animation Certificate is intended to give students the skills needed to work as a digital animator. The classes required for this certificate will have students learning the most up-to-date animation and video software packages including Blender, Flash, Premiere Pro, After Effects and other applications. Intensive hands-on participation will be stressed in creating 3D models, animations, and scenes. Emphasis is placed on practical, real-world application of their skills. Upon certificate completion, students will have multiple short animation projects suitable for a portfolio or demo reel.

Career Opportunities

Many career opportunities exist in the computer animation field, particularly for individuals with extensive portfolios. Jobs exist in the video game industry, web design and advertising focused on emerging technologies. Many computer animators begin their career as self-employed, freelancers, in order to expand their personal portfolio.

Program Outcomes

1. Graduates will have extensive knowledge and skills in computer animation using Blender.
2. Graduates will have knowledge and skills in computer animation using other various 3D animation tools.
3. Graduates will have knowledge and skills in basic video production.

Program Advisor

Darren Pearson darren.pearson@saintpaul.edu

Course Offering Options

This program can be completed by using a combination of day, evening, and Saturday courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Recommended Equipment

Digital Camera, USB Drive, Adobe Software

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> DGIM 1490 3D Animation Fundamentals	4
<input type="checkbox"/> DGIM 2520 3D Character Animation	4
<input type="checkbox"/> DGIM 2587 Digital Video 1	2
<input type="checkbox"/> DGIM 2588 Digital Video 2	2
<input type="checkbox"/> DGIM 2704 3D Animation Capstone	4
<input type="checkbox"/> DGIM XXXX Technical Elective	2

Total Program Credits 18

Program Start Dates

Fall, Spring

Course Sequence

The following course sequence is recommended; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

DGIM 1490 3D Animation Fundamentals	4
DGIM XXXX Technical Elective	2
Total Semester Credits	6

Second Semester

DGIM 2520 3D Character Animation	4
DGIM 2587 Digital Video 1	2
DGIM 2588 Digital Video 2	2
Total Semester Credits	8

Third Semester

DGIM 2704 3D Animation Capstone	4
Total Semester Credits	4

Total Program Credits 18

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Arithmetic: Score of 20+

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

336C (7191)

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Web Design CERTIFICATE

Program Overview

This program prepares students for jobs in the exciting computer graphics field. Students will learn how to take an idea from concept through production including computer graphics and computer animation.

The student should be creative and have excellent communications skills. Students should exhibit qualities of patience and precision and should enjoy working both independently and on team projects.

Career Opportunities

The computer graphics field relates to many jobs in the multimedia area including but not limited to:

- Web Designer
- Web Developer

Program Outcomes

1. Graduates will have knowledge of front-end, web design software packages.
2. Graduates will have knowledge of back-end, web development software languages.
3. Graduates will have knowledge of usability, accessibility and search engine optimization practices.

Program Advisor

Darren Pearson darren.pearson@saintpaul.edu

Recommended Equipment

USB Drive, Digital Camera, Adobe Software

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1450 Web Fundamentals/HTML	4
<input type="checkbox"/> CSCI 1470 Web Design	4
<input type="checkbox"/> CSCI 2440 Client Side Programming 1	4
<input type="checkbox"/> DGIM 1443 Graphical Web Design 1	2
<input type="checkbox"/> DGIM 1448 Flash 1	2
<input type="checkbox"/> DGIM 2521 2D Web Animation	2

Total Program Credits 18

Program Start Dates

Fall, Spring

Course Sequence

The following course sequence is recommended; however, this sequence is not required. Contact Program Advisor with questions.

First Semester

CSCI 1450 Web Fundamentals/HTML	4
DGIM 2521 2D Web Animation	2
Total Semester Credits	6

Second Semester

CSCI 1470 Web Design	4
DGIM 1443 Graphical Web Design 1	2
DGIM 1448 Flash 1	2
Total Semester Credits	8

Third Semester

CSCI 2440 Client Side Programming 1	4
Total Semester Credits	4

Total Program Credits 18

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Requires additional education and/or experience in the field in addition to assessment requirements

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

178C (7113)

*Information is subject to change.
This Program Requirements Guide is not a contract.*

CyberSecurity AAS DEGREE

Program Overview

CyberSecurity professionals work in a wide variety of information technology positions, but have a focus on information assurance, cyber ethics, and incident detection, investigation and response. Students completing this degree will be able to investigate and defend computer systems against cyber-attacks, unauthorized use or modification, and exploitation.

Students entering into this program of study should have excellent communication, reading and math skills. Throughout the program students will experience coursework that will help them develop skills such as critical thinking, performance monitoring, decision making and evaluating systems and organizations.

The CyberSecurity program at Saint Paul College is 60 credits in length. The program provides 16 credits specifically related to CyberSecurity which will aid students in the field and in potential certifications.

Career Opportunities

CyberSecurity professionals will find a growing need in both public and private employment sectors. Graduates will find excellent opportunities as systems administrators, network engineers, system programmers, and systems specialists.

Program Outcomes

1. Graduates will have knowledge and skills in system design, analysis and maintenance.
2. Graduates will have the skills to gather, monitor, and analyze multiple sources of data to identify changes in circumstances or events.
3. Graduates will have the skills to evaluate information to determine compliance with security standards.
4. Graduates of the CyberSecurity program will be prepared for employment as information Security Analysts or Computer Systems Analysts.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

CyberSecurity AAS

- BS Operations Management
Minnesota State University-Moorhead
- BS Information Technology
Saint Mary's University-Twin Cities Campus

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

James Woodcock james.woodcock@saintpaul.edu
Mark Rawlings mark.rawlings@saintpaul.edu

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1410 Computer Science & Information Systems	4
<input type="checkbox"/> CSCI 1423 Computer Networking 1 – Client	4
<input type="checkbox"/> CSCI 1440 Networking Fundamentals	4
<input type="checkbox"/> CSCI 1523 Intro to Computing and Programming Concepts	4
<input type="checkbox"/> CSCI 2420 Computer Security	4
<input type="checkbox"/> CSCI 2451 Computer Networking 2 – Server	4
<input type="checkbox"/> CSCI 2461 Computer Networking 3 – Linux	4
<input type="checkbox"/> CSCI 2465 Computer Networking 4 – Infrastructure	4
<input type="checkbox"/> CSCI 2480 Network Security and Penetration Prevention	4
<input type="checkbox"/> CSCI 2482 Security Incident Handling, Response and Disaster Recovery	4
<input type="checkbox"/> CSCI 2484 Ethical Hacking & Countermeasures	4
Subtotal	44

General Education/MnTC Requirements

General Education/MnTC Requirements	Cr
Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	
<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4cr	
SPCH 17XX (Goal 1 only) – 3cr	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical /Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science, and Behavior Sciences	3
<input type="checkbox"/> Goal 6: Humanities & Fine Arts	3
General Education Requirements	16

Total Program Credits 60

Program Start Dates

Fall, Spring, Summer

Course Sequence

This course sequence is recommended for a full-time (part-time) student; however, this sequence is not required.

Not all courses are offered each semester; a selection of courses is offered summer term.

Students should consult with the Program Advisor each semester.

First Semester

CSCI 1410 Introduction to Computer Science & Information Systems	4
CSCI 1423 Computer Networking 1 – Client	4
CSCI 1440 Networking Fundamentals	4
ENGL1711 Composition 1	4
Total Semester Credits	16

Second Semester

CSCI 1523 Intro to Computing and Programming Concepts	4
CSCI 2420 Computer Security	4
CSCI 2451 Computer Networking 2 – Server	4
Humanities and Fine Arts (Goal 6)	3
Total Semester Credits	15

Third Semester

CSCI 2461 Computer Networking 3 – Linux	4
CSCI 2465 Computer Networking 4 – Infrastructure	4
SPCH XXXX (Goal 1 only)	3
Natural Science (Goal 3) OR	
Mathematics/Logical Reasoning (Goal 4)	3
Total Semester Credits	14

Fourth Semester

CSCI 2480 Network Security and Penetration Prevention	4
CSCI 2482 Security and Incident Handling Response and Disaster Recovery	4
CSCI 2484 Ethical Hacking & Countermeasures	4
History, Social and Behavioral Science (Goal 5)	3
Total Semester Credits	15

Total Program Credits 60

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Elementary Algebra: Score of 76+ or grade of "C" or better in MATH 0910

Assessment Results and Prerequisites:

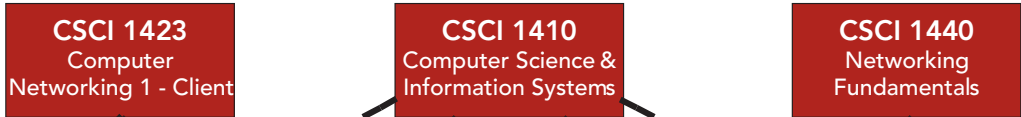
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

352A (7203)

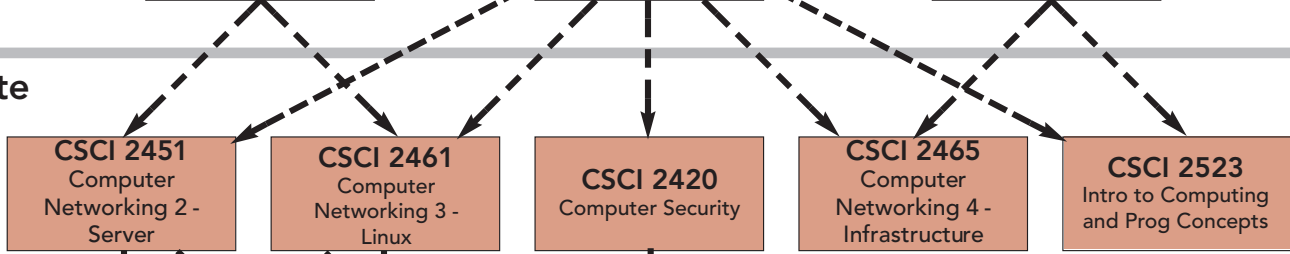
CyberSecurity AAS DEGREE *(continued)*
(44 credits + 16 GenEd credits)

The below chart illustrates the courses required for completion of this degree.

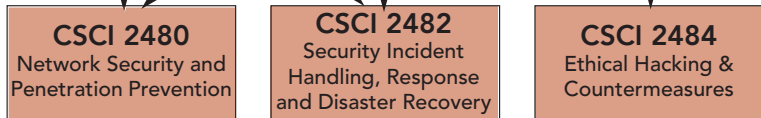
Introductory



Intermediate



Advanced
 (offered once per year)



CyberSecurity CERTIFICATE

Program Overview

Note: Students must have completed the Computer Network Engineering AAS degree or have instructor approval.

CyberSecurity professionals work in a wide variety of information technology positions, but have a focus on information assurance, cyber ethics, and incident detection, investigation and response. Students completing this degree will be able to investigate and defend computer systems against cyber-attacks, unauthorized use or modification, and exploitation.

Students entering into this program of study should have excellent communication, reading and math skills. Throughout the program students will experience coursework that will help them develop critical skills such as critical thinking, performance monitoring, decision making and evaluating systems and organizations

The CyberSecurity certificate program at Saint Paul College is 24 credits in length. The program provides 16 credits specifically related to CyberSecurity which will aid students in the field and in potential certifications.

Career Opportunities

CyberSecurity professionals will find a growing need in both the public and private employment sectors. Graduates will find excellent opportunities as systems administrators, network engineers, system programmers, and systems specialists.

Program Outcomes

1. Graduates will have knowledge and skills in system design, analysis and maintenance.
2. Graduates will have the skills to gather, monitor, and analyze multiple sources of data to identify changes in circumstances or events.
3. Graduates will have the skills to evaluate information to determine compliance with security standards.
4. Graduates of the CyberSecurity program will be prepared for employment as Information Security Analyst or Computer Systems Analysts.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

James Woodcock james.woodcock@saintpaul.edu
Mark Rawlings mark.rawlings@saintpaul.edu

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1440 Networking Fundamentals	4
<input type="checkbox"/> CSCI 2420 Computer Security	4
<input type="checkbox"/> CSCI 2451 Computer Networking 2 - Server	4
<input type="checkbox"/> CSCI 2480 Network Security and Penetration Prevention	4
<input type="checkbox"/> CSCI 2482 Security Incident Handling, Response and Disaster Recovery	4
<input type="checkbox"/> CSCI 2484 Ethical Hacking & Countermeasures	4
Subtotal	24
Total Program Credits	24

Program Start Dates

Fall, Spring

Course Sequence

This course sequence is recommended for a full-time (part-time) student; however, this sequence is not required.

Not all courses are offered each semester; a selection of courses is offered summer term.

Students should consult with the Program Advisor each semester.

First Semester

CSCI 1440 Networking Fundamentals	4
CSCI 2420 Computer Security	4
CSCI 2451 Computer Networking 2 - Server	4
Total Semester Credits	12

Second Semester

CSCI 2480 Network Security and Penetration Prevention	4
CSCI 2482 Security and Incident Handling Response and Disaster Recovery	4
CSCI 2484 Ethical Hacking & Countermeasures	4
Total Semester Credits	12

Total Program Credits 24

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Elementary Algebra: Score of 76+ or grade of "C" or better in MATH 0910

Students enrolling in the Certificate should have previous networking experience or consider taking additional networking courses as identified by the instructor/advisors.

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

352C

Computer Science AS DEGREE

Program Overview

The Associate in Science Degree in Computer Science is designed to provide students with opportunities for immediate employment or for transfer to four-year institutions. The College has developed articulation agreements with four-year institutions to assist students with their transfer goals. See a Transfer Specialist for further information.

Students planning a career in this area should have above average mathematic reasoning and communication skills. Students should exhibit qualities of patience, and preciseness and enjoy working in a team environment.

Career Opportunities

Graduates of this program may choose to continue their education at a four-year institution in a Computer Science or related field. Others may elect to enter the workforce following graduation. Graduates will find opportunities in the computer science field in the areas of programming or database management in business, manufacturing, government and education. With additional education and experience, students may advance to positions such as Database Analyst, Systems Analyst, Software Developer or Programmer-Analyst.

Program Outcomes

1. Graduates will be able to develop complex algorithms which underlie common programming tasks.
2. Graduates will be able to construct and analyze the performance of complex data structures and use them to develop efficient computer programs.
3. Graduates will have a sound understanding of the mathematics that underlies Computer Science and be able to develop and deploy computer programs which utilize it.
4. Graduates of the program will have mastered the general education requirements for work and life roles.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Computer Science AS

- BA Individualized Studies
Metropolitan State University
- BS Information Technology
Saint Mary's University-Twin Cities Campus
- BS Computer Information Systems
College of St. Scholastica

Program Faculty

Warren Sheaffer warren.sheaffer@saintpaul.edu

Part-time/Full-time Options

Some day and evening class availability. Students may attend full-time or part-time.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1410 Computer Science & Information Systems	4
<input type="checkbox"/> CSCI 1523 Intro to Computing and Programming Concepts	4
<input type="checkbox"/> CSCI 1524 Intro to Algorithms and Data Structures	4
<input type="checkbox"/> CSCI 1533 ANSI C Language Programming	2
<input type="checkbox"/> CSCI 1541 Java Programming 1	4
<input type="checkbox"/> CSCI 2570 Machine Architecture & Organization	4
<input type="checkbox"/> CSCI 2469 Advanced Programming Principles	4
<input type="checkbox"/> CSCI 2460 Discrete Structures of Computer Science	4
Subtotal	30

General Education/MnTC Requirements

General Education/MnTC Requirements	Cr
Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	
<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3: Natural Sciences	4-5
PHYS 1720 Principles of Physics 1 – 4 cr	
OR PHYS 2700 General Physics 1 – 5 cr	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning	6-7
MATH 1730 College Algebra or higher 3 – 4 cr	
PHIL 1710 Logic – 3 cr	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
ECON 1730 Microeconomics – 3 cr	
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
PHIL 1720 Ethics – 3 cr	
<input type="checkbox"/> Goals 1-10 of the Minnesota Transfer Curriculum	5-7
Select a minimum of 5 – 7 additional credits	
Students must select courses from at least six (6) Goal Areas of the Minnesota Transfer Curriculum.	
General Education Requirements	30

Total Program Credits 60

* Please refer to specific articulation agreements to determine the best mathematics option.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student. Not all courses are offered each semester.

First Semester

CSCI 1410 Computer Science & Information Systems	4
ENGL 1711 Composition 1	4
MATH 2749 Calculus 1	4
MnTC Elective	3
Total Semester Credits	15

Second Semester

CSCI 1523 Intro to Computing and Programming Concepts	4
PHYS 1720 Principles of Physics 1	4
CSCI 1533 ANSI C Language Programming	2
PHIL 1710 Logic (Goal 4)	3
MnTC Elective	3
Total Semester Credits	16

Third Semester

CSCI 1524 Intro to Algorithms and Data Structures	4
CSCI 1541 Java Programming 1	4
CSCI 2460 Discrete Structures of Comp Science	4
ECON 1730 Microeconomics (Goal 5)	3
Total Semester Credits	15

Fourth Semester

CSCI 2469 Advanced Programming Principles	4
CSCI 2570 Machine Architecture & Organization	4
PHIL 1720 Ethics (Goal 6)	3
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	14

Total Program Credits 60

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Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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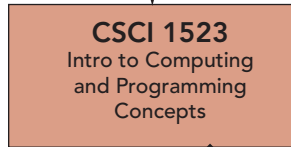
Computer Science AS DEGREE *(continued)*
 (30 credits + 30 GenEd credits)

The below chart illustrates the courses required for completion of this degree.

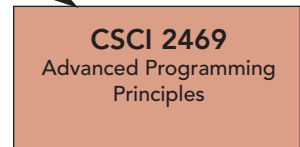
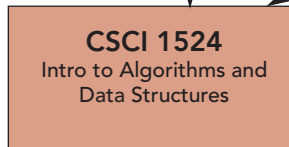
Introductory



Intermediate



Advanced



Management Information Systems AS DEGREE

Program Overview

The Associate in Science Degree in Management Information Systems is designed to provide students with opportunities for immediate employment or for transfer to four-year institutions. The College has developed articulation agreements with four-year institutions to assist students with their transfer goals. See a Transfer Specialist for further information.

Students planning a career in this area should have above average mathematic reasoning and communication skills. Students should exhibit qualities of patience, perseverance, and preciseness, and should enjoy working in a team environment.

Career Opportunities

A management information system degree prepares the student for a career that combines business techniques and computer systems capability. Students study how to provide reporting and analysis using best practices in information technology.

Graduates will find opportunities in the information systems field in business, manufacturing, government and education.

With additional education and experience, students may advance to positions such as Systems Analyst, Software Architect and Business Analyst. Graduates of this program may choose to continue their education at a four-year institution in Management Information Systems or a related field. Others may elect to enter the workforce following graduation.

Program Outcomes

1. Graduates will be able to analyze complex business processes and develop process improvements and comprehensive information system requirements specifications to support them.
2. Graduates will be able to help build and test information systems in an organization.
3. Graduates will be able to utilize accounting and business systems information to develop recommendations for operating cost reduction and improved use of capital investment.
4. Graduates will have a sound understanding of business systems, current technologies, organizational structures, communication tools and critical thinking skills to help guide Management Information Systems success.

Program Faculty

Warren Sheaffer warren.sheaffer@saintpaul.edu

Part-time and Full-time Options

This program can be completed by using a combination of day, evening, and Saturday courses. Part-time and full-time options are available; costs will vary depending on part-time or full-time enrollment.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> ACCT 1411 Principles of Accounting 1	4
<input type="checkbox"/> BUSN 1440 Marketing Principles	3
<input type="checkbox"/> BUSN 2450 Management Fundamentals	3
<input type="checkbox"/> CSCI 1410 Computer Science & Information Systems	4
<input type="checkbox"/> CSCI 1450 Web Fundamentals/HTML	4
<input type="checkbox"/> CSCI 1523 Intro to Computing and Programming Concepts	4
<input type="checkbox"/> CSCI 1550 Database Management Fundamentals	4
<input type="checkbox"/> CSCI 2410 Management Information Systems	3
Subtotal	29

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning	7-8
MATH 1740 Intro to Statistics – 4 cr	
MATH 1730 College Algebra – 3 cr OR	
MATH 2749 Calculus 1 – 4 cr	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	6
ECON 1720 Macroeconomics – 3 cr	
ECON 1730 Microeconomics – 3 cr	
<input type="checkbox"/> Goals 1-10 of the Minnesota Transfer Curriculum	10-11
Select a minimum of 10-11 additional credits	
Students must select courses from at least six (6) Goal Areas of the Minnesota Transfer Curriculum.	
General Education Requirements	31

Total Program Credits 60

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Management Information Systems AS

- BA Individualized Studies
Metropolitan State University
- BS Management Information Systems
Metropolitan State University
- BS Information Technology
Saint Mary's University-Twin Cities Campus
- BS Computer Information Systems
College of St. Scholastica

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Start Dates

Fall, Spring, Summer

Course Sequence (Suggested)

The following sequence is recommended for a full-time student. Not all courses are offered each semester.

First Semester

BUSN 2450 Management Fundamentals	3
CSCI 1410 Computer Science & Info Systems	4
ENGL 1711 Composition 1	4
MATH 1730 College Algebra OR	
MATH 2749 Calculus 1	3-4
Total Semester Credits	14-15

Second Semester

ACCT 1411 Principles of Accounting 1	4
BUSN 1440 Marketing Principles	3
CSCI 1523 Intro to Computing and Programming Concepts	4
MATH 1740 Introduction to Statistics	4
Total Semester Credits	15

Third Semester

CSCI 1450 Web Fundamentals/HTML	4
CSCI 1550 Database Management Fundamentals	4
ECON 1720 Macroeconomics	3
Humanities and Fine Arts (Goal 6)	3
SPCH XXXX (Goal 1 only)	3
Total Semester Credits	16

Fourth Semester

CSCI 2410 Management Information Systems	3
ECON 1730 Microeconomics	3
General Education Electives (Goals 1-10)	7-8
(8 credits if completed MATH 1730)	
(7 credits if completed MATH 2749)	
Total Semester Credits	14-15

Total Program Credits 60

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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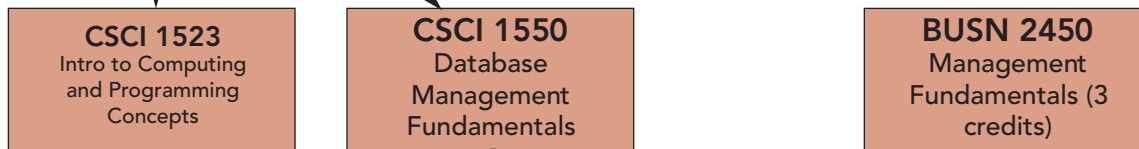
Management Information Systems AS DEGREE *(continued)*
 (29 credits + 31 GenEd credits)

The below chart illustrates the courses required for completion of this degree.

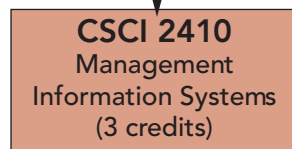
Introductory



Intermediate



Advanced
 (offered once per year)



Computer Network Engineering AAS DEGREE

Program Overview

Networking Specialists can work in a wide variety of jobs. The work could include purchasing, installing, configuring, administrating and/or supporting. Some jobs in networking could include computer network support, user training, installing and maintaining local and/or wide area networks.

The student should have excellent communication and math skills. For the certificate programs, the student is expected to have prior microcomputer and/or networking experience. He/she should exhibit qualities of patience, perseverance and preciseness and be a logical thinker. The student should enjoy working in a team environment and be able to work independently.

Career Opportunities

With almost every size company connected to some type of network, the jobs in networking have become the fastest growing jobs in the computer field. With companies networking to share resources and reduce expenses the networking specialist is an invaluable part of the new company structure. There is a wide variety of jobs in networking including installation, maintenance, training, managing and user support.

Graduates find excellent opportunities as Network Administrators, Network Support, and Certified Network Engineers in business, manufacturing, government and education. Jobs for Networking Specialists for all types of installations are found throughout the country with opportunities for excellent earnings and rapid advancement. Jobs include the following:

- Networking Engineer
- Network Help Desk Support
- Datacommunications Specialist
- PC Network Administrator
- Information Specialist
- WAN Manager Network Administrator
- LAN Specialist
- Telecommunications Specialist
- Certified Network Engineer
- LAN Manager

Program Outcomes

1. Graduates will have knowledge and skills in computer network engineering.
2. Graduates will have knowledge and experience in system design, analysis and maintenance.
3. Graduates of the Computer Network programs will be prepared for employment as computer network engineers.
4. Graduates will be prepared to take industry certification exams.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Faculty

Warren Sheaffer warren.sheaffer@saintpaul.edu

Part-Time/Full-Time Options

Some day and evening class availability. Students may attend full time or part time.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1410 Computer Science & Information Systems	4
<input type="checkbox"/> CSCI 1423 Computer Networking 1 – Client	4
<input type="checkbox"/> CSCI 1440 Networking Fundamentals	4
<input type="checkbox"/> CSCI 1523 Intro to Computing and Programming Concepts	4
<input type="checkbox"/> CSCI 2420 Computer Security	4
<input type="checkbox"/> CSCI 2451 Computer Networking 2 – Server	4
<input type="checkbox"/> CSCI 2453 Computer Virtualization	4
<input type="checkbox"/> CSCI 2461 Computer Networking 3 – Linux	4
<input type="checkbox"/> CSCI 2465 Computer Networking 4 – Infrastructure	4
<input type="checkbox"/> CSCI 2475 A+ Hardware/Operating System Prep	4
<input type="checkbox"/> CSCI 2570 Machine Architecture and Organization	4
Subtotal	44

General Education Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science, and Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
General Education Requirements	16

Total Program Credits 60

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Computer Network Engineering AAS	
BS	Operations Management Minnesota State University-Moorhead
BS	Information Technology Saint Mary's University-Twin Cities Campus
BS	Computer Information Systems College of St. Scholastica

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student. Not all courses are offered each semester.

First Semester

CSCI 1410 Computer Science & Information Systems	4
CSCI 1423 Computer Networking 1 – Client	4
CSCI 1440 Networking Fundamentals	4
CSCI 2475 A+ Hardware/Operating System Prep	4
Total Semester Credits	16

Second Semester

CSCI 1523 Intro to Computing and Programming Concepts	4
CSCI 2453 Computer Virtualization	4
ENGL 1711 English Composition (Goal 1)	4
Natural Sciences (Goal 3) OR	
Mathematical/Logical Reasoning (Goal 4)	3
Total Semester Credits	15

Third Semester

CSCI 2451 Computer Networking 2 – Server	4
CSCI 2461 Computer Networking 3 – Linux	4
SPCH XXXX (Goal 1 only)	3
History, Social Science, and	
Behavioral Sciences (Goal 5)	3
Humanities and Fine Arts (Goal 6)	3
Total Semester Credits	17

Fourth Semester

CSCI 2420 Computer Security	4
CSCI 2465 Computer Networking 4 – Infrastructure	4
CSCI 2570 Machine Architecture and Organization	4
Total Semester Credits	12

Total Program Credits 60

Continued on next page

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Elementary Algebra: Score of 76+ or grade of "C" or better in MATH 0910

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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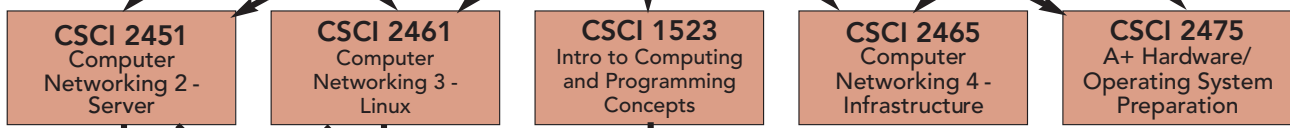
Computer Network Engineering AAS DEGREE *(continued)*
 (44 credits + 16 GenEd credits)

The below chart illustrates the courses required for completion of this degree.

Introductory



Intermediate



Advanced
 (offered once per year)



Computer Programming AAS DEGREE

Program Overview

The job of the applications programmer is to (1) review job specifications provided by the system analyst and end user and (2) plan, code, test, and document a programming solution which takes the available data input and produces the desired output in the form of a printed report or a screen display. The programming language(s) used depends on the nature of the problem and the languages available to the programmer at his/her installation.

The student should have above average communications and math skills. He/she should exhibit qualities of patience, perseverance and preciseness and should enjoy working in a team environment and also be able to work independently.

Career Opportunities

Graduates find excellent opportunities as computer programmers in business, manufacturing, government and education. Jobs for computer programmers for all types of computer systems are found throughout the country with opportunities for good earning and rapid advancement. Jobs include: Programmer, Database Project Specialist, Applications Programmer, Technical Programmer, Systems Analyst, MIS Coordinator, Software Developer, Junior Programmer-Analyst, and Senior Programmer-Analyst.

Program Outcomes

1. Graduates will be able to design and code production software applications.
2. Graduates will be able to analyze complex organizational problems and create design specifications to address these problems.
3. Graduates will be able to use industry standard database management systems to support their applications
4. Graduates of the degree programs will have mastered the general education requirements for work and life roles.
5. Graduates will be prepared to take certification exams in their area of specialization.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Computer Programming AAS

- BS Operations Management
Minnesota State University-Moorhead
- BS Information Technology
Saint Mary's University-Twin Cities Campus
- BS Computer Information Systems
College of St. Scholastica

Program Faculty

Warren Sheaffer warren.sheaffer@saintpaul.edu

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1410 Computer Science & Information Systems	4
<input type="checkbox"/> CSCI 1423 Computer Networking – Client	4
<input type="checkbox"/> CSCI 1450 Web Fundamentals/HTML	4
<input type="checkbox"/> CSCI 1523 Intro to Computing and Programming Concepts	4
<input type="checkbox"/> CSCI 1524 Intro to Algorithms and Data Structures	4
<input type="checkbox"/> CSCI 2570 Machine Architecture and Organization	4
<input type="checkbox"/> Technical Electives	4
Select 1 of the following courses listed below. Ensure that your elective is not part of your chosen emphasis:	
<input type="checkbox"/> CSCI 1541 Java Programming 1	4
<input type="checkbox"/> CSCI 1531 Objective-C Programming	4
<input type="checkbox"/> CSCI 1550 Database Management Fundamentals	4
<input type="checkbox"/> CSCI 2440 Client Side Programming 1 (required for the Web Based 2D Game Development Emphasis)	4
<input type="checkbox"/> CSCI 2442 Server Side Programming	4
<input type="checkbox"/> CSCI 2560 Introduction to Computer Games	4
Subtotal	28

Complete one of the Emphases listed below 16

Java Program Emphasis	Cr
<input type="checkbox"/> CSCI 1541 Java Programming 1	4
<input type="checkbox"/> CSCI 1542 Java Programming 2	4
<input type="checkbox"/> CSCI 1550 Database Management Fundamentals	4
<input type="checkbox"/> CSCI 2466 J2EE-JSP and Servlets	4
Total Program Credits	16

Web Development Emphasis

Web Development Emphasis	Cr
<input type="checkbox"/> CSCI 2440 Client Side Programming 1	4
<input type="checkbox"/> CSCI 2442 Server Side Programming	4
<input type="checkbox"/> Select 2 of the following courses	8
<input type="checkbox"/> CSCI 2466 J2EE-JSP and Servlets	4
<input type="checkbox"/> CSCI 2621 Ruby on Rails	4
<input type="checkbox"/> CSCI 2622 Client Side Programming 2	4
Total Program Credits	16

Mobile Development Emphasis

Mobile Development Emphasis	Cr
<input type="checkbox"/> CSCI 1531 Objective-C Programming	4
<input type="checkbox"/> CSCI 1541 Java Programming 1	4
<input type="checkbox"/> CSCI 2628 Programming iOS Devices	4
<input type="checkbox"/> CSCI 2629 Programming Android Devices	4
Total Program Credits	16

Web Based 2D Game Development Emphasis

Web Based 2D Game Development Emphasis	Cr
<input type="checkbox"/> DGIM 2521 2D Web Animation	2
<input type="checkbox"/> DGIM 2586 Digital Sound	2
<input type="checkbox"/> CSCI 2587 Web Based Game Development 1	4
<input type="checkbox"/> CSCI 2588 Web Based Game Development 2	4
<input type="checkbox"/> DGIM Technical Electives	4
<input type="checkbox"/> DGIM 1490 3D Animation Fundamentals	4
<input type="checkbox"/> DGIM 2560 Illustrator	4
<input type="checkbox"/> DGIM 1483 Photoshop 1	2
<input type="checkbox"/> DGIM 1484 Photoshop 2	2
Total Program Credits	16

Enterprise Emphasis

<input type="checkbox"/> CSCI 1410 Computer Science and Information Systems	4
<input type="checkbox"/> CSCI 1423 Computer Networking 1 - Client	4
<input type="checkbox"/> CSCI 1544 Enterprise Operating Systems	4
<input type="checkbox"/> CSCI 1546 COBOL Programming 1	4
<input type="checkbox"/> CSCI 1547 COBOL Programming 2	4
<input type="checkbox"/> CSCI 2470 Enterprise Database Systems	4
<input type="checkbox"/> CSCI 2472 Enterprise Transaction Processing (CICS)	4

General Education Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	
<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science, and Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
General Education Requirements	16

Total Program Credits 60

Continued on next page

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Elementary Algebra: Score of 76+ or grade of "C" or better in MATH 0910

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

009A (7011)

Computer Programming AAS DEGREE *(continued)*

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester.

First Semester

CSCI 1410 Computer Science & Information Systems	.4
CSCI 1423 Computer Networking – Client	.4
CSCI 1450 Web Fundamentals/HTML	.4
SPCH XXXX (Goal 1 only)	.3
Total Semester Credits	15

Second Semester

CSCI 1523 Intro to Computing and Programming Concepts	.4
Select Appropriate Emphasis Course	.4
CSCI XXXX Technical Elective	.4
Natural Sciences (Goal 3) OR Mathematical/Logical Reasoning (Goal 4)	.3
Total Semester Credits	15

Third Semester

CSCI 1524 Intro to Algorithms and Data Structures	.4
Select Appropriate Emphasis Course	.4
Select Appropriate Emphasis Course	.4
ENGL 1711 Composition 1	.4
Total Semester Credits	16

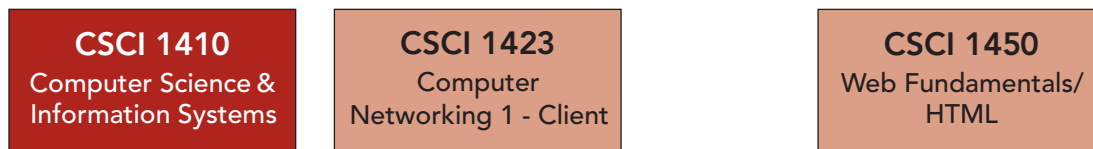
Fourth Semester

CSCI 2570 Machine Architecture and Organization	.4
Select Appropriate Emphasis Course	.4
Humanities and Fine Arts (Goal 6)	.3
History, Social Science, and Behavioral Sciences (Goal 5)	.3
Total Semester Credits	14
Total Program Credits	60

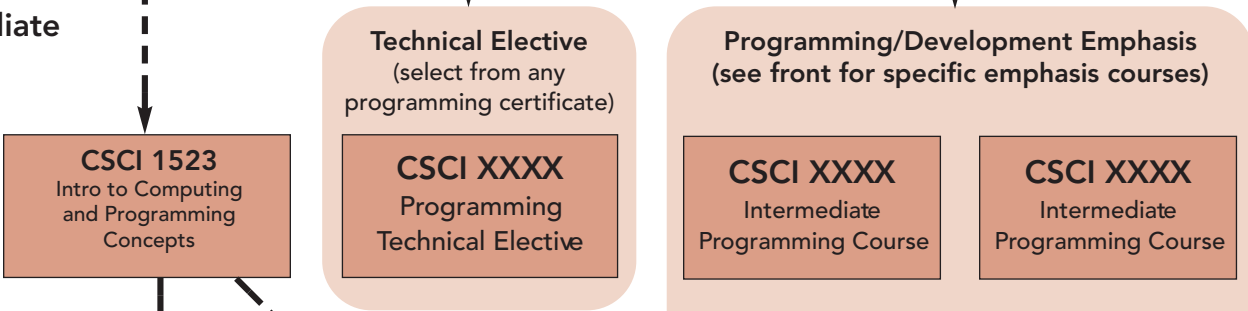
Computer Programming AAS Degree (44 credits + 16 GenEd credits)

The below chart illustrates the courses required for completion of this degree.

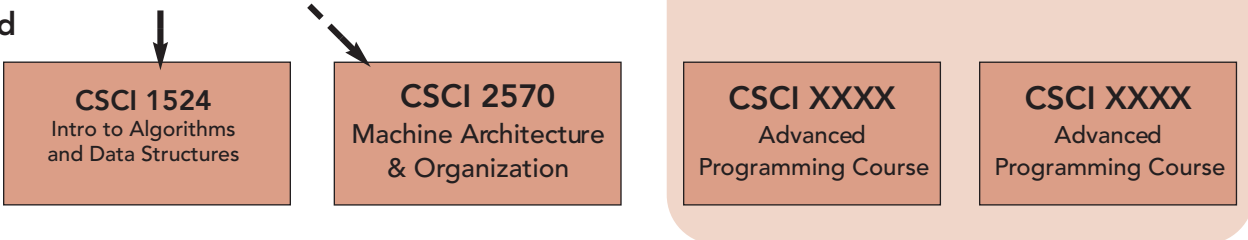
Introductory



Intermediate



Advanced



Enterprise Computing CERTIFICATE

Program Overview

The Enterprise Computing Certificate at Saint Paul College is offered in cooperation with the IBM Academic Initiative, a global program that facilitates the collaboration between IBM and educators to teach students the skills they need to be competitive within the rapidly changing information technology landscape. The program provides students with a global understanding of IBM System Z with an emphasis on system administration and ZOS, COBOL programming, CICS and Transaction Processing Systems, DB2 administration and application development.

Major companies around the world run their critical applications on large and midrange systems, such as mainframes, Power Systems, blades, and rack and cluster systems. Mainframe computing systems are transforming businesses and systems around the world. The mainframe is driving areas in cloud computing, analytics, security and mobile computing and are tackling challenges never thought possible. The need for technical skills on enterprise systems continues to grow, and students with knowledge and hands-on experience are sought after in the job market.

Career Opportunities

The IBM Academic Initiative System z program seeks to ensure that the next generation of mainframe experts will be available to help more companies and organizations leverage the superior security, availability, scalability, and efficiency of the mainframe. The demand for IT skills is growing, especially for students who have mainframe or enterprise computing skills.

Students graduating with the Enterprise Computing Certificate will learn valuable skills that will qualify them for jobs with some of the largest, and most successful companies in Banking, Insurance, Healthcare, and Information Technology. Positions that students will be able to fill include System Engineer, Mainframe Operator, Information Security Specialist, and more

Program Outcomes

1. Create COBOL applications in a zEnterprise system.
2. Create VSAM clusters to support basic file maintenance applications.
3. Integrate an IBM DB2 enterprise database with a COBOL DB2 API applications.
4. Code and test COBOL DB2 dynamic SQL interactive applications.
5. Explain the relationship between zEnterprise hardware concepts, z/OS operating system concepts, and interactive facilities such as TSO/E, ISPF, and UNIX.
6. Develop COBOL application programs that incorporate access to a DB2 database and implement transaction processing using CICS.

Program Faculty

Warren Sheaffer warren.sheaffer@saintpaul.edu

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1410 Computer Science and Information Systems	4
<input type="checkbox"/> CSCI 1423 Computer Networking 1 - Client	4
<input type="checkbox"/> CSCI 1544 Enterprise Operating Systems	4
<input type="checkbox"/> CSCI 1546 COBOL Programming 1	4
<input type="checkbox"/> CSCI 1547 COBOL Programming 2	4
<input type="checkbox"/> CSCI 2470 Enterprise Database Systems	4
<input type="checkbox"/> CSCI 2472 Enterprise Transaction Processing (CICS)	4

Total Program Credits 28

Program Start Dates

Fall, Spring, Summer

Course Sequence

This course sequence is recommended for a full-time student; however, this sequence is not required.

Not all courses are offered each semester; a selection of courses is offered summer term.

Students should consult with the Program Advisor each semester.

First Semester

CSCI 1410 Computer Science and Information Systems	4
CSCI 1423 Computer Networking 1 - Client	4
CSCI 1544 Enterprise Operating Systems	4
CSCI 1546 COBOL Programming 1	4
Total Semester Credits	16

Second Semester

CSCI 1547 COBOL Programming 2	4
CSCI 2470 Enterprise Database Systems	4
CSCI 2472 Enterprise Transaction Processing (CICS)	4
Total Semester Credits	12

Total Program Credits 28

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Elementary Algebra: Score of 76+ or grade of "C" or better in MATH 0910

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

378C

Network Administration CERTIFICATE

Program Overview

The Network Administration Certificate is designed for individuals who already have acquired at least a minimum level of technical computer skills, either through previous education, training, and/or experience. It is designed to enhance one's current computer knowledge and skills.

Networking Specialists can work in a wide variety of jobs. The work could include purchasing, installing, configuring, administering, and/or supporting. Some jobs in networking could include help desk support, user training, installing and maintaining local and/or wide area networks.

The student should have excellent communications and math skills. For the certificate programs the student is expected to have prior microcomputer and/or networking experience. He/she should exhibit qualities of patience, perseverance, and preciseness and be a logical thinker. The student should enjoy working in a team environment, and be able to work independently. All networking programs emphasize preparation for either the Microsoft Certified System Administration or Linux Professional Institute (LPI) Certification.

Career Opportunities

With almost every size company connected to some type of network, the jobs in networking have become the fastest growing jobs in the computer field. With companies networking to share resources and reduce expenses the networking specialist is an invaluable part of the new company structure. There is a wide variety of jobs in networking including installation, maintenance, training, managing and user support.

Graduates find excellent opportunities as Network Administrators, Network Support, and Certified Network Engineers in business, manufacturing, government and education. Jobs for Networking Specialists for all types of installations are found throughout the country with opportunities for excellent earnings and rapid advancement. Jobs include the following:

- Networking Engineer
- Network Help Desk Support
- Data Communications Specialist
- PC Network Administrator
- Information Specialist
- WAN Manager
- Network Administrator
- LAN Specialist
- Telecommunications Specialist
- Certified Network Engineer
- LAN Manager

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Outcomes

1. Graduates will have knowledge and skills in computer network engineering.
2. Graduates will have knowledge and experience in computer network system design, analysis, and maintenance.
3. Graduates of the Computer Network Programs will be prepared for employment as computer network engineers.

Program Faculty

Warren Sheaffer warren.sheaffer@saintpaul.edu

Part-time/Full-time Options

Some day and evening class availability. Students may attend full time or part time.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1410 Computer Science & Information Systems	4
<input type="checkbox"/> CSCI 1423 Computer Networking 1 – Client	4
<input type="checkbox"/> CSCI 1440 Networking Fundamentals	4
<input type="checkbox"/> CSCI 2451 Computer Networking 2 – Server	4
<input type="checkbox"/> CSCI 2461 Computer Networking 3 – Linux	4
<input type="checkbox"/> CSCI 2465 Computer Networking 4 – Infrastructure	4

Total Program Requirements 24

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a part-time student. Not all courses are offered each semester.

First Semester

CSCI 1410 Computer Science & Information Systems	4
CSCI 1440 Networking Fundamentals	4
Total Semester Credits.	8

Second Semester

CSCI 1423 Computer Networking 1 – Client	4
CSCI 2465 Computer Networking 4 – Infrastructure	4
Total Semester Credits.	8

Third Semester

CSCI 2451 Computer Networking 2 – Server	4
Total Semester Credits.	4

Fourth Semester

CSCI 2461 Computer Networking 3 – Linux	4
Total Semester Credits.	4

Total Program Credits 24

Continued on next page

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements in addition to having acquired previous technical computer skills:

Reading: Score of 38+

Elementary Algebra: Score of 76+ or grade of "C" or better in MATH 0910

Requires additional education and/or experience in the field in addition to assessment requirements.

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

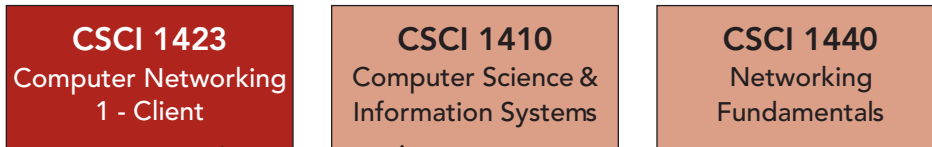
Degree option may have a greater requirement than this certificate.

298C (7183)

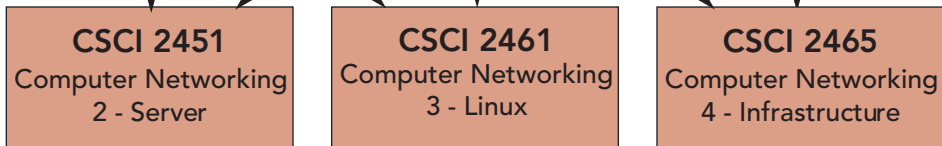
Network Administration CERTIFICATE *(continued)*
(24 credits)

The below chart illustrates the courses required for completion of this certificate.

Introductory



Intermediate



Java Programming CERTIFICATE

Program Overview

This is a 24 credit certificate program exploring the Java programming language and computing platform. The certificate includes a foundation course in computer science, a web fundamentals course, and an in depth study of databases. It then features a two-course sequence in Java programming and a course in Java for web development. This certificate may be completed apart from a degree program or may be selected as an emphasis in the Computer Programming AAS degree.

The student should have above average communications and math skills. He/she should exhibit qualities of patience, perseverance, and preciseness, and should enjoy working in a team environment and also be able to work independently. All programs emphasize training for industry certification.

Career Opportunities

Graduates find excellent opportunities as computer programmers in business, manufacturing, government and education. Jobs for computer programmers for all types of computer systems are found throughout the country with opportunities for good earning and rapid advancement.

Program Outcomes

1. Graduates will be able to design and code production software applications.
2. Graduates will be able to use industry standard database management systems to support their applications.

Program Faculty

Warren Sheaffer warren.sheaffer@saintpaul.edu

Part-Time/Full-time Options

Some day and evening class availability. Students may attend full time or part time.

Program Requirements

Check off when completed

This program is designed for individuals who have computer programming knowledge or are currently employed in the computer programming field.

Course	Cr
<input type="checkbox"/> CSCI 1410 Computer Science & Information Systems	4
<input type="checkbox"/> CSCI 1450 Web Fundamentals/HTML	4
<input type="checkbox"/> CSCI 1541 Java Programming 1	4
<input type="checkbox"/> CSCI 1542 Java Programming 2	4
<input type="checkbox"/> CSCI 1550 Database Management Fundamentals	4
<input type="checkbox"/> CSCI 2466 J2EE-JSP and Servlets	4

Total Program Credits 24

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a part-time student. Not all courses are offered every semester. Please contact the program advisor for course sequence.

First Semester

CSCI 1410 Computer Science & Information Systems	4
CSCI 1450 Web Fundamentals/HTML	4
CSCI 1541 Java Programming 1	4
Total Semester Credits	12

Second Semester

CSCI 1542 Java Programming 2	4
CSCI 1550 Database Management Fundamentals	4
CSCI 2466 J2EE-JSP and Servlets	4
Total Semester Credits	12

Total Program Credits 24

Continued on next page

*Information is subject to change.
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Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Elementary Algebra: Score of 76+ or grade of "C" or better in MATH 0910

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

299C (7177)

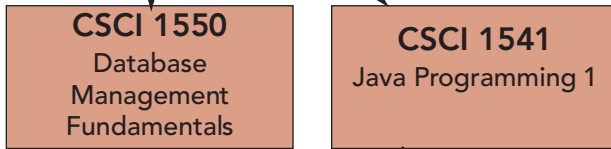
Java Programming CERTIFICATE *(continued)*
 (24 credits)

The below chart illustrates the courses required for completion of this certificate.

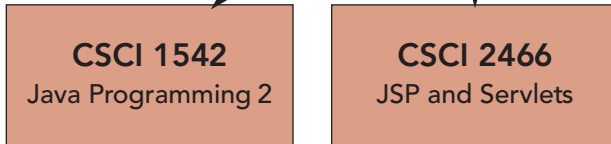
Introductory



Intermediate



Advanced
 (offered once per year)



Web Based 2D Game Development CERTIFICATE

Program Overview

This is a 24 credit certificate program exploring video game creation. The certificate is ideal for students who want to acquire skills needed for game design and programming. The certificate will utilize HTML5, Javascript, Tumult Hype and Phonegap to recreate classic video games for both the Desktop and mobile platforms. The capstone class will introduce students to some of the concepts of mobile app development for both the iPhone and Android platforms. This certificate may be completed apart from a degree program or may be selected as an emphasis in the Computer Programming AAS degree.

The student should have above average communications and math skills. He/she should exhibit qualities of patience, perseverance, and preciseness, and should enjoy working in a team environment and also be able to work independently. All programs emphasize training for industry certification.

Career Opportunities

Graduates find excellent opportunities as computer programmers in business, manufacturing, government and education. Jobs for computer programmers for all types of computer systems are found throughout the country with opportunities for good earning and rapid advancement.

Program Outcomes

1. Graduates will be able to design and code gaming software applications.
2. Graduates will be able to use industry standard design skills to support their applications

Program Faculty

Darren Pearson darren.pearson@sainpaul.edu

Part-Time/Full-time Options

Some day and evening class availability. Students may attend full time or part time.

Program Requirements

Check off when completed

This program is designed for individuals who have computer programming knowledge or are currently employed in the computer programming field.

Course	Cr
<input type="checkbox"/> CSCI 1450 Web Fundamentals/HTML	4
<input type="checkbox"/> CSCI 2440 Client Side Programming 1	4
<input type="checkbox"/> CSCI 2587 Web Based Game Dev. 1	4
<input type="checkbox"/> CSCI 2588 Web Based Game Dev. 2	4
<input type="checkbox"/> DGIM 2521 2D Web Animation	2
<input type="checkbox"/> DGIM 2586 Digital Sound	2
<input type="checkbox"/> DGIM Technical Elective	4

Any 4 credits of DGIM classes will be allowed, although the following classes are strongly recommended.

- DGIM 1490 3D Animation Fundamentals - 4cr
- DGIM 2560 Illustrator - 4cr
- DGIM 1483 Photoshop 1 - 2cr
- DGIM 1484 Photoshop 2 - 2cr

Total Program Credits24

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a part-time student. Not all courses are offered every semester. Please contact the program advisor for course sequence.

First Semester

CSCI 1450 Web Fundamentals/HTML	4
CSCI 2440 Client Side Programming 1	4
CSCI 2587 Web Based Game Dev. 1	4
Total Semester Credits.	12

Second Semester

CSCI 2588 Web Based Game Dev. 2	4
DGIM 2521 2D Web Animation	2
DGIM 2586 Digital Sound	2
DGIM Technical Elective	4
Total Semester Credits.	12

Total Program Credits24

Continued on next page

Information is subject to change.
This Program Requirements Guide is not a contract.

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Elementary Algebra: Score of 76+ or grade of "C" or better in MATH 0910

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

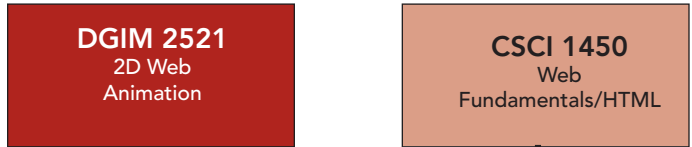
Degree option may have a greater requirement than this certificate.

299C (7177)

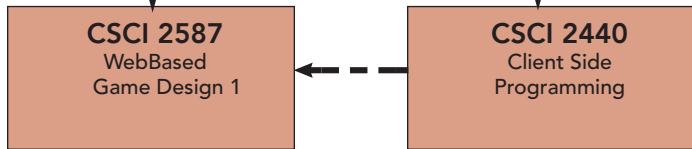
Web Based 2D Game Development CERTIFICATE *(continued)*
(24 credits)

The below chart illustrates the courses required for completion of this certificate.

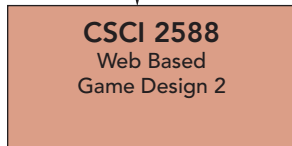
Introductory



Intermediate



Advanced
 (offered once per year)



Web Development CERTIFICATE

Program Overview

This is a 24 credit certificate program providing a foundation in current web technologies. It features a two course sequence in client side programming including AJAX, and also coverage of at least two current server side technologies for database driven development. It includes popular technologies like Ruby on Rails and JSP/Servlets. This certificate may be completed apart from a degree program or may be selected as an emphasis in the Computer Programming AAS degree.

Career Opportunities

Graduates find excellent opportunities as computer programmers in business, manufacturing, government and education. Jobs for computer programmers for all types of computer systems are found throughout the country with opportunities for good earning and rapid advancement.

Program Outcomes

1. Graduates will be able to design and code production web applications based on standard client and server side technologies.
2. Graduates will be able to use industry standard database management systems to support their applications.

Program Faculty

Darren Pearson darren.pearson@sainpaul.edu

Part-Time/Full-time Options

Some day and evening class availability. Students may attend full time or part time.

Program Requirements

Check off when completed

This program is designed for individuals who have computer programming knowledge or are currently employed in the computer programming field.

Course	Cr
<input type="checkbox"/> CSCI 1410 Computer Science & Information Systems	4
<input type="checkbox"/> CSCI 1450 Web Fundamentals/HTML	4
<input type="checkbox"/> CSCI 2440 Client Side Programming 1	4
<input type="checkbox"/> CSCI 2442 Server Side Programming.	4
Subtotal.	16
<input type="checkbox"/> Technical Electives	8
Select two of the following courses:	
<input type="checkbox"/> CSCI 2466 J2EE-JSP and Servlets	4
<input type="checkbox"/> CSCI 2621 Ruby on Rails	4
<input type="checkbox"/> CSCI 2622 Client Side Programming 2	4
Total Program Credits	24

Program Start Dates

Fall, Spring, Summer

Course Sequence

Not all courses are offered every semester. Please contact the program advisor for course sequence.

Continued on next page

*Information is subject to change.
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Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Elementary Algebra: Score of 76+ or grade of "C" or better in MATH 0910

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

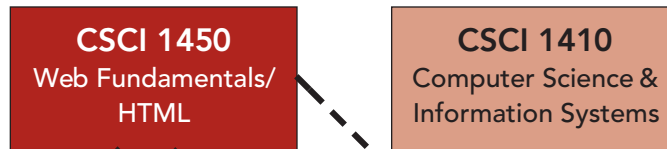
Degree option may have a greater requirement than this certificate.

244C (7117)

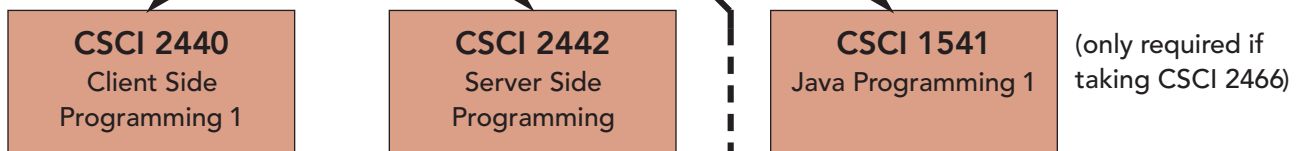
Web Development CERTIFICATE *(continued)*
 (24 credits)

The below chart illustrates the courses required for completion of this certificate.

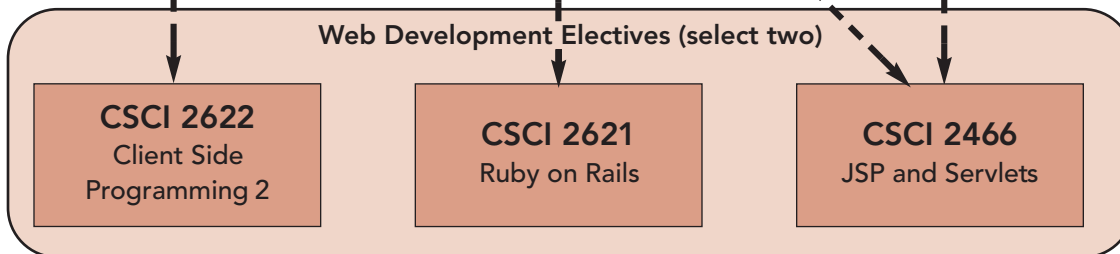
Introductory



Intermediate



Advanced
 (offered once per year)



Mobile Development CERTIFICATE

Program Overview

This is a 24 credit certificate program introducing development on the two most popular mobile platforms: Android and iOS. The certificate includes a foundation course in computer science, a web fundamentals course, and a two course sequence exploring each mobile platform. This certificate may be completed apart from a degree program or may be selected as an emphasis in the Computer Programming AAS degree.

Career Opportunities

Graduates from the Mobile Development Certificate program will find excellent opportunities in many industries from healthcare to entertainment. Graduates can also find jobs through freelance opportunities and computer Science entrepreneurs.

Program Outcomes

1. Students will become proficient in the development of mobile applications for both the iDevice and Android mobile platforms.
2. Students will be capable of utilizing industry standard application development platforms for both iDevice and Android software.
3. Students will be knowledgeable in application deployment strategies and technologies for both iDevice and Android platforms.
4. Student will have a general knowledge of the business model surrounding mobile application development.

Program Faculty

Warren Sheaffer warren.sheaffer@saintpaul.edu

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> CSCI 1410 Computer Science & Information Systems	4
<input type="checkbox"/> CSCI 1450 Web Fundamentals/HTML	4
<input type="checkbox"/> CSCI 1531 Objective-C Programming	4
<input type="checkbox"/> CSCI 1541 Java Programming 1	4
<input type="checkbox"/> CSCI 2628 Programming iOS Devices	4
<input type="checkbox"/> CSCI 2629 Programming Android Devices	4
Total Program Credits	24

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student. Not all courses are offered each semester.

First Semester

CSCI 1410 Computer Science & Information Systems	4
CSCI 1450 Web Fundamentals/HTML	4
Total Semester Credits	8

Second Semester

CSCI 1531 Objective-C Programming	4
CSCI 1541 Java Programming 1	4
Total Semester Credits	8

Third Semester

CSCI 2628 Programming iOS Devices	4
CSCI 2629 Programming Android Devices	4
Total Semester Credits	8

Total Program Credits 24

Continued on next page

*Information is subject to change.
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Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 38+

Elementary Algebra: Score of 76+ or grade of "C" or better in MATH 0910

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

334C (7181)

Mobile Development CERTIFICATE *(continued)*
 (24 credits)

The below chart illustrates the courses required for completion of this certificate.

Introductory



Intermediate



Advanced



Liberal & Fine Arts Programs & Courses

Liberal & Fine Arts Programs

Associate in Arts Degree (60 Credits)	202
Associate in Arts Degree –	
Emphasis in Communication Studies (60 Credits)	203
Emphasis in Criminology (60 Credits)	204
Emphasis in History (60 Credits) NEW!	205
Emphasis in Social Science/Public Affairs (60 Credits)	206
Associate in Fine Arts Degree – Music (68 Credits)	207
American Sign Language Studies Certificate	
(30 Credits)	208
Also available: Sign Language Interpreter/Transliterater	
AAS Degree, page 165	

Communications

English	210
Reading	210
English for Speakers of Other Languages (ESOL)	210
Speech	211

Fine Arts/Humanities

Art	211
Drama & Theatre	211
Humanities	211
Music	212
Philosophy	212

Global Languages

American Sign Language (ASL)	212
Chinese	212
Spanish	213

Social Science

Anthropology	213
Economics	214
Geography	214
History	214
Political Science	214
Psychology	214
Sociology	215
Women's and Gender Studies	215

Associate in Arts DEGREE

Program Overview

The Associate in Arts (AA) degree is awarded for successful completion of 60 semester credits in liberal arts and sciences and is designed to constitute the first two years of a bachelor's degree. The Associate in Arts degree is a liberal arts degree intended primarily for students who plan to transfer to another college or university to complete a bachelor's degree.

No specific major is listed in conjunction with the degree; however, students may choose to concentrate in a particular field of study in preparation for a planned major or professional emphasis at a four-year college or university.

An AA degree must include the entire Minnesota Transfer Curriculum (40 semester credits), which, pursuant to Minnesota statute, must transfer to any institution in the Minnesota State Colleges and Universities system or the University of Minnesota.

Students are to develop an educational plan in consultation with a Saint Paul College Transfer Specialist to assure that degree requirements are fulfilled. Requirements may vary depending upon the major and transfer college.

The AA degree can be completed through a variety of course delivery methods including face to face, hybrid and/or online. A student may choose to complete the entire AA degree online.

Program Outcomes

1. Knowledge of the important concepts and principles of the natural sciences, mathematics, history, social and behavioral sciences, arts, and humanities.
2. Skills necessary for life roles, including skills in thinking, communication and methods of inquiry and applications of knowledge.
3. Critical examination of and an appreciation for diverse people, cultures and life roles.

Program Advisors

Transfer Specialists are the Academic Advisors for the Associate in Arts degree and are located in the Transfer Center, Room 1320, Main Floor.

For assistance or additional information, please call our Transfer Center at 651.846.1739 or email: transfer.center@saintpaul.edu.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Program Requirements

Check off when completed

Course Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each of the ten Goal Areas

- Goal 1: Communication** 9
Minimum of 9 credit, including the following:
ENGL 1711 Composition 1 – 4 cr
ENGL 1712 Composition 2 – 2 cr
SPCH 17XX (Goal 1 only) – 3 cr
 - Goal 2: Critical Thinking**
Fulfilled when 10 goal areas (40 credits) are completed
 - Goal 3: Natural Sciences** 7
Minimum of two courses from two different disciplines, one of which must be a lab course.
 - Goal 4: Mathematical/Logical Reasoning.** 3
Minimum of one course. Courses must be numbered between 1700-1799 or 2700-2799.
 - Goal 5: History, Social Sciences and Behavioral Sciences** 9
Minimum of three courses from two different disciplines.
 - Goal 6: Humanities and Fine Arts** 9
Minimum of three courses from two different disciplines.
 - MnTC Goal 7: Human Diversity**
Minimum of one course.
 - MnTC Goal 8: Global Perspective**
Minimum of one course.
 - MnTC Goal 9: Ethic and Civil Responsibility**
One eligible course.
 - MnTC Goal 10: People and the Environment**
Minimum of one course.
- Minnesota Transfer Curriculum (MnTC)**
Goals 1-10: 40
Additional MnTC and/or pre-major electives. . 20
- Total Program Credits** 60

Additional Requirements

- At least 60 earned college-level credits (40 MnTC credits and 20 additional MnTC, pre-major or elective credits)
- A grade of "C" or better in ENGL 1711
- Associate in Arts (AA) cumulative GPA of 2.0
- Minnesota Transfer Curriculum (MnTC) cumulative GPA of 2.0
- Meet Saint Paul College residency requirement: 20 credits. This requirement may be reduced to 12 credits with transfer of at least 12 college-level credits from another Minnesota State College and University or the University of Minnesota.

Minnesota Transfer Curriculum

Students completing the Minnesota Transfer Curriculum (MnTC) must take courses that satisfy the requirements for each of the 10 Goal Areas.

- A minimum of 40 credits is required.
- Credits are counted only once toward the MnTC 40-credit minimum even though a course may be listed in more than one goal area. Courses designated with a superscript satisfy more than one goal area, i.e., BIOL 1725¹⁰.
- A discipline is a subject, e.g., "Biology," "Chemistry," and "Physics" are three different disciplines.

Check www.transferology.com to determine whether courses transfer as direct equivalents at the institution you plan to attend.

Using the MnTC Curriculum Guide

The MnTC Curriculum Guide is available online at www.saintpaul.edu/MnTC or you can pick one up in the Transfer Center or in Enrollment Services.

On the guide, pay special attention to the following:

- A (p) listed after the course title indicates that a prerequisite is required before the course can be taken.
- An asterisk (*) after the course number indicates the course contains a lab.

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+; Visit the transfer Center to determine if transfer programs require college-level math.

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

99AA

Associate in Arts DEGREE Emphasis in Communication Studies

Program Overview

The Associate in Arts Degree - Emphasis in Communication Studies provides students with the opportunity to learn how to write strong messages and speak persuasively. Students will also build skills in networking, team building, and conflict management.

Career Opportunities

Students who successfully complete the Associate in Arts Degree - Emphasis in Communication Studies will be prepared to transfer to a baccalaureate program in Professional Communications. With a degree in Communications you can work in a number of fields within the Arts, Audio-Video Technology and Communications sectors such as Communications Director, Customer Relations, Media Relations, Journalism and Sales.

Program Outcomes

1. Apply knowledge of the important concepts and principles of the natural science, mathematics history, social and behavioral sciences, arts, and humanities.
2. Develop skills necessary for life roles, including skills in thinking, communication, and methods of inquiry and applications of knowledge.
3. Critically examine and develop an appreciation for diverse people, cultures, and life roles.
4. Develop oral and written communication skills to communicate with a wide range of diverse populations.
5. Demonstrate an understanding of communication skills in both spoken and written form.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between this program(s) and post secondary institution(s) for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

**Associate in Arts Degree -
Emphasis in Communication Studies**
BA Professional Communication
Metropolitan State University

Program Faculty

Anna Ignatjeva anna.ignatjeva@saintpaul.edu
Dan Paulnock daniel.paulnock@saintpaul.edu
Shelby Reigstad shelby.reigstad@saintpaul.edu

Program Requirements

Check off when completed

Emphasis Requirements	Cr
<input type="checkbox"/> SPCH 1710 Fundamentals of Public Speaking	3
<input type="checkbox"/> SPCH 1720 Interpersonal Communication	3
<input type="checkbox"/> SPCH 1730 Intercultural Communication	3
<input type="checkbox"/> SPCH 1750 Small Group Communication	3
<input type="checkbox"/> SPCH 1780 Gender Communication	3
<input type="checkbox"/> SPCH 1700 Introduction to Speech Communication	3
<input type="checkbox"/> Communication Studies Electives	2
Choose from:	
SPCH 1740 Mass Media & Communication- 3 cr	
SPCH 1770 Family Communication- 3 cr (Any MnTC SPCH course may be counted as a Communication Studies Elective)	
Emphasis Total	20

MnTC Requirements	Cr
Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	
<input type="checkbox"/> Goal 1: Communication	9
ENGL 1711 Composition 1 – 4 cr ENGL 1712 Composition 2 – 2 cr SPCH XXXX- 3 cr <i>Requirement met with emphasis SPCH courses.</i>	
<input type="checkbox"/> Goal 2: Critical Thinking <i>Fulfilled when 10 goal areas (40 credits) are completed.</i>	
<input type="checkbox"/> Goal 3 Natural Science	7
<i>Two courses from two different disciplines, one of which must be a lab course.</i>	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning.	3
<i>One course numbered between 1700-1799 or 2700-2799.</i>	
<input type="checkbox"/> Goal 5: History, Social Sciences and Behavioral Sciences	9
<i>Three courses from two different disciplines.</i>	
<input type="checkbox"/> Goal 6: Humanities & Fine Arts	9
<i>Three courses from two different disciplines.</i>	
<input type="checkbox"/> Goal Areas 7-10 <i>Select courses to meet all 10 Goal Areas</i>	
MnTC Requirements Total	40

Total Program Credits 60

If courses are counted in both the Emphasis Requirements and the MnTC Requirements students may need to complete additional classes to reach the 60 credit total.

Program Advisors

Transfer Specialists are the Academic Advisors for the Associate in Arts degree. They are located in the Transfer Center, Room 1320, Main Floor. For assistance or additional information about the specific articulation agreements, please call or email the Transfer Center at 651.846.1739 or transfer.center@saintpaul.edu

Additional Requirements

- At least 60 earned college-level credits (40 MnTC credits and 20 additional MnTC, pre-major or elective credits)
- A grade of "C" or better in ENGL1711
- Associate in Arts (AA) cumulative GPA of 2.0
- Minnesota Transfer Curriculum (MnTC) cumulative GPA of 2.0
- Meet Saint Paul College residency requirement: 20 credits. This requirement may be reduced to 12 credits with transfer of at least 12 college-level credits from another Minnesota State College and University or the University of Minnesota.

Program Start Dates

Fall, Spring, Summer

Course Sequence

Students are allowed to take the courses in any sequence. However, all course prerequisites need to be followed. For specific suggestions, please speak with a Transfer Specialist or the program faculty. Students should consult with the Program Advisor each semester.

Not all courses are offered each semester, a selection of courses is offered summer term.

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+; Visit the Transfer Center to determine if transfer programs require college level math.

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

99A emphasis Communication

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Associate in Arts DEGREE Emphasis in Criminology

Program Overview

The Associate in Arts Degree - Emphasis in Criminology provides students the opportunity to study specific types of crime, the theories of crime and punishment, the psychological and social origins of criminal behavior, and social value systems. Students will also examine criminal law and criminal justice systems, penology, rehabilitation, recidivism, social attitudes concerning crime and the justice system, and criminal justice policy.

Career Opportunities

Students who successfully complete the Associate in Arts Degree - Emphasis in Criminology will be prepared to transfer to a baccalaureate program in Criminal Justice. With a degree in criminal justice, you can work in a number of careers fields within the justice system such as court administrators, social workers, parole officers, correctional officers and management positions.

Program Outcomes

1. Apply knowledge of the important concepts and principles of the natural sciences, mathematics, history, social and behavioral sciences, arts, and humanities.
2. Develop skills necessary for life roles, including skills in thinking, communication, and methods of inquiry and applications of knowledge.
3. Critically examine and develop an appreciation for diverse people, cultures, and life roles.
4. Develop oral and written communication skills to communicate with a wide range of diverse populations.
5. Demonstrate an understanding of the fields of criminology and criminal justice and apply criminological theory to contemporary problems and issues.

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Associate in Arts Degree - Emphasis in Criminology

BA Criminal Justice
Metropolitan State University

Program Faculty

Kris D'Meier kris.dmeier@saintpaul.edu
Jolene Sundlie jolene.sundlie@saintpaul.edu

Program Requirements

Check off when completed

Emphasis Requirements	Cr
<input type="checkbox"/> SOCI 1765 Sociology of Crime and Deviance	3
<input type="checkbox"/> SOCI 1766 Juvenile Delinquency	3
<input type="checkbox"/> SOCI 1772 Intro to Criminal Justice	3
<input type="checkbox"/> Criminology Electives	11
Recommended Courses:	
PHIL 1720 Ethics – 3 cr	
POLS 1720 Intro to American Government – 3 cr	
PSYC 1710 General Psychology – 4 cr	
PSYC 1740 Abnormal Psychology – 4 cr	
SOCI 1710 Intro to Sociology – 4 cr	
SOCI 1720 Social Problems – 3 cr	
SOCI 1774 Intro to Corrections – 3 cr	
SOCI 1776 Probation, Parole and Alternative Sentencing – 3 cr	
SOCI 2710 Social Psychology – 4 cr (Any MnTC course may be counted as a Criminology Elective)	
Emphasis Total	20

MnTC Requirements	Cr
Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	
<input type="checkbox"/> Goal 1: Communication	9
ENGL 1711 Composition 1 – 4 cr	
ENGL 1712 Composition 2 – 2 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 2: Critical Thinking	
<i>Fulfilled when 10 goal areas (40 credits) are completed.</i>	
<input type="checkbox"/> Goal 3: Natural Science	7
<i>Two courses from two different disciplines, one of which must be a lab course.</i>	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning.	3
<i>One course numbered between 1700-1799 or 2700-2799.</i>	
MATH 1740 (recommended) – 4 cr	
<input type="checkbox"/> Goal 5: History, Social Sciences and Behavioral Sciences	9
<i>Three courses from two different disciplines.</i>	
Emphasis courses SOCI 1765 – 3 cr and SOCI 1766 – 3 cr will count toward Goal 5.	
<i>One additional non-SOCI course is required.</i>	
<input type="checkbox"/> Goal 6: Humanities & Fine Arts	9
<i>Three courses from two different disciplines.</i>	
<input type="checkbox"/> Goal Areas 7-10	
<i>Select courses to meet all 10 Goal Areas</i>	
MnTC Requirements Total	40

Total Program Credits 60

If courses are counted in both the Emphasis Requirements and the MnTC Requirements students may need to complete additional classes to reach the 60 credit total.

Program Advisors

Transfer Specialists are the Academic Advisors for the Associate in Arts degree. They are located in the Transfer Center, Room 1320, Main Floor.

For assistance or additional information about the specific articulation agreements, please call or email the Transfer Center at 651.846.1739 or transfer.center@saintpaul.edu

Additional Requirements

- At least 60 earned college-level credits (40 MnTC credits and 20 additional MnTC, pre-major or elective credits)
- A grade of "C" or better in ENGL 1711
- Associate in Arts (AA) cumulative GPA of 2.0
- Minnesota Transfer Curriculum (MnTC) cumulative GPA of 2.0
- Meet Saint Paul College residency requirement: 20 credits. This requirement may be reduced to 12 credits with transfer of at least 12 college-level credits from another Minnesota State College and University or the University of Minnesota.

Program Start Dates

Fall, Spring, Summer

Course Sequence

Students are allowed to take the courses in any sequence. However, all course prerequisites need to be followed. For specific suggestions, please speak with a Transfer Specialist or one of the program faculty. Students should consult with the Program Advisor each semester.

Not all courses are offered each semester; a selection of courses is offered summer term.

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ or grade of "C" or better in ENGL 0922

Arithmetic: Arithmetic: Score of 20+; Visit the Transfer Center to determine if the transfer programs require college-level mathematics.

Assessment Results and Prerequisites: Students admitted to Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

99AA emphasis Criminology

Information is subject to change.
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Associate in Arts DEGREE

Emphasis in History

Program Overview

The Associate in Arts Degree – Emphasis in History provides students with the opportunity to study the narrative of past events as they relate to the human race. They use this knowledge to discuss, write, and educate others regarding the interpretation of the past.

Career Opportunities

Students who successfully complete the Associate in Arts Degree – Emphasis in History will be prepared to transfer to a baccalaureate program in History. With a degree in History you can work in a number of fields within the government and education systems such as special collections librarians, archivists, museum work, and faculty at secondary and post-secondary institutions. A History degree is also useful preparation for careers in policy studies or the practice of law.

Program Outcomes

1. Apply knowledge of the important concepts and principles of the natural sciences, mathematics, history, social and behavioral sciences, arts, and humanities.
2. Develop skills necessary for life roles, including skills in thinking, communication, and methods of inquiry and applications of knowledge.
3. Critically examine and develop an appreciation for diverse people, cultures, and life roles.
4. Develop oral and written communication skills to communicate with a wide range of diverse populations.
5. Demonstrate an understanding of historical events and their causes, indicators, and effects on civilizations and cultures.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between this program(s) and post-secondary institution(s) for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Associate in Arts Degree - Emphasis in History
 BA History
 Metropolitan State University

Program Faculty

Kurt Kortenhof kurt.kortenhof@saintpaul.edu
 Ayesha Shariff ayesha.shariff@saintpaul.edu

Program Requirements

Check off when completed

Emphasis Requirements	Cr
<input type="checkbox"/> HIST 1746 U.S. History since 1865	4
<input type="checkbox"/> HIST 1760 History of World Civ. to 1500	3
<input type="checkbox"/> HIST 1761 History of World Civ. since 1500	3
<input type="checkbox"/> HIST 2790 Historical Methods	2
<input type="checkbox"/> History Electives	8
Choose from:	
HIST 1730 Contemporary World History – 3 cr	
HIST 1750 Minnesota History – 3 cr	
HIST 1770 History of Women in the U.S. – 3cr	
HIST 1773 African American History – 3cr	
HIST 2740 Immigration and Ethnic History of the U.S. – 3cr	
HIST 2780 Special Topics in History (1-6) (Any MnTC Goal 5 HIST course may be counted as a History Elective)	
Emphasis Total	20

MnTC Requirements	Cr
Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	
<input type="checkbox"/> Goal 1: Communication	9
ENGL 1711 Composition 1 – 4 cr	
ENGL 1712 Composition 2 – 2 cr	
SPCH XXXX (Goal 1 required) – 3 cr	
<input type="checkbox"/> Goal 2: Critical Thinking <i>Fulfilled when 10 goal areas (40 credits) are completed.</i>	
<input type="checkbox"/> Goal 3 Natural Science	7
<i>Two courses from two different disciplines, one of which must be a lab course.</i>	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning	3
<i>One course numbered between 1700-1799 or 2700-2799.</i>	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	9
<i>Three courses from two different disciplines. Emphasis courses HIST 1760 – 3 cr and HIST 1761 – 3 cr will count toward Goal 5. One additional non-HIST course is required.</i>	
<input type="checkbox"/> Goal 6: Humanities & Fine Arts	9
<i>Three courses from two different disciplines.</i>	
<input type="checkbox"/> Goal Areas 7-10 <i>Select courses to meet all 10 Goal Areas</i>	
MnTC Requirements Total	40

Total Program Credits 60

If courses are counted in both the Emphasis Requirements and the MnTC Requirements students may need to complete additional classes to reach the 60 credit total.

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

Program Advisor

Transfer Specialists are the Academic Advisors for the Associate in Arts degree. They are located in the Transfer Center, Room 1320, Main Floor. For assistance or additional information about the specific articulation agreements, please call or email the Transfer Center at 651.846.1739 or transfer.center@saintpaul.edu

Additional Requirements

- At least 60 earned college-level credits (40 MnTC credits and 20 additional MnTC, pre-major or elective credits)
- A grade of “C” or better in ENGL 1711
- Associate in Arts (AA) cumulative GPA of 2.0
- Minnesota Transfer Curriculum (MnTC) cumulative GPA of 2.0
- Meet Saint Paul College residency requirement: 20 credits. This requirement may be reduced to 12 credits with transfer of at least 12 college-level credits from another Minnesota State College and University or the University of Minnesota.

Program Start Dates

Fall, Spring, Summer

Course Sequence

Students are allowed to take the courses in any order. However, all course prerequisites need to be followed. For specific suggestions, please speak with a Transfer Specialist or the program faculty. Students should consult with the Program Advisor each semester.

Not all courses are offered each semester; a selection of courses is offered summer term.

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of “C” or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of “C” or better in ENGL 0922

Arithmetic: Score of 20+; Visit the Transfer Center to determine if transfer programs require college-level math.

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

99AA-Emphasis History

Associate in Arts DEGREE

Emphasis in Social Science/Public Affairs

Program Overview

The Associate in Arts Degree - Emphasis in Social Science/Public Affairs provides students with the opportunity to learn both the political science-based interpretation of public policy as well as the integration of other disciplines and fields that directly contribute to the management of public interest.

Career Opportunities

Students who successfully complete the Associate in Arts Degree – Emphasis in Social Science/Public Affairs will be prepared to transfer to a baccalaureate program in Social Science or Political Science. With a degree in political science you can work in a number of fields within the Government and Public Administration system such as compliance officers, operations managers, political scientists, and public relations specialists.

Program Outcomes

1. Apply knowledge of the important concepts and principles of the natural science, mathematics, history, social and behavioral sciences, arts, and humanities.
2. Develop skills necessary for life roles, including skills in thinking, communication and methods of inquiry and applications of knowledge.
3. Critically examine and develop an appreciation for diverse people, cultures, and life roles.
4. Develop oral and written communication skills to communicate with a wide range of diverse populations.
5. Demonstrate an understanding of the fields of social science and public affairs and apply political theory to contemporary problems and issues.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between this program(s) and post secondary institution(s) for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Associate in Arts Degree - Emphasis in Social Science/Public Affairs

- BA Social Science - Generalist
Metropolitan State University
- BA Social Science - Political Science
Metropolitan State University

Program Faculty

James Andresen james.andresen@saintpaul.edu

Program Requirements

Check off when completed

Emphasis Requirements	Cr
<input type="checkbox"/> PHIL 1720 Ethics	3
<input type="checkbox"/> POLS 1720 Intro to American Government	3
<input type="checkbox"/> POLS 1750 Intro to Political Science	3
<input type="checkbox"/> POLS 1760 Intro to Political Philosophy	3
<input type="checkbox"/> Social Science Electives	8
Recommended Courses:	
ECON 1720 Macroeconomics – 3 cr	
ECON 1730 Macroeconomics – 3 cr	
POLS 1790 Special Topics in Political Science – 1-6 cr	
PSYC/SOCI 2720 Social Psychology – 4 cr	
SOCI 1720 Social Problems – 3 cr	
<i>(Any MnTC Goal 5 course may be counted as a Social Science Elective)</i>	
Emphasis Total	20

MnTC Requirements

MnTC Requirements	Cr
Refer to the Minnesota Transfer Curriculum Course List for each Goal Area	
<input type="checkbox"/> Goal 1: Communication	9
ENGL 1711 Composition 1 – 4 cr	
ENGL 1712 Composition 2 – 2 cr	
SPCH XXXX (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 2: Critical Thinking	
<i>Fulfilled when 10 goal areas (40 credits) are completed.</i>	
<input type="checkbox"/> Goal 3 Natural Science	7
<i>Two courses from two different disciplines, one of which must be a lab course.</i>	
<input type="checkbox"/> Goal 4 : Mathematical/Logical Reasoning	3
<i>One course numbered between 1700-1799 or 2700-2799.</i>	
<input type="checkbox"/> Goal 5: History, Social Science, and Behavioral Sciences	9
<i>Three courses from two different disciplines.</i>	
Emphasis courses POLS 1720 – 3 cr,	
POLS 1750 – 3 cr will count toward Goal 5.	
One additional non-POLS course is required.	
<input type="checkbox"/> Goal 6: Humanities & Fine Arts	9
<i>Three courses from two different disciplines.</i>	
Emphasis course PHIL1720 – 3 cr will count toward Goal 6. Two additional courses are required.	
<input type="checkbox"/> Goal Areas 7-10 of the MnTC	
<i>Select courses to meet all 10 Goal Areas</i>	
MnTC Requirements Total	40

Total Program Credits60

If courses are counted in both the Emphasis Requirements and the MnTC Requirements students may need to complete additional classes to reach the 60 credit total.

Program Advisor

Transfer Specialists are the Academic Advisors for the Associate in Arts degree. They are located in the Transfer Center, Room 1320, Main Floor.

For assistance or additional information about the specific articulation agreements, please call or email the Transfer Center at 651.846.1739 or transfer.center@saintpaul.edu

Additional Requirements

- At least 60 earned college-level credits (40 MnTC credits and 20 additional MnTC, pre-major or elective credits)
- A grade of "C" or better in ENGL1711
- Associate in Arts (AA) cumulative GPA of 2.0
- Minnesota Transfer Curriculum (MnTC) cumulative GPA of 2.0
- Meet Saint Paul College residency requirement: 20 credits. This requirement may be reduced to 12 credits with transfer of at least 12 college-level credits from another Minnesota State College and University or the University of Minnesota.

Program Start Dates

Fall, Spring, Summer

Course Sequence

Students are allowed to take the courses in any order. However, all course prerequisites need to be followed. For specific suggestions, please speak with a Transfer Specialist or the program faculty. Students should consult with the Program Advisor each semester.

Not all courses are offered each semester; a selection of courses is offered summer term.

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+; Visit the Transfer Center to determine if transfer programs require college level math.

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Associate in Fine Arts DEGREE

Music

Program Overview

The Associate in Fine Arts in Music provides students with the educational foundation needed to transfer to a four-year music program. The program will offer music theory and music history as well as develop performance skills.

Career Opportunities

Students who successfully complete the Associate in Fine Arts in Music Degree will be prepared to transfer to a baccalaureate program in Music. With a degree in music you can pursue careers as college or high school music teachers, music directors and composers, or musicians and singers.

Program Outcomes

1. Apply knowledge of the important concepts and principles of the natural science, mathematics, history, social and behavioral sciences, arts, and humanities.
2. Develop skills necessary for life roles, including skills in thinking, communication, and methods of inquiry and applications of knowledge.
3. Critically examine and develop an appreciation for diverse people, cultures, and life roles.
4. Develop oral and written communication skills to communicate with a wide range of diverse populations.
5. Demonstrate an understanding of the field of music and apply elements of musical theory, history, and performance.

Program Advisors

Transfer Specialists are the Academic Advisors for the Associate in Fine Arts degree. They are located in the Transfer Center, Room 1320, Main Floor. For assistance or additional information about the specific articulation agreements, please call or email the Transfer Center at 651.846.1739 or transfer.center@saintpaul.edu

Program Faculty

Julieta Alvarado julieta.alvarado@saintpaul.edu
 Michael Olsen michael.olsen@saintpaul.edu

Program Requirements

All MUSC classes must be completed with a grade of "C" or better.

Check off when completed

Course	Cr
<input type="checkbox"/> MUSC 1700 Music Theory & Lab 1.	4
<input type="checkbox"/> MUSC 1705 Music Theory & Lab 2.	4
<input type="checkbox"/> MUSC 1710 Music Theory & Lab 3.	4
<input type="checkbox"/> MUSC 1715 Music Theory & Lab 4.	4
<input type="checkbox"/> Select 6 credits of Music History	6
MUSC 2720 Music History 1: Medieval to Baroque – 3 cr	
MUSC 2721 Music History 2: Classical to Modern – 3 cr	
<input type="checkbox"/> Select 8 credits of lessons in a primary instrument. . . 8	
MUSC 2701 Applied Voice	
MUSC 2702 Applied Piano	
MUSC 2703 Applied String	
<input type="checkbox"/> Select 4 credits of ensemble music	4
MUSC 1730 Concert Choir	
MUSC 2710 Chamber Singers	
MUSC 2713 Guitar Ensemble	
MUSC 2714 String Ensemble	
<input type="checkbox"/> MUSC 1770 Music in World Cultures	3
Subtotal.	37

General Education/MnTC Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH 1710 Fund of Public Speaking (Goal 1 only) – 3 cr	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science, and Behavior Sciences.	3
<input type="checkbox"/> Goal 6: Humanities & Fine Arts	3
ARTS, ENGL, HUMA, PHIL, SPAN or THTR (recommended)	
<input type="checkbox"/> Goal 1-10 or the MnTC.	15
Students must select courses from at least six (6) MnTC goal areas.*	
General Education Requirements	31

Total Program Credits 68

*Suggested courses include:
 MUSC 1735 Classical Piano 1
 MUSC 1736 Classical Piano 2
 MUSC 1745 History of Rock & Roll
 MUSC 1750 Jazz History
 MUSC 1760 American Music
 MUSC 1765 Music of Latin America & the Caribbean

Program Start Dates

Fall, Spring, Summer

Course Sequence

Students are allowed to take the courses in any sequence. However, all course prerequisites need to be followed. For specific suggestions, please speak with a Transfer Specialist or the program faculty. Students should consult with the Program Advisor each semester.

Not all courses are offered each semester; a selection of courses is offered summer term.

Transfer Opportunities

Saint Paul College has transfer articulation agreements between this program(s) and post-secondary institution(s) for the baccalaureate degree programs listed below. For more information please contact a transfer specialist or go to www.saintpaul.edu/Transfer.

Associate of Fine Arts - Music

BS Music Education
 Southwest Minnesota State University

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Arithmetic: Score of 20+; Visit the Transfer Center to determine if transfer programs require college-level math.

Assessment Results and Prerequisites: Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

99FA

*Information is subject to change.
 This Program Requirements Guide is not a contract.*

American Sign Language Studies CERTIFICATE

Program Overview

The American Sign Language Studies Certificate Program provides students with the knowledge and skills of American Sign Language (ASL), focusing on the uniqueness of ASL as a language, Deaf Culture and Deaf History. The program encourages students to become involved in the social and cultural activities of the Deaf Community. The curriculum provides a solid and basic foundation for entry into a career in a deafness-related field and prepares students for continued educational studies in a variety of disciplines. It is a pathway to entering the Sign Language Interpreter/Transliterators Program at Saint Paul College or similar programs at other institutions. Individuals who intend to, or currently work with Deaf and/or Hard-of-Hearing individuals in fields such as education, human/social services, community service agencies, and vocational rehabilitation benefit from the opportunity to learn and develop stronger skills in American Sign Language.

It is necessary for students in the American Sign Language Studies Program to be able to process visual information.

Career Opportunities

Completion of the American Sign Language Studies Certificate:

- Enhances the ability to work and communicate more effectively with Deaf and Hard-of-Hearing people in academic, agency, and business settings.
- Provides opportunities to enhance ASL fluency and acquire Deaf Culture knowledge which is applicable to a variety of educational disciplines.
- Prepares students to meet the ASL prerequisites for the Sign Language Interpreter/Transliterators Program.
- Enhances American Sign Language fluency for potential or current teachers of Deaf and Hard-of-Hearing students.

Program Outcomes

1. Graduates will be prepared to meet the ASL prerequisites for the Sign Language Interpreter/Transliterators Program.
2. Graduates will develop ASL skills and Deaf Culture awareness to more effectively communicate with Deaf and Hard-of-Hearing people in a variety of settings.
3. Graduates will meet world language requirements at the high school and college/university level.
4. Graduates will be prepared to take an American Sign Language Proficiency Interview and to meet K-12 Skill Levels.
5. Graduates will meet entrance requirements for undergraduate or graduate programs in ASL Studies, Linguistics, and Deaf Education.

Program Faculty

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Part-time/Full-time Options

Part-time and full-time options are available.

Sign Language Interpreter/Transliterators Program

Students planning to enroll in the Sign Language Interpreter/Transliterators Program after completing this certificate program must meet the program standards and complete the [Application to Sign Language Interpreter/Transliterators AAS Degree Major](#) form to apply for admission.

In the Sign Language Interpreter/Transliterators Program, it is necessary for students to be able to process auditory and visual information.

College Credit by Exam/Test-out

If a student has successfully completed a Saint Paul College Credit by Exam/Test-Out of ASLS 1411 American Sign Language 1 and/or ASLS 1412 American Sign Language 2, then ASLS 1415 American Sign Language 5 is strongly recommended. Students who have not had recent ASL courses (within the past 24 months) at date of application will need to refresh their skills by repeating their last ASL course.

Credits by Exam/Test-Outs are not transferable from other educational institutions.

Program Requirements

Check off when completed

Course	Cr
<input type="checkbox"/> SPCH XXXX (Goal 1)	3
<input type="checkbox"/> ASLS 1411 American Sign Language 1	3
<input type="checkbox"/> ASLS 1412 American Sign Language 2	3
<input type="checkbox"/> ASLS 1413 American Sign Language 3	3
<input type="checkbox"/> ASLS 1414 American Sign Language 4	3
<input type="checkbox"/> ASLS 1420 ASL Linguistics	4
<input type="checkbox"/> ASLS 1430 Classifiers	3
<input type="checkbox"/> ASLS 1435 Deaf Studies/Culture	3
<input type="checkbox"/> ASLS 1443 ASL Fingerspelling and Numbers	3
Subtotal	28
<input type="checkbox"/> Select 2 credits from following	
Technical Electives	2
<input type="checkbox"/> ASLS 1415 American Sign Language 5	3
<input type="checkbox"/> ASLS 1446 ASL Non-Manual Markers	2
<input type="checkbox"/> ASLS 1448 American Sign Language Semantics	2
<input type="checkbox"/> ASLS 1497 Special Topics in ASL	1-5
Total Program Credits	30

Optional Course

ASLS 1469 Deaf Heritage of Minnesota 2
 Course is not offered annually.

Continued on next page

Minimum Program Entry Requirements
 Students entering this program must meet the following minimum program entry requirements:

It is necessary for students in the American Sign Language Studies Program to be able to process visual information.

Reading: Score of 78+ or grade of "C" or better in READ 0722.

Arithmetic: Score of 20+

If you intend to enroll in the Sign Language Interpreter/Transliterators program, be aware there is a program prerequisite in arithmetic.

Assessment Results and Prerequisites:
 Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Degree option may have a greater requirement than this certificate.

125C (7060)

*Information is subject to change.
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American Sign Language Studies CERTIFICATE *(continued)*

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended; however, it is not required. Not all courses are offered each semester; a selection of courses is offered summer term. Some courses are available day and evening; some courses are available days only.

First Semester

SPCH XXXX (Goal 1)	3
ASLS 1411 American Sign Language 1	3
ASLS 1412 American Sign Language 2	3
Total Semester Credits	9

Second Semester

ASLS 1413 American Sign Language 3	3
ASLS 1414 American Sign Language 4	3
Total Semester Credits	6

Third Semester

ASLS 1420 ASL Linguistics	4
*ASLS 1443 ASL Fingerspelling and Numbers	3
Total Semester Credits	7

Fourth Semester

ASLS 1430 Classifiers	3
*Technical Electives	2
Total Semester Credits	5

ASLS 1435 Deaf Studies/Culture	3
Can be taken anytime during the program.	

Total Program Credits30

* Technical electives can be taken in Fall Semester and ASLS 1443 Fingerspelling and Numbers can be taken during Spring Semester.

Guidelines for Placement in ASL Courses at Saint Paul College

Students with no or little background in ASL

If you have little or no background in ASL you should register for ASLS 1411 American Sign Language 1, which is the first course in our ASL language sequence.

Students with college-level study of ASL

If you have taken ASL courses at another higher education institution, you should have your transcripts evaluated by the Saint Paul College Transfer Center in order to determine appropriate placement.

Students with high school study of ASL

If you have studied ASL for one year or less in high school, enroll in ASLS 1411 American Sign Language 1.

If you have studied ASL for two or more years in high school and can answer “yes” to three or more of the following questions, then you may take a test out on SPC campus.

1. Did you study ASL during your junior AND senior years of high school?
2. Did you graduate from high school during the past two years?
3. Did your teacher use ASL without voice in class?
4. Is ASL your primary language?

For-credit course placement

Test Out:

Students may take a test out at their own expense to determine whether they have the linguistic proficiency necessary to enroll in our second, third, or fourth semester ASL courses. Students passing this test out will receive college-level credit, but will not receive a letter grade. For more information about this test, see the American Sign Language Studies page on the college website.

Non-credit course placement

Sign Language Proficiency Interview (SLPI):

This exam has a fee and a documentation of SLPI rating will be required for non-credit placement. Students scoring advanced/advanced plus on the SLPI evaluation will be allowed to register for ASLS 1414 (ASL 4).

Students scoring intermediate plus on the SLPI evaluation will be allowed to register for ASLS 1413 (ASL 3).

For more information on how to take SLPI go to <http://www.msad.state.mn.us/Staff/SLPI%20Registration%20Form%202014-2015.pdf>. This is not associated with Saint Paul College.

These guidelines are subject to change. Please, make sure you are following the most current version.

Liberal Arts Courses

Course delivery methods change on a semester basis. Please check the current course schedule for the most up-to-date information at www.saintpaul.edu/CourseSchedule.

Communications

English Overview

The English and Communications faculty are dedicated to helping students apply the knowledge and skills gained through the study of writing and literature to successfully communicate in work and life roles. Two levels of developmental writing courses are available. The department offers a wide selection of transferable general education courses including Composition 1 and 2 and literature courses including the Survey of American Literature, The English Novel, Native American and African American Literature, an Introduction to Poetry and others. Students planning to transfer to a four-year degree generally enroll in Composition courses and one or two related electives as they fulfill requirements for the Associate in Arts, Associate in Science and Associate in Applied Science degrees.

Course		Cr
ENGL 0921*	Fundamentals of Writing 1	4
ENGL 0922*	Fundamentals of Writing 2	4
ENGL 1711	Composition 1	4
ENGL 1712	Composition 2	2
ENGL 1720	Introduction to Creative Writing	3
ENGL 1725	Introduction to Fiction Writing	3
ENGL 1730	Introduction to Technical Writing	3
ENGL 1780	Recently-Arrived Contemporary Immigrant Literature	3
ENGL 1790	Contemporary Writers of Color	3
ENGL 2721	Survey of American Literature 1	3
ENGL 2722	Survey of American Literature 2	3
ENGL 2725	Survey of British Literature	3
ENGL 2730	Contemporary American Novel	3
ENGL 2732	Exploring the Short Story	3
ENGL 2740	Native American Literature	3
ENGL 2750	African American Literature	3
ENGL 2760	English Novel	3
ENGL 2770	Introduction to Poetry	3
ENGL 2775	Science Fiction and Fantasy	3
ENGL 2776	Women Writers	3
ENGL 2778	Urban Literature—Lost in the City	3
ENGL 2790	Special Topics in English	1-6

* Does not meet Minnesota Transfer Curriculum (MnTC) Distribution Requirements

Department Faculty

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Reading Overview

The Reading faculty are dedicated to helping students become proficient and successful readers so they may apply this knowledge to meet the demands of their content-area and program specific

reading assignments and their future careers. College reading involves a variety of skills and strategies used together to gain meaning from academic or technical text; it requires critical thinking, draws on background knowledge of a variety of topics, and makes use of a large vocabulary.

Course		Cr
READ 0721*	Reading 1	3
READ 0722*	Reading 2	3
READ 0723*	Accelerated: Reading 1 and 2	6
READ 0725*	Vocabulary Development	1
READ 1490*	Special Topics in Reading	1-6

English for Speakers of Other Languages (ESOL)

The English for Speakers of Other Languages (ESOL) courses are designed to help non-native speakers of English to enter and succeed in the community and technical college system as well as in the transfer curriculum.

ESOL skills courses focus on speaking and listening, reading and vocabulary, writing and grammar, and pronunciation. In addition, students take an integrated skills course which gives them an opportunity to explore various topics and practice all their language skills together.

Depending on their intended major, students completing the ESOL courses may begin one of the career and technical programs, enroll in general education courses, or take further developmental coursework in English and/or Reading.

Students interested in enrolling in the ESOL courses must take the ESL ACCUPLACER test. This test assesses reading, listening and grammar ability.

Before starting a major program, ESOL students must finish all required ESOL courses. ESOL 0850 is the last course students take in the ESOL program.

Upon successful completion of ESOL 0850, students may begin one of the career and technical programs, enroll in general education course, or take further developmental coursework in English (ENGL 1415) and/or Reading (READ 0722). Students will work with ESOL advisors in order to choose the course that are required for their chosen major and language ability.

Course*		Cr
ESOL 0725	High Intermediate Reading & Vocabulary	4
ESOL 0735	High Intermediate Speaking & Listening	4
ESOL 0745	High Intermediate Writing & Grammar	4
ESOL 0750	High Intermediate Integrated Skills	3
ESOL 0825	Advanced Reading & Vocabulary	4
ESOL 0835	Advanced Speaking & Listening	4
ESOL 0845	Advanced Writing & Grammar	4
ESOL 0850	Advanced Integrated Skills	3
ESOL 1490	Special Topics in English for Speakers of Other Languages	1-6

Electives		Cr
ESOL 0820	Pronunciation and Articulation	1

* These courses do not meet Minnesota Transfer Curriculum (MnTC) Distribution Requirements

Department Faculty

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Speech Overview

Rhetoric is where the study of Speech Communication began. By definition, rhetoric refers to oratory or persuasive speaking. The Speech faculty promotes the study and application of human communication and mass communication concepts and skills for work and life roles. Students enroll in Speech courses to fulfill Minnesota Transfer Curriculum requirements and graduation requirements.

Course		Cr
SPCH 1700	Introduction to Speech Communications	3
SPCH 1710	Fundamentals of Public Speaking	3
SPCH 1720	Interpersonal Communication	3
SPCH 1730	Intercultural Communication	3
SPCH 1740	Mass Media and Communications	3
SPCH 1750	Small Group Communication	3
SPCH 1770	Family Communication	3
SPCH 1780	Gender Communication	3
SPCH 1790	Special Topics in Speech	1-6

Department Faculty

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Fine Arts/Humanities

Art Overview

Art courses are designed to provide the highest quality coursework for students majoring in art as well as students who are interested in exploring their creative expression through the creation of artwork in a studio class or the study of art in a historical context. Our art coursework provides students with a richer understanding of the world and themselves. The instructors are committed to excellence in teaching and scholarship. The fine arts department offers a large variety of studio and art history coursework that transfers towards a major in art or art history at a four-year institution. Students who plan on majoring in art at a four-year institution should include art history, studio art and humanities coursework in order to be prepared for upper division work in whatever area of art they may choose to pursue. Art and art history classes fulfill requirements for the Minnesota Transfer Curriculum, as well as graduation requirements.

Course		Cr
ARTS 1713	Photography 1	3
ARTS 1714	Photography 2	3
ARTS 1720	Art Appreciation	3
ARTS 1722	American Animation	3
ARTS 1724	The Design of Everyday Life	3
ARTS 1726	Art in the Cities	3
ARTS 1730	Drawing 1	3
ARTS 1731	Drawing 2	3
ARTS 1732	Two-Dimensional Design	3
ARTS 1733	Three-Dimensional Design	3
ARTS 1740	Introduction to Painting	3
ARTS 1742	Intermediate Painting	3
ARTS 1744	Introduction to Watercolor Painting	3
ARTS 1750	Introduction to Ceramics	3
ARTS 1752	Intermediate Ceramics	3
ARTS 1760	World Art	3
ARTS 1770	Art in America	3
ARTS 1780	Beginning Printmaking	3
ARTS 1790	History of Photography	3
ARTS 1795	Special Topics in Art	1-6

ARTS 2710	Advanced Studio Arts	3-4
ARTS 2754	Advanced Ceramics	3

Department Faculty

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Drama and Theatre Overview

The Drama and Theatre Department course offerings cover both the theoretical and performance aspects of theatre. Students who enroll in Theatre courses fulfill the Minnesota Transfer Curriculum requirements as well as graduation requirements.

Course		Cr
THTR 1710	Introduction to Theatre	3
THTR 1716	Theatre Around the World	3
THTR 1720	Exploring the Theatre Arts	3
THTR 1725	Acting 1	3
THTR 1730	Theatre Stagecraft and Production	3
THTR 1731	Theatre Performance Practicum	1
THTR 1732	Technical Theatre Practicum	1
THTR 1740	Fundamentals of Playwriting: Playwriting 1	3
THTR 1790	Special Topics in Drama and Theatre	1-6
THTR 2725	Acting 2	3

Department Faculty

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Humanities Overview

Humanities courses promote the study of cultural developments. Students gain an increased understanding of the world they live in, how it came to be as it is, and what their place is in it. Students will be asked to consider how they can apply what they have learned about what has come before to what might occur in the future. Humanities is an interdisciplinary subject in that it is an exploration of the influence particular fields have on each other; for example, the influence of political movements on visual art, or the influence of religion on poetry of the same period. The fields included in the Humanities are: art, history, literature, philosophy, religion, politics, law, music, drama and language. Students are encouraged to make comparisons between different fields and different time periods and to consider the significance of similarities and differences. Humanities courses fulfill Minnesota Transfer Curriculum requirements and graduation requirements.

Course		Cr
HUMA 1720	The Ancient & Medieval World	4
HUMA 1730	The Modern World	4
HUMA 1750	Culture and Civilization: Spanish-Speaking Cultures	3
HUMA 1770	The Art of Film	3
HUMA 1780	American Film	3
HUMA 1790	International Film	3
HUMA 1795	Special Topics in Humanities	1-6

Department Faculty

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Music Overview

The College offers Music courses to fulfill the Minnesota Transfer Curriculum requirements and graduation requirements.

Course		Cr
MUSC 1700	Music Theory and Lab 1	4
MUSC 1705	Music Theory and Lab 2	4
MUSC 1710	Music Theory and Lab 3	4
MUSC 1715	Music Theory and Lab 4	4
MUSC 1720	Fundamentals of Music	3
MUSC 1730	Concert Choir	2
MUSC 1735	Classical Piano 1	2
MUSC 1736	Classical Piano 2	2
MUSC 1740	Music Appreciation	3
MUSC 1745	History of Rock and Roll	3
MUSC 1750	Jazz History	3
MUSC 1760	American Music	3
MUSC 1765	Music of Latin America and the Caribbean	3
MUSC 1770	Music in World Cultures	3
MUSC 1790	Special Topics in Music	1-6

Department Faculty

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Philosophy Overview

Philosophy, literally, is the love of wisdom. It is the search for truth and the asking of fundamental questions about our existence and relationship with the world and interaction with others. Philosophy includes the study of arguments, and the providing of evidence and reasons for making particular claims. The practice of philosophy teaches critical thinking and careful reflection; all courses encourage students to formulate pertinent questions and examine and create arguments. It is hoped that students will continue to use careful reasoning skills honed in philosophy classes as they continue in their education and in life. Areas of concentration within philosophy include logic, ethics, religion and the theory of knowledge.

Philosophy is helpful for careers in law, teaching, business, medicine and many other fields. Philosophy courses fulfill a number of requirements for the Minnesota Transfer Curriculum and graduation requirements.

Course		Cr
PHIL 1700	Introduction to Philosophy	3
PHIL 1710	Logic	3
PHIL 1715	Philosophy of Scientific Reasoning	3
PHIL 1720	Ethics	3
PHIL 1722	Health Care Ethics	3
PHIL 1740	World Mythology	3
PHIL 1742	Greek and Roman Mythology	3
PHIL 1750	Eastern Philosophy	3
PHIL 1760	World Religions	3
PHIL 1770	Feminist Philosophy	3
PHIL 1790	Special Topics in Philosophy	1-6

Department Faculty

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Global Languages

American Sign Language (ASL)

The American Sign Language (ASL) courses are central to the 30-credit American Sign Language Studies Certificate program which provides students with the knowledge and skills of American Sign Language (ASL), focusing on the uniqueness of ASL as a language, Deaf Culture and Deaf History. If you are interested in the American Sign Language Studies Certificate program, please see the Program Requirements Guide in the Liberal Arts Program section.

Not all ASL courses meet the MnTC goals. Students may reference the course descriptions to see if a course meets Minnesota Transfer Curriculum goals.

Course		Cr
ASLS 1411	American Sign Language 1	3
ASLS 1412	American Sign Language 2	3
ASLS 1413*	American Sign Language 3	3
ASLS 1414*	American Sign Language 4	3
ASLS 1415	American Sign Language 5	3
ASLS 1420	ASL Linguistics	4
ASLS 1430	Classifiers	3
ASLS 1435	Deaf Studies/Culture	3
ASLS 1443	ASL Fingerspelling and Numbers	3
ASLS 1446	ASL Non-Manual Markers	2
ASLS 1448	American Sign Language Semantics	2
ASLS 1469	Deaf Heritage of Minnesota	2
ASLS 1497	Special Topics in ASL	1-5

*Meets MnTC Goal 8

Department Faculty

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Chinese Overview

Chinese language courses are designed to develop a basic competency in Chinese speaking, listening, reading, and writing; an appreciation for cultural diversity; and the application of conversational Chinese to work and life roles. Students with two-years of high school Chinese are generally prepared for beginning courses while students with three to four years of high school Chinese are generally ready to enter intermediate courses. Students who enroll in Chinese courses fulfill the Minnesota Transfer Curriculum requirements as well as graduation requirements.

Guidelines for Placement in Chinese Courses

Students with little or no background in Chinese

If you have little or no background in Chinese, you should register for CHIN 1710 Beginning Chinese 1, which is the first course in our Chinese language sequence.

Students with college-level study of Chinese

If you have taken Chinese courses at another higher education institution, you should have your transcripts evaluated by the Transfer Center in order to determine appropriate placement.

Students with high school level study of Chinese

If you have studied Chinese for one year or less in high school, enroll in CHIN 1710 Beginning Chinese 1.

If you have studied Chinese for two or more years in high school and can answer “yes” to three or more of the following questions, then you should make an appointment with the Chinese language instructor to determine your placement.

1. Did you study Chinese during your junior AND senior years of high school?
2. Did you graduate from high school during the past two years?
3. Did your teacher speak Chinese to you in class?
4. Did you complete written homework and written compositions in Chinese on a regular basis?

Course	Cr
CHIN 1710 Beginning Chinese 1	5
CHIN 1720 Beginning Chinese 2	5
CHIN 1790 Special Topics in Chinese	1-6

Spanish Overview

Spanish courses are designed to develop proficiency in Spanish speaking, listening, reading, and writing; an appreciation for cultural diversity; and the application of conversational Spanish to work and life roles. Beginning and Intermediate-level courses are offered. Students with two-years of high school Spanish are generally prepared for beginning courses while students with three to four years of high school Spanish are generally ready to enter intermediate courses. Students who enroll in Spanish courses fulfill the Minnesota Transfer Curriculum requirements as well as graduation requirements.

Guidelines for Placement in Spanish Courses

Students with little or no background in Spanish

If you have little or no background in Spanish, you should register for SPAN 1710 Beginning Spanish 1, which is the first course in our Spanish language sequence.

Students with college-level study of Spanish

If you have taken Spanish courses at another higher education institution, you should have your transcripts evaluated by the Transfer Center in order to determine appropriate placement.

Students with high school level study of Spanish

If you have studied Spanish for one year or less in high school, enroll in SPAN 1710 Beginning Spanish 1.

If you have studied Spanish for two or more years in high school and can answer “yes” to three or more of the following questions, then you may take a placement exam.

1. Did you study Spanish during your junior AND senior years of high school?
2. Did you graduate from high school during the past two years?
3. Did your teacher speak Spanish to you in class?
4. Did you complete written homework and written compositions in Spanish on a regular basis?

Non-credit placement:

Students may take a free placement test to determine whether they have the linguistic proficiency necessary to enroll in our second, third, or fourth semester Spanish courses. Students passing this free placement test do not receive any college-level credit for it. For more information about this test, contact the instructor of the course in which you wish to enroll.

For-credit placement: College-Level Examination Program(CLEP):

This exam has a fee and you can earn college-level credit provided you achieve a certain level of proficiency. Students scoring 50 or above on the CLEP can get 6 credits of electives. Students scoring 66 or above can get credit for SPAN 1710 and SPAN 1720. For more information on how to take the CLEP exam go to www.saintpaul.edu/CLEP.

Placement and credit recommendation based on CLEP scores:

CLEP score	Spanish Class student should take
34 or lower	Register for Span 1710 Beginning Spanish 1
35-44	Register for SPAN 1720 Beginning Spanish 2
45-54	Register for SPAN 1730 Intermediate Spanish 2
55-65	Register for SPAN 1740 Intermediate Spanish 2
66+	Credit for SPAN 1710 & SPAN 1720

These guidelines are subject to change. Please, make sure you are following the most current version.

Course	Cr
SPAN 1710 Beginning Spanish 1	5
SPAN 1720 Beginning Spanish 2	5
SPAN 1730 Intermediate Spanish 1	5
SPAN 1740 Intermediate Spanish 2	5
SPAN 1790 Spanish for the Workplace	3
SPAN 1795 Special Topics in Spanish	1-6

Department Faculty

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Social Science

Anthropology Overview

The Anthropology department offers courses that cover human nature and society in a global context. Students are exposed to the biological and cultural evolution of our species and the cultural worlds past, present and future. Forces that have shaped us and that we continuously shape are discussed within local, national and global perspectives. Students are encouraged to critically assess as well as celebrate the cultural diversity of our world. Anthropology courses fulfill Minnesota Transfer Curriculum requirements and graduation requirements.

Course	Cr
ANTH 1710 Introduction to Cultural Anthropology	4
ANTH 1720 Introduction to Physical Anthropology	4
ANTH 1730 Gender and Culture in Global Perspective	3
ANTH 1790 Special Topics in Anthropology	1-6

Economics Overview

Economics is a social science that studies how our society can achieve economic goals. These goals are divided into two main areas of macroeconomics and microeconomics. Goals in macroeconomics are full employment, price stability, and economic growth. Macroeconomics uses theoretical tools, historical perspective, and modeling to understand the development and functioning of macroeconomic policy. Macroeconomics explores how policy advocated by economists and political advisors is implemented and with what degrees of success. Microeconomics analyzes the economic decisions made by individual firms, organizations, and people. Microeconomic goals are maximizing individual and societies benefits using limited resources. Microeconomics uses modeling to understand how and why our resource markets work and provides insights into policies that make them more efficient. Studying economics helps students in many fields by providing a framework on which to analyze changes that are affecting our collective future.

Course		Cr
ECON 1710	Introduction to the American Economy	3
ECON 1720	Macroeconomics	3
ECON 1730	Microeconomics	3
ECON 1790	Special Topics in Economics	1-6

Department Faculty

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Geography Overview

Geography studies places and human activities across the earth. Geographers often ask where? and why? The field focuses on the distribution and changes in the location of ethnicities, resources, transportation, land use, industries, climate, physical land formations, etc. Many geography courses have both physical environment and human/cultural components. The geography faculty often have a global and interdisciplinary approach. Geography courses fulfill a number of requirements for the Minnesota Transfer Curriculum, Education majors, Social Science disciplines, and government and international careers. Special topics and field study courses are added occasionally.

Course		Cr
GEOG 1700	Physical Geography	3
GEOG 1720	Human/Cultural Geography	3
GEOG 1740	World Geography	3
GEOG 1750	Minnesota Geography	3
GEOG 1790	Special Topics in Geography	1-6

Department Faculty

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History Overview

The History department promotes the study, teaching and analysis of historical developments which have created our present world. The historical past is studied so that students can better fulfill their work and life roles. The department offers survey courses in American history and the history of world civilizations; however, students are not required to take these survey courses in chronological order. Students who plan to major in History at a

four-year institution are encouraged to take both the American and world history survey courses in order to be well-prepared for upper division coursework. History courses fulfill a number of requirements for the Minnesota Transfer Curriculum, as well as graduation requirements.

Course		Cr
HIST 1730	Contemporary World History	3
HIST 1745	U.S. History to 1865	4
HIST 1746	U.S. History Since 1865	4
HIST 1750	Minnesota History	3
HIST 1760	History of World Civilizations to 1500	3
HIST 1761	History of World Civilizations since 1500	3
HIST 1770	History of Women in the United States	3
HIST 1773	African American History	3
HIST 2740	Immigration and Ethnic History of the United States	3
HIST 2780	Special Topics in History	1-6
HIST 2790	Historical Methods	2

Department Faculty

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Political Science Overview

Political science is one of the most popular undergraduate majors preparing students for a wide variety of careers. It is also one of the most popular majors for those planning to attend law school. The political science faculty seeks to prepare students for advanced study by providing introductions to major areas of the discipline. Additionally, the faculty aims to prepare students for active and thoughtful citizenship.

Course		Cr
POLS 1720	Introduction to American Government	3
POLS 1740	Introduction to World Politics	3
POLS 1750	Introduction to Political Science	3
POLS 1760	Introduction to Political Philosophy	3
POLS 1790	Special Topics in Political Science	1-6

Department Faculty

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Psychology Overview

Psychology is the scientific inquiry into human behavior and mental processes explaining the complexity of issues from both an environmental and biological perspective. Courses are offered that provide a foundation in core psychological areas. Students enroll in psychology to obtain a better understanding of human behavior in a variety of settings as well as for relevant preparation for nursing, business and other fields. Psychology courses fulfill the Minnesota Transfer Curriculum requirements and graduation requirements.

Course		Cr
PSYC 1710	General Psychology	4
PSYC 1720	Psychology throughout the Lifespan	3
PSYC 1740	Abnormal Psychology	4
PSYC 1750	Introduction to Health Psychology	3
PSYC 1790	Special Topics in Psychology	1-6
PSYC 2720	Social Psychology	4

Department Faculty

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Sociology Overview

The Sociology faculty strive to promote social awareness, active citizenship and critical thinking within and beyond our own culture. Courses are designed to emphasize the importance of the sociological perspective in work and life roles in a global world. Many students take sociology courses to develop personal skills and to learn about other cultures and societies. Students enroll in sociology courses to fulfill Minnesota Transfer Curriculum requirements and graduation requirements.

Course	Cr	
SOCI 1710	Introduction to Sociology	4
SOCI 1720	Social Problems	3
SOCI 1730	Sociology of Families and Relationships	3
SOCI 1740	Sociology of Work	3
SOCI 1760	Mass Media and Society	4
SOCI 1765	Sociology of Crime and Deviance	3
SOCI 1766	Juvenile Delinquency	3
SOCI 1772	Introduction to Criminal Justice	3
SOCI 1774	Introduction to Corrections	3
SOCI 1776	Probation, Parole and Alternative Sentencing	3
SOCI 1790	Special Topics in Sociology	1-6
SOCI 2720	Social Psychology	4

Department Faculty

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Women's and Gender Studies Overview

The Women's and Gender Studies course and related coursework emphasizes collaborative learning across academic disciplines with a focus on women and gender relationships. Several courses in the Liberal Arts and Sciences include an emphasis on gender analysis that links the content. Students are encouraged to contact the transfer specialists for information on four-year colleges and universities that offer a major or minor in Women's and Gender Studies. Students enroll in Women's and Gender Studies and related courses to fulfill Minnesota Transfer Curriculum requirements as well as graduation requirements.

Course	Cr	
WGST 1785	Foundations in Women's Studies	3
WGST 1790	Special Topics in Women's and Gender Studies	1-6
Related courses across the disciplines:		
ANTH 1730	Gender and Culture in Global Perspective	3
BIOL 1785	Biology of Men and Women	3
ENGL 2776	Women Writers	3
HIST 1770	History of Women in the United States	3
PHIL 1730	Feminist Philosophy	3
SOCI 1730	Sociology of Families and Relationships	3
SPCH 1780	Gender Communication	3

Department Faculty

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Course Descriptions

Course descriptions are alphabetized by program area:

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Course descriptions are subject to change.
The most current course descriptions are available online at: www.saintpaul.edu/CourseSchedule.

Course Descriptions

The following course descriptions are alphabetized by academic program area. Each course description includes a course number and title, description of the course, a listing of any required prerequisites and the number of credits. The credit listing includes the lecture, lab and/or on-the-job breakdown. For example, 4C/3/1/0 shows that the course is 4 credits with 3 credits of lecture, 1 credit of lab and 0 credits of on-the-job training. Minnesota Transfer Goals are indicated by (MnTC: Goal(s) "goal number").

Accounting

ACCT 1411 Principles of Accounting 1

Introduces students to the fundamental accounting concepts and principles used to analyze and record business transactions. Topics include transaction analysis, double-entry accounting, internal controls, cash transactions, purchases and payables cycle, sales and receivables cycle, specialized journals, payroll processes, inventory valuations, year-end procedures and financial statement preparation. Examples are drawn from service and merchandising organizations. 4C/4/0/0

ACCT 1412 Principles of Accounting 2

An introduction to principles of accounting for the partnership entity, the corporate entity and additional topics in financial accounting. Additional topics include long term liabilities, investments, managerial accounting concepts and financial statement analysis. Emphasis will be placed on the uses of accounting information in decision-making by internal and external users. (Prerequisite(s): ACCT 1411) 4C/4/0/0

ACCT 1511 Federal Taxation 1

Introduces students to the basic issues and concepts of taxation principles. Students observe federal tax laws as applied to the preparation of the Form 1040 and related schedules. Tax preparation software is utilized for case projects. (Prerequisite(s): ACCT 1411) 4C/4/0/0

ACCT 1512 Federal Taxation 2

Introduces students to the fundamentals of tax law regarding business federal income taxation. Planning issues of estates and gift taxation are part of this course. Tax preparation software is utilized for case projects. (Prerequisite(s): ACCT 1511) 4C/4/0/0

ACCT 1521 Accounting Computer Applications

Designed to combine the theory of financial accounting principles with accounting software applications. The course will cover the basic design of accounting software and students will develop an analytical understanding of its properties. Special emphasis will be placed on applying the theory of accounting to the practice of using an accounting software package. (Prerequisite(s): ACCT 1412) 4C/4/0/0

ACCT 2411 Intermediate Accounting

Intermediate Accounting Covers financial reporting using generally accepted accounting principles and concepts relating to income determination, revenue recognition and asset valuation. (Prerequisite(s): ACCT 1412) 4C/4/0/0

ACCT 2420 Managerial Accounting

Introduces students to costing concepts and methods of analysis. Students analyze the management decision-making process via problem solving and case analysis. Projects include non-profit and profit entities. (Prerequisite(s): ACCT 1412) 4C/4/0/0

ACCT 2530 Fundamentals of Non-profit Accounting

This course addresses the entity which is not concerned with a profit objective. About one-third of entities in the United States are non-profit. The course covers objectives and principles of reporting for the non-profit entity. (Prerequisite(s): ACCT 1412) 4C/4/0/0

ACCT 2540 Financial Modeling for Spreadsheets

Designed to unify financial accounting theory with financial functions and formulas. This course covers elements of financial modeling with the time value of money. Present value and future value concepts are defined and utilized in this course. (Prerequisite(s): ACCT 1411) 4C/4/0/0

ACCT 2591 Accounting Internship

A cooperative work-student program between Saint Paul College Accounting Program and a business facility to allow the student an employment-like experience. (Prerequisite(s): Instructor approval) Variable credits 2-8

American Sign Language

ASLS 1411 American Sign Language 1

Introduction to American Sign Language (ASL), a visual/gestural language used by the Deaf Community. Course covers sign vocabulary, sentence structures, dialogue formats through facial expressions and body movements used in signing. (MnTC: Goal 8) 3C/3/0/0

ASLS 1412 American Sign Language 2

A continuation of ASLS 1411, designed to expand students' conversational range from talking about themselves to talking about other people and activities, giving directions, describing people and making requests. (Prerequisite(s): ASLS 1411 with a grade of "C" or better) (MnTC: Goal 8) 3C/3/0/0

ASLS 1413 American Sign Language 3

A continuation of ASLS 1412, designed to expand students' comprehension and sign language production skills. Through meaningful communication contexts, students will use communicative functions which include locating things, asking for solutions, discussing life events and describing objects. Use of appropriate cultural behaviors and strategies for conversational management is stressed. Receptive and expressive fingerspelling and information about the deaf community will further enhance the learning process. (Prerequisite(s): ASLS 1412 with a grade of "C" or better) (MnTC: Goal 8) 3C/3/0/0

ASLS 1414 American Sign Language 4

A continuation of ASLS 1413 provides more complex ASL grammatical features, communicative functions and receptive fingerspelling and numbers. Cultural features will be stressed to develop competency and fluency in the language. (Prerequisite(s): ASLS 1413 with a grade of "C" or better) (MnTC: Goal 8) 3C/3/0/0

ASLS 1415 American Sign Language 5

This course is an ongoing instruction of American Sign Language covering communicative functions, sign vocabulary, fingerspelling, grammar and cultural aspects of the Deaf Community. At the completion of ASL 5, each student shall be able to use these language functions and conversational behaviors appropriately in ASL. (Prerequisite(s): ASLS 1414 with a grade of "C" or better) 3C/3/0/0

ASLS 1420 ASL Linguistics

Introduces students to the linguistics of American Sign Language (ASL). Students study the major features of language structures and the underlying knowledge for the social uses of American Sign Language. Content includes an examination of the structure of the physical signals of ASL, the customary patterns for combining them and the influence of signs on one another in connected discourse. (Prerequisite(s): ASLS 1414 with a grade of “C” or better) 4C/4/0/0

ASLS 1430 Classifiers

Introduces students to the fundamentals of American Sign Language (ASL) classifiers. Students will enhance and expand the use of classifiers in their expressive skills and the recognition of classifiers in their receptive skills. (Prerequisite(s): ASLS 1420 with a grade of “C” or better) 3C/3/0/0

ASLS 1435 Deaf Studies/Culture

This course is designed to help students understand and appreciate Deaf Culture and the Deaf Community. Deaf history, historical and modern-day perspectives, deafness and its impact, Deaf Culture/Community characteristics, education, communication modes/languages used by deaf people and the ramifications and impact of American Sign Language and Deaf Culture upon the lives of D/deaf people and other populations will be introduced. (MnTC: Goal 7) 3C/3/0/0

ASLS 1443 ASL Fingerspelling and Numbers

This course introduces the students to the fundamentals of fingerspelling/lexicalized fingerspelling and the complex rules and patterns of ASL numbers systems. This course develops expressive and receptive fingerspelling and number skills. Receptive skills focus on whole-word recognition, distinction among different number systems, phrase recognition, and identifying fingerspelled words and numbers in context. Expressive skills focus on the development of speed, clarity, and fluency. (Prerequisite(s): ASLS 1414 American Sign Language 4 with a grade of “C” or better.) 3C/3/0/0

ASLS 1446 ASL Non-Manual Markers

This course covers the non-manual aspect of the language. The use of the face, eyes and head to convey grammatical information will be covered. Students will analyze specific features. Other topics include ASL ‘mouthing’, showing emotion and inappropriate facial behaviors. (Prerequisite(s): ASLS 1420 with grade of “C” or better) 2C/2/0/0

ASLS 1448 American Sign Language Semantics

This course is designed to expand students’ sign vocabulary by analyzing multiple-meaning words and various sign equivalents. Language learning activities will focus on nouns-verbs, sentence types, classifiers, inflection of verbs with temporal aspect and distributional aspect. (Prerequisite(s): ASLS 1414 with grade of “C” or better) 2C/2/0/0

ASLS 1469 Deaf Heritage of Minnesota

Covers the history of deaf people in Minnesota and its impact upon deaf and non-deaf Minnesotans. (Prerequisite(s): ASLS 1420 with a grade of “C” or better or instructor approval) 2C/2/0/0

ASLS 1497 Special Topics in ASL

A variable credit granting course that focuses on special topics in the area of American Sign Language and Deaf Culture. Courses are designed to accommodate the learning needs and interests of students. Each course syllabus focuses on specific content areas which may not be presented or are presented in-depth in other ASLS courses. Variable credits 1-5

Anthropology

ANTH 1710 Introduction to Cultural Anthropology

This course introduces students to the concept of culture, anthropological methods and theories, and the unity and diversity of the human species. Culture is the means by which human beings adapt to their environment, structure their societies, and give meaning to life. The course surveys the similarities and differences of the complex whole of human culture, including: subsistence strategies; economics; marriage, family and kinship; gender; political organization; inequality; religion; colonialism; and globalization. There is a focus on current issues and problems, and their relationship to societal and global matters. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 5 & 7) 4C/4/0/0

ANTH 1720 Introduction to Physical Anthropology

This course examines human biological evolution and variation from the perspective of morphological and cultural adaptation. Discussion addresses the basis of human biology, including genetics, physiology, population dynamics, and adaptive mechanisms. Primates and human ancestors are explored as a comparative model of contemporary human behavior and social organization. The frameworks and arguments of fossil and archaeological evidence are investigated. Modern human biological diversity and adaptations are analyzed, with attention to disease environments and misconceptions of “race.” (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 5 & 10) 4C/4/0/0

ANTH 1730 Gender and Culture in Global Perspective

This course examines how sex, gender, and sexuality are culturally constructed through social structures, and how these influence the biological distinctions of male, female, and intersex individuals. Through a comparative approach, we will survey gender roles, values, and relative rank in various socioeconomic levels, including hunter-gatherer, horticultural, pastoral, agricultural, and industrial. Other material to explore will include the intersection between gender, race, class, and sexuality; the origins and consequences of patriarchy; the impact of the global economy on gender identities and self-perceptions; gender, politics, and social change; and the status of women and men in different kinship systems and families, and the power that accrues to them. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 5 & 8) 3C/3/0/0

ANTH 1790 Special Topics in Anthropology

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score.) (MnTC: Goal 5) Variable credits 1-6

Art

ARTS 1713 Photography 1

This is a course devoted to introducing photography as a medium of creative expression and visual communication. Students are introduced to 35mm film cameras and the techniques used in the darkroom to create black and white photographs. Initial assignments address technical proficiency and then the emphasis transitions towards creative exploration, aesthetics, and meaning. Classroom discussion will also establish a fundamental relationship between digital and film photography. A \$200 camera deposit will be collected from students who borrow a film SLR camera. The deposit will be refunded at the end of the semester provided the camera is returned undamaged and in suitable working condition. (Prerequisite(s): READ 0722 with a grade of “C” or better or appropriate assessment score) (MnTC: Goal 6) 3C/1/2/0

ARTS 1714 Photography 2

This is a course devoted to fostering the skills and proficiency established in Photography 1 and allows students to experience a more meaningful amount of time to produce a body of creative work concentrating on one topic or thematic element. The intention of this course is for each student to produce a unique, high-quality, photographic portfolio that showcases technical and conceptual understanding of the photographic medium with the artwork produced. The accompanying lab section will dictate whether the student continues working in a darkroom or transitions into the digital photography lab. A \$200 camera deposit will be collected from students who borrow a camera. The deposit will be refunded at the end of the semester provided the camera is returned undamaged and in suitable working condition. (Prerequisite(s): ARTS 1713 Photography 1 with a grade of “C” or better) (MnTC: Goal 6) 3C/1/2/0

ARTS 1720 Art Appreciation

This is an introductory “learning to look” course with the objective of developing students’ ability to see, understand and enjoy the visual arts. Examples of painting, sculpture and architecture from around the world, many of which will already be familiar to students, will be viewed, discussed and analyzed in class. Students will also learn about the materials and processes of art making. We will then go out and take a look at the real thing by visiting the Minneapolis Institute of Arts and the Walker Art Center. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goal 6 & 8) 3C/3/0/0

ARTS 1722 American Animation

This course looks at animation as an art form and cultural product. We will consider animation within the contexts of American popular culture, media history, and socio-political history. We will explore technical and aesthetic advancements from the early animation devices of the nineteenth century to the current and emerging digital technologies of today. Our studies will take us through the classic cartoons of Winsor McCay, Max Fleischer, The Walt Disney Company, and Warner Bros. to the latest creations of Pixar and South Park Studios. (Prerequisite(s): READ 0722 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 6 & 7) 3C/3/0/0

ARTS 1724 The Design of Everyday Life

Design is a powerful cultural force that surrounds us wherever we go. This course provides students with the basic historical and analytical tools to understand the impact of design on our day-to-day lives, objects, communication materials, and environments. Lessons will cover the main movements, trends and issues in design, from the end of the nineteenth century through today, with particular emphasis on consumer cultures and the interconnections between design and technology. Visual examples will range from furniture to advertisements, industrial design to digital media. (Prerequisite(s): READ 0722 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 6 & 7) 3C/3/0/0

ARTS 1726 Art in the Cities

This course takes an experiential approach to learning about the visual arts. Through visits to museums, galleries, studios, and historic sites, students will become familiar with some of the cultural resources available in Minneapolis and Saint Paul. We will study art representing various media, artistic philosophies, historical contexts, and the multiculturalism of the Twin Cities. Weekly readings, papers, and a final project emphasize the development of critical thinking, visual analysis, and writing skills. Students will be responsible for their own transportation. (Prerequisite(s): READ 0722 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 6 & 7) 3C/3/0/0

ARTS 1730 Drawing 1

This course will focus on techniques and strategies for improving observational drawing abilities. Through hands-on drawing exercises, students will learn to depict the world around them and the human form with greater accuracy. (MnTC: Goal 6) 3C/1/2/0

ARTS 1731 Drawing 2

This course continues the development of skills and techniques learned in Drawing 1. This course emphasizes observing relationships, line and value to enhance experimental and personal expression; introduces techniques for drawing in color, incorporates figure drawing, and includes the study of influential artists throughout the history of art, concentrating on contemporary means of expression. Students design art projects and complete a portfolio. (Prerequisite(s): ARTS 1730 Drawing 1 with a grade of “C” or better) (MnTC: Goal 6) 3C/1/2/0

ARTS 1732 Two-Dimensional Design

This course is a foundational study of the principles of two-dimensional design for an understanding of its nature and expressive possibilities, with the opportunity to develop a creative approach in working with its elements. This course will study basic approaches to understanding Notan, the elements of design and the principles of design through personal investigation. (MnTC: Goal 6) 3C/2/1/0

ARTS 1733 Three-Dimensional Design

This course is a foundation level study of the principles and elements of three-dimensional design. Students will use a variety of media and art techniques to explore three-dimensional design, form, line, plane, volume, mass, space, texture, light, and time. Projects emphasize a working creative method for problem solving in three-dimensions as well as a general knowledge of historical and contemporary design issues. (MnTC: Goal 6) 3C/2/1/0

ARTS 1740 Introduction to Painting

This course will introduce students to the materials and techniques of oil painting. Assignments will be geared towards improving one’s ability to paint from direct observation, depicting the natural world and the human form with greater accuracy, and integrating “color theory” into oil paintings. (MnTC: Goal 6) 3C/1/2/0

ARTS 1742 Intermediate Painting

This course will incorporate and further develop skills and techniques learned in Introduction to Painting, but will be more independent in nature. Each student will write a proposal for a cohesive body of work to be completed over the course of the semester, and will work towards developing a personal “style” of painting. Through a series of in-class group critiques, students will learn to analyze and critique works of art. (Prerequisite(s): ARTS 1740 Introduction to Painting with a grade of “C” or better) (MnTC: Goal 6) 3C/1/2/0

ARTS 1744 Introduction to Watercolor Painting

This course will introduce students to the practice of watercolor painting. Students will become familiar with the materials and terminology of the medium. They will learn to synthesize a variety of painting techniques into watercolor paintings of varying genres and styles. Students will develop an understanding of color theory, as it applies to watercolor painting, and will come to understand historical and contemporary issues pertaining to the medium. (MnTC: Goal 6) 3C/1/2/0

ARTS 1750 Introduction to Ceramics

This hands-on studio arts course will introduce students to the fundamentals of Ceramic Art. The primary emphasis will be the creation of functional ceramic pottery. Students will learn to make hand-built pottery and learn to “throw” pots on the pottery wheel. In addition to this, students will learn about trimming, glazing, kiln firing, and a variety of decorative techniques. (MnTC: Goal 6) 3C/1/2/0

ARTS 1752 Intermediate Ceramics

This hands-on studio arts course will continue to introduce students to the fundamentals of Ceramic Art. The course will also introduce contemporary practices in ceramic arts and investigate sculptural aspects of the medium. Half of the semester will include advanced wheel techniques and a continued concentration on throwing functional pots. In addition to this, students will continue learning about trimming, glazing, kiln firing, and become more proficient in decorative techniques. (Prerequisite(s): ARTS 1750 Introduction to Ceramics with a grade of “C” or better) (MnTC: Goal 6) 3C/1/2/0

ARTS 1760 World Art

What would you see if you suddenly found yourself in China, Nigeria, India or Mexico? How would the world look to you? For many of us, it would probably look very strange. One of the many ways to make our world familiar to us, whether we travel or not, is to try to understand a culture's visual expression in architecture, sculpture, painting and other media. This class will view slides of artwork in a lecture/discussion format. We will then visit the Minneapolis Institute of Arts, twice, where we will be able to immerse ourselves in the cultures studied by examining the original artworks produced by these cultures. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 8) 3C/3/0/0

ARTS 1770 Art in America

This course is an introduction to art and architecture in North America from the Colonial period to the present. Art in America is united by common historical events and includes Native American culture and influences outside of America. We will explore patterns of cultural interchange with particular emphasis on colonialism, revolution, and the search for national identities. We will also examine the impact of historic and current social movements and politics on art in America. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 6) 3C/3/0/0

ARTS 1780 Beginning Printmaking

For centuries artists have used printmaking processes to create beautiful images on paper. This course is an introduction to the fundamentals of fine art printmaking. Students will be instructed in the following printmaking areas: monotype, collograph, dry point linocut, and woodcut. In-class projects will focus on hands-on learning and experimentation as students progress toward assembling a fine art print folio of their work. (MnTC: Goal 6) 3C/1/2/0

ARTS 1790 History of Photography

This survey course will focus on the art of still photography from the 19th century to the present. There is an emphasis on the work of artists, their processes, and the accompanying aesthetic movements occurring between the announcement of the Daguerreotype in 1839 and the beginning of the twenty-first century. As witnesses of popular culture, students will examine the interaction of photography with other visual art forms. The photographic print, as a means of artistic expression, will be discussed, including historic, social, and artistic movements. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 6) 3C/3/0/0

ARTS 1795 Special Topics in Art

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 6) Variable credits 1-6

ARTS 2710 Advanced Studio Arts

In the Advanced Studio Arts course students will build upon what they learned in Drawing 1, Introduction to Painting, or Fundamentals of Photography courses. The course will be independent in nature with students focused on developing their own personal artistic "style" in either drawing, painting or photography. Students will propose an idea for a body of work and will spend the semester creating a cohesive portfolio of images and writing an artist's statement. The semester will culminate with a public exhibition of student work. (MnTC: Goal 6) Variable credits 3-4

ARTS 2754 Advanced Ceramics

This hands-on studio arts course will build on the proficiency that students have achieved in Introductory and Intermediate Ceramics. The Advanced Ceramics course will require a familiarity with the wheel and hand-building techniques with an emphasis placed on a semester-long ceramics project resulting in a sculptural, conceptual, or functional body of ceramic art work. The course will also expand on contemporary practices in ceramic arts and further investigate sculptural aspects of the medium. Students will become familiar with local ceramics artists and the greater Twin Cities ceramics community. (Prerequisite(s): ARTS 1752 Intermediate Ceramics with a grade of "C" or better) (MnTC: Goal 6) 3C/1/2/0

Auto Body**ABDY 1400 Introduction to Auto Body Repair**

Personal safety, tool use and maintenance and basic body shop procedures are covered. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1410, 1420, 1430, 1440, 1450) 3C/1/2/0

ABDY 1410 Auto Body Sheet Metal Repair

Covers basic sheet metal repair on automobiles, and tools and equipment used in the repair process. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1400, 1420, 1430, 1440, 1450) 3C/1/2/0

ABDY 1420 Auto Body Repair Techniques

Covers the use of basic hand and power tools and preparation of an auto before painting. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1400, 1410, 1430, 1440, 1450) 3C/1/2/0

ABDY 1430 Introduction to Paint Prep

Focuses on refinishing safety, preparation, tools and equipment used in the application of materials. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1400, 1410, 1420, 1440, 1450) 4C/0/4/0

ABDY 1440 Advanced Body & Frame Repair Theory

Topics include advanced body and frame theory, use of frame rack and safe use of power equipment as it applies to major collision damage. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1400, 1410, 1420, 1430, 1450) 2C/1/1/0

ABDY 1450 Collision Repair, Estimating & Shop Management

The focus of this course will be identification and calculation of vehicle damage from a collision. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1400, 1410, 1420, 1430, 1440) 2C/1/1/0

ABDY 1460 Auto Body Open Lab

Flexible lab hours are available for various auto body repair projects. One to four credits as elective for ABDY 1550 General Auto Body Detailing. (Prerequisite(s): Enrollment in Auto Body Program) 4C/4/0/0

ABDY 1510 Advanced Body & Frame Repair

Covers the repair of major collision damage. The course will focus on using measuring and strengthening equipment. (Prerequisite(s): ABDY 1450 and enrollment in Auto Body Program; Co-Requisite(s): ABDY 1520, 1530, 1540, 1550) 3C/1/2/0

ABDY 1520 Paint & Color Matching Techniques

Emphasizes overall refinishing, including color matching and all types of paint problems. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1510, 1530, 1540, 1550) 4C/2/2/0

ABDY 1530 Paint Finish & Detailing

Covers automotive finishes and how to detail them. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1510, 1520, 1540, 1550) 4C/2/2/0

ABDY 1540 Auto Body Specialization Finishes

Application of special automotive finishes used on today's automobile is emphasized in this course. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1510, 1520, 1530, 1550) 4C/2/2/0

ABDY 1550 General Auto Body Detailing

Detailing of automobiles after they leave the paint shop is the focus of this course. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1510, 1520, 1530, 1540) 4C/2/2/0

ABDY 1560 Alignment & Brakes for Auto Body

Covers alignment and brakes, how that applies to auto body collision damage and how repairs are made. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1570, 1581, 1582) 2C/1/1/0

ABDY 1570 Air Conditioning & Auto Electric for Auto Body

Covers the repair of air conditioning and electrical components as it applies to auto collision damage. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1560, 1581, 1582) 3C/1/2/0

ABDY 1581 Welding—Auto Body 1

Covers welding equipment used in auto body repair and its safe and correct use. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1560, 1570, 1582) 2C/1/1/0

ABDY 1582 Welding—Auto Body 2

Emphasizes the types of welding used on automobiles and basic welding joints. (Prerequisite(s): Enrollment in Auto Body Program; Co-Requisite(s): ABDY 1560, 1570, 1581) 3C/1/2/0

Automotive Service

AUTO 1410 Trade Knowledge

Covers the examination and use of safety equipment in an automotive shop. Communication skills, general knowledge of the trade and procedures used in operating an automotive shop are also covered. (Prerequisite(s): Admission to the Auto Service Program) 3C/1/2/0

AUTO 1420 General Auto Service

Covers correct procedures for servicing vehicles, shop safety and the use of service manuals and bulletins. Automotive tools and equipment and minor service will be emphasized. (Prerequisite(s): AUTO 1410) 3C/1/2/0

AUTO 1430 Brakes

Covers the basic principles of the brake system. Emphasis will be placed on operation, diagnosis and repair of common types of braking systems. (Prerequisite(s): AUTO 1410) 4C1/3/0

AUTO 1440 Alignment & Suspension

Covers the study of suspension and steering systems. The student will inspect, repair and adjust the suspension and steering systems on today's cars and light trucks. (Prerequisite(s): AUTO 1430) 5C/1/4/0

AUTO 1510 Clutch/Driveline Manual Transmission

Standard automotive and light truck clutches are covered. Content includes design, adjustment, overhaul, diagnosis and repair on mechanical and hydraulic clutch systems. This course also covers operation and proper repair procedures of current manual transmissions used in late model vehicles. (Prerequisite(s): AUTO 1430) 3C/1/2/0

AUTO 1522 Four Wheel Drive Differential

Emphasizes the operation and proper repair procedures of current transfer cases, hubs and differentials in four wheel drive vehicles. (Prerequisite(s): AUTO 1510) 4C/2/2/0

AUTO 1530 Basic Electrical & Battery

Covers basic fundamentals of electricity and electronics, circuits, magnetism, resistance, coils, instruments, diodes and solid-state devices. Battery charging and testing is included. 3C/1/2/0

AUTO 1540 Basic Engine Management

Covers instruction on operation of the ignition system and maintenance of the ignition and fuel systems. This course focuses on the replacement of maintenance items such as spark plugs, distributor cap, ignition wire and air, fuel and emission filters. (Prerequisite(s): AUTO 1530) 3C/1/2/0

AUTO 1550 Heating & Air Conditioning

Focuses on the principles of heating and air conditioning. Topics include A/C types, the diagnoses of malfunctions and tests/repairs. Lab work is done on actual systems. During the lab, the student will test and repair vacuum and electrical controls, air flow distribution and heater system controls. (Prerequisite(s): AUTO 1530) 4C/1/3/0

AUTO 1570 Basic Auto Welding

Students will learn basic welding and cutting skills applicable for automotive technicians. Students will learn set up and use of Oxy Fuel Torch Cutting equipment. Students will also learn to set up, GMAW (Mig) welding equipment and successfully weld various joints in multiple positions. Students will also learn how to operate basic metal working tools and equipment such as grinders, band saws and shears. Shop safety is incorporated into all aspects of the course. 2C/0/2/0

AUTO 2410 Starting & Charging Systems

Covers overhaul of components such as starters and alternators. Complete system diagnoses and repair are also included. (Prerequisite(s): AUTO 1530) 3C/1/2/0

AUTO 2420 Electrical Accessories

Covers the operation and servicing techniques of chassis wiring, lights, instruments and headlight aiming. How to read and interpret wiring diagrams will also be included. (Prerequisite(s): AUTO 1530) 3C/1/2/0

AUTO 2430 Engine Theory & Repair

Covers disassembly, inspection, repair and reassembly of the internal combustion engine. Repair procedures such as the replacement of piston ring, engine bearings and valve grinding are covered. (Prerequisite(s): AUTO 1540) 4C/1/3/0

AUTO 2440 Engine Installation

Covers the removal and installation of complete engine assemblies, transfer of parts and removal and installation of accessories. 2C/1/1/0

AUTO 2450 Introduction to Auto Computers

Covers the operation of computer systems of engines using feedback carburetors and fuel injection. Sensors and actuators that operate in the system will be studied and tested. (Prerequisite(s): AUTO 1530) 2C/1/1/0

AUTO 2510 Fuel Systems

This course covers the fundamentals of carburetor and intake systems, maintenance and repair of the fuel system and emission controls. It also covers the use of 4 gas and 5 gas analyzers, scanners and other test equipment to troubleshoot and repair problems in computerized fuel systems. (Prerequisite(s): AUTO 1540) 5C/1/4/0

AUTO 2520 Engine Drivability

Covers application of knowledge and skills gained when studying engine, fuel, ignition and computer systems. (Prerequisite(s): AUTO 1410 and AUTO 1540) 3C/1/2/0

AUTO 2530 Automatic Transmission Theory

Covers the basics of torque converters, planetary gear sets, clutches, bands and hydraulics. 2C/1/1/0

AUTO 2542 Automatic Transmission Diagnosis & Repair

Covers automatic transmission and transaxle diagnoses and service. Trouble shooting and repair procedures will also be covered. (Prerequisite(s): AUTO 2530) 4C/2/2/0

AUTO 2550 Specialized Lab 1

Covers the content goals listed or any other goals that the student and the instructor agree upon. The purpose of the course is for students to specialize in an area they prefer. (Prerequisite(s): Completion of all other listed courses) 2C/1/1/0

AUTO 2570 Advanced Auto Welding

A continuation of Basic Auto Welding 1570. Students will learn to set up GTAW (Tig) welding equipment and will make welds on various materials such as steel, stainless steel and aluminum in multiple positions. Students will operate basic metal working tools and equipment such as grinders, band saws, and shears. Welding shop safety is emphasized. (Prerequisite(s): AUTO 1570) 2C/0/2/0

Biochemistry

BIOC 1730 Biochemical Laboratory Exploration

This course introduces students to procedures and guidelines relating to chemical, biological, physical, and biomedical research. Students will gain an understanding of good laboratory practices, intellectual property, standard operating procedures, clinical research practices, and lab safety. Students will also learn to communicate in a scientific manner. The lab component of the course will provide hands-on experience with the laboratory environment, clean room environment, and instrumentation used in scientific laboratories. (Prerequisite(s): CHEM 1711 or BIOL 1740 with a grade of "C" or better) (MnTC: Goal 3) 4C/3/1/0

BIOC 1790 Special Topics in Biochemistry

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 3) Variable credits 1-6

BIOC 2700 Biochemistry

This course includes structure and function of proteins, carbohydrates, nucleic acids, and lipids. Action and regulation of major metabolic pathways. Synthesis and degradation of biomolecules. Enzyme energetics, kinetics, and chemical basis for transmission of genetic information will also be discussed. Lab work will utilize applied biochemical techniques to reinforce topics covered in the lecture. This includes protein and lipid assays, examinations of metabolism, and analysis of sugars. Lab work will be designed to give the student experience using modern biochemical techniques and equipment. Responsible record keeping and conduct will also be emphasized. (Prerequisite(s): CHEM 2720, BIOL 1740 with a grade of "C" or better or instructor permission) (MnTC: Goal 3) 4C/3/1/0

BIOC 2790 Biochemistry Internship/Research Project

This course provides students with an opportunity to design and carry out a research project under the supervision of a faculty advisor utilizing biochemistry in a lab setting. The research project will be prepared using literature review, problem identification, procedural documentation, data collection, data analysis, findings, conclusions, and recommendations for future research. The course will also provide an opportunity for field study in an approved internship setting. Evaluation will be carried out by faculty teams and experts in the field. (Prerequisite(s): Instructor approval) (MnTC: Goal 3) Variable credits 1-4

Biology

BIOL 1471 Medical Terminology

This online course covers how bio/medical terms are constructed from Greek and Latin word elements including roots, combining forms, prefixes, and suffixes. Definitions, spelling, pronunciation, and applications of these terms will be stressed. Diseases and treatments specific to the body's organ systems will also be covered. This course is useful for anyone who desires a better understanding of medical language. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) 2C/2/0/0

BIOL 1725 Environmental Science

This course covers basic scientific and ecological principles, including an understanding of how the earth functions, how humans are affecting the earth, and proposed solutions to many of the environmental problems we face. Specific topics include: ecology, human population growth, biotechnology, pollution, human impacts on climate, energy resources, and waste management. Students will be required to take positions on environmental issues and alternative future scenarios. In-class activities will include group discussions and video and the use of internet-based resources. Two hours of lab per week are required and include group experiments, computer simulations, outdoor lab activities, and field trips. Traditional and online sections are available. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 3 & 10) 4C/3/1/0

BIOL 1730 Human Body Systems

This course begins with a study of the structural organization of the human body and then proceeds with the study of cell structure, types of tissues and basic anatomy and physiology of major organ systems of the human body. The central theme will focus on how the body systems work together to maintain homeostasis and good health. Laboratory activities include the dissection of a preserved animal and animal organs. The course is intended for all interested students and required for programs like Medical Laboratory Technician, Practical Nursing, Respiratory Therapy Technician, and Pharmacy Technician. Traditional and hybrid sections are available. Two hours of lab per week are required. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 3) 3C/2/1/0

BIOL 1735 Understanding Biology

This course is designed for non-science majors or as a preparation for BIOL 1740. A basic introduction to the principles of cell biology and genetics will be covered. The course will also examine the plant and animal kingdoms and general principles of ecology and evolution. One main goal of this course is to provide students with an understanding of biology that will allow them to evaluate and make informed opinions about related current events. Two hours of lab per week are required. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 3) 4C/3/1/0

BIOL 1740 General Biology 1: The Living Cell

This course is a study of biological processes including cell chemistry, metabolism, reproduction, genetics, and complex cell physiology. The lab component covers the application of concepts through observation, experimentation, and problem analysis. This course is intended for biology majors and students requiring a strong biological background for selected majors, including nursing and other allied health fields, and interested non-majors. BIOL 1740 is a prerequisite for BIOL 2721 Human Anatomy and Physiology 1, BIOL 2750 General Microbiology, and BIOL 1745 General Biology 2: The Living World. Traditional, hybrid and online sections are available. Three hours of lab per week are required. (Prerequisite(s): READ 0722 with a grade of "C" or better, or concurrent enrollment, or appropriate assessment score.) (MnTC: Goal 3) 5C/4/1/0

BIOL 1745 General Biology 2: The Living World

This course covers biological processes, including a survey of life forms (viruses, bacteria, protists, fungi, plants, and animals), their evolution, and ecology. The laboratory focuses on organism taxonomy, classification, and mammalian systems including comparative anatomy, organism dissections, ecological interrelationships of organisms and their environment. Three hours of lab per week are required and some activities involve the dissection of preserved animals and animal organs. Traditional, hybrid and online sections are available. (Prerequisite(s): BIOL 1740 General Biology 1: The Living Cell with a grade of "C" or better) (MnTC: Goals 3 & 10) 5C/4/1/0

BIOL 1760 Nutrition

This course explores the science of nutrition, including healthy diet fundamentals and the roles of carbohydrates, proteins, fats, vitamins, and minerals in health and fitness. Topics such as dietary guidelines, risk factors for illnesses linked to nutrition, and how the media influences personal diet choices will be covered. Hunger and the global environment as it relates to nutrition will also be covered. This course includes hands-on, lab-like activities related to nutrition and health. Traditional and online sections are available. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 3) 3C/3/0/0

BIOL 1782 Introduction to Forensic Science

This course provides an introduction to Forensic Science. General biological concepts and their applications to various scientific principles and techniques used in Forensic Biology will be covered. Specific topics include chromatography, hair and fiber analysis, fingerprinting, blood spatter and typing, DNA typing, and forensic entomology. This course is intended for students in liberal arts and sciences, other related science fields, and interested non-science majors and can be used to fulfill the science lab requirement. Two hours of lab per week are required. Traditional, hybrid and online sections are available. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 3) 4C/3/1/0

BIOL 1785 Biology of Men and Women

This course is designed to bring into open many issues regarding those aspects of reproductive anatomy and physiology which are of special interest and unique to men and women, especially those relating to sexuality and reproduction. Lecture topics are structured to include lab-like activities using models to study and compare male and female reproductive anatomy, fetal development and stages of pregnancy. Lab-like components include a tour of cell division and embryonic development using specimens. Topics which are fact-based, opinion-based and controversial will be open to debates and discussions. Traditional and online sections are available. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 3 & 9) 3C/3/0/0

BIOL 1790 Special Topics in Biology

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 3) Variable credits 1-6

BIOL 2721 Human Anatomy and Physiology 1

This course covers body organization, tissues, human body systems (integumentary, skeletal, muscular and nervous), and the special senses, integrating both the anatomy and physiology of each organ system. Dysfunctions may be included, but the body in homeostasis is emphasized. Two hours of lab per week are required. Some lab activities involve the dissection of preserved animal organs. Traditional and hybrid sections are available. (Prerequisite(s): BIOL 1740 General Biology 1: The Living Cell with a grade of "C" or better) (MnTC: Goal 3) 4C/3/1/0

BIOL 2722 Human Anatomy and Physiology 2

This course covers those body systems not included in Human Anatomy & Physiology 1: cardiovascular, respiratory, reproductive, urinary, endocrine, digestive, and lymphatic/immune systems. The anatomy and physiology of each organ system is integrated. Dysfunctions may be included, but the body in homeostasis is emphasized. Two hours of lab per week are required. Many lab activities involve dissection of a preserved animal and animal organs. Human cadavers are also studied for two hours. (Prerequisite(s): BIOL 2721 Human Anatomy and Physiology 1 with a grade of "C" or better) Traditional and hybrid sections are available. (MnTC: Goal 3) 4C/3/1/0

BIOL 2750 General Microbiology

General Microbiology covers bacteria, fungi, protozoa, algae, and viruses. Structure, metabolism, growth requirements, genetics, and replication of these microbes will be compared. Emphasis will be placed on the role of microbes in human disease and the function of the immune system in microbial control and balance. Environment and industrial microbiology will also be discussed. Three hours of lab per week are required and sessions will be structured to provide a hands-on introduction to common laboratory techniques related to topics covered in lecture. Safety and infection control will also be stressed. (Prerequisite(s): BIOL 1740 General Biology 1: The Living Cell with a grade of "C" or better) Traditional and hybrid sections are available. (MnTC: Goal 3) 4C/3/1/0

BIOL 2760 Cell and Molecular Biology

This course is designed for Saint Paul College students interested in Biomedical or Biotechnology sciences as part of their core curriculum. It is also open to any student interested in the fields of cell biology and molecular genetics. Through laboratory investigations, students will learn the current concepts and techniques in molecular biology for a better understanding of the cell. Students will also learn the use of National Center for Biotechnology Information (NCBI) website for the analysis of genetic sequence and applying their findings to the treatments and cure of human disease, agricultural improvement, forensic science and a better understanding of evolution. Ethical and moral issues posed by molecular biotechnology will be explored and discussed. (Prerequisite(s): BIOL 2750 General Microbiology with a grade of "C" or better) (MnTC: Goal 3) 5C/4/1/0

BIOL 2770 Biology Internship

This course provides students with an opportunity to design and carry out a science research project under the supervision of a faculty advisor. The research report will be prepared using literature review, problem identification, procedural documentation, data collection, data analysis, findings, conclusions, and recommendations. Evaluation will be carried out by faculty teams and experts in the field. The course will also provide an opportunity for field study in an approved internship setting. (Prerequisite(s): Instructor approval) (MnTC: Goal 3) Variable credits 1-4

Business

BUSN 1410 Introduction to Business

Offers an introduction to the United States business system. Students will explore economic principles, international business, business ethics, marketing and financial principles. 3C/3/0/0

BUSN 1440 Marketing Principles

Students will develop an understanding of the basic principles of marketing. Students will examine core marketing concepts (needs, wants and demands) and the elements used in developing a marketing plan, including consumer behavior principles, direct and online marketing, pricing strategies, advertising, sales promotion, public relations, personal selling and product distribution. Current marketing trends will be discussed. 3C/3/0/0

BUSN 1441 Consumer Behavior

This course will explore the behavior of consumers as it relates to products and services. The role of the consumer in the marketplace will be examined including the analysis of needs, motivation, attitudes, perceptions, decisions, and behavior. 3C/3/0/0

BUSN 1444 Advertising and Promotional Strategies

This course explores the world of advertising and other mass communications practices. It will examine advertising theory, functions and principles. All types of media will be explored, including television, radio, magazine, newspaper, outdoor and the internet. Various careers in advertising will be examined. 3C/3/0/0

BUSN 1446 Sales and Account Management

In this course we will examine the personal selling process. We will explore the practical and tactical process of how to sell products and services in a complex market. We will also examine sales force training, compensation, territory assignment and quotas. 3C/3/0/0

BUSN 1449 Business Communications

This course presents an overview of the challenges associated with workplace expectations regarding business etiquette, appropriate use of technology, and proper attire. It assists students in gaining knowledge of how to appropriately communicate with others and how to effectively deal with conflict, teamwork, and accountability in a fair and ethical manner. It also enhances the basic skills necessary for obtaining a job and achieving success in today's challenging economy and increasingly competitive work environment. 3C/3/0/0

BUSN 1480 Business Career Resources

This course provides information and guidance in the development of professional job seeking skills. Topics will include: the application, the resume, the cover letter, using the Internet in a job search, locating job opportunities, marketing yourself and company research. 1C/1/0/0

BUSN 1490 E-Marketing

The Internet and other technologies have created many opportunities for businesses and organizations to communicate and create value for their customers. This course is designed to give students an understanding of E-Marketing strategies and how they fit into an overall integrated marketing and communications plan. Topics include direct marketing, internet advertising, performance analytics, search engine optimization and career opportunities in E-Marketing. 3C/3/0/0

BUSN 1492 Social Media Marketing

In this course students will learn successful marketing strategies using social media as an essential part of an integrated marketing strategy. Social media provides both a listening and outreach tool for promoting business, products and ideas. Social media ethics, legal issues and best practices will be covered. Various social media platforms such as Facebook, Twitter, YouTube and LinkedIn will be explored, as well as careers and jobs in Social Media Marketing. Students will analyze contemporary social media cases and strategies and develop a comprehensive social media marketing plan. Other topics include target marketing on the social web and rules of engagement. 3C/3/0/0

BUSN 1760 Principles of Finance

Principles and practices of business finance to help decision makers in a dynamic economy. Focus is placed on reviewing and analyzing financial statements, the time value of money, cash flow management, and risk and return. 4C/4/0/0

BUSN 1762 Money and Banking

This course provides an introduction to money and banking and presents a fundamental treatment of how money functions in the United States and world economies. It introduces the concept of money supply and the role of banks as money creators and as participants in the nation's payments mechanism. The course explores the working of fiscal and monetary policy, the functions and powers of the Federal Reserve System, and various monetary theories. Also highlighted are major trends and issues in banking and international banking. 4C/4/0/0

BUSN 1770 The Business of Music

This course presents a broad overview of the recording and music industry, and explains how the various segments operate on a day-to-day basis; where monies are generated, who the key players are, how deals are made and broken, how to protect technologies that are changing the way that music is marketed, promoted, distributed, and heard. This course presents the career opportunities that are available within the industry, and the knowledge you'll need to achieve your goals. 3C/3/0/0

BUSN 1780 Business Trends in Music

This course is essential for all artists, songwriters and music business people seeking successful careers in the music business. The course examines aspects of the evolving music industry, reflect on changes affecting it, and evaluate how these changes, technologies and powerful trends can directly impact your career. 3/3/0/0

BUSN 1782 Investments

This course provides a study of the core concepts of investments for Finance majors. It broadly covers financial instruments, such as equity, fixed income, and derivative securities, as well as key concepts studied in Principles of Finance. (Prerequisite(s): BUSN 1760 Principles of Finance) 3C/3/0/0

BUSN 1784 Principles of Risk Management and Insurance

This course examines the nature of risk and how it can be managed. Insurance is one of the tools used to respond to risk. It will be examined along with a multitude of other options that are available for risk management. (Prerequisite(s): BUSN 1760 Principles of Finance) 3C/3/0/0

BUSN 2410 Critical Thinking for Business Decision Making

This course will cover theory and application of critical thinking. Students explore the various elements of the critical thinking process and understand the importance of effective critical thinking skills in the 21st century workplace. Emphasis is placed on learning how to use critical thinking to challenge assumptions and expand perceptions about situations, as well as applying improved skills to the day-to-day operations of a business. 2C/2/0/0

BUSN 2440 Fundamentals of Nonprofit Management

This course explains the foundation of the nonprofit sector. Students will be introduced to the fundamentals of effective organization mission and vision statements, strategic planning, operations management, board development and budgeting. Students will gain understanding of different aspects of the nonprofit organization. 3C/3/0/0

BUSN 2441 Fundraising Techniques

Learn the role of the board and staff in fundraising, setting fundraising goals, and the cultivation and recognition of donors. This course also covers other components of fundraising for successful generation of revenue. 1C/1/0/0

BUSN 2442 Grant Writing and Research

Learn the tactics of researching and writing effective proposals. Discover the best ways to develop documentation, write compelling inquiry letters and set goals that can be achieved. 1C/1/0/0

BUSN 2443 Dynamics of Board Relations

Develop a better board of directors or become a better board member. Boards of directors of nonprofits are often unclear about their role and relationship with staff and the executive director. This course defines the role of the board and strengthens the working relationship between staff members and board members. 1C/1/0/0

BUSN 2444 Volunteer Program Management

Volunteers make it happen! Successful management of this important asset is critical to an organization. Learn the basic principles and concepts of professional volunteer management and gain a solid foundation on which to build. 1C/1/0/0

BUSN 2445 Nonprofit Law and Ethics

Gain knowledge of the complexities of nonprofit organizations. Learn about the legal aspects of nonprofit and tax exempt organizations under federal and state law. Areas discussed include incorporation, exemption, reporting requirements and various IRS mandates for 501(c)(3) exemptions. Ethical issues and concepts as they relate to nonprofit business will be discussed. 1C/1/0/0

BUSN 2450 Management Fundamentals

The course includes the history of management theory with emphasis on forces of change that have resulted in a changing view of the business world for managers. Principal management functions covered are planning, organizing, leading and the process of control as an information feedback function for increasing productivity. Emphasis is on the integration of all management functions into one effort for visionary, effective and efficient operations. 3C/3/0/0

BUSN 2455 Essentials of Entrepreneurship and Small Business Management

In this course the student will learn the essential skills needed to start and manage a successful new business venture. Topics include: the challenge of entrepreneurship, building a business plan, marketing and financial issues with a start-up company and how to gain a competitive advantage. 3C/3/0/0

BUSN 2459 Family and Personal Financial Planning

This course offers practical methods for managing individual personal and family finances. Tools, software and strategies will be explored to encourage responsible financial well-being. Students will write a financial plan consistent with individual goals and values that incorporate the areas studied in the course. 4C/4/0/0

BUSN 2460 Entrepreneurship Resources

In this course the student will learn the essential resources needed to start and manage a successful new business venture. Topics include: how to work with the Small Business Administration, free federal and state resources and how to decide which resources are most valuable when starting a new business. 2C/2/0/0

BUSN 2464 Leading and Coaching Others

This course focuses on developing skills as a leader and coach. The students will explore a variety of coaching tools, techniques and best practices, from analyzing performance to creating a climate for effective coaching and learning. Some of the coaching and leadership topics include improving skills for developing trust, confidence, and rapport. The course also explores obstacles of coaching and provides tools for overcoming the obstacles. 2C/2/0/0

BUSN 2465 Business Ethics

This course introduces students to ethical issues and concepts as they relate to business and as they impact society, the economy and the environment. Students will analyze various approaches to making ethical decisions through case studies. Topics range from the role of the government to corporate global businesses. Both national and international ethics will be discussed. 3C/3/0/0

BUSN 2466 Managing Change and Conflict

This course helps students to learn and develop the unique set of skills and competencies used to initiate and sustain major organizational change. Students explore techniques for working collaboratively with others to drive organizational culture change. Emphasis is also placed on effectively managing conflict and provides opportunity to develop a list of tools and resources used in conflict management. 2C/2/0/0

BUSN 2470 Legal Environment of Business

This course covers basic information about the various classifications of the law and the rights and responsibilities imposed on the business community by our legal system. The course introduces students to the legal system and its impact on the individual, the business environment and upon society as a whole. Areas of study include basic laws, contracts, negligence, product liability, employment law, alternative dispute resolution and business entities. 3C/3/0/0

BUSN 2472 Business Negotiation Skills

Covers techniques and unique circumstances for the negotiation of prices in the business environment. The course will guide students through the areas of risk negotiations, bargaining concepts, strategy and tactics for successful contract negotiations. 3C/3/0/0

BUSN 2473 Project Management

This course is an introduction to project management. The course emphasizes the relationship of project management techniques to business decisions. Project management processes for initiating, planning, executing and closing down projects are covered. Specific techniques covered include work breakdown schedules, resource leveling, risk identification, contingency planning and other skills are covered. Each student will conduct a series of case studies using Microsoft Project as project management tools. 3C/3/0/0

BUSN 2480 Business Management Internship

A cooperative work-study program between Saint Paul College—A Community & Technical College Business Management degree program and a business facility. This elective course allows the student to experience a closely supervised job situation that is related to the program. (Prerequisite(s): Instructor approval) Variable credits 1-3

BUSN 2482 Entrepreneurship Capstone

Students will complete a business plan. A business plan integrates skills and elements from various disciplines. Because a business plan is a complete and professional document that establishes the viability of your business ideas, students will build both their writing and presentation skills. 3C/3/0/0

Business Technology

BTEC 1400 Keyboarding

Covers “Touch Keyboarding” skill development on a computer keyboard. A variety of drills will be used to develop speed and accuracy of keyboarding skills. 2C/1/1/0

BTEC 1401 Skillbuilding for Keyboarding

Designed to increase keyboarding speed and improve keyboarding accuracy through personal goal setting, error analysis and intensive corrective practice work. Students must know how to key using the “touch” method. 2C/1/1/0

BTEC 1410 Advanced Keyboarding Applications

Covers continued development of keyboarding speed and accuracy and proofreading skills. Students will develop skill in formatting and production of the following documents: memos, letters, envelopes, tables, and reports. Students will be tested on the first day of class to determine two requirements: 1) Accurate keyboarding speed of 30 wpm, and 2) Using the touch method. 3C/1/2/0

BTEC 1418 Computer Fundamentals

This course covers introductory information about computer hardware and software, working with drives, folders and files, and the use of the microcomputer as a productivity tool. Students will be given introductory training in Microsoft Windows, Microsoft Office (word processing, spreadsheets, graphs, database and presentation applications) and Internet usage. 3C/3/0/0

BTEC 1421 Business Information Applications 1

This is the first course in a series that teaches students how to use Microsoft Office software applications. Software covered includes Word, Excel, Access, and PowerPoint. By the end of this course, students will be skilled in the basic features of Microsoft Office. Students will create common business documents including letters, reports, tables, newsletters, Excel worksheets, Access databases, and PowerPoint graphic presentations. This course, BTEC 1423 Business Information Applications 2 and BTEC 2506 Business Information Applications 3, prepare the student for the Microsoft Office Specialist (MOS) certification exams. (Prerequisite(s): Knowledge of computers) 3C/0/3/0

BTEC 1423 Business Information Applications 2

This is the second course in a series that teaches students how to use Microsoft Office software applications. Software used includes Word, Excel, Access, and PowerPoint. By the end of this course, students will be skilled in the advanced features of Microsoft Office. Students will create advanced business documents including Word form letters, merged documents, and newsletters; Excel financial worksheets, amortization schedules, and data tables; advanced Access queries, multi-table forms, customized reports and switchboards; and advanced PowerPoint presentations. This course, BTEC 1421 Business Information Applications 1 and BTEC 2506 Business Information Applications 3, prepare the student for the Microsoft Office Specialist (MOS) certification exams. (Prerequisite(s): BTEC 1421) 4C/0/4/0

BTEC 1530 Communication Technology

This course offers hands-on instruction in current communication technology software. Topics in this class will cover the fundamentals of Microsoft Outlook, Microsoft Publisher, and creating web pages. In Microsoft Outlook, the students will create messages, contact lists, and manage calendars. In Microsoft Publisher, the student will create and edit a publication, design a newsletter, publish a tri-fold brochure, and create an e-mail letter. Students will also learn how to create a simple Web site, add text and links, and create tables. 4C/0/4/0

BTEC 2410 Business Procedures

This course covers topics that develop skill in performing typical office tasks: telephoning, mailing, filing, calendaring, meeting arrangements, travel arrangements, office equipment care, time management, document production, reprographics and creating reports and financial records. Through the use of interactive software and projects, the student will experience daily routines, make decisions, set priorities, deal with work pressures, develop interpersonal relationships and become aware of work quality and quantity requirements. 4C/4/0/0

BTEC 2506 Business Information Applications 3

This is the third course in a sequence that explores expert level applications using Microsoft Office software. This course assumes students are familiar with the fundamental and advanced features of Microsoft Word, Excel, Access, and PowerPoint. Students demonstrate proficiency in Microsoft Office in preparation for the Microsoft Certified Applications Specialist certification exams. Students create expert level documents, worksheets, databases, and presentations suitable for the business environment, coursework, and personal use. (Prerequisite(s): BTEC 1423) 4C/0/4/0

BTEC 2550 Emerging Business Technologies

This course explores emerging business technologies and their connection to business processes. The course includes discussions of social, legal, and ethical issues, in the business environment. Students will explore their role and responsibilities to the environment and society, to ensure that productivity and technology are appropriately managed. 4C/0/4/0

BTEC 2590 Business Technology Internship

A cooperative work-study program between Saint Paul College Business Technology programs and a business facility. This course allows the student to experience a closely supervised job situation that is related to the program. (Prerequisite(s): Instructor approval) Variable credits 2-8

Cabinetmaking**CABT 1410 Print Reading and Design**

This course will introduce students to residential print reading, building trade drawings, architectural graphics, and symbols used in the trades. Students will also be introduced to AutoCAD (computerized drafting software) where they will learn basic commands needed to design 2D drawings. 3C/2/1/0

CABT 1415 Wood Technology

This course will introduce students to the materials and finishes used in cabinetmaking. Students will learn to identify hardwoods, softwoods and manufactured panel products, and the grading of these products. Students will also learn about abrasives, adhesives, fasteners, and clamping devices. The second half of this course will cover the types of finishes used in cabinetmaking and how they are applied. 3C/1/2/0

CABT 1425 Machining 1

This course will introduce students to shop safety. The student will study the identification, care and use of hand tools, portable power tools, and machinery. The course offers safety demonstrations on all power equipment and safety tests will be performed on most machines. Basic knowledge of power and hand tools is required. Students will master the machinery through building various projects. 5C/2/3/0

CABT 1426 Machining 2

This course will reinforce proper machine operation and safety on woodworking machinery already learned in Machining 1. Advanced woodworking machinery not covered in Machining 1 will be demonstrated, along with safety tests on these machines. Machine maintenance and tooling is covered. A series of projects will give the students hands-on experience. Machining 1 is not a prerequisite for this course. 3C/1/2/0

CABT 1431 Framed Cabinetry

This course introduces the student to face frame base and upper cabinetry. Students will learn the design, planning, and construction processes of building face frame cabinets. The student will then apply these techniques by building a project. (Co-Requisite(s): CABT 1425) 5C/2/3/0

CABT 1440 Wood Preparation and Repair

This course will cover wood preparation for finishing. Students will study in depth on the different abrasive products used in the wood industry and how to properly use them. Students will learn the various techniques for repairing both new and pre finished wood which may be damaged. Bleaching, filling grain, distressing, and aging techniques will also be covered. Students will master the techniques through various projects. 3C/2/1/0

CABT 1447 Wood Finishing 1

This course will concentrate on the colors of finishing. Students will learn color theory and how it applies to wood finishing. Various types of stains and methods of applying them will be covered in this course. Students will master the techniques through various projects. (Prerequisite(s): CABT 1440 Wood Preparation and Repair; Co-Requisite(s): CABT 1448 Wood Finishing 2) 3C/2/1/0

CABT 1448 Wood Finishing 2

This course will cover the various types of top coat finishes, application methods, and compatibility of various finishes. Students will master the techniques through various projects. (Prerequisite(s): CABT 1440 Wood Preparation and Repair; Co-Requisite(s): CABT 1447 Wood Finishing 1) 3C/2/1/0

CABT 2410 Laminates and Countertops

This course introduces students to laminates/veneers, the tools used for laminating, and laminate countertops. Students will learn to measure, order material, layout, and fabricate laminate countertops. Solid surface, stone products, and other types of countertops are also covered. Various projects will give the students hands-on experience. 4C/1/3/0

CABT 2441 Frameless Cabinetry

This course introduces the students to frameless cabinetry which is also known as European cabinetry, or 32mm cabinetry. The course will cover design, layout, and construction of frameless cabinets using boring machines and edgebanders, and the hardware used in frameless cabinetry. Commercial fixtures used in retail will also be covered in this course. The students will build both a base and an upper utility cabinet using the techniques learned. (Co-Requisite(s): CABT 1426) 5C/2/3/0

CABT 2510 CAD/CAM/CNC

This course will introduce the students to computer operated machinery. The student will learn to layout and draw projects using computers, apply tool paths for various operations, and set up a CNC router to perform operations. 4C/2/2/0

CABT 2700 Cabinetmaking - Open Lab

This course is for students with prior experience with woodworking terminology and shop safety; students wanting to upgrade their skills and knowledge to help them in the cabinetmaking industry. The student must be able to demonstrate the use of hand tools and portable power equipment. The student must meet with the instructor to see whether the student has the correct criteria in the cabinetmaking area. New students must meet with the instructor prior to registering for the class. Variable credits 1-2

CABT 2705 Specialty Finishes

This course will cover specialty finishes used in the furniture and cabinet industry such as crackle finishes, antiquing, and other faux finishes. Students will master the techniques through various projects. 2C/1/1/0

CABT 2790 Cabinetmaking Special Projects

This course is designed to create customized projects for students as needed on an individual basis. Variable credits 1-4

Carpentry

CARP 1110 Carpentry Remodeling Techniques

The student will learn the latest procedures and steps in planning, executing and completing remodeling projects around the house. 3C/2/1/0

CARP 1112 Building Walls/Hanging Drywall

This is a beginning wall building class. The student will learn carpentry jargon, layout and procedures for wall construction and how to cover walls with drywall and finish them for painting. 3C/2/1/0

CARP 1114 Finish Carpentry Techniques

The student will learn to finish a remodeling project by installing base trim, ceiling trim, window and door casings. The student will also learn special finish trim techniques. 3C/2/1/0

CARP 1116 Installing Windows and Doors

The student will learn how to install various windows and hang interior doors in a home. They will learn to make both plumb, level and square weatherize. 3C/2/1/0

CARP 1410 Project Estimating

Review basic arithmetic, algebra and geometry as it relates to carpentry. Students will learn construction terminology and estimate building costs. 3C/3/0/0

CARP 1420 Construction Blueprint Reading

Covers reading and interpreting blueprints used in the construction industry. Lines, abbreviations, symbols, parts of the blueprints, specifications and isometric drawings will be included in this class. 2C/2/0/0

CARP 1430 Introduction to Carpentry and Hand Tools

Learn to make drawings and sketches used in construction and learn to use basic carpentry hand tools. (Prerequisite(s): Concurrent enrollment in CARP 1420) 3C/1/2/0

CARP 1510 Intermediate Carpentry

Safety, job site working conditions and trade requirements, construction materials, building codes and residential construction concepts are included in this class. 5C/4/1/0

CARP 1521 Building Technology

Covers practice on the safe use of portable power tools and stationary shop equipment. Students gain familiarity with materials used in the construction industry and procedures used in the erection of residential and light commercial buildings. (Prerequisite(s): Concurrent enrollment in CARP 1510) 5C/0/5/0

CARP 1522 Power Tool and Shop Procedures

Continuation of CARP 1521. Includes practice on the safe use of portable power tools and stationary shop equipment. Students gain familiarity with materials used in the construction industry and procedures used in the erection of residential and light commercial buildings. (Prerequisite(s): Concurrent enrollment in CARP 1510) 5C/3/2/0

CARP 2410 Advanced Carpentry

Covers the methods and features of the instruments used by carpenters in laying out buildings. Cabinet installation, job seeking, soil types and excavations, properties of concrete and equipment and procedures used in the erection of commercial construction projects are included in this class. (Prerequisite(s): CARP 1510, CARP 1521, CARP 1522) 6C/4/2/0

CARP 2421 Fieldwork and Carpentry Procedures

Provides hands-on experience with the optic and electronic instruments used in laying out buildings. Erect scaffold systems and concrete forming systems used on commercial building projects. (Prerequisite(s): Concurrent enrollment in CARP 2410) 5C/1/4/0

CARP 2422 Carpentry Concrete Technology and Installation

Continuation of CARP 2421. Get hands-on experience with the optic and electronic instruments used in laying out buildings. Erect scaffold systems and concrete forming systems used on commercial building projects. (Prerequisite(s): Concurrent enrollment in CARP 2410) 5C/1/4/0

CARP 2495 Special Topics in Carpentry

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various program and pre-major course requirements. Please see a current Course Schedule for complete course details. Variable credits 1-6

Center for Manufacturing and Applied Engineering (The following courses are restricted to the 360° Program – see an advisor for more information)

CMAE 1502 Technical Mathematics

This is an introductory technical math course. The course is designed for students who have basic math skills and for those who need a review of basic technical math concepts. The primary goals of this course are to help individuals acquire a solid foundation in the basic skills of math/shop algebra and geometry. This course will show how these skills can model and solve authentic real-world problems. This is a blended on-line course utilizing Tooling “U”, D2L Brightspace. 3C/3/0/0

CMAE 1506 Introduction to Computers

This e360 course provides essential, hands-on coverage of Microsoft Office suite which includes: Getting Started with Microsoft Office, new features and user interface; Word core skills and new features such as Design Themes and Live Preview; Excel key concepts and skills, table styles and conditional formatting; Access database creation, working in Layout view and Navigation Pane; PowerPoint fundamentals of creating well-designed presentations; Email/Netmail, D2L Brightspace, Smart Thinking, Computer Security and E-folio building. This course requires on-site lab attendance. 2C/1/1/0

CMAE 1510 Print Reading

This course will orient the student in the basic skills and abilities required for understanding prints utilized in a manufacturing/industrial environment. Emphasis will be on interpretation of Geometric Dimensioning and Tolerancing symbols/principles; Alphabet of lines; Multi-view drawing (including Orthographic Projection, Isometric Views and Perspective Drawing); Title blocks; Revision systems; Identification of general/local notes; Dimensions and tolerances; Basic principles of math/geometry in relation to mechanical print reading; Interpretation of basic weld symbols; Techniques of basic shop sketching and interpretation of three-dimensional drawings, will be also discussed. Each student will have the opportunity to apply the knowledge acquired through a variety of in-class activities and external assignments. 2C/2/0/0

CMAE 1514 Safety Awareness

This course is designed to align with the Manufacturing Skill Standards Council's (MSSC) assessment and certification system for Safety. The course curriculum is based upon federally-endorsed national standards for production workers. This course will introduce OSHA standards relating to personal protective equipment, HAZMAT, tool safety, confined spaces, and others. 2C/2/0/0

CMAE 1518 Manufacturing Processes and Production

This course is designed to align with the Manufacturing Skill Standards Councils (MSSC) assessment and certification system for Manufacturing Processes. The course curriculum is based upon federally-endorsed national standards for production workers. This course emphasizes Just-In-Time (JIT) manufacturing principles, basic supply chain management, communication skills, and customer service. 2C/2/0/0

CMAE 1522 Quality Practices

This course is designed to align with the Manufacturing Skill Standards Council's (MSSC) assessment and certification system for Quality Practices. The course curriculum is based upon federally-endorsed national standards for production workers. Emphasis is placed on Continuous Improvement concepts and how they relate to a quality management system. Students will be introduced to a quality management system and its components. These include corrective actions, preventative actions, control of documents, control of quality records, internal auditing of processes, and control of nonconforming product. 2C/2/0/0

CMAE 1526 Maintenance Awareness

This course is designed to align with the Manufacturing Skill Standards Councils (MSSC) assessment and certification system for Maintenance Awareness. The course curriculum is based upon federally-endorsed national standards for production workers. The Maintenance Awareness course introduces the concepts of Total Productive Maintenance and preventative maintenance. Students are introduced to lubrication, electricity, hydraulics, pneumatics, and power transmission systems. 2C/2/0/0

CMAE 1528 Career Success Skills

This is an introductory career success skills course. The primary goals of this course are to help individuals acquire a solid foundation in the basic skills for a successful career. This course will identify the skills important to businesses and help the student assess his/her level of skill. The course will provide suggestions for how the student can improve his/her level of skill. This is an on-line course utilizing D2L Brightspace and Screencast. 1C/1/0/0

CMAE 1530 Machining Math

This is a math course designed for students in a machine shop environment. The primary goals of this course are to help individuals acquire a solid foundation in the basic skills of math that relate directly to the machine shop and industrial manufacturing. This course will show how these skills can model and solve authentic real-world problems. This is a blended on-line course utilizing Tooling "U", D2L Brightspace and proctored unit exams. (Prerequisite(s): CMAE 1502) 2C/2/0/0

CMAE 1532 Machine Tool Print Reading

This course covers the principles of mechanical print reading. Course includes sketching, lines, dimensioning and tolerancing, and single/multi-view drawings. (Prerequisite(s): CMAE 1510 Print Reading) 2C/2/0/0

CMAE 1534 Machine Tool Technology Theory

This course will address the machining theory related to the safety and operation of basic machine tools including: drill press, vertical milling machine, engine lathe, precision and non-precision grinders, saws and precision measuring equipment. This course uses Tooling U and D2L Brightspace. (Prerequisite(s): CMAE 1530 Machining Math and CMAE 1532 Machine Tool Print Reading) 2C/2/0/0

CMAE 1536 Machine Tool Technology 1

This course will address the operations of a drill press, tool grinder, vertical milling machine, engine lathe, and saws. Machine safety, machine component identification, as well as turning, milling, sawing, bench work, drilling and single-point tool grinding projects are also included in the components listed above. The student will also learn the care and use of inspections and layout tools. (Co-Requisite(s): CMAE 1534 Machine Tool Technology Theory) 2C/0/2/0

CMAE 1538 Machine Tool Technology 2

This course will address the advanced operations of a drill press, vertical milling machine, engine lathe, surface grinder and saws. Machine safety, machine component identification, as well as turning, milling, sawing, drilling and surface grinding projects are also included in the components listed above. The student will also learn the care and use of high precision measuring equipment. (Prerequisite(s): CMAE 1536 Machine Tool Technology 1) 2C/0/2/0

CMAE 1540 Introduction to CNC Machining

This course is an introduction to CNC machining. The focus will center on CNC machining centers and will include the history of CNC machining, G & M codes, programming, set-up and operating procedures. This is an online course utilizing Tooling U and D2L Brightspace. Online Text: Mill CNC Programming. (Prerequisite(s): CMAE 1536 Machine Tool Technology 1) 3C/3/0/0

CMAE 1542 Geometric Dimensioning and Tolerancing

Students will engage in learning how to read prints with Geometric Dimensioning and Tolerancing applications. Each of the geometric controls will be examined so the student may determine the allowable variation in form and size between part features. The Y14.5 M standard will be part of the overall instruction. Using precision equipment most of the geometric controls will be inspected to print specifications. (Prerequisite(s): CMAE 1532) 2C/2/0/0

CMAE 1550 DC Power

This course covers the basic principles in DC electric circuits including series, parallel and complex circuit analysis, Ohm's Law, meters, conductors, insulators, resistors, batteries, and magnetism. The use and understanding of test equipment for circuit analysis is stressed. 3C/3/0/0

CMAE 1552 AC Power

This course covers investigation of alternating current and its behavior in resistive, inductive and reactive series, parallel, and series/parallel circuits; use of test instrumentation; and electromagnetic induction. 3C/3/0/0

CMAE 1554 Digital Electronics

This is a first course in Digital Electronics. The primary goals of this course are to help individuals acquire a fundamental knowledge of digital electronics, Boolean algebra, digital devices, analog to digital conversion and digital to analog conversion, and how to apply their knowledge and skills through problem solving, simulation and practical projects. This course requires on-site lab attendance. 3C/1/2/0

CMAE 1556 Analog Circuits

This course covers diodes, power supplies, transistor operation, biasing, and specifications along with amplifier configuration and applications. It also covers operational amplifier operation, applications, and related circuitry. Troubleshooting, design, and circuit analysis are emphasized. This course requires on-site lab attendance. 3C/2/1/0

CMAE 1558 Motor Controls

This course introduces the learner to motor control components and provides them with a basic knowledge of control circuitry. The learner will build on his/her experiences from Basic Electricity by designing, building, and troubleshooting more complex circuits. Devices such as contractors, motor-starters, relays, timers, mechanical, and proximity switches are used. Electronic motor controls and programmable devices such as variable frequency drives are introduced and in this course. (Prerequisite(s): CMAE 1550 and 1552) 3C/3/0/0

CMAE 1560 Interpreting Symbols

The welding profession requires a good working knowledge of the fundamental component of welding prints that make up structures in the welding industry. To accurately layout and fabricate parts, the welder will need basic knowledge of print lines, dimensions, notes, and welding symbols. The students will breakdown welding prints to develop the skills necessary to fabricate individual component parts that will make-up welded structures. Written and fundamental tests will be administered in accordance with the American Welding Society (AWS) and the appropriate correlating code books. 2C/2/0/0

CMAE 1562 OxyFuel Welding

This course covers the use of oxy-fuel equipment while welding, cutting, brazing, and using the Plasma Arc Cutting (PAC) and Air Carbon Arc Cutting (CAC-A) processes. There will also be an introduction into laser cutting equipment. A very important part of this course will be discussing safety as it relates to the thermal welding and cutting equipment. Time will be spent in the lab developing skills using the thermal welding and cutting processes. Welds will be made in the flat, horizontal, vertical, and overhead positions. Cuts will be made in the flat and horizontal positions. Written and Fundamental tests will be done in accordance with the American Welding Society (AWS) codes and standards. This course requires on-site lab attendance. 3C/1/2/0

CMAE 1564 Shielded Metal Arc Welding (SMAW)

Students will study the safety concerns connected with the Shielded Metal Arc Welding (SMAW) process, along with an introduction into the types of power sources used for arc welding, process applications, electrode selections, overview of weld types, and other work-related safety conditions in the welding field. Time will be spent in the lab developing skills using the SMAW processes. Welds will be made in the flat, horizontal, vertical, and overhead positions. Written and fundamental tests will be done in accordance with the American Welding Society (AWS) codes and standards. This course requires on-site lab attendance. 3C/1/2/0

CMAE 1566 Gas Metal Arc Welding (GMAW) / Flux Cored Arc Welding (FCAW)

Students will study the safety concerns connected with the Gas Metal Arc Welding (GMAW) and Flux Cord Arc Weld (FCAW). The GMAW process will be discussed in depth in relationship to the different type of modes of transfer available, shielding gases, and the different types of materials that can be welded. The FCAW process is similar in the type of equipment used for mode of transfer. The differences in the electrode types of gas-shielded wires and self-shielded wires will be discussed along with the types of shielding gases that are used. There will be discussions on the importance of how the welding process intersects with the arc welding symbols and codes. Along with this, we will also do a review of procedures used in the visual inspections of welds. Time will be spent in the lab developing skills using the GMAW and FCAW processes. Welds will be made in the flat, horizontal, vertical, and overhead positions. Written and Fundamental tests will be done in accordance with the American Welding Society (AWS) codes and standards. This course requires on-site lab attendance. (Prerequisite(s): CMAE 1564) 3C/1/2/0

CMAE 1568 Gas Tungsten Arc Welding (GTAW)

This course covers the safety hazards and applications for Gas Tungsten Arc Welding (GTAW) in the welding industry. Material covered in the classroom will be power sources, setup, types of current, current selection, shielding gases and torch types. Various procedures will be discussed for welding different metals (Aluminum, Stainless Steel, and Mild Steel) and potential problems that may be encountered. Applications for the process in different industries, and the use of back purging and its application will also be discussed. Welds will be made in the flat, horizontal, vertical and overhead positions. Written and Fundamental tests will be done in accordance with the American Welding Society (AWS) codes and standards. This course requires on-site lab attendance. (Prerequisite(s): CMAE 1564, 1566, 1570) 3C/1/2/0

CMAE 1570 Metallurgy

This course covers the study of metals and how the effects of welding and heat treatments affect them. Terminology dealing with metallurgy will be an important part of the course. Physical and mechanical properties of ferrous and nonferrous metals will be covered along with the classifications of the different types of metals. By understanding the mechanical properties of metals, you will gain an understanding of the range of usefulness of the materials in the metal working community. Written tests will be done in accordance with the American Welding Society (AWS) codes and standards. 1C/1/0/0

Chemistry

CHEM 1700 Chemistry Concepts

This laboratory science course covers the basic concepts of chemistry. Topics include measurements and calculations used in chemistry; the general properties of chemicals; physical characteristics of matter, atoms and elements; basics of chemical bonding; chemical equations and their uses; gases, liquids and solids; solutions; and acids and bases. The course relates chemistry concepts to applications in everyday life. The course is intended for students who have not had a high school chemistry course. (Prerequisite(s): MATH 0910 Introductory Algebra with a grade of "C" or better, or appropriate assessment score) (MnTC: Goal 3) 4C/3/1/0

CHEM 1711 Principles of Chemistry 1

This course uses the scientific method to study matter; what matter is comprised of and how matter changes. Basic chemical theory and applications are covered with an emphasis on the principles and theories of atomic and molecular structure; periodic properties of elements; thermochemistry, reaction stoichiometry; behavior of gases, liquids and solids; molecular and ionic structure and bonding; energy sources and environmental issues related to energy use. The lab component includes the application of chemical concepts through observation, data collection, quantitative measurement and problem analysis. High School chemistry is recommended. (Prerequisite(s): MATH 0920 Intermediate Algebra or CHEM 1700 Chemistry Concepts with a grade of "C" or better, or appropriate assessment score) (MnTC: Goal 3) 4C/3/1/0

CHEM 1712 Principles of Chemistry 2

This course is a continuation of CHEM 1711 Principles of Chemistry 1 with an emphasis on chemical kinetics; radioactive decay; chemical equilibrium; solutions; acids and bases; solubility; second law of thermodynamics; electrochemistry and corrosion; descriptive chemistry of the elements; coordination chemistry; biochemistry; and applications of chemical principles to environmental problems. The lab component of this course provides students with the opportunity to apply chemical concepts through observation, data collection, quantitative measurement and problem analysis. (Prerequisite(s): CHEM 1711 with a grade of "C" or better) (MnTC: Goal 3) 4C/3/1/0

CHEM 2700 Organic Chemistry Survey

This course is a one semester survey course of topics in organic chemistry. This course is designed to give a basic understanding of the role that organic compounds play in nature as well as their industrial applications. Topics include an overview of covalent bonding, nomenclature, reactions, and stereochemistry. A variety of different organic functional groups will be studied including alkanes, aromatics, halides, alcohols, aldehydes, ketones, and carboxylic acids. The laboratory activities include an introduction to laboratory techniques used in chemical synthesis, and the use of chromatography and spectroscopy in the analysis of organic compounds. (Prerequisite(s): CHEM 1711 with a grade of "C" or better) (MnTC: Goal 3) 4C/3/1/0

CHEM 2720 Organic Chemistry 1

This course is the first semester of a two-semester sequence in organic chemistry. Topics include an overview of covalent bonding, acid-base chemistry, and reaction energetics. The course also covers nomenclature, stereochemistry, organic molecular structures, substitution and elimination reactions and reactions alkanes, alkenes, alkynes, and alcohols. The laboratory activities include an introduction to laboratory techniques used in organic chemical synthesis, and the use of chromatography and spectroscopy in the analysis of organic compounds. Three hours of lab per week are required. (Prerequisite(s): CHEM 1712 with a grade of "C" or better) (MnTC: Goal 3) 5C/4/1/0

CHEM 2721 Organic Chemistry 2

This course is a continuation of CHEM 2720 Organic Chemistry 1. Topics include amines, ketones, aldehydes, carboxylic acids, and their derivatives. Reaction mechanisms studied include electrophilic aromatic substitution, nucleophilic aromatic substitution, nucleophilic addition and substitution at carbonyl groups, and reactions at the alpha carbon of carbonyl compounds. The course also includes application of organic chemistry related to polymers, natural products, and biochemistry. The laboratory activities cover reactions, synthesis, and the chemical and instructional identification of organic compounds. Three hours of lab per week are required. (Prerequisite(s): CHEM 2720 with a grade of "C" or better) (MnTC: Goal 3) 5C/4/1/0

CHEM 2730 Instrumental Analysis

This course introduces the principles of analytical methods and instrumentation. The theories and applications of various chemical and biochemical methods of analyses will be studied. Instrumentation methods including chromatography, spectrophotometry, microscopy, and others will be applied in laboratory to a variety of chemical and biological systems. Mathematical calculations, statistical analysis of data, and quantitative chemical analysis will also be incorporated. Students will also be introduced to standards important to quality control in regulatory environments, using documentation procedures and validation principles according to regulatory standards. (Prerequisite(s): CHEM 1711 with a grade of "C" or better) (MnTC: Goal 3) 4C/2/2/0

CHEM 2790 Chemical Technology Laboratory Research Project

This course provides students with an opportunity to design and carry out a science research project under the supervision of a faculty advisor. The research project will be prepared using literature review, problem identification, procedural documentation, data collection, data analysis, findings, conclusions, and recommendations. Evaluation will be carried out by faculty teams and experts in the field. The course will also provide an opportunity for field study in an approved internship setting. (Prerequisite(s): Instructor approval) (MnTC: Goal 3) Variable credits 1-4

CHEM 2791 Cleanroom Lab Research Project

This course provides students with an opportunity to design and carry out a research project under the supervision of a faculty advisor utilizing the cleanroom facilities. The research project will be prepared using literature review, problem identification, procedural documentation, data collection, data analysis, findings, conclusions, and recommendations for future research. The course will also provide an opportunity for field study in an approved internship setting. Evaluation will be carried out by faculty teams and experts in the field. (Prerequisite(s): Instructor approval) (MnTC: Goal 3) Variable credits 1-4

CHEM 2795 Special Topics in Chemistry

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 3) Variable credits 1-6

Child Development**CDEV 1200 Introduction to Early Childhood Education**

This course provides an overview of the early childhood field, including philosophies, missions, and regulations. It examines the roles and responsibilities of professionals in a variety of career settings. Examines positive communication and relationships with families. 3C/3/0/0

CDEV 1210 Child Growth and Development

Examines the major developmental milestones for children, both typical and atypical, from conception through adolescence in the areas of physical, psychosocial, and cognitive development. Emphasizes interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methods, students will observe children and analyze characteristics of development at various stages. 3C/2/1/0

CDEV 1220 Health, Safety and Nutrition

An introduction to the regulations, standards, policies, and procedures, prevention techniques, and early childhood curriculum related to health, safety, and nutrition. The key components that ensure physical health, mental health, and safety for both children and staff will be identified, as well as the importance of collaboration with families and health professionals. A focus will be on integrating the concepts into everyday planning and program development. 3C/2/1/0

CDEV 1230 Guiding Children's Behavior

Examines positive strategies to guide children's behavior in the early childhood setting. Examines ways to establish supportive relationships with children and guide them, in order to enhance learning, development, and well-being. 3C/3/0/0

CDEV 1240 Learning Environment and Curriculum

Presents an overview of knowledge and skills related to providing appropriate curriculum and environments for young children. Examines the role of the teacher in providing learning experiences to meet each child's needs, capabilities, and interests, and ways to implement the principles of developmentally appropriate practices. Will provide an overview of content areas including (but not limited to): Language and literacy, social and emotional learning, sensory learning, art and creativity, math and science. 4C/3/1/0

CDEV 1610 Observation and Assessment

This course focuses on the appropriate use of assessment and observation strategies to document development, growth, play and learning to join with families and professionals in promoting children's success. Recording strategies, rating systems, multiple assessment tools and portfolios are explored. There will be a focus on increasing objectivity in observing and interpreting children's behavior, observing developmental characteristics and increasing the awareness of normal patterns of behavior. (Prerequisite(s): Completion of all certificate level coursework or instructor approval) 3C/3/0/0

CDEV 1640 Curriculum Planning

Provides an advanced level of curriculum planning. Emphasis is on organizing, implementing, and evaluating developmentally appropriate curricula. (Prerequisite(s): Completion of certificate level coursework and instructor approval) 3C/3/0/0

CDEV 1910 Practicum 1

Students demonstrate early childhood teaching competencies under guided supervision to make connections between theory and practice and developing professional behaviors. Students apply comprehensive understanding of children and families; developmentally appropriate, child-centered, play-oriented approaches to teaching and learning, and knowledge of curriculum content areas. They design, implement, and evaluate experiences that promote positive development and learning for all young children. (Prerequisite(s) Completion of all other Diploma level courses and instructor approval) 3C/0/0/3

CDEV 2320 Children with Differing Abilities

Examines the child with differing abilities in an early childhood setting. Students will integrate strategies that support diversity and anti-bias perspectives, provide inclusive programs for young children, apply legal and ethical requirements including, but not limited to ADA and IDEA, differentiate between typical and exceptional development, analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders, work collaboratively with community and professional resources, utilize an individual education plan, adapt curriculum to meet the needs of children with developmental differences, cultivate partnerships with families who have children with developmental differences (Prerequisite(s): Completion of all certificate level coursework or instructor approval) 3C/2/1/0

CDEV 2520 The Peaceful Classroom

Provides an overview of the effects of violence on the development and the behavior of young children. Students explore elements to be incorporated into a Peaceful Classroom. Students identify behavioral intervention strategies to address challenging behaviors and create activities to foster peacemaking skills in children. 3C/3/0/0

CDEV 2530 Children with Challenging Behaviors

Helps students understand children's behavior problems and identify intervention strategies to prevent and resolve problem behavior, use behavior modification effectively and design behavior plans. 3C3/0/0

CDEV 2550 Math, Science and Technology for Young Children

Provides an overview of cognitive development and math and science learning experiences in home and center-based settings. Students integrate knowledge of child development, learning environments and teaching methods to promote curiosity, attention, perception, memory, problem solving, and logical thinking, etc. 3C/2/1/0

CDEV 2560 Language & Literature Learning Experiences

Provides an overview of language learning experiences in early childhood settings and a detailed study of literature/literacy experiences. Students will integrate knowledge of children's language and literacy development, learning environments and teaching strategies to select, plan, present, and evaluate literature experiences to children of different abilities and diverse backgrounds. 3C/2/1/0

CDEV 2570 Working with Diverse Children and Families

Examines how to work with many types of families. Investigates the importance of the family/school partnership, study methods of effectively communicating with families, and identify community organizations and networks that support families. Various classroom strategies will be explored emphasizing culturally and linguistically appropriate anti-bias approaches supporting all children in becoming competent members of a diverse society. 3C/3/0/0

CDEV 2580 Creative Development & Learning Experiences

Provides an overview of creative development and artistic/aesthetic learning experiences in home and center-based settings. Students integrate knowledge of child development, learning environments, and teaching methods to promote children's artistic, musical, movement and dramatic abilities. 3C/3/0/0

CDEV 2590 Social-Emotional Development & Learning Experiences

Provides an overview of social-emotional learning experiences. Students integrate knowledge of child development, learning environment, and teaching methods to promote emotional development, self-concept, self-esteem, social skills, diversity awareness, and social studies. 3C/3/0/0

CDEV 2597 Special Topics

Intent of this course is to allow flexibility in providing learning experiences to meet a special need of the student, the major program and the College. (Prerequisite(s): Instructor approval) Variable credits 1–4

CDEV 2599 Practicum 1: Special Settings/ American Sign Language

Provides an opportunity to apply knowledge and skill in an actual child development setting. Students will observe and assess children's behavior; facilitate free play; implement adult-directed learning experiences; and maintain professional relationships. (Prerequisite(s): Completion of all CDEV ASL courses and instructor approval) 2C/0/0/2

CDEV 2600 Organizational Leadership and Management

The student will discuss personal and professional reasons for becoming a teacher, ways to advocate in this profession and will develop a plan for continuous education and professional development. The student will join a professional organization and attend a professional conference. Students will improve skills in working with others by learning strategies for team building, coping with stress, and problem-solving. Students will study professional ethics and procedures for evaluating staff. (Prerequisite(s): Completion of certificate level coursework) 2C/2/0/0

CDEV 2620 Practicum 2

Provides an opportunity to apply knowledge and skill in early childhood settings. Students implement a variety of learning experiences that are developmentally appropriate for and culturally sensitive to two different age groups and program settings. (Prerequisite(s): Successful completion of all other required AAS coursework and Instructor approval) 4C/0/0/4

CDEV 2800 Child Development Administration

A course for directors, coordinators, or lead teachers in child development programs that provides an overview of managing a child development organization with emphasis on facilities, health and safety, risk management, record keeping, marketing and administrative styles. (Prerequisite(s): Child Development Careers Diploma and instructor approval) 3C/3/0/0

CDEV 2820 Child Development Financial Management

Provides students interested in child development administration with an introduction to budgeting, financial management and financial record keeping in child development programs. Specific topics include: start-up costs, determining utilization rates, setting/collecting parent fees, identifying break-even points, preparing financial statements and fundraising. (Prerequisite(s): Child Development Careers Diploma and instructor approval) 3C/2/1/0

CDEV 2840 Child Development Staffing & Supervision

Offers students an opportunity to develop advanced level skills in hiring, training, evaluating, coordinating and supervising staff in child development settings. (Prerequisite(s): Child Development Careers Diploma and instructor approval) 3C/2/1/0

CDEV 2860 Advanced Internship-Administration of Child Development Setting

Provides an opportunity for advanced-level child-development professionals to apply knowledge and skill in the administration of a child development setting. (Prerequisite(s): Child Development Careers Diploma and instructor approval) 1C/0/0/1

Chinese Language

CHIN 1710 Beginning Chinese 1

This course introduces Mandarin Chinese language based on the knowledge of basic skills and strategies in listening, speaking, reading and writing in a general Mandarin speaking environment. Learners will acquire the language through a theme-based and function-based approach, but also by focusing on grammar whenever necessary. China's culture and history are also important components of the course. At the end of the term, students are expected to be able to communicate some basic personal information, both oral and written. They will read and write simplified Chinese characters and learn some key components of Chinese culture and general knowledge of Chinese history. The course will also prepare students for further studies in Chinese. This course consists of five hours per week of instruction and in-class discussion in addition to homework, tape assignments, and on-line practice. (Prerequisite(s): READ 0722 Reading 2 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 8) 5C/4/1/0

CHIN 1720 Beginning Chinese 2

As the second part of the Accelerated Modern Chinese course series, this course is designed for heritage speakers of Chinese or those who have completed CHIN 1710 at Saint Paul College. The purpose of this course is to help students improve their ability in listening, speaking, reading, and writing Chinese. It particularly aims to help students develop more sophisticated vocabulary and enhance reading and writing ability in Chinese. As with CHIN 1710, the course consists of five hours per week of instruction and in-class discussion, homework, tape assignments and online practice. (Prerequisite(s): CHIN 1710 with a grade of "C" or better or instructor approval) (MnTC: Goal 8) 5C/4/1/0

CHIN 1790 Special Topics in Chinese

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 8) Variable credits 1-6

CNC Technology

CNCT 1410 Introduction to Manufacturing Processes

This course covers a general orientation, an overview of careers, shop safety, measurement, precision tools, band saw theory, lathe theory, drills and vertical milling machines. This course will include additional theory and online assignments. 4C/4/0/0

CNCT 1420 Engineering Drawings

This introductory course covers view orientation, section views, surface finish, dimensioning, part tolerance, and machining symbols. This course will include additional theory and online assignments. 4C/4/0/0

CNCT 1430 Materials Processes 1

This introductory lab covers shop safety, bench work, drill presses, lathe operations, and vertical milling. 4C/1/3/0

CNCT 1431 Materials Processes 2

This course covers intermediate lathe and milling machines. Basic surface grinding will be introduced. Work efficiency and inspection of finished work will be stressed. (Prerequisite(s): CNCT 1430 or concurrent) 4C/1/3/0

CNCT 1705 Introduction to CNC Machining

This course will introduce the basics of CNC machining, including understanding G and M codes. 4C/3/1/0

CNCT 1710 Shop Calculations

The subject matter of this course progresses from the arithmetical operations through measurement systems, basic algebra for shop formula solving skills, practical geometry with shop examples, and applications and trigonometry, emphasizing its valuable use in the shop and in the trade. (Prerequisite(s): CNCT 1431 with a grade of "C" or better) 2C/2/0/0

CNCT 1720 Geometric Dimensioning

This course covers the principles, application, and interpretation of geometric dimensioning and tolerance as per ASME-Y14.5M 1994 Standards. (Prerequisite(s): CNCT 1431 with a grade of "C" or better) 2C/2/0/0

CNCT 1730 CNC 1

This course covers the basic operation and setup skills using G & M code format. (Prerequisite(s): CNCT 1431 with a grade of "C" or better) 4C/2/2/0

CNCT 1731 CNC 2

This course covers the setup and operation of CNC machine tools. Also includes advanced NC/CNC programming and operation on machining centers. (Prerequisite(s): CNCT 1730 or concurrent with a grade of "C" or better) 4C/2/2/0

CNCT 1740 Computer Integrated Manufacturing

Introduces production machining processes and includes calculations and methods for work holding setups of various piece parts. (Prerequisite(s): CNCT 1431 with a grade of "C" or better) 4C/4/0/0

CNCT 2410 Tool Design

Analysis and design fundamentals required to design and build a mold. Content includes types of molds, plastic molding characteristics, metal alloy castings, design principles, and molding methods. This course will include additional theory and online assignments. (Prerequisite(s): CNCT 1740 with a grade of "C" or better) 4C/4/0/0

CNCT 2420 Mechanical Systems/EDM

The focus of this hybrid course will be on manufacturing design, production processes, and Electrical Discharge Machining. Also included will be production tool design projects, related theory in quality, lean manufacturing, abrasives, mechanical systems, inspection procedures, welding and CNC controls. (Prerequisite(s): CNCT 1740 with a grade of "C" or better) 4C/4/0/0

CNCT 2430 Mold/Plastic Technology

This is an introductory course on the design and construction principles of basic molds. CNC machines along with manual mills, lathes, surface grinders, jig bores, drill presses and injection molding machines are used in a laboratory setting to produce a plastic injection mold. (Prerequisite(s): CNCT 1740 with a grade of "C" or better) 4C/1/3/0

CNCT 2440 Manufacturing Applications

Product development fundamentals including design, research, cost estimating and manufacturing of a metal stamped product. This course will also include CNC machining. (Prerequisite(s): CNCT 1740 with a grade of "C" or better) 4C/1/3/0

CNCT 2510 Mechanical Applications

This course covers advanced tool room machining operations using vertical mills, lathes, surface grinders, as well as part inspection. (Prerequisite(s): CNCT 1431 with a grade of "C" or better) 4C/2/2/0

CNCT 2520 CAD

This introductory course will use SolidWorks as the CAD software of instruction and application. Basic construction of solid modeling, engineering drawings, and assemblies will be covered. 4C/4/0/0

CNCT 2530 CNC Lathe

This course covers the programming, set-up, and operation CNC turning centers. This course will include additional theory and online assignments. (Prerequisite(s): CNCT 1430, CNCT 1431 with a grade of “C” or better) 4C/4/0/0

CNCT 2540 Computer Aided Manufacturing

This course covers computer aided manufacturing using Mastercam software. Students will learn to create geometry, toolpaths, and CNC files for a series of projects. The use of PC based CAM software to generate numerical control programs is included. (Prerequisite(s): CNCT 1730 with a grade of “C” or better, CNCT 1731 with a grade of “C” or better or concurrent) 4C/2/2/0

CNCT 2550 Industry Internship

This industry internship will expose the student to manufacturing, and will provide operator training and workplace safety. (Prerequisite(s): A grade of “C” or better in all program courses.) 4C/0/0/4

College & Career Planning Success Strategies

CSCR 1403 Choosing Your Career Path

This course focuses on the career planning and decision-making process. Students will acquire skills in identifying potential career areas based on personal assessments and in utilizing career decision-making and goal-setting strategies to determine a career choice. Students will utilize various career resources, such as online sites, to assist in the decision-making planning process. 1C/1/0/0

CSCR 1405 College Success Strategies and Career Resources

This course is designed to help students succeed in college and develop career-planning skills. Students will learn to study more effectively. Focused topics will include time management, study strategies, note-taking, test-taking, mnemonic devices and college resources. Students will gain knowledge of career resources and the career-planning process. 2C/2/0/0

CSCR 1406 Study Skills and College Success Strategies

This course is designed to help students, identify and develop necessary skills and strategies to enhance study skills and college success. Focused topics will include college expectations; overcoming barriers to success; study skills such as time management and notetaking; learning styles; college resources; and maintaining physical, mental, and emotional health. 2C/2/0/0

Computer Science

CSCI 1410 Computer Science and Information Systems

Designed to introduce computer information systems to students in the fields of computer science and information science. The course will cover the basic architecture and design of digital computers and the software that runs on them. Special emphasis will be placed on the technical aspects of the field of computer science and a significant amount of time will be spent developing a sound analytical understanding of the field. Topics such as machine architecture, binary arithmetic, algorithm development, data structures, file organization, database design, systems analysis, data communication and systems software will be covered. Students must have a sound preparation in mathematics through basic algebra. (Prerequisite(s): Grade of “C” or better in MATH 0910 or appropriate assessment score.) 4C/4/0/0

CSCI 1423 Computer Networking 1 - Client

This course introduces students in networking programs to workstation-based operating system design, implementation and administration. The primary components of workstation operating systems such as process management, memory management systems, file systems, security subsystems, I/O control subsystems, etc. are reviewed at the conceptual level. UNIX and Windows based operating systems are used as implementation case studies. Students are expected to become proficient with the ideas inherent in operating system design and how these ideas are implemented in both UNIX and Windows based workstation operating systems. Workstation-based peer-to-peer networking is reviewed in the context of both Windows and UNIX based networking. (Prerequisite(s): Grade of “C” or better in MATH 0910 or appropriate assessment score.) 4C/4/0/0

CSCI 1440 Networking Fundamentals

This course provides an introduction to computer networking. The material in the course follows the OSI networking model as a basis for coverage of the entire field of computer networking. Topics include the physical, data link, network, transport, session, presentation and application layers of the OSI model as they are implemented in current network technologies. Students will use a very hands-on approach learning physical networking as well as logical networking tasks. The course makes extensive use of Cisco networking hardware and software as well as Cisco learning materials. With extensive outside study and review students in this course may become prepared to become certified as Network+ level technicians. (Prerequisite(s): Grade of “C” or better in MATH 0910 or appropriate assessment score.) 4C/4/0/0

CSCI 1450 Web Fundamentals/HTML

This course provides students with a thorough grounding in the World Wide Web, a fundamental knowledge of HTML and a basic understanding of Internet technical architectures. Students learn about search engines, Web servers, scripting, protocols, ISPs and other Internet technologies. Technical architecture topics include the study of networks, Internet protocols, Internet servers, firewalls, security and general issues in conducting ecommerce. Students will design and program HTML Web pages, tutorials and publish a Web site project. (Prerequisite(s): Grade of “C” or better in MATH 0910 or appropriate assessment score.) 4C/4/0/0

CSCI 1470 Web Design

This course explores the principles of Web design theory and practice. Concepts related to the look and feel of the client-side of the World Wide Web are emphasized. Topics include the design of a graphical user interface, site content, organization and navigation, with emphasis on the human interface. Also included are Web “usability” issues. Color palettes, font selection and use of animation are discussed. The use of HTML layout concepts and software such as Photoshop and Dreamweaver are introduced. (Prerequisite(s): CSCI 1450) 4C/4/0/0

CSCI 1523 Introduction to Computing and Programming Concepts

This course is focused on computational problem solving. Students must engage in problem-solving tasks such as clarifying any ambiguous aspects of the problem definition, decomposing the problem into subproblems, deciding which computer-related problem solving strategies (such as recursion) might be useful in solving the problem, constructing a solution, implementing the solution as a computer procedure, and verifying that the solution is correct (including modifying it when it is not). (Prerequisite(s): CSCI 1410) 4C/4/0/0

CSCI 1524 Introduction to Algorithms and Data Structures

This course is focused on the use of algorithms and data structures to solve problems. Students will solve various problems using appropriate software design methods and software tools. For example, students need to decide which problem solving strategies (such as divide and conquer) might be useful for a specific problem, construct a solution, design appropriate data types and algorithms, and verify the correctness of the solution. (Prerequisite(s): CSCI 1523 and CSCI 1541) 4C/4/0/0

CSCI 1531 Objective-C Programming

This is a rigorous first course in Objective-C programming which is the primary development language for OSX and iOS devices. The course begins with C language features and quickly moves to the object-oriented extensions provided by Objective-C. Objects, classes, and messages are explored in depth. Concepts include: inheritance, polymorphism, dynamic typing, categories, protocols, and memory management. The Cocoa application framework is studied and the XCode development environment is used extensively. Previous exposure to C, C++, or Java is assumed. (Prerequisite(s): CSCI 1410) 4C/4/0/0

CSCI 1533 ANSI C Language Programming

This course is an intermediate introduction to Language C and the tools used to develop executable programs. The course reviews elementary C programming concepts at a rapid pace and continues with Language C development using simple data structures such as arrays and linked lists. This is followed by a detailed review of how memory is managed in Language C, pointers, referencing and dereferencing, C structures and abstract data types. Students should expect that all programming will be done at the command line using command line editors and Linux as the operating system. (Prerequisite(s): CSCI 1523) 2C/2/0/0

CSCI 1541 Java Programming

This course covers the syntax of the Java programming language and object-oriented programming with the Java programming language. It includes variables, primitive data types, decision structures, loops, file I/O, methods, classes arrays, text processing, wrapper classes, and inheritance. Students will learn how to develop Java applications using the command line interface. (Prerequisite(s): CSCI 1410) 4C/4/0/0

CSCI 1542 Java Programming 2

This course provides students with first-hand experience using object-oriented analysis and design and Java to create a distributed, multi-tier application. Students use graphical user interface (GUI) design principles and network-communications capabilities to code a functional Java application that interacts with a networked database server. (Prerequisite(s): CSCI 1541) 4C/4/0/0

CSCI 1544 Enterprise Operating Systems

This course provides an integrated view of using IBM zEnterprise systems to prepare students to take the IBM System Z Mastery test. An overview for zEnterprise hardware concepts, z/OS operating system concepts, and interactive facilities, such as TSO/E, ISPF and UNIX will be presented. The roles of virtual and physical storage, LPARs, Parallel Sysplex, z/VM, and cluster technologies to provide scalability and continuous availability within zEnterprise systems are discussed. Students will be provided hands-on experiences using z/FS data sets, ISPF, SDSF, JCL, and JES3. A batch COBOL application will be edited, compiled, linked, and executed and debugged. CICS applications, WebSphere (J2EE) applications, and WebSphere MQ services will be compared as alternatives to zEnterprise interfaces, middleware and OLTP transactional services. An overview of system programming and SMP/E, zEnterprise database management systems, clients and utilities, e.g., DB2, IMS, SPUI, QMF, z/OS HTTP web server, VTAM, TCP/IP, and RACF (IBM Security Server) will be introduced. Access to a zEnterprise system, hands-on exercises, and online support materials are important components of this course. (Prerequisite(s): CSCI 1410 and CSCI 1423) 4C/4/0/0

CSCI 1546 COBOL Programming 1

This course provides the student with the hands-on skills to develop and debug COBOL applications in a zEnterprise system. Students will be introduced to TSO logon procedures, JCL, the ISPF, RDz, and SDSF. Fundamental COBOL coding rules, syntax, sequential batch report file processing, arithmetic verbs, conditional control structures, level 88s, data validation, utility sorting, control-break logic, and processing and searching single-level tables are presented. (Prerequisite(s): CSCI 1410 and CSCI 1423) 4C/4/0/0

CSCI 1547 COBOL Programming 2

Students will be introduced to Virtual Storage Access Method (VSAM). The structure and application of Virtual Storage Access Method (VSAM) datasets, i.e., ESDS, KSDS, and RRDS, are compared. Using the IDCAMS utility students will create and manage VSAM clusters to support basic file maintenance applications. Other COBOL topics include advanced table processing; batch ESDS, KSDS, and RRDS processing and updating, and the use of sub-programs. Additional concepts covered are structured program design considerations, the interrelationship of programs within an information system, coding for program efficiency and clarity, and the creation and use of quality program documentation. (Prerequisite(s): CSCI 1546) 4C/4/0/0

CSCI 1550 Database Management Fundamentals

This course covers information models and systems; database query languages; object-oriented and relational database design; transaction processing; distributed databases; data modeling; normalization; and physical database design. The relational model is studied in-depth and students are expected to develop proficiencies in the design and implementation of databases using it. Students will spend a significant portion of the course studying SQL. Students are expected to become proficient in the use of SQL and the implementation database typically used for this course is MYSQL. This course is based on ACM specifications for a first course in Database Systems. (Prerequisite(s): CSCI 1410) 4C/4/0/0

CSCI 2410 Management Information Systems

This course provides elementary concepts to the management of information systems. The course is designed to allow the student of management information systems to evaluate, design and implement information processing systems that support the business enterprise. The purpose of the course is to understand the underlying principles of information systems for different management functions from the business perspective. (Prerequisite(s): CSCI 1550) 3C/3/0/0

CSCI 2420 Computer Security

This course is a comprehensive introduction to computer security. The course is an in-depth introduction the concept of cybercrime and security in networks and the internet. It presents the conceptual frameworks of computer security assessment. Topics covered include denial of service attacks, malware, viruses, trojan horses, worms, encryption, industrial espionage, internet fraud, cyber terrorism and information warfare. The course makes extensive use of in class and Internet-based laboratories within which computer security scenarios are implemented and strategies for their design and operation are reviewed. Students taking this course should have a background in computer networking and a thorough understanding of client/server networking. With extensive outside study and review students in this course may become prepared to become certified as Security+ level technicians. (Prerequisite(s): CSCI 2451 and CSCI 2461) 4C/4/0/0

CSCI 2440 Client Side Programming 1

This course introduces JavaScript programming and the skills needed to create dynamic, client-side web pages. The basics of JavaScript programming are covered, including: basic scripting, control statements, functions, arrays, and objects. Students will then explore the DOM (Document Object Model), JavaScript event handling, DHTML (Dynamic HTML) and select advanced topics. Class sessions include hands-on work and lectures. This course assumes a working knowledge of HTML and a previous introduction to CSS (Cascading Style Sheets). (Prerequisite(s): CSCI 1450) 4C/4/0/0

CSCI 2442 Server Side Programming

This course is designed for students interested in developing the server-side skills needed to create dynamic, data-driven websites. This course uses the popular server-side programming language PHP to interact with SQL databases. Fundamental techniques are covered, including: connecting to a database and performing basic database operations to create, read, update, and delete data. HTML form elements are reviewed and then form processing is discussed as well as writing functions for data validation. Server-side scripting is used to generate dynamic web pages. Students will learn how to authenticate users, manage user requests, and maintain user state through sessions and cookies. (Prerequisite(s): CSCI 1450) 4C/4/0/0

CSCI 2451 Computer Networking 2 – Server

This course is designed to give the student of networking an introduction to client/server networking. Students in this course will be expected to install and configure both the server operating system and clients connecting to the server. At the completion of the course students understand the basics specifying, designing, installing, configuring and maintaining a client/server network. Microsoft Client and Server Software is utilized as the teaching platform and students are expected to become proficient in the use to this commercial platform. Specialized topics include network security, name resolution system, (DNS, DNS&WINS), network access protection (NAP), file services, print services, Active Directory service, etc. A significant amount of time in the course is dedicated to laboratory exercises and hands-on experience. With extensive outside study and review successful students in this course may become prepared to become certified as Microsoft Systems Administrator. (Prerequisite(s): CSCI 1410 and CSCI 1423) 4C/4/0/0

CSCI 2452 Cloud Computing

This course introduces software and technologies used to create and manage cloud computers and access to them. Both public cloud computing services such as Amazon Web Services and private cloud computers will be reviewed. Students will work directly with servers and install and configure cloud systems during the course. This course is conducted in a hands-on manner and class sessions typically will be dedicated to hands-on exercise. (Prerequisite(s): CSCI 2451 and CSCI 2461) 4C/4/0/0

CSCI 2453 Computer Virtualization

This course introduces software and technologies used to create virtual computers. Proprietary virtualization software such as VMWare and Microsoft Virtualization are covered as well as open source projects such as Xen and virtualbox. Students will work directly with servers and install and configure each of the virtualization systems during the course. This course is conducted in a hands-on manner and class sessions typically will be dedicated to hands-on exercises. (Prerequisite(s): CSCI 2451 and CSCI 2461) 4C/4/0/0

CSCI 2461 Computer Networking 3 – Linux

This course provides an in-depth study of Linux based operating systems administration and networking. The installation configuration and management of Linux-based servers is covered in-depth. The course also covers the configuration of Linux-based operating systems in a network environment. Students will spend a significant amount of the classroom meeting time conducting hands-on laboratory exercises. With extensive outside study and review students in this course may become prepared to become certified as Linux systems administrators. (Prerequisite(s): CSCI 1410 and CSCI 1423) 4C/4/0/0

CSCI 2463 XML Programming

This course is designed to give the student both the theoretical foundation and hands-on skills required to begin using XML (eXtensible Markup Language). It begins by examining what XML is and what it can be used for. Early topics include elements and attributes, the use of namespaces, defining valid XML documents and the use of DTDs and Schemata to constrain XML, particularly as used in B2B (business-to-business) applications. Students learn about the DOM (Document Object Model), an object-oriented API for working with XML. XSLT (eXtensible Stylesheet Language for Transformations), Templates and Xpath are also covered. Advanced topics include XML and databases, SOAP (the Simple Object Access Protocol), the SAX (Simple API for XML) interface and others. (Prerequisite(s): CSCI 1450) 4C/4/0/0

CSCI 2465 Computer Networking 4 – Infrastructure

This course introduces networking students to the core infrastructure components of local, campus and wide area networks. The design, installation and configuration of routers, switches and other networking infrastructure devices is covered in-depth. Routing protocols and concepts are a primary focus of study in the course. The course makes extensive use of Cisco materials and equipment for routing protocols and concepts. This course assumes that the students have a background through experience, or coursework, that encompasses a fundamental understanding of networking. With extensive outside study and review, students in this course may become prepared to become certified Cisco networking technicians. (Prerequisite(s): CSCI 1410 and CSCI 1440) 4C/4/0/0

CSCI 2466 J2EE-JSP and Servlets

This is a first course in using Java technology for the development of applications deployed in a client/server environment. The course introduces the concept of a Java application server and teaches the student how to install and configure an application server for use in developing and deploying distributed Java applications. Students then are introduced to elementary servlet programming, Java server pages [JSP] development and deployment, Java standard template library [JSTL] and an introduction to Java server faces [JSF]. Students will then develop server-based applications which access data stored in a database management system via the Java database connector [JDBC]. Students in this course are expected to have a background in introductory Java programming. (Prerequisite(s): CSCI 1450 and CSCI 1541) 4C/4/0/0

CSCI 2469 Advanced Programming Principles

The class is focused on principles that underlie the structure and analysis of programs. Students will learn different programming styles, such as those based on functional programming, search-based programming, and concurrent programming, and will learn to program over symbolic structures. Applications will allow students to learn about modular development and language principles to support modularity. (Prerequisite(s): CSCI 1524) 4C/4/0/0

CSCI 2470 Enterprise Data Base Systems

This course focuses on the design, implementation, testing and integration of an IBM DB2 enterprise database with a COBOL DB2 API application. Relational Data Modeling within a business requirement context will be presented. Using a 3270-terminal emulation client, the student will be introduced to SPUFI and QMF to execute SQL batch and static SQL statements. Using DB2I, DCLGEN, ISPF, and SDSF students will code and test COBOL DB2 dynamic SQL interactive applications. The DB2 COBOL application development process, e.g., DB2 Precompile, COBOL load modules, DBRM, packages and plans will be presented. Implementation of cursors, currency, null processing, error handling, basic security and administration will be also presented. Basic SQL DDL commands will be introduced using RDz. (Prerequisite(s): CSCI 1547) 4C/4/0/0

CSCI 2472 enterprise Transaction Processing (CICS)

This course focuses on the CICS Enterprise Transaction Processing System and CICS COBOL applications. CICS architecture, online resource definition (CEDA), CSD data sets, and legacy CICS resource tables are presented. Students will design, prepare (DFHMAPS) and code a BMS mapset to generate physical and symbolic maps. Using a pseudo-conversational and modular style, students will develop, prepare (DFHYITVL), and test CICS COBOL VSAM and DB2 applications using the CICS EXEC and EXEC SQL APIs. Popular CICS-supplied transactions, e.g., CESN, CSEF, CEMT, CECI, and CEDA will be reviewed. Using CICS as an HTTP Server to interface with a WebSphere Application Server (WAS) and WebSphere MQ will be introduced. (Prerequisite(s): CSCI 1546) 4C/4/0/0

CSCI 2475 A+ Hardware/Operating System Preparation

The course provides an in-depth review of PC hardware, Operating Systems and the application software that they run. The material encompasses the body of knowledge outlined by CompTIA for their certification as an A+ computer technician. (Prerequisite(s): CSCI 1410 and CSCI 1440) 4C/4/0/0

CSCI 2480 Network Security and Penetration Prevention

This course examines the critical defensive technologies needed to secure network perimeters. Coverage includes network security threats and goals, advanced TCP/IP concepts, router security, intrusion detection, firewall design and configuration, IPSec and virtual private network (VPN) design, and wireless design and security. (Prerequisite(s): Grade of “C” or better in CSCI 2420, 2451, 2461, and 2465) 4C/4/0/0

CSCI 2482 Security Incident Handling, Response and Disaster Recovery

This course provides an overview of the process of creating and implementing policies and procedures for responding to security incidents and for disaster recovery. The student will gain skills in creating policies for responding to security incidents as well as the business continuity and disaster recovery aspects of the incident response plan. (Prerequisite(s): Grade of “C” or better in CSCI 1523, 2420, and 2465) 4C/4/0/0

CSCI 2484 Ethical Hacking and Countermeasures

This course provides an introduction to ethical hacking and security testing. Topics include tools and techniques used to detect system vulnerabilities. Students will learn how to set up defensive systems and countermeasures. (Prerequisite(s): Grade of “C” or better in CSCI 1523 and CSCI 2420) 4C/4/0/0

CSCI 2560 Introduction to Computer Games

This course deals in an elementary and introductory manner with the design and creation of computer games. Students will be expected to develop computer games from conception through implementation in this course. Game programming in this course will focus on “interactive” gaming rather than strategic gaming. Students are expected to have a familiarity with programming before entering this course. The work for this course will include a variety of projects. (Prerequisite(s): CSCI 1410 and CSCI 1541) 4C/4/0/0

CSCI 2570 Machine Architecture and Organization

This course covers basic hardware and software structure; I/O and main memory organization; internal representation of data; addressing methods; program controls; microprocessor families; multiprocessors; concurrent programming and synchronization; and RISC architectures. Students in this course will become proficient in assembly level programming and will extend this knowledge to higher level languages such as language C. Students are expected to devote a significant amount of time in analyzing designing and implementing low-level software for this platform. The course is designed around the specifications published by the ACM and IEEE for a course on Computer Organization and Architecture. (Prerequisite(s): CSCI 1523) 4C/4/0/0

CSCI 2587 Web Based Game Development 1

This course introduces standard techniques and strategies used in traditional two dimensional, web-based video game development, implemented using HTML 5, Javascript and the Tumult Hype web development environment. Students will implement various “retro” games utilizing random number generators, sprite sheet animation, axis aligned bounding box collision detection, audio events, character inventory management, and high score database configuration. Students will develop multiple mini-games for an online, web-based portfolio. (Prerequisite(s): CSCI 2440 and DGIM 2586) 4C/4/0/0

CSCI 2588 Web Based Game Development 2

This course builds upon the concepts presented in CSCI 2587 - Web Based Game Development I and will refine techniques developed in that course. In addition, the Phonegap Build tool will be introduced to migrate HTML 5 and Javascript browser-based games onto both the iPhone and Android mobile app platforms, as well as other emerging mobile platforms. Attention will also be focused on user interface and “playability” factors for the various games developed. Students will continue to develop multiple mini-games for an online, web-based portfolio. (Prerequisite(s): CSCI 2587) 4C/4/0/0

CSCI 2597 Special Topics in Computer Science

This course provides learning experiences that meet the needs of students, major programs, and the College in the area of computer science. (Prerequisite(s): Instructor approval) Variable credits 1-6

CSCI 2621 Ruby on Rails

This course introduces the Ruby on Rails framework for developing web applications. Ruby is considered a next generation language for developing applications for the World Wide Web. The combination of the power of the Ruby language and the flexibility and extensibility of the Rails framework are examined. The model-view controller paradigm is utilized for developing database-driven websites. The course assumes familiarity with HTML and knowledge of client side programming. This is a hands-on course designed for students to develop functioning database driven websites. (Prerequisite(s): CSCI 2442) 4C/4/0/0

CSCI 2622 Client Side Programming 2

This course is an advanced course in JavaScript programming for the client. It covers key Web 2.0 technologies such as AJAX (asynchronous JavaScript and XML) used to create rich, interactive web applications. The course begins with the elementary aspects of AJAX programming and then focuses on popular AJAX toolkits and JavaScript frameworks. It introduces JSON (JavaScript Object Notation) as an alternative format for data interchange. It also presents advanced JavaScript topics and techniques. The key elements of the course are hands-on exercises utilizing AJAX tools and techniques to develop interactive Web sites. This course assumes a previous introduction to JavaScript as well as previous exposure to database-driven website development. (Prerequisite(s): CSCI 2440) 4C/4/0/0

CSCI 2628 Programming iOS Devices

This course introduces the software, tools and techniques necessary to program popular iOS Devices from the Apple computer company. Students will learn how to write programs that can run on the iPhone, iPod and iPad. The course will introduce the software development kits for iOS Devices, Xcode development tools, Objective-C, and the Cocoa graphical library. Students will develop a series of applications during the course. Students in this course are expected to have previous programming experience in language C or C++. (Prerequisite(s): CSCI 1531) 4C/4/0/0

CSCI 2629 Programming Android Devices

This course introduces the software, tools, and techniques necessary to program the mobile devices that utilize the Android operating system and its supporting software development environment. Students will learn how to write programs that can run on any device supporting the Android environment. The course will introduce the software development kits for Android devices, Eclipse based development tools, Java ME, and the supporting graphical library. Students will develop a series of applications during the course. Students in this course are expected to have previous programming experience in the Java programming language. (Prerequisite(s): CSCI 1541) 4C/4/0/0

CSCI 2630 Metaverse Application Development

This course covers the conceptualization, design, development and deployment of a programming application that will execute as part of a Metaverse environment. The focus of the course is to add behavior to the virtual world we term a Metaverse. The Java programming languages are used in the course and programming applications will be developed in this language. The term project, which will be a large part of the course, will be designed conceptually, programmed in Java and deployed in a metaverse. Students are expected to have a background in Java programming and strong interest in multiuser game programming. (Prerequisite(s): CSCI 1541) 4C/4/0/0

CSCI 2632 Metaverse Graphics Programming

This course is a three-dimensional graphics application programming course which uses the OpenGL library as a graphics programming library standard. Students in this course will be expected to program three-dimensional objects, both active and passive, that will be placed in a three-dimensional Metaverse. Students are expected to develop advanced graphics applications that utilize knowledge of algebra, geometry and physics. Programs will be deployed into a Metaverse environment and a significant part of the course is the development and successful deployment of such applications. (Prerequisite(s): CSCI 1541 and CSCI 2630) 4C/4/0/0

CSCI 2690 Computer Science Internship

A cooperative work-student program between Saint Paul College Computer Science Program and a business facility to allow the student an employment-like experience. (Prerequisite(s): Instructor approval) Variable 1-8 credits

Cosmetology, Nail Care and Esthetician Core Courses

CHSN 1405 Preclinic Hair Care 1

Provides students with the opportunity to develop basic hair skills with a focus on trichology, shampoo, conditioning, cutting and finishing hair techniques. (Prerequisite(s): Completion of or concurrent with CHSN 1410, CHSN 1420, CHSN 1445 and CHSN 1450) 3C/0/3/0

CHSN 1406 Preclinic Hair Care 2

Provides students with the opportunity to continue to develop hair service skills with a focus on shampooing, conditioning, styling, long hair, wigs and extensions. (Prerequisite(s): Completion of or concurrent enrollment in CHSN 1405) 3C/1/2/0

CHSN 1407 Preclinic Nail Care

Provides an introduction to nail care including manicuring, pedicuring and artificial nails. (Prerequisite(s): Completion of or concurrent enrollment in CHSN 1410 and CHSN 1420) 3C/1/2/0

CHSN 1409 Preclinic Chemical Control

Provides an introduction to cosmetology chemicals and their applications. This includes curl reformation, permanent waving, soft curl perming and chemical relaxing. (Prerequisite(s): Completion of or concurrent enrollment in CHSN 1405 and CHSN 1406) 3C/1/2/0

CHSN 1410 Preclinic Introduction

Provides an introduction to cosmetology, nail technology and skin care, including professional image, Minnesota laws and rules, safety and sanitation. (Prerequisite(s): High School Diploma or a GED) 4C/3/1/0

CHSN 1413 Preclinic Hair Color

Provides an introduction to temporary, demi-permanent, permanent and de-colorization hair color services. (Prerequisite(s): Completion of or concurrent enrollment in CHSN 1409) 3C/1/2/0

CHSN 1418 Advanced Hair Care

Provides advanced skill training, color and chemical reformation in hair cutting and styling. (Prerequisite(s): Completion of or concurrent enrollment in CHSN 1413) 4C/1/3/0

CHSN 1420 Body Systems and Diseases

This course presents cells, tissue and organs as they relate to the histology and physiology of the skin, hair and nails and how they work together to form body systems. Major body systems will be explained, along with their impact on the skin, hair and nails. Students will study skin, hair and nail diseases and disorders in order to differentiate between treatable disorders and those that require referral to a physician. (Prerequisite(s): Enrollment in Cosmetology, Nail Technician or Esthetician Program) 4C/3/1/0

CHSN 1431 Clinic 1 for Cosmetology Majors

This course is designed to provide clinical practice and performance of previously learned hair, skin and nail skills. This course provides the necessary hours to complete hair, skin and nail care quotas as mandated by the State of Minnesota and to develop proficiency in hair, skin and nail services. (Prerequisite(s): CHSN 1406) 3C/0/3/0

CHSN 1432 Clinic 2 for Cosmetology Majors

This course is designed to provide clinical practice and performance of previously learned hair, skin and nail skills. This course provides the necessary hours to complete hair, skin and nail care quotas as mandated by the State of Minnesota and to develop proficiency in hair, skin and nail services. (Prerequisite(s): CHSN 1406) 3C/0/3/0

CHSN 1433 Clinic 3 for Cosmetology Majors

This course is designed to provide clinical practice and performance of previously learned hair, skin and nail skills. This course provides the necessary hours to complete hair, skin and nail care quotas as mandated by the State of Minnesota and to develop proficiency in hair, skin and nail services. (Prerequisite(s): CHSN 1406) 3C/0/3/0

CHSN 1434 Clinic 4 for Cosmetology Majors

This course is designed to provide clinical practice and performance of previously learned hair, skin and nail skills. This course provides the necessary hours to complete hair, skin and nail care quotas as mandated by the State of Minnesota and to develop proficiency in hair, skin and nail services. (Prerequisite(s): CHSN 1406) 3C/0/3/0

CHSN 1435 Clinic 5 for Cosmetology Majors

This course is designed to provide clinical practice and performance of previously learned hair, skin and nail skills. This course provides the necessary hours to complete hair, skin and nail care quotas as mandated by the State of Minnesota and to develop proficiency in hair, skin and nail services. (Prerequisite(s): CHSN 1406) 3C/0/3/0

CHSN 1436 Clinic 6 for Cosmetology Majors

This course is designed to provide clinical practice and performance of previously learned hair, skin and nail skills. This course provides the necessary hours to complete hair, skin and nail care quotas as mandated by the State of Minnesota and to develop proficiency in hair, skin and nail services. (Prerequisite(s): CHSN 1406) 3C/0/3/0

CHSN 1442 Clinic 1 for Estheticians

This course is designed to provide clinical practice of previously learned skin care skills. (Prerequisite(s): CHSN 1410, CHSN 1420, CHSN 1445 and CHSN 1450 or concurrent enrollment) 4C/0/4/0

CHSN 1443 Clinic 2 for Estheticians

This course is designed to provide clinical practice of previously learned skin care skills. This course provides the necessary hours to complete skin care quotas as mandated by Minnesota Laws and Rules. (Prerequisite(s): Students must have 480 clock hours and have completed all preceding courses in the Esthetics program, CHSN 1442) 4C/0/4/0

CHSN 1445 Cosmetic Chemistry and Makeup Applications

Chemistry is a science that deals with the composition, structure and properties of matter and how matter changes. This course covers the composition of product ingredients, changes produced by cosmetic products, color theory, make up application techniques, lash and brow tinting and temporary hair removal (Prerequisite(s): CHSN 1410, CHSN 1420, concurrent enrollment or within the same semester) 4C/3/1/0

CHSN 1450 Skin Analysis and Massage

Students will learn to greet customers and to consult in a professional manner. Students will learn to perform draping, skin analysis and proper massage techniques according to client's skin type. Students will learn, in a supervised setting, care and proper use of esthetic equipment. Emphasis is on maintaining safety. (Prerequisite(s): CHSN 1410, CHSN 1420 and CHSN 1445, concurrent enrollment or within the same semester) 4C/1/3/0

**CHSN 1451 Salon Operations 1 for Cosmetology/
Nail Technician Majors**

Provides students with additional time to complete the required services and/or hours for licensure. (Prerequisite(s): Completion or concurrent enrollment in CHSN 1435 or CHSN 1431 or 1461) 1C/0/1/0

**CHSN 1452 Salon Operations 2 for Cosmetology/
Nail Technician Majors**

Provides students with additional time to complete the required services and/or hours for licensure. (Prerequisite(s): Completion or concurrent enrollment in CHSN 1435 or CHSN 1431 or 1461) 2C/0/2/0

**CHSN 1453 Salon Operations 3 for Cosmetology/
Nail Technician Majors**

Provides students with additional time to complete the required services and/or hours for licensure. (Prerequisite(s): Completion or concurrent enrollment in CHSN 1435 or CHSN 1431 or 1461) 3C/0/3/0

**CHSN 1454 Salon Operations 4 for Cosmetology/
Nail Technician Majors**

Provides students with additional time to complete the required services and/or hours for licensure. (Prerequisite(s): Completion or concurrent enrollment in CHSN 1435 or CHSN 1431 or 1461) 4C/0/4/0

**CHSN 1455 Salon Operations 5 for Cosmetology/
Nail Technician Majors**

Provides students with additional time to complete the required services and/or hours for licensure. (Prerequisite(s): Completion or concurrent enrollment in CHSN 1435, or CHSN 1431 or 1461) 5C/0/5/0

**CHSN 1456 Salon Operations 6 for Cosmetology/
Nail Technician Majors**

Provides students with additional time to complete required services and/or hours for licensure. (Prerequisite(s): Completion or concurrent enrollment in CHSN 1435 or CHSN 1431 or 1461) 6C/0/6/0

CHSN 1461 Clinic 1 for Nail Technicians

This course provides students with an opportunity to develop the practical skills necessary in basic nail care and to complete required services and hours for licensure. (Prerequisite(s): CHSN 1407) 3C/0/3/0

CHSN 1470 Sanitation for Hair Braiders

This course presents safety issues and sanitation principles practiced in the service of hair braiding. 2C/2/0/0

CHSN 1510 Legal Risk Management for Estheticians

This course will cover risk, risk management, and professional liability in relation to estheticians providing services in a medical office. Client health and safety as well as personal health and safety will be addressed. Additional topics covered will include OSHA and HIPPA guidelines, scope of practice, liability insurance, client medical and lifestyle history and client expectations. Must be enrolled in Esthetician Medical Setting AAS or Esthetics Medical Setting Advanced Certificate. 2C/2/0/0

CHSN 1512 Peels and Chemical Exfoliation

Identification of ingredients and their effect on the skin will be covered. Course will provide knowledge of application and depths of chemical peels offered in a medical setting under the supervision of a physician. Must be enrolled in Esthetician Medical Setting AAS or Esthetics Medical Setting Advanced Certificate. Must be enrolled in Esthetician Medical Setting AAS or Esthetics Medical Setting Advanced Certificate. (Prerequisite(s): CHSN 1510) 3C/2/1/0

CHSN 1514 Advanced Skin Treatments

This course presents the theory of advanced skin treatments offered in a medical setting under the supervision of a Physician. Included will be the theoretic knowledge of therapeutic peeling of the skin through use of Lasers, permanent hair reduction using lasers, cellular stimulation through the use of Light Emitting Diodes, the therapeutic application of Ultrasound and Micro-current use in both skin and body applications. Must be enrolled in Esthetician Medical Setting AAS or Esthetics Medical Setting Advanced Certificate. (Prerequisite(s): CHSN 1512) 3C/2/1/0

CHSN 1520 40 Hour Refresher

This 40 hour refresher course is for individuals who do not have enough hours of experience in the past 3-year licensing period and wish to renew their individual cosmetology license. Must present MN Cosmetology license to the instructor. 2C/2/0/0

CHSN 1522 Nail Technician Refresher Course

This 35 hour refresher course is for individuals who do not have enough hours of work experience in the past 3-year licensing period and would like to renew their individual manicuring license. Must present nail technician license to the instructor. 2C/1/1/0

CHSN 1551 Salon Operations 1 for Estheticians

This course gives students additional time to complete the required services and/or hours for licensure. (Prerequisite(s): Completion or concurrent enrollment in CHSN 1443) 1C/0/1/0

CHSN 1552 Salon Operations 2 for Estheticians

This course gives students additional time to complete the required services and/or hours for licensure. (Prerequisite(s): Completion or concurrent enrollment in CHSN 1443) 2C/0/2/0

CHSN 1553 Salon Operations 3 for Estheticians

This course gives students additional time to complete the required services and/or hours for licensure. (Prerequisite(s): Completion or concurrent enrollment in CHSN 1443) 3C/0/3/0

CHSN 1565 155 Hour Reactivation Course

This course provides 155 hours of the theory and practical requirements for reactivating a cosmetology license. Must have a MN Cosmetology license that is inactive or expired by more than 3 years and must present it to the instructor. 6C/3/3/0

CHSN 2411 CIDESCO Exam Student Preparation

The CIDESCO Pre exam class will prepare the CIDESCO student candidate for all aspects of the CIDESCO exam including the facial exam, the body exam, additional subjects and the written exam. (Prerequisite(s): Completion of esthetician curriculum) 3C/0/3/0

CHSN 2580 Cosmetology Instructor License

This course provides 30 hours of teaching methods for Cosmetology and 8 hours of the laws that support and protect the Cosmetology industry. Must meet Board of Cosmetology Law 2105.0140 and must present a current Cosmetology license to the instructor. 2C/1/1/0

Culinary Arts

CULA 1405 Culinary Arts Foundations 1

This course is made up of two units: "Introduction to Culinary Arts" which is designed to allow the student to become familiar with the hospitality industry, our program and the foundation skills necessary to become a foodservice professional, and "Basic Baking" which is designed to allow the student to develop knowledge and skills necessary to work in a professional baking environment. 2C/0/2/0

CULA 1415 Culinary Arts Foundations 2

This course is made up of two units: "Basic Pantry and Cold Food Production" which is designed to allow the student to develop knowledge and skills necessary to work in the garde manger and pantry areas in a professional foodservice environment, and "Basic Range and Hot Food Production" which is designed to allow the student to develop knowledge and skills necessary to work in a professional foodservice environment. Foundation stocks, sauces and soups are the major component. Must be taken concurrently with Culinary Arts Foundations 1 or have instructor approval. 4C/0/4/0

CULA 1425 Fundamentals of Pastry

This course provides a thorough exploration into the basics of the sweet kitchen. Students prepare and evaluate a number of pastry fundamentals to a marketable level. (Prerequisite(s): CULA 1405 or instructor approval) 1C/0/1/0

CULA 1435 Butchery and Charcuterie

Covers the processing of meat, fish and poultry items. Issues of grading, yield, market forms and standards are discussed. Many types of meat, fish and poultry are processed in the class. (Prerequisite(s): CULA 1405 or concurrently with CULA 1405) 2C/0/2/0

CULA 1440 Breakfast Cookery

Covers the many types of foods usually associated with breakfast/brunch service. Most of these items will be prepared, served in the class and in a restaurant setting. (Prerequisite(s): CULA 1405 and CULA 1415 or concurrently with CULA 1405) 1C/0/1/0

CULA 1445 Food Service Practicum

Students explore various aspects of quantity food production in a fast-paced, high-volume food service setting. Students are introduced to aspects of quantity range, bake shop, short-order and pantry operations. (Prerequisite(s): CULA 1405 and CULA 1415) 2C/0/2/0

CULA 1455 Food Safety and Sanitation

Develops an understanding of the basic principles of sanitation and safety in order to maintain a safe and healthy environment for the consumer. Optional ServSafe exam provided for certification. 2C/2/0/0

CULA 1460 Applied Menu Composition

Covers the production of the entire menu. Individual responsibility and teamwork are the cornerstones of successful foodservice and of this course. A new menu will be prepared each day by each team. (Prerequisite(s): CULA 1405 and 1415 or concurrently with CULA 1405 and 1415) 2C/0/2/0

CULA 1465 Culinary Nutrition Theory

Covers the fundamentals of nutrition theory taught from the point of view of the chef. Healthy cooking techniques, dietary requirements and current nutritional research topics are explored. 2C/2/0/0

CULA 1490 Restaurant Industry Applied Math

An assessment and review of math skills necessary for foodservice workers. Functions with whole numbers, fractions, decimals and percentages are covered and applied to food service problems. Must be accepted as Culinary Arts major. 2C/2/0/0

CULA 1505 Contemporary Bake Shop Production

Allows students to develop production baking skills to a marketable level. (Prerequisite(s): CULA 1455, CULA 1460, CULA 1465, CULA 1490) 2C/0/2/0

CULA 1515 Contemporary Pantry Production

Allows the students to develop marketable production skills in the pantry/cold food area. (Prerequisite(s): CULA 1455, CULA 1460, CULA 1465, CULA 1490) 2C/0/2/0

CULA 1525 Contemporary Range Production

Allows students to develop marketable skills in many aspects of hot food preparation in a production kitchen environment. (Prerequisite(s): CULA 1455, CULA 1460, CULA 1465, CULA 1490) 2C/0/2/0

CULA 1535 Catering Practicum

This course will allow students to have the opportunity to plan, prepare, serve and clean up a catered function. Another important part of the course will be the opportunity for the students to interface with the customer directly during the service time and the post service evaluation from the students' personal evaluation of the event. (Prerequisite(s): CULA 1455, CULA 1460, CULA 1465, CULA 1490) 1C/0/1/0

CULA 1545 Contemporary Quick Fare Production

Allows the student to develop marketable production skills in the Grill/Short Order cooking area. (Prerequisite(s): CULA 1455, CULA 1460, CULA 1465, CULA 1490) 2C/0/2/0

CULA 1555 Culinary Career Portfolio

This course exposes students to the diverse employment opportunities in the food service industry. Students develop an electronic career portfolio and refine employment securing techniques. (Prerequisite(s): CULA 1405) 1C/1/0/0

CULA 1565 Principles of Culinary Leadership

Allows students to prepare for the transition from employee to supervisor by developing human relations and personnel management skills in a foodservice environment. (Prerequisite(s): CULA 1455, CULA 1460, CULA 1465, CULA 1490 or instructor approval) 2C/1/1/0

CULA 1570 Applied Basic Pastry & Confection

Allows students to develop cake/pastry decorating skills to a marketable level. (Prerequisite(s): CULA 1405 or instructor approval) 2C/0/2/0

CULA 1575 Artisan Baking and Pastry

Introduces students to a variety of upscale scratch cake and pastry items and plated desserts. The course focuses on high quality ingredients, sound production and finishing techniques. (Prerequisite(s): CULA 1425 or instructor approval) 2C/0/2/0

CULA 1585 Introduction to Dining Room Service

The course covers serving techniques and dining room operations through classroom and laboratory experience in the City View Grille Dining Room. (Prerequisite(s): CULA 1405 and CULA 1415) 1C/0/1/0

CULA 1590 Cafe Dining Practicum

Students will develop skills in breakfast cookery and casual lunch fare in the student run City View Grille. (Prerequisite(s): CULA 1505, CULA 1515, CULA 1525, CULA 1545) 2C/0/2/0

CULA 1700 Culinary Externship

This course is designed to expose students to the industry in a 96 hour externship. Students reflect on their experiences through assignments and discussions. (Prerequisite(s): CULA 1445 or instructor approval) 3C/0/0/3

CULA 1705 Sustainable Foods Practicum

Students get an introduction to local and sustainable food systems through working with a local farm to create and serve a farm to table dinner. (Prerequisite(s): CULA 1590) 1C/0/1/0

CULA 2100 Menu Composition and Analysis

Requires students to develop marketable skills in the areas of menu planning, menu analysis, production scheduling and recipe interpretation for different menu settings and operations. Must be taken as a block with CULA 2105-2220. (Prerequisite(s): CULA 1550) 2C/0/2/0

CULA 2105 Applied Restaurant Operations 1

Requires students to develop marketable skills in many aspects of hot and cold food preparation in a fine dining environment. Must be taken as a block with CULA 2105-2220. (Prerequisite(s): CULA 1550) 3C/0/3/0

CULA 2110 Applied Restaurant Operations 2

Requires students to develop marketable skills in many aspects of hot and cold food preparation in a fine dining environment. Must be taken as a block with CULA 2105-2220. (Prerequisite(s): CULA 1550) 3C/0/3/0

CULA 2115 Contemporary Dining Room Service

The course explores and refines advanced aspects of front of the house restaurant operations. Students learn and practice functions of dinner service at the City View Grille. (Prerequisite(s): CULA 1590) 1C/0/1/0

CULA 2220 Sensory Evaluation & Wine Pairing

The advanced culinary student will develop a palate of flavor and aroma profiles, an understanding of food and wine pairing techniques, as well as proper service and wine-making processes. Wine varietals will be professionally sampled and evaluated based upon color, aroma, body and finish in order to cultivate an appreciation for the integral relationship between food and wine. Must be taken as a block with CULA 2105-2220. (Prerequisite(s): CULA 1545 and completion of General Education requirements) 2C/2/0/0

CULA 2225 Garde Manger

The course explores the art of cold food preparation through various mediums. Thorough explorations into cold sauces, pates, terrines, condiments and forcemeats will be highlighted in a contemporary buffet format. (Prerequisite(s): CULA 2220) 1C/0/1/0

CULA 2230 Food/Beverage/Labor Cost Control

Covers the principles of menu pricing and analysis, budgeting and inventory control systems in foodservice operations. (Prerequisite(s): CULA 1490 or Instructor approval) 3C/3/0/0

CULA 2235 Event Based Dining Capstone

The course explores one-off dining experiences in a number of settings. Students learn the process of catering events with a diverse set of standards, expectations and clientele. Students become familiar with all facets of events from the concept and development of the menu through set-up, service and strike of the event. (Prerequisite(s): CULA 2225) 2C/0/2/0

CULA 2440 Ice Carving

Allows students to develop marketable skills in the art and craft of ice carving. (Prerequisite(s): CULA 1570 or instructor approval) 1C/0/1/0

CULA 2450 Advanced Pastry Confection

Allows students to explore and develop skills in a variety of pastry, confectionery and other food sculpture mediums. Requirements also include the production of a tiered cake. (Prerequisite(s): CULA 1570 or instructor approval) 2C/0/2/0

CULA 2460 Culinary Capstone: Garde Manger

Allows students to explore concepts and practice techniques necessary to prepare a classical haute cuisine buffet. Emphasis will be placed on the design and presentation of food items. Each student will design and produce two display platters consisting of meat, fish and poultry products with all necessary accompanying items. (Prerequisite(s): CULA 1545 and completion of General Education requirements) 3C/0/3/0

CULA 3630 Artisan Baking

This hands-on course is designed to build proficiency in the preparation of a number of different types of artisan baking of products focusing on products used in restaurants and specialty bakeries, utilizing organic and local ingredients. Discussions will include technique and consistency issues, the role of local and organic ingredients in baking and the baker's responsibility in promoting sustainability. 3C/1/2/0

CULA 3635 Artisan Cheese

This class is designed to illustrate the importance of artisan cheeses and their role in the food world through ancient and modern times. Course topics will include fresh, soft, semi soft, hard, mold ripened, and wash rind cheeses. Students will learn hands on cheese making and food pairing techniques that utilize local farms and artisan foods. The class will compare and discuss the regional cheeses of America, Europe, the Mediterranean, and different cultures abroad. 3C/1/2/0

CULA 3641 Charcuterie

This class is a thorough introduction into the art of charcuterie and condiment making with an emphasis on product utilization. Students will learn various preservation techniques including brining and curing, working with smoked products, marinades, pickled products, relishes, cold sauces, mustards, bacons and hams within specific sanitary confines. Discussions will include technique and sanitation issues as well as the role of local & organic procurement of ingredients and the charcuterie's responsibility in promoting sustainability. 2C/1/1/0

CULA 3650 Organic and Sustainable Foods

This class is designed to illustrate the importance of organic and local ingredients, from the harvest at the farm to the final plate presentation in the kitchen. Students will get an introduction to organics, sustainable agriculture and seasonal cooking. The class will participate in trips to local farms and markets and a gardening project. Students will get an in-depth look at the roles of local farms and artisan food producers, along with techniques in scratch cooking and product utilization. 3C/1/2/0

Culinary Arts - Wine

CULA 1600 Professional Introduction to Wine

Review the origins and history of the vine, vineyard calendar, soil and climate, natural hazards, growing regions and major grape varietals of the world. Examine considerations for harvest of grapes, techniques for making still wines (red, white and rose), techniques for making sparkling and fortified wines, processing and aging techniques and the blending process. Explore grape varietals, regulations, history, culture and traditions: USA, France, Italy, Spain/Portugal, Germany, Australia, South America and South Africa. (Prerequisite(s): Must be 21 years or older. Must be taken concurrently with CULA 1610-1640.) 2C/2/0/0

CULA 1610 Flavor Dynamics of Wine

Experience professional wine evaluation based on sensory (visual, organoleptic) traits. Comparison and analysis of world wine regions. Includes an emphasis on the development of a wine vocabulary and sensory description techniques. (Prerequisite(s): Must be 21 years or older. Must be taken concurrently with CULA 1600-1640.) 2C/1/1/0

CULA 1620 Professional Wine Service

Allows student to develop professional wine service techniques, wine etiquette, glassware/equipment options, building a relationship with the guest and elements of the guests' aesthetic experience. (Prerequisite(s): Must be 21 years or older. Must be taken concurrently with CULA 1600-1640.) 1C/1/0/0

CULA 1630 Strategies for Pairing Food and Wine

Allows student to analyze the rationale behind successful wine and food pairings and the impact of preparation techniques on wine choice. Learn how to enhance wine and food pairing opportunities and improve menu and wine list compatibility. (Prerequisite(s): Must be 21 years or older. Must be taken concurrently with CULA 1600-1640.) 2C/1/1/0

CULA 1640 Wine Marketing

This course will allow students to review legalities, wine market cycles, wine pricing, developing a wine program, building a wine list and wine storage. An important part of the course is to develop strategies for determining your target market, wine merchandising and promotional opportunities, consumer education and building strong repeat business. (Prerequisite(s): Must be 21 years or older. Must be taken concurrently with CULA 1600-1640.) 2C/2/0/0

Digital Graphics and Interactive Multimedia

DGIM 1400 Introduction to Computer Graphics

Introduction to Computer Graphics will introduce students to a wide variety of software applications used in the Visualization Technology area as well as cover the basic theories and practices regarding still image graphics, file formats, animation and color theory. In addition, the importance of an online portfolio will be discussed and a basic portfolio will be constructed. 4C/4/0/0

DGIM 1443 Graphical Web Design 1

This course explores the basics of Adobe Muse 1. Topics include file organization, the Adobe Muse interface, site control, images, text, linking pages, ordered, unordered and defined lists, color schemes, tables and basic layouts. The focus of this course is to introduce the learner to Adobe Muse and develop a simple Web site using the techniques learned. 2C/2/0/0

DGIM 1444 Graphical Web Design 2

This course explores the more advanced topics of Adobe Muse including frames, rollovers, cascading style sheets, HTML, forms, DHTML, automation, sounds, templates and libraries and troubleshooting. It is recommended that student taking this course have taken DGIM 1443 or its equivalent. 2C/2/0/0

DGIM 1448 Flash 1

This course introduces the student to Flash. Topics include common Flash tasks, the Flash interface, setting up, modifying, navigating Flash documents, creating simple graphics, working with text, working with bitmaps and building professional graphics. This is a hands-on course where the students will develop a project using the knowledge gained in class. 2C/2/0/0

DGIM 1449 Flash 2

This course takes you beyond the basics of DGIM 1448. Topics include adding sounds to Flash, publishing movies, layer editing, Action Script, importing Quick Time movies into Flash and creating 3-D effects in Flash. This is a hands-on course where the students will develop a project using knowledge gained in class. It is recommended that students taking this course have taken DGIM 1448 or its equivalent. 2C/2/0/0

DGIM 1472 Digital Multimedia for Non-Majors

This course is an introduction to digital multimedia tools for students not majoring in the computer careers area of the College. It is an overview course on the subject of digital media and covers a variety of digital media tools such as Photoshop, Audacity, MovieMaker, and other tools of this type. The course will cover the topics of interest to someone planning to use the software and hardware systems for documentary purposes in other coursework areas. 2C/2/0/0

DGIM 1483 Photoshop 1

This course introduces the student to Adobe Photoshop. Topics include the Photoshop interface, hardware and software requirements, file formats, pixels, vectors, resolution, color theory, Photoshop color management, masks, type and topography, painting tools and brushes, layers and layer styles, filters, extraction, liquefy and the pattern maker. This is a hands-on course where the students will develop a project using the knowledge gained in class. 2C/2/0/0

DGIM 1484 Photoshop 2

This course is a continuation of DGIM 1483 Photoshop 1 as a Presentation Media. Topics include image composition, retouching, compositing, ImageReady, Web design, print and prepress, actions, and automation. This is a hands-on course where the students will develop a project using knowledge gained in class. (Prerequisite(s): DGIM 1483 Photoshop 1 as a Presentation Media or equivalent knowledge) 2C/2/0/0

DGIM 1490 3D Animation Fundamentals

This course introduces students to the Blender 3D Animation Tool. Topics will include navigating the Blender interface, object creation and editing, Blender modifiers, material & texture application, lighting and camera setup, multi-resolution sculpting, UV texture mapping, particle tools, shape keys and render setups. Students will be expected to develop an individual animation project using techniques from the lessons learned. 4C/4/0/0

DGIM 1540 Blogging Applications

This course introduces various web logging (blogging) applications currently in use today on the World Wide Web, along with common practices used by bloggers. Applications to be covered include Blogger, Tumblr, Twitter, WordPress, plus other newly developed applications. In addition to the general use of these applications, students will be introduced to techniques used for Search Engine Optimization (SEO), web traffic analytics, monetized ad placement, Real Simple Syndication (RSS) support, as well as audio and video blogging options. While there is no prerequisite for this course, students are strongly encouraged to have a basic understanding of the Hyper Text Markup Language (HTML). 2C/2/0/0

DGIM 2520 3D Character Animation

This course continues to explore the features of the Blender 3D Animation Tool. Topics will include rigging and skinning fundamentals, inverse kinematic modeling, 3D sculpting tools, character modeling, re-topology body parts, material application and character walk cycle creation. Students will be expected to develop an individual animation project using techniques from the lessons learned. (Prerequisite(s): DGIM 1490 3D Animation Fundamentals) 4C/4/0/0

DGIM 2521 2D Web Animation

This course introduces students to the fundamentals of digital animation with specific focus on two dimensional software animation tools. Topics will include the 12 basic principles of animation as applied to both hand drawn and computer animation, support for web animation on multiple platforms with emphasis on mobile devices, layer editing, audio and video support as well as integration of traditional still image graphic tools into the animation process. Software used in this class will include but not limited to Processing, Adobe Edge and Stencil, as well as other HTML5 compliant web animation software tools. This is a hands-on course where the students will develop a final project using the knowledge gained in class. 2C/2/0/0

DGIM 2560 Illustrator

In this course, the student will discover the capabilities of the Adobe Illustrator software tool. This begins with an overview of vector vs raster graphics fundamentals. Specific techniques will involve navigating and customizing the Adobe Illustrator workspace, demonstrating selection and alignment with various tools, using of magic wands, item grouping and working with various open and closed path objects. In addition, various transformation techniques including scaling, reflecting, rotating, distorting, shearing and perspective will be explored along with how filters and symbols are used to enhance vector graphic projects. Detailed proficiency will be acquired using the Pen, Pencil, Brush, Layer, Spraycan tools along with a greater understanding of both print and web color theory. Upon completion of this course, the student will complete a final project using techniques from lessons learned. 4C/4/0/0

DGIM 2569 Digital Portfolio Development

This course teaches the student how to create a portfolio. In this course the students will create a digital (web based) and hard copy (paper) portfolio. Topics will include portfolio definitions, design, types, goals, content, organization, and presentation, showing their creative talents to an audience of peers, instructors, and industry professionals. 2C/2/0/0

DGIM 2586 Digital Sound

This course teaches students how to create and edit digital sound for use in computer animation. Topics include analog and digital sound techniques and equipment, analog to digital conversion, basic sound editing, formats and sound conversion, digital to analog conversion and basic sound effect techniques for use in computer animation. 2C/2/0/0

DGIM 2587 Digital Video 1

This course focuses on digital video editing using the Premiere Pro video editing software. Techniques involving multitrack video editing and digital audio integration will be explored, along with the creation of various title effects, fade/transition effects and other standard industry practices. In addition, the topics of video filetype and codecs, demo reel creation, use of other software tools for footage creation and basic video capture techniques will be explored. 2C/2/0/0

DGIM 2588 Digital Video 2

This course focuses on digital video editing using the Final Cut Pro video editing software. Many of the same general techniques covered in DGIM 2587 will be covered but done from the perspective of the Final Cut Pro interface. In addition, video distribution via the web, live video streaming techniques and video integration into the web using the HTML5 standards will be explored. (Prerequisite(s): DGIM 2587 Digital Video 1) 2C/2/0/0

DGIM 2589 Digital Motion Graphics: After Effects

This course introduces the Adobe tool After Effects and explores its usage in video and film post production. Students will learn to animate, alter and compose media in both 2D and 3D space. Various other non-linear editing methods will be explored. Advanced keyframing techniques will be explored in depth, along with other standard post-production techniques used in modern video editing. Various After Effects plug-in usage will be explored, along with the integration of After Effects with other tools in the Adobe suite. Finally, the features of various competing products to After Effects, such as Blender and Jahshaka will be reviewed and compared. (Prerequisite(s): DGIM 2587 Digital Video 1 or concurrent) 2C/2/0/0

DGIM 2591 Computer Graphics & Digital Multimedia Internship

A cooperative work-student program between Saint Paul College's Computer Graphics & Digital Multimedia Program and a business facility to allow the student an employment-like experience. (Prerequisite(s): Instructor approval) Variable credits 2-8

DGIM 2597 Special Topics in Computer Graphics & Digital Multimedia

Provides learning experiences that meet the needs of students, major programs and the College. (Prerequisite(s): Instructor approval) Variable credits 1-6

DGIM 2704 3D Animation Capstone

This course is meant to integrate and expand upon the various animation, video editing and image manipulation skills developed in previous classes in this area. In addition, students are expected to explore new and emerging technologies in the area of animation as part of preparing for future changes in this rapidly changing area. Students will be expected to develop both individual and group animation projects for use in their Internet based portfolio. (Prerequisite(s): DGIM 1490 3D Animation Fundamentals) 4C/4/0/0

Economics

ECON 1710 Introduction to the American Economy

This introductory course provides an overview of the United States' economic system including a broad range of microeconomics and macroeconomics. Topics covered include an overview of the history of the American economic experience. The United States' economy is broadly based on a free market economic model. In addition to looking at the free market model, the rationale for government intervention in our economy is also examined. This course explores the role of government in our modern economy including topics in public choice, fiscal policy, and monetary policy. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 5) 3C/3/0/0

ECON 1720 Macroeconomics

Macroeconomics is a social science that studies how our society can achieve economic goals of full employment, price stability, economic growth, and stable balance of trade. International trade and the concept of comparative advantage and restrictive trade policies are explored. From this inquiry, students will be able to demonstrate the effects of trade on a country's economic performance. In addition, economic data is used to measure growth and to compare an economy's growth rates relative to other international growth rates. The United States' fiscal and monetary policies are defined and examined in terms of the effects those policies have on economic performance. Fiscal and monetary policy is also examined in relation to the business cycle. In addition an inquiry is made of the importance and interrelated nature of social institutions in achieving economic goals. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 8) 3C/3/0/0

ECON 1730 Microeconomics

Microeconomics is a social science that studies how our society can maximize its economic welfare by the efficient use of resource and product markets. In order to facilitate this study, microeconomics has developed tools such as market models that simplify the complex real world situations. These tools are abstractions of reality from which basic economic principles can be derived. These principles act as a guide to our private and society's public choices. Fundamental issues covered are supply and demand, elasticity, competitive and non-competitive markets. The text has numerous topical examples such as free trade, interest groups, agricultural policy, advertising, health care and more. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 8) 3C/3/0/0

ECON 1790 Special Topics in Economics

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 5) Variable credits 1-6

Education

EDUC 1410 Introduction to Teaching STEM

This course will introduce students to the craft of teaching in the areas of science, technology, engineering and math. Students will identify their teaching strengths, develop skills for interpersonal communication, and practice self-critique. Additionally, students will utilize best practice techniques such as active learning, inquiry-based labs and coaching methods to facilitate student engagement and achievement. Topics such as course development and assessment will be addressed through the creation of mini-lessons or tutorials. Students will participate in a field experience program where they will assist a mentor with supplemental educational techniques such as after-school programs or tutoring. 3C/2/1/0

Electrical Technology

ELTN 1410 National Electric Code 1 and Trade Calculations

This is an introductory course to comprehending the National Electrical Code and the mathematical skills that are required to perform electrical circuit calculations required in the electrical industry. Students will study the history of the code, the code making process, how changes are adopted into the code and the NEC basic structural components. Technical areas include definitions of technical terms and concepts, applied arithmetic calculations, algebraic functions, trigonometry functions and graphing as they apply to circuit analysis and code requirements. 4C/2/2/0

ELTN 1422 Direct Current Circuit Analysis

This course covers the basic concepts of electricity and DC circuits. Topics included are resistance, current, voltage, power, conductors and insulators. Students will learn methods to mathematically determine electrical quantities using Ohm's law and additional electrical formulas, to determine values in series, parallel and combination circuits. The skills and techniques needed to use electrical multimeters to test and troubleshoot circuits is studied. Hands-on experiments for all DC circuit types will consist of building circuits with power supplies and electrical components, and will be evaluated with electrical multimeters. 5C/3/2/0

ELTN 1432 Alternating Current Circuit Analysis

This course covers the basic concepts of AC circuits. Topics included are the study of electromagnetic principles, sine wave principles and relationships, inductance, capacitance, series and parallel circuits, power, circuit analysis and resonance. Students will learn methods to mathematically determine instantaneous electrical values. Hands-on experiments will include the construction of circuits showing the operation of electromagnets, sine waves, series and parallel resistive, inductive and capacitive circuits. (Prerequisite(s): ELTN 1410 and ELTN 1422) 5C/2/3/0

ELTN 1442 Single-Phase Motors and Generators

This course starts with the basic characteristics of DC motors and DC generators, the types, construction, principles of operation, installation, and maintenance, and formats of controls. Next the student will discover the common types of AC motors used today, the construction, principles of operation, installation and troubleshooting methods. Hands-on experiments using specialized test equipment and electrical meters will include energizing both DC motors and generators and also AC motor types under various load conditions. (Prerequisite(s): ELTN 1410 and ELTN 1422) 5C/2/3/0

ELTN 1512 Three-Phase Systems, Motors and Generators

This course covers three-phase theory, wiring system calculations, methods, and installations. Three-phase motors and generators will also be introduced so students can identify, connect, operate, troubleshoot, and maintain them. This course also covers the proper use of three-phase test equipment used to operate, troubleshoot, and maintain the systems studied in this course. 5C/3/2/0

ELTN 1522 Introduction to Electronics and Test Equipment

Students are introduced to semiconductors, study different types of diodes and connect them in typical circuits. Complete power supply circuits are connected, analyzed and tested. This course covers transistor theory, operation, connection, testing, and troubleshooting practices for transistors in amplifier and switching applications. This course covers the use of electrical and electronic test equipment. 5C/2/3/0

ELTN 1532 Intermediate Electronics and PLC's

This course covers transistor theory, operation, connection, testing, and troubleshooting practices for transistors in amplifier and switching applications. Also, this course covers transistor the information necessary to gain working and troubleshooting knowledge of thyristors, light, and heat sensitive devices and electrical transducers. Also introduced are programmable logic controllers (PLC's) and it explains how they can be used to control machines and building equipment. Hands-on programming of simple process control examples including system wiring to input/output devices will be fully integrated throughout the course. 5C/2/3/0

ELTN 1540 Low Voltage Systems and Job Site Safety

This course will cover the basic concepts associated with fire and security alarm systems and data communications systems. Hands-on application of components include fire alarm systems, security systems, and data communication and cabling systems. This course will also cover all aspects OSHA job safety for construction electricians. It will address safety issues for awareness rather than compliance purposes. 4C/1/3/0

ELTN 2410 Distribution, Power and Specialty Transformers

This course covers single-phase, Three-phase and specialty transformer operation, including transformer losses, efficiency, and phase relationships. There is extensive math and in-depth coverage of Article 450 of the National Electrical Code. 4C/1/3/0

ELTN 2420 Motor Controls

This course covers design, wiring, and troubleshooting of control and load circuits for single-phase and Three-phase motors. Also covered is the sizing of conductors, circuit short circuit and ground fault protection, and the calculation and proper sizing of motor overload protection. There is also in-depth coverage of Article 430 of the National Electrical Code. 4C/1/3/0

ELTN 2430 Residential Wiring and Blueprint Reading

This course covers the material and design aspect of residential wiring. Topics covered include branch circuit requirements, wiring methods, and the use of blueprints. Related articles in the National Electrical Code are also covered. 4C/1/3/0

ELTN 2440 Heating and Cooling System Controls

This course covers the control of heating and cooling systems in residential and commercial situations. Gas, oil, and electric systems are covered. Related articles in the National Electrical Code are also covered. 4C/1/3/0

ELTN 2510 Wiring Methods and Systems

This course covers the methods used to deliver power in a safe and efficient electrical installation. Conductor properties and various configurations are discussed and installed. (Prerequisite(s): ELTN 2410, ELTN 2420, ELTN 2430, ELTN 2440) 4C/1/3/0

ELTN 2522 Commercial Wiring Methods

This course covers the design, material usage and safe installation practices on commercial job sites. Power tool safety and usage is applied in a hands-on mockup setting. (Prerequisite(s): ELTN 2410, ELTN 2420, ELTN 2430, ELTN 2440) 5C/2/3/0

ELTN 2532 Industrial Wiring Methods and Service Entrance

This course covers the design, material usage and safe installation practices on industrial job sites. Requirements and safe installation of service entrance equipment and conductors are also covered. (Prerequisite(s): ELTN 2410, ELTN 2420, ELTN 2430, ELTN 2440) 5C/2/3/0

ELTN 2540 National Electrical Code 2

This course takes an in-depth look at the requirements of chapters one through 5 in the current National Electrical Code. Compliance is discussed in the classroom and reinforced in a hands-on mockup setting. (Prerequisite(s): ELTN 2410, ELTN 2420, ELTN 2430, ELTN 2440) 4C/1/3/0

ELTN 2550 Introduction to Renewable Energy

This course presents a discussion of renewable energy systems and resources such as solar, wind, hydro and geothermal. Topics will include photovoltaic cells, solar panels and arrays. In addition, students will learn about generation and effectiveness of various renewable energy systems. 2C/2/0/0

Electromechanical Systems

EMEC 1422 Direct Current Circuit Analysis

This course covers the basic concepts of electricity and DC circuits. Topics included are resistance, current, voltage, power, conductors and insulators. Students will learn methods to mathematically determine electrical quantities using Ohm's law and additional electrical formulas, to determine values in series, parallel and combination circuits. The skills and techniques needed to use electrical multimeters to test and troubleshoot circuits is studied. Hands-on experiments for all DC circuit types will consist of building circuits with power supplies and electrical components, and will be evaluated with electrical multimeters. 5C/3/2/0

EMEC 1432 Alternating Current Circuit Analysis

This course covers the basic concepts of AC circuits. Topics included are the study of electromagnetic principles, sine wave principles and relationships, inductance, capacitance, series and parallel circuits, power, circuit analysis and resonance. Students will learn methods to mathematically determine instantaneous electrical values. Hands-on experiments will include the construction of circuits showing the operation of electromagnets, sine waves, series and parallel resistive, inductive and capacitive circuits. (Prerequisite(s): ELTN 1410 and ELTN 1422) 5C/2/3/0

EMEC 1442 Single-Phase Motors and Generators

This course starts with the basic characteristics of DC motors and DC generators, the types, construction, principles of operation, installation, and maintenance, and formats of controls. Next the student will discover the common types of AC motors used today, the construction, principles of operation, installation and troubleshooting methods. Hands-on experiments using specialized test equipment and electrical meters will include energizing both DC motors and generators and also AC motor types under various load conditions. 5C/2/3/0

EMEC 1512 Three-Phase Systems, Motors and Generators

This course covers three-phase theory, wiring system calculations, methods, and installations. Three-phase motors and generators will also be introduced so students can identify, connect, operate, troubleshoot, and maintain them. This course also covers the proper use of three-phase test equipment used to operate, troubleshoot, and maintain the systems studied in this course. 5C/3/2/0

EMEC 1522 Introduction to Electronics and Test Equipment

Students are introduced to semiconductors, study different types of diodes and connect them in typical circuits. Complete power supply circuits are connected, analyzed and tested. This course covers transistor theory, operation, connection, testing, and troubleshooting practices for transistors in amplifier and switching applications. This course covers the use of electrical and electronic test equipment. 5C/2/3/0

EMEC 2420 Motor Controls

This course covers design, wiring, and troubleshooting of control and load circuits for single-phase and Three-phase motors. Also covered is the sizing of conductors, circuit short circuit and ground fault protection, and the calculation and proper sizing of motor overload protection. There is also in-depth coverage of Article 430 of the National Electrical Code. 4C/2/2/0

EMEC 2440 Heating and Cooling System Controls

This course covers the control of heating and cooling systems in residential and commercial situations. Gas, oil, and electric systems are covered. Related articles in the National Electrical Code are also covered. 4C/2/2/0

EMEC 2610 Fluid System Fundamentals – Pneumatics

This course is an introduction to pneumatic power systems found in modern industrial machinery and automation. The learning is based on practical online instruction and classroom hands-on tasks involving pneumatically operated devices and associated peripheral equipment. Topics include basic laws of fluid mechanics, standard symbols, pumps, control valves, control assemblies, actuators, maintenance procedures, test equipment, electric and pneumatic switching/control devices, and proper safety procedures. Online learning computer simulation and 3D software will be used throughout the course as well as laboratory pneumatic equipment. (Prerequisite(s): Journeyman electrician or ELTN/CNEL diploma/AAS) 3C/0/3/0

EMEC 2615 Fluid System Fundamentals – Hydraulics

This course is an introduction to hydraulic fluid drive systems found in modern industrial machinery and automation. The learning is based on practical online instruction and classroom hands-on tasks involving hydraulically operated devices and associated peripheral equipment. Topics include basic laws of hydraulic fluid mechanics, standard symbols, pumps, control valves, control assemblies, actuators, test equipment, electro-hydraulic switching/control devices, and proper safety procedures. Online learning computer simulation and 3D software will be used throughout the course as well as laboratory hydraulic equipment. (Prerequisite(s): Journeyman electrician or ELTN/CNEL diploma/AAS or instructor approval) 3C/0/3/0

EMEC 2620 Mechanical Fundamentals 1

This course is an introduction to mechanical drive systems. Topics include the transfer of mechanical power through chain/gear/belt drive systems, alignment of drives to loads, and drive component lubrication. The class material will be delivered through online instruction and hands-on labs focusing on various types of drive systems. (Prerequisite(s): Journeyman electrician or ELTN/CNEL diploma/AAS or instructor approval) 4C/2/2/0

EMEC 2625 Mechanical Fundamentals 2

This course continues the work in Mechanical Fundamentals 1 by providing a deeper understanding of mechanical drive systems and introducing the student to various pump systems. The class material will be delivered through online instruction and hands-on labs focusing on various types of bearings, gaskets, drives, and pumps. (Prerequisite(s): Journeyman electrician or ELTN/CNEL diploma/AAS or instructor approval) 4C/2/2/0

EMEC 2710 Fundamentals of Instrumentation

This course will cover the essential elements of a process control system. The learning is based on practical online instruction and classroom hands-on tasks involving circuit wiring, instrument calibration, and documentation. It will cover common types of electrical and pneumatic signals used for data collection while exploring devices used to measure flow rate, pressure, temperature, level and analytical control. This course will compare fundamental control concepts such as on/off and PID. It will explain how control concepts are used in the various control loops of feedback, cascade, ratio and feed-forward. Troubleshooting exercises and safety procedures will be implemented throughout the course. (Prerequisite(s): Journeyman electrician or ELTN/CNEL diploma/AAS or instructor approval) 3C/1/2/0

EMEC 2720 Automatic Process Control

This course will cover the essential elements of a process control system. The learning is based on practical online instruction and classroom hands-on tasks involving automatic process controllers and associated instrumentation equipment. It will cover common types of electrical and pneumatic signals used for data collection and control while exploring devices used to measure flow, pressure, temperature, and level. This course will compare fundamental control concepts such as on/off and PID. It will explain how control concepts are used in the various control loops of feedback, cascade, ratio, and feed forward. (Prerequisite(s): Journeyman electrician or ELTN/CNEL diploma/AAS or instructor approval and EMEC 2710 Fundamentals of Instrumentation) 4C/2/2/0

EMEC 2730 Advanced PLC's and Process Control

This course will focus on advanced principles of programmable logic controllers (PLC). This course will familiarize the student with interfacing input and output with automation motion control systems used in manufacturing. The learning is based on practical online instruction and classroom hands-on tasks. Introduction to analog input and output modules and devices, internal registers and tables, comparison functions, computational functions, data move functions, subroutines, data manipulation and sequencing functions, high speed counting, analog functions, trigonometric and advanced math functions. Also included are PLC networking, Supervisory Control and Data Acquisition (SCADA), PID automatic process control and the use of Human Machine Interface (HMI) in a control system. Troubleshooting exercises, hands-on I/O wiring, device wiring, programming, and safety procedures will be implemented throughout the course. (Prerequisite(s): Journeyman electrician or ELTN/CNEL diploma/AAS or instructor approval) 3C/2/1/0

EMEC 2740 Electromechanical Troubleshooting and Maintenance

This course introduces students to basic troubleshooting and maintenance techniques used in the industry. Topics include understanding the difference between troubleshooting and maintenance, common issues with basic electromechanical equipment, professional communication, team management, and conflict resolution within a team environment. The curriculum is divided between online delivery and lab experience. 3C/2/1/0

EMEC 2750 Automated Process Controls

This course will cover the essential elements of a process control system. Topics include closed and open loop processes, variable measurement, instrument calibration, and various loop controllers. The learning is based on practical online instruction and hands-on tasks involving level, flow, pressure, and temperature controlled process loops. (Prerequisite(s): Journeyman electrician or ELTN/CNEL diploma/AAS) 3C/0/3/0

EMEC 2760 Programming for Robotic Manufacturing

This course focuses on programming robotics that specialize in manufacturing settings. Topics include robotic safety, homing, programming for automatic and manual operations, work cell coordination, and robotic quality control. The learning is based on practical online instruction and hands-on programming involving an expanding robotic platform. 4C/2/2/0

EMEC 2770 Advanced PLC Programming

This course builds a deep understanding of a Programmable Logic Controller (PLC), a specialized computing system used to automate various industrial settings. Topics include digital and analog input and output modules, internal registers and tables, function block usage, networking, and how to use a PLC to aid in troubleshooting. The learning is based on practical online instruction and hands-on tasks that focus on interacting with PLCs. (Prerequisite(s): Journeyman electrician or ELTN/CNEL diploma/AAS or instructor approval) 4C/2/2/0

Engineering (Pre)

ENGR 1706 Principles of Engineering

Principles of Engineering is a broad-based survey course designed to help students understand the field of engineering and engineering technology and the career pathways. Students are introduced to engineering fundamentals and the knowledge and skills necessary for success as professional engineers and engineering technologies. This course is required for students enrolled in the Science Technician AS degree program. Engineering students should register for ENGR 1707. 2C/1/1/0

ENGR 1707 Introduction to Engineering

Introduction to Engineering is a broad-based course designed to help students understand the field of engineering and engineering technology and the career pathways. Students are introduced to engineering fundamentals and the knowledge and skills necessary for success as professional engineers and engineering technologies. Topics include an overview of the engineering profession, engineering design, manufacturing, use of computer packages, and technical communication. Engineering graphics and solid modeling will be presented including the use of a solid modeling software. This course is required for students enrolled in the Pre-Engineering AS degree program. 3C/2/1/0

ENGR 1709 Digital Electronics

Digital Electronics is the study of electronic circuits that are used to process and control digital signals. Digital Electronics is the foundation of all modern electronic devices such as cellular phones, MP3 players, laptop computers, digital cameras, high definition televisions, etc. In this course, students will be exposed to combinational and sequential logic design, microcontrollers, soldering. It is a project based course requiring use of problem solving, and teamwork, and communication skills to analyze, design, and build digital electronic circuits. 3C/1/2/0

ENGR 1712 Computer Integrated Manufacturing

Computer Integrated Manufacturing (CIM) describes the process of automation of a manufacturing plant with all processes functioning under computer control. In this course, students will explore how things are made, the processes that go into making different types of products, how automation changed manufacturing, and automation processes and basic programming for control systems and robots. (Prerequisite(s): Completion of or concurrent enrollment in ENGR 1706 Principles of Engineering) 2C/1/1/0

ENGR 1714 Engineering CAD

This course introduces students to solid modeling software used in engineering for design and analysis of parts. It includes creating models and drawings for basic extrusions, revolve features, and cuts as well as more complex blends, sweeps and assemblies. 2C/1/1/0

ENGR 1717 Circuit Analysis

This course is meant to develop circuit analysis skills in DC and AC circuits. It includes circuit laws and theorem, mesh and node analysis, natural and step response of RL, RC, and RLC circuits. (Prerequisite(s): PHYS 2710 and MATH 2760 or instructor approval) 4C/3/1/0

ENGR 1790 Special Topics in Engineering

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. Variable credits 1-6

ENGR 2700 Introduction to Problem Solving & Engineering Design

This class introduces the student to a multifaceted engineering problem solving and design paradigm. In this course, students will learn a systematic engineering approach to solving a problem, engineering design process, and technical presentation and analysis of data. Students will be introduced to mathematical, spreadsheet and solid modeling software for use in engineering problem solving. Open-ended activities and design projects will provide opportunities for students to apply common elements of problem solving in the solution of engineering problems in the context of a structured problem solving and design process. (Prerequisite(s): ENGR 1706) 2C/1/1/0

ENGR 2705 Statics

Statics is the first area of study in the science of mechanics. Statics deals with the study of rigid bodies at rest and the forces acting on them. Statics is the foundational course for many fields in engineering including civil, mechanical, biomedical, and structural. In this course, students will use Newton's three laws of motion to solve equilibrium of particles and rigid bodies on both 2D and 3D; determine centroids and moments of inertia; solve for internal and external forces in trusses, beams, and frames; and develop shear and moment diagrams. (Prerequisite(s): PHYS 2700 or instructor approval) 3C/3/0/0

ENGR 2710 Dynamics

This course continues the development of fundamental engineering concepts. Topics will include kinematics and kinetics of particles, systems of particles and rigid bodies, work-energy, linear and angular impulse momentum. (Prerequisite(s): Grade of "C" or better in ENGR 2705) 3C/3/0/0

ENGR 2712 Deformable Body Mechanics

This course focuses on the application of the principles of mechanics of deformable bodies including the underlying concepts of stress and strain. The course further examines the relationships among loads on deformable bodies, the stresses and strains within those bodies and the deformations and stability of those bodies. Topics include: uniaxial loading and deformation, stress and strain at a point, combined stress states, Mohr's circle, internal forces in beams, material behavior, and torsion of circular shafts. (Prerequisite(s): ENGR 2705) 3C/3/0/0

ENGR 2715 Thermodynamics

This course covers basic thermal energy relationships, processes, and cycles, First and Second Law of Thermodynamics, entropy, and availability. This course is intended for engineering majors and includes open-ended design. (Prerequisite(s): Grade of "C" or better in CHEM 1711 and PHYS 2700) 3C/3/0/0

English

ENGL 0921 Fundamentals of Writing 1

This course is designed for beginning writers who need additional foundational writing instruction and experience. It provides sequenced instruction in grammar usage, sentence construction, paragraph unity and coherence, and the writing process. Students will study models of effective sentences and paragraphs and then generate their own work. Additionally, this course will focus on building vocabulary for fluency and precision in communication. Completion of this course with a grade of "C" or better is required to continue on to ENGL 0922. (Prerequisite(s): READ 0721, department approval or appropriate assessment score) 4C/4/0/0

ENGL 0922 Fundamentals of Writing 2

This course provides credits for certificate and diploma programs and is preparation for ENGL 1711. In addition to reviewing sentence mechanics, students will study a variety of writing models in both paragraph and essay formats. Students must pass the course with a "C" or better in order to move on to ENGL 1711. (Prerequisite(s): Grade of "C" or better in ENGL 0921 and READ 0721 or appropriate assessment score.) 4C/4/0/0

ENGL 1711 Composition 1

This course emphasizes the process of writing expository and persuasive essays using effective writing skills and a variety of research techniques. The course includes an analysis of primary and/or secondary sources with a focus on critical reading, logical reasoning and academic research writing. (Prerequisite(s): Grade of "C" or better in READ 0722 Reading 2, ENGL 0922 Fundamentals of Writing 2 with a grade of "C" or better, or appropriate assessment score) (MnTC: Goal 1) 4C/4/0/0

ENGL 1712 Composition 2

This course emphasizes critical reading and analytical writing using literature as the basis for composition. The course includes an analysis of primary and/or secondary sources with a focus on academic writing. (Prerequisite(s): Grade of "C" or better in ENGL 1711) (MnTC: Goal 1) 2C/2/0/0

ENGL 1720 Introduction to Creative Writing

In this course, we will explore creative writing through reading, analysis, discussion and by writing in three genres: poetry, short story and creative nonfiction. Students will develop an understanding of creative writing techniques and the elements of literature through analysis of literary technique and applying knowledge of craft technique to their own work. Students will learn writing techniques through exercise and practice. Students will analyze and respond critically to poetry, fiction and creative nonfiction in the texts and works produced by peers through reading, discussion, group work, workshops and in writing in order to practice an informed response to creative literature. Students will be encouraged to investigate publication opportunities for their own original writing and to present their own original work in a public reading at the end of the semester. (Prerequisite(s): Grade of "C" or better in ENGL 1711) (MnTC: Goal 6) 3C/3/0/0

ENGL 1725 Introduction to Fiction Writing

This writing intensive course will explore and analyze fictional writing elements (dialogue, setting, character, cause and effect, theme, conflict, resolution etc.) through critical reading of short stories. Learners will discuss and critique literature and their own writing using workshop sessions to explore writing goals and hone creative and critical writing analysis techniques. Learners will develop an understanding of fiction by applying these techniques to our own writing and in discussion of peers' work. In this course, learners will express a new understanding of fiction writing techniques by applying informed and critical responses to classic and contemporary fictional pieces. Learners will examine the writing process by practicing writing exercises, creating short fiction pieces, examining writing elements through critical reading responses and exams, and by investigating opportunities and tendencies in writing through revision. (Prerequisite(s): ENGL 1711 Composition 1 with a grade of "C" or better) (MnTC: Goal 6) 3C/3/0/0

ENGL 1730 Introduction to Technical Writing

Introduction to Technical Writing is a college-level, introductory course emphasizing workplace writing and communication useful in professional, business, and vocational/technical fields. There will be attention to clear, correct and effective writing necessary for success in the workplace. Assignments include internal and external communication, including e-mail, formal correspondence and memos, researched formal and informal reports, proposals and requests for proposals, instructions, writing for Internet publication, and production of an application packet. Students will be asked to consider audience analysis, usability, workplace writing ethics, and produce work appropriate for Internet publication. (MnTC: Goal 1) 3C/3/0/0

ENGL 1780 Recently-Arrived Contemporary Immigrant Literature

Some of the most compelling contemporary American literature has been written by first and second-generation immigrants to the United States. This course will cover a number of works that explore the difficult process of cultural adjustment for writers of various racial and ethnic groups. The course will cover the larger narrative of coming to America but also focus on particular literary, socio-cultural and historical issues. Students will discover how language and narrative strategies are employed by writers to create the stories of their lives: intergenerational conflicts, difficulties tied to language and the formation and re-formation of racial and ethnic identities as writers confront the demands of a new country and life. Immigration and naturalization laws at various moments in US history and how those laws have influenced contemporary literature will be discussed. (Prerequisite(s): ENGL 1711 Composition 1 with a grade of "C" or better) (MnTC: Goals 6 & 7) 3C/3/0/0

ENGL 1790 Contemporary Writers of Color

This course examines American literature as a multi-voiced body and considers the contributions to that body by writers of color. Under consideration are writings by Native American, Asian American, African American and Latino authors. Particular attention will be given to issues of race, gender, ethnicity, class and sexuality and how these issues are reflected in the complicated construction of identity. As a means of considering how various racial identities are constructed and expressed in literature, contemporary and recently-published work by writers from these groups will be read. In order to provide appropriate context for readings and discussions, the class will consider relevant cultural and social histories of these writers as well. (Prerequisite(s): ENGL 1711 Composition 1 with a grade of “C” or better) (MnTC: Goals 6 & 7) 3C/3/0/0

ENGL 2721 Survey of American Literature 1

A survey of American poetry, essays, novels and short stories from colonial times to the end of the Civil War. This course will help the student to discover the definitions of these distinctive genres, their unique boundaries and potential and what distinguishes them from other forms of writing. The historical, political and cultural background of the time will also be covered in this course, so that the student will find the readings to be more interesting and accessible. (Prerequisite(s): Grade of “C” or better in ENGL 1711) (MnTC: Goals 6 & 7) 3C/3/0/0

ENGL 2722 Survey of American Literature 2

A survey of American poetry, essays, novels and short stories from the end of the Civil War to the present. A continuation of Survey of American Literature 1. This course will help the student to discover the definitions of these distinctive genres, their unique boundaries and potential and what distinguishes them from other forms of writing. The historical, political and cultural background of the time will also be covered in this course, so that the student will find the readings to be more interesting and accessible. While not a requirement, the student will find this course more enjoyable if he has first taken Survey of American Literature 1. (Prerequisite(s): Grade of “C” or better in ENGL 1711) (MnTC: Goals 6 & 7) 3C/3/0/0

ENGL 2725 Survey of British Literature

This college literature course, intended for all students, will introduce British literature. Beginning with the Old English and spanning to the Modernists of the early twentieth century, students will read, discuss, and analyze a variety of texts such as poems, essays, letters, and selections from novels. Typical works and authors may include Beowulf, Chaucer, Milton, Shakespeare, and Swift. The course will consider what these works reveal about British society as well as what they suggest about the human condition. (Prerequisite(s): ENGL 1711 Composition 1 with a grade of “C” or better) (MnTC: Goal 6) 3C/3/0/0

ENGL 2730 Contemporary American Novel

A study of the American novel from the late nineteenth century to the present. Beginning with realistic novels that reflected vast social changes at the turn of the century, this course seeks to discover the unique boundaries and potential of the contemporary American novel, what distinguishes it from other forms of literature and how the form changed as the American culture changed. The historical, political and cultural background of the time will also be covered in this course, exploring how issues like feminism, civil rights, workers’ rights and the rise of youth culture are reflected in American literature. This course ends with the contemporary novels of the twenty-first century. (Prerequisite(s): Grade of “C” or better in ENGL 1711 Composition 1) (MnTC: Goal 6) 3C/3/0/0

ENGL 2732 Exploring the Short Story

This course will focus on analysis of short stories in the context of a genre, a theme, or an author. We will consider the short stories’ historical contexts, their critical commentary, and their cultural significance as reflected in the time periods in which they were written. We will discuss the themes and values expressed in these short stories and examine how they impact us as readers. (Prerequisite(s): Grade of “C” or better in ENGL 1711 Composition 1) (MnTC: Goal 6) 3C/3/0/0

ENGL 2740 Native American Literature

Through an analysis of structural and thematic elements, this course seeks to discover the unique additions that Native American writers have brought to the traditional literary canon. Special attention will be given to the historical and cultural aspects of the text. This course is designed to introduce the concept of narrative voice in literature and provide critical techniques for its analysis. (Prerequisite(s): Grade of “C” or better in ENGL 1711 Composition 1) (MnTC: Goals 6 & 7) 3C/3/0/0

ENGL 2750 African American Literature

Through an analysis of structural and thematic elements, this course seeks to discover the unique additions that African American writers have brought to the traditional literary canon. Special attention will be given to the historical and cultural periods, such as the Harlem Renaissance. Moreover, this course is designed to introduce how African American literary criticism has been instrumental in validating and placing African American works in a literary tradition. (Prerequisite(s): Grade “C” or better in ENGL 1711 Composition 1) (MnTC Goals: 6 & 7) 3C/3/0/0

ENGL 2760 English Novel

Why did the novel as a genre emerge in England during the beginning of the 18th century? Beginning with Daniel Defoe’s *Moll Flanders*, this course seeks to discover the unique boundaries and potential of the English novel, what distinguishes it from other forms of literature and how the form changed as the English culture changed. The historical, political and cultural background of the time will also be covered in this course, so that the student will find the readings to be more interesting and accessible. (Prerequisite(s): Grade of “C” or better in ENGL 1711 Composition 1) (MnTC: Goal 6) 3C/3/0/0

ENGL 2770 Introduction to Poetry

This course will focus on the formal aspects of meter and prosody in order to objectify and demystify meaning in poetry. This course will help the student discover the various poetic forms and why a poet would choose one form over the other. In order to facilitate meaning, lectures and additional reading will focus on the social and political climates in which the poems were written. (Prerequisite(s): READ 0722 Reading 2 with a grade of “C” or better, ENGL 1711 Composition 1 with a grade of “C” or better) (MnTC: Goal 6) 3C/3/0/0

ENGL 2775 Science Fiction and Fantasy

This course will explore science fiction and fantasy through close and comparative readings of various texts. Together we’ll consider how the writers of these genres respond to the various challenges of the twenty-first century, including shifting gender, politics, war, and the impact of new technologies on culture. This course will largely be concerned with the twin goals of articulating the writer’s critique of present social conditions and exploring how those critiques are constructed. (Prerequisite(s): ENGL 1711 Composition 1 with a grade of “C” or better) (MnTC: Goal 6) 3C/3/0/0

ENGL 2776 Women Writers

This college literature course, intended for all students, will explore literature written in English by women. We will analyze course readings with a special focus on the distinct concerns, perspectives, and challenges of women writers. In addition, we will examine the social and cultural contexts in which these works were written, developing our understanding that literature can reflect, critique, and even shape its cultural moment. (Prerequisite(s): ENGL 1711 Composition 1 with a grade of “C” or better) (MnTC: Goals 6 & 7) 3C/3/0/0

ENGL 2778 Urban Literature—Lost in the City

This course explores contemporary literature in the context of the urban landscape. Together, we'll explore the function of the city in literature with attention to how characters both shape and are shaped by an urban existence. Also, how do various writers portray the city? As a labyrinth? A market place of cross-cultural encounters? A place of refuge? A dystopia? Through close and comparative readings, we'll construct an informed understanding of how and why a city is portrayed by a particular writer and to what degree the city itself functions as a meaningful character in literature. (Prerequisite(s): ENGL 1711 Composition 1 with a grade of "C" or better) (MnTC Goal: 6) 3C/3/0/0

ENGL 2790 Special Topics in English

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 1) Variable credits 1-6

English for Speakers of Other Languages (ESOL)

ESOL 0725 High Intermediate Reading and Vocabulary

This course introduces non-native English speakers to academic reading skills at the high intermediate level. Students learn how to identify main ideas and details, use pre-reading strategies, increase reading speed, and interpret graphs and charts. Students also build their vocabulary through the study of word parts, the academic word list, and other strategies. The use of library resources, dictionaries, and online materials is also emphasized. This is a required course. (Prerequisite(s): Appropriate assessment score) 4C/4/0/0

ESOL 0735 High Intermediate Speaking and Listening

This course introduces non-native English speakers to academic speaking and listening skills at the high intermediate level. This course helps students improve their ability to understand native speakers and to express themselves correctly and confidently in a variety of everyday and academic situations. Students use new vocabulary and apply grammar skills to make presentations, participate in group discussions, take lecture notes, and participate in a variety of audio and video activities. This course also helps students improve their pronunciation. Regular use of the multimedia language laboratory is part of this course. This is a required course. (Prerequisite(s): Appropriate assessment score) 4C/4/0/0

ESOL 0745 High Intermediate Writing and Grammar

This course introduces non-native English speakers to academic writing skills at the high intermediate level. Students will improve their ability to write clear, correct sentences, well-organized paragraphs and short essays. Students study basic verb forms, verb tenses, and other grammar structures. Then, they apply this grammar knowledge in a variety of writing situations and formats. Students become familiar with the writing process and online materials. This is a required course. (Prerequisite(s): Appropriate assessment score) 4C/4/0/0

ESOL 0750 High Intermediate Integrated Skills

This course provides high-intermediate level non-native English speakers with an opportunity to integrate, apply and practice the language skills and concepts they are learning in their ESOL skills courses. The reading, writing, listening, speaking, vocabulary, and grammar skills introduced in the other courses are applied in various types of projects and presentations focusing on specific themes. Integrated skills courses focus on developing critical thinking skills and using appropriate language to express ideas and demonstrate content knowledge in a college setting. This is a required course. (Prerequisite(s): Appropriate assessment score and either completion of or concurrent enrollment in ESOL 0725, ESOL 0735, ESOL 0745) 3C/2/1/0

ESOL 0820 Pronunciation and Articulation

This course is designed for ESOL students who need to improve their pronunciation, articulation and intonation skills. The emphasis is on the technique of sound production, enunciation, rhythm, volume, and pitch through modeling and extensive drilling. Students will reduce their accent and acquire more confidence when they speak. Students at any level are accepted, no prerequisites. 1C/0/1/0

ESOL 0825 Advanced Reading and Vocabulary

In this course, non-native English speakers continue to develop their academic reading and vocabulary skills at the advanced level. Students continue to analyze main ideas and details, use pre-reading strategies, increase reading speed, and interpret graphs and charts. Students further develop their general and academic vocabulary through the study of word parts, the academic word list, and other strategies. The use of library resources, dictionaries, and online materials is also emphasized. This is a required course. (Prerequisite(s): Appropriate assessment score or completion of ESOL 0725 with a grade of "C" or better) 4C/4/0/0

ESOL 0835 Advanced Speaking and Listening

In this course, non-native English speakers continue to develop their academic speaking and listening skills at the advanced level. Students will listen to academic lectures and online media, participate in academic discussions, deliver presentations, and give oral summaries. Students will learn note-taking skills and appropriate communicative strategies for the U.S. college classroom. Use of correct grammar, clear pronunciation and academic vocabulary will be reinforced throughout the semester. Regular use of the multimedia language laboratory is part of this course. This is a required course. (Prerequisite(s): Appropriate assessment score or completion of ESOL 0735 with a grade of "C" or better) 4C/4/0/0

ESOL 0845 Advanced Writing and Grammar

In this course, non-native English speakers continue to develop writing skills and grammar accuracy at the advanced level. This course helps students improve their ability to write clear, correct sentences and well-organized paragraphs and essays. Students study advanced sentence and grammar structures and then apply this grammar knowledge in a variety of writing situations and formats. This course also emphasizes the writing process and the use of online materials. This is a required course. (Prerequisite(s): Appropriate assessment score or completion of ESOL 0745 with a grade of "C" or better) 4C/4/0/0

ESOL 0850 Advanced Integrated Skills

This course provides advanced-level non-native English speakers with an opportunity to integrate, apply and practice the language skills, and concepts they are learning in their ESOL skills courses. The reading, writing, listening, speaking, vocabulary, and grammar skills introduced in the other courses are applied in various types of projects and presentations focusing on specific themes. Integrated skills courses focus on developing critical thinking skills and using appropriate language to express ideas and demonstrate content knowledge in a college setting. This is a required course. (Prerequisite(s): Appropriate assessment score or completion of ESOL 0750 and either completion of or concurrent enrollment in ESOL 0825, ESOL 0835, ESOL 0845) 3C/2/1/0

ESOL 1490 Special Topics in English for Speakers of Other Languages

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. Variable credits 1-6

Geography

GEOG 1700 Physical Geography

This course introduces students to natural landscapes and the geography of the physical environment. Topics include: volcanoes, earthquakes, tornadoes, hurricanes, landslides, glaciers, soil, the water cycle, etc. The course covers how these processes work, as well as how these systems and humans impact each other. So this course also covers environmental concerns such as destruction of environments, desertification, air pollution, climate change, etc. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 10) 3C/3/0/0

GEOG 1720 Human/Cultural Geography

This course covers the geographic study of the world cultural areas. Topics include: cultural geography (patterns of language and religion, folk customs, globalization, popular culture), political geography (formation of countries, conflict over land), populations (growth, distributions, migrations, characteristics), global economic activity, and development. Case studies from many parts of the world will be analyzed and key geographic concepts will be reviewed. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 8) 3C/3/0/0

GEOG 1740 World Geography

This course covers the geographic study of the world discussing U.S. and Canada, Latin America, Africa, Middle East, Europe, and various regions in Asia. Topics covered include: cultures and characteristics of regions, development, unique features around the world, movements of people around the world, the natural landscapes, economic influences, and conflict between countries. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 8) 3C/3/0/0

GEOG 1750 Minnesota Geography

In this course, students will explore Minnesota's regions. Topics covered include: people (culture, settlement patterns, and migrations), physical landscapes (glacial landforms, soils, and waterways), land use (agriculture, manufacturing, urbanization, etc.), geopolitical issues, and economics. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 10) 3C/3/0/0

GEOG 1790 Special Topics in Geography

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 5) Variable credits 1-6

Global Trade

INTL 1400 Introduction to International Business

Introduces the student to the general field of international business. Study will cover foreign investments, cultural differences, impact of trade agreements, international payments, logistics, taxation and personnel issues. This course provides the foundation for other International Trade courses. 3C/3/0/0

INTL 1410 International Communications and Cultural Awareness

Covers potential problems in the international transaction due to language, and cultural differences. Both written and oral issues will be discussed. In addition, the areas of social and business habits that are different from one country to another will be covered. An understanding of these various needs will help ease the international transaction. 3C/3/0/0

INTL 1512 Export Shipping and Compliance

This course introduces students to the flow of merchandise in an international trade transaction, using various modes of transportation, routing, paperwork, regulations and Incoterms. The principle documents that must be prepared for shipments will be analyzed and created. Information will include the purpose of each document, its function, common problems in preparing and processing this type of document. Discussion will include reviewing documents from the banker, freight forwarder and shipper perspective. Export compliance issues will be discussed. 3C/3/0/0

INTL 2420 U.S. Customs and Importing

Provides students with the basic knowledge needed for customs clearance. This includes classification of products using the Harmonized System, understanding import regulations, marking rules, preparing entry documentation, learning various types of entries and special provisions. This course will help prepare the student to take the U.S. Customs Broker exam. Import compliance will also be discussed. 3C/3/0/0

INTL 2491 International Trade Internship

Cooperative work study program between the Saint Paul College International Trade Program and a business facility to allow the student an employment-like experience. Job duties must reflect program goals. (Prerequisite(s): Instructor approval) Variable lab credits 1-3

INTL 2497 International Trade Special Projects

The intent of this course is to allow flexibility in providing learning experiences to meet a special need of the student, the major program and the College. (Prerequisite(s): Instructor approval) Variable lab credits 1-3

INTL 2530 International Marketing

Study marketing from the international point of view. Topics include how and where to find new international customers, evaluating the needs of international customers, and keeping these customers happy while bringing a profit to the company. Also included are the fundamentals of selling, advertising, the effect of cultural differences on selling and advertising procedures, and techniques of closing the sale. 3C/3/0/0

Health

HLTH 1410 Medical Terminology

Students recognize and build medical terms after learning the meaning of their component parts. A computer lab may be utilized to review terminology and provide practice in word building. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) 1C/0/1/0

HLTH 1418 Somatic Practitioner: Business and Ethics

In this course, students will be introduced to different types of business and ethical standards in the somatic industries of massage therapy, personal training, esthetics and wellness in the massage therapy industry, and basic aspects of a business plan. Topics include scope of practice, certifications, legal requirements, equipment options, charting, time management skills and payment tracking methods. Principles of professional ethics and interactions with clients are integrated throughout the course. (Prerequisite(s): Declared major in Massage Therapy or Personal Trainer major) 2C/1/1/0

HLTH 1420 Anatomy & Physiology

This course assists the student to acquire basic knowledge of body structure and function. Text and materials support a one-semester anatomy and physiology course. Emphasis is on the healthy body. The content in this course includes medical terms that prepare the student to understand common diseases in the clinical setting. Disorders, physiologic responses to environmental factors, and other topics of general interest are explored. Learning outcomes are tied to specific assessments found at the end of each chapter. (Prerequisite(s): HLTH 1410 concurrent enrollment recommended) 4C/4/0/0

HLTH 1421 Anatomy & Physiology for the Somatic Practitioner

Assist the student to acquire basic knowledge of body structure and function with a more detailed exploration of musculo/skeletal, nervous and endocrine system. Students also recognize and build medical terms. Basic concepts of nutrition and understanding of the digestive system will be explored. A thorough understanding of the sliding filament theory and types of muscle contraction will be explored. (Prerequisite(s): Declared major in Massage Therapy, Personal Trainer or Yoga program) 4C/2/2/0

HLTH 1422 Wellness Coaching

The major focal points of this course is to coordinate knowledge of exercises, lifestyle and nutrition through thoughtful assessment and inquiry, collaborative problem-solving and goal-setting, and safe, open and honest dialogue to assist clients in obtaining future wellness results. Students will learn to help future clients by providing instruction and mentoring, assist in setting goals and help define an action plan that is holistic in nature. Emphasis will be on practical application of working with clients. (Prerequisite(s): Declared major in Massage Therapy or Personal Trainer program) 4C/2/2/0

HLTH 1425 Clinical Applications in Kinesiology

This is a course in the applied study of human movement. Students will study muscles of the body, origin and insertion sites, nerve innervation, associated bones and bony landmarks and action. Students will investigate planes of movement, types of joints, discuss directions and positions of the human body and perform basic structural assessment. Adhesions and trigger points will be discussed and palpated. This course will also look at the theory and practice of functional muscle testing. (Prerequisite(s): HLTH 1420 or HLTH 1421. Physical ability to palpate the human body and willingness to view selected Human Cadaver videos are recommended.) 3C/1/2/0

HLTH 1432 CPR for the Professional Rescuer and Healthcare Provider

This American Red Cross course teaches CPR and AED use for those with a duty to respond. Course meets CPR requirements for Nurses, Nurse Assistants, and other allied health professionals. It is accepted for certification by the National Registry of Emergency Medical Technicians (NREMT). Skills are demonstrated for basic life support: solo and two-person CPR for the infant, child, and adult; the use of bad valve masks (BVM's); obstructed airway management; and training in Automatic External Defibrillators (AED's) for victims of sudden cardiac arrest. Certification is valid for two years. 1C/1/0/0

HLTH 1454 Yoga Postures/Asanas

A yoga practice can increase mental clarity, focus and support vitality in daily life. This course presents yoga principles and postures, called asanas, which develop balance, strength and flexibility. Students will learn the foundational yoga postures in each of the main categories of postures including: seated postures, standing postures, inversions, arm balances, hip openers and twists. Students will study an overview of the health benefits gained through yoga practice. Discuss health limitations with the instructor. (Prerequisite(s): Must have at least six months regular yoga practice experience prior to attending this training) 3C/2/1/0

HLTH 1458 Relaxation and Meditation

Learn relaxation techniques and study the many benefits of meditation. Students learn various mindfulness practices including guided relaxation, gentle yoga, breathing techniques, walking meditation, and sitting meditation. Students will develop a consistent routine and learn techniques to help cope with stress and cultivate a deeper awareness of themselves and how they relate to the world. 3C/2/1/0

HLTH 1459 Yoga Asanas/Teaching Methodology

Deepen your understanding of the yoga asanas (postures). Students will study the yoga postures in each of the main categories of postures, seated postures, standing postures, inversions, arm balances, hip openers and twists. Refine your understanding and skills of alignment within asanas. Teaching methodology includes alignment, sequencing, adjustments and effective ways to guide students in a yoga practice. Discuss the business aspects of teaching yoga. (Prerequisite(s): HLTH 1454. Discuss health limitations with the instructor.) 3C/2/1/0

HLTH 1460 Nutrition for the Health Professions

Helps the student develop an understanding of the fundamental principles of nutrition necessary to improve and maintain health, to prevent illness and to provide support and therapy during illness. (Grade of "C" or better in HLTH 1410 and HLTH 1420 is recommended) 2C/2/0/0

HLTH 1465 Functional Holistic Nutrition

The focus of this class is to develop a solid awareness of nutrition; be able to utilize that awareness and make suggestions to somatic practitioner clientele in a legal and ethical fashion, as outlined by the National Association of Nutrition Professionals (NANP) associate membership. 4C/3/1/0

HLTH 1470 Wellness through the Lifespan

Provides the student with concepts of wellness and the mind/body connection throughout the human lifespan. This course focuses on the promotion of wellness, stress reduction, and integrative healthcare services involved in the progressive stages of physical, emotional, intellectual and social development throughout the lifespan. 4C/3/1/0

HLTH 1485 Therapeutic Exercise

The focus of this course is the management of common, soft-tissue injuries through inhibitory techniques, bracing, taping, advanced stretching and corrective exercise techniques. Adaptive exercise for special populations such as geriatrics and pregnancy will also be discussed. (Prerequisite(s): HLTH 1425 recommended) 5C/0/5/0

HLTH 1490 Personal Fitness 1

The major focal points of this course is to create ground frame knowledge of personal fitness including strength, endurance and flexibility for the betterment of individual health. Functional strength training, Active Isolated and Dynamic stretching and aerobic exercise options will be examined and performed. Individuals will create their own personal fitness plan and implement that plan during open Fitness Lab hours. 1C/0/1/0

HLTH 1491 Personal Fitness 2

This class builds on the concepts discussed and experienced in Personal Fitness 1. Concepts of periodization planning will be discussed and implemented. A holistic approach to personal fitness will ensue with a discussion of healthful living including grocery shopping concepts and stress management concepts. 1C/0/1/0

HLTH 1541 Yoga History/Philosophy

This course will provide a solid foundation in the historical and philosophical concepts of yoga. Study historical texts such as the Bhagavad Gita and Patanjali's Yoga Sutras that provide lessons and offer clear steps on the path of yoga. Learn philosophical concepts of various schools of yoga including: Tantra, Ayurveda, chakras, and more. 3C/2/1/0

HLTH 1542 Teaching Methodology for the Yoga Instructor

Includes principles of demonstration, observation, assisting/correcting instruction, teaching styles, learning styles, qualities of a teacher and the business aspect of teaching yoga. Will include practicum of practice teaching, receiving feedback, observation of others and assisting while others teach. 3C/2/1/0

HLTH 1560 Internship for the Yoga Instructor Course

These hours are to be distributed on an individual basis among the categories as determined by the Instructor. 3C/0/0/3

HLTH 1600 Foundations of Fitness

The purpose of the course is to seek improvement of the student's knowledge and understanding about the components of physical fitness, and how those components contribute to lifelong health and well-being. This course is designed to provide knowledge for the individual to assess, motivate, and maintain a lifestyle of wellness. 2C/0/2/0

HLTH 1900 Pathology for the Somatic Practitioner

This course is designed to teach the study of deviations from normal anatomy and physiology as well as basic pharmacology. Students will examine injury and disease related conditions most likely to be encountered in a somatic practice. Special attention is given to signs and symptoms, indications and contraindications of treatment methods, as well as instruction related to skin, neuromuscular and soft tissue conditions. Basic pharmacology will be examined along with drug/supplement interactions. (Recommendation(s): HLTH 1421) 4C/3/1/0

Health Unit Coordinator

HLUC 1410 Diagnostic & Therapeutic Procedures

Designed to acquaint the student with patient's medical record (paper or electronic) and doctor's orders for treatments, medications, diagnostic tests and medical procedures. The information presented provides knowledge essential for the processing of physician orders. (Prerequisite(s): ENGL 0922, READ 0722 or appropriate assessment score) 4C/4/0/0

HLUC 1420 Health Unit Coordinator Fundamentals

Introduces the student to the health care facility environment and procedures. Students will become acquainted with their role in the health care setting, including recent changes with electronic medical record and computerized physician order entry, ethical and legal standards, customer relations, telephone and communication techniques, problem solving, medical terminology, basic human structure, diseases and disorders. (Prerequisite(s): ENGL 0922, READ 0722 or appropriate assessment score) 4C/4/0/0

HLUC 1510 Processing Physicians' Orders 1

This hybrid course is designed to develop student skills in reading and processing physicians' orders. Students will be given hands-on applications in the processing of physicians' orders. It will include procedures for processing of orders related to patient diets, supplies, treatments, activities, nursing observations and medications. Processing of physicians' orders will be in a computer lab setting. (This course must be taken in the semester immediately preceding internship.) (Prerequisite(s) or Co-Requisite(s): HLUC 1410, HLUC 1420) 3C/2/1/0

HLUC 1511 Processing Physicians' Orders 2

This hybrid course is designed to give the students hands-on applications in the processing of physicians' orders in a computer lab setting. Students will be given sets of handwritten and routine orders which they will read, interpret and process. The student will be introduced to more difficult orders than were introduced in HLUC 1510. (This course must be taken in the same semester as HLUC 1510 and the semester immediately preceding internship.) (Prerequisite(s) or Co-Requisite(s): HLUC 1410 and HLUC 1420; Prerequisite(s): HLUC 1510) 3C/1/2/0

HLUC 2491 Health Unit Coordinator Internship

The student will complete 96 hours of experience at the internship facility. Student must receive instructor recommendation to proceed to internship. Candidates for internship must have proven themselves to be reliable in attendance, professional in behavior, participate in class, and safe in performing Health Unit Coordinator tasks. Students will be required to submit a Background Study conducted by the Department of Human Services. An individual who is disqualified as a result of the background study will not be permitted to participate in a clinical internship. Students will be required to submit to the instructor a current immunization record. Students will agree to and sign a Student Intern Agreement and Pledge of Confidentiality forms. (Prerequisite(s): Successful completion of all HLUC courses: HLUC 1410; HLUC 1420; HLUC 1510; HLUC 1511 with a grade of "C" or better to be eligible for participation in internship) 3C/0/0/3

History

HIST 1730 Contemporary World History

This course surveys Contemporary World History, from the end of World War II to the present with a focus on Europe, Asia, Africa, Latin America and the Middle East. Significant forces, ideas, events and people that have influenced the world since 1945 are studied. Course themes highlight how and why events transpired and created change in people's lives. Historical events are studied to provide an appreciation for their influence on contemporary society and the implications they may hold for the future. (Prerequisite(s): READ 0721 with a grade of "C" or better or concurrent enrollment or appropriate assessment score.) (MnTC: Goals 5 & 8) 3C/3/0/0

HIST 1745 U.S. History to 1865

This course surveys the political and social history of America from the seventeenth century to the end of the Civil War. The interaction of Europeans, Native Americans, and Africans through the Colonial Era, the American Revolution, and the Early Republic will be discussed. Topics covered also include Jacksonian Democracy, westward expansion, the role of women in the nineteenth century, nineteenth century immigration, and the controversy over slavery. (Prerequisite(s): READ 0721 with a grade of "C" or better or concurrent enrollment or appropriate assessment score.) (MnTC: Goals 5 & 7) 4C/4/0/0

HIST 1746 U.S. History Since 1865

This course surveys the political and social history of America from the end of the Civil War to the present. Topics covered include Reconstruction and racial segregation in the South, the Gilded Age and Progressive Era, the Great Depression of the 1930s, World Wars I and II, the war in Vietnam, the Civil Rights Movement, and social movements of the 1960s. Throughout the course the roles of women, immigrants, and people of color will be discussed. (Prerequisite(s): READ 0721 with a grade of "C" or better or concurrent enrollment or appropriate assessment score.) (MnTC: Goals 5 & 7) 4C/4/0/0

HIST 1750 Minnesota History

This course surveys Minnesota's historical development from the pre-Columbian period to the present. It focuses on the historic importance of Minnesota's geography and natural resources, American Indian-white relations, the development of Minnesota's unique political tradition and the emergence of Minnesota's diverse society and economy. Course readings, videos and class discussions are supplemented by visits to metro-area historic sites and the Minnesota Historical Society's History Center. In addition, students are exposed to the tools and techniques historians use to study the past as a part of completing research projects. (Prerequisite(s): READ 0721 with a grade of "C" or better or concurrent enrollment or appropriate assessment score.) (MnTC: Goals 5 & 10) 3C/3/0/0

HIST 1760 History of World Civilizations to 1500

This course surveys world history from the first civilizations to 1500 C.E. Course themes focus on political, ideological, economic, social, cultural, religious, technological and environmental developments in Africa, Eurasia and the Americas. (Prerequisite(s): READ 0721 with a grade of “C” or better or concurrent enrollment or appropriate assessment score.) (MnTC: Goals 5 & 8) 3C/3/0/0

HIST 1761 History of World Civilizations since 1500

This course surveys world history from 1500 C.E. to the present. Course themes focus on political, ideological, economic, social, cultural, religious, technological and environmental developments in Africa, Eurasia and the Americas. Special focus is given to global factors that allowed the West to exercise significant influence over the development of Africa, Asia and the Americas. (Prerequisite(s): READ 0721 with a grade of “C” or better or concurrent enrollment or appropriate assessment score.) (MnTC: Goals 5 & 8) 3C/3/0/0

HIST 1770 History of Women in the United States

This course explores the history of women in the United States from the colonial period to the present. Within this chronological framework, the course examines how women understood their lives as individuals and as members of families and communities. The course also explores strategies through which women of diverse races, classes, and ethnicities struggled to control their own lives and identities. Special focus is given to how ideologies of gender, race, class and sexuality framed American society and culture. (Prerequisite(s): READ 0721 with a grade of “C” or better or concurrent enrollment or appropriate assessment score.) (MnTC: Goals 5 & 9) 3C/3/0/0

HIST 1773 African American History

This course explores the history of African American men and women in the United States from their involuntary arrival in the early 17th century to the present. Within this chronological framework, the course will examine the historical changes that have shaped African American life and culture, explore how African Americans have understood their lives as individuals and as members of families, communities and institutions, evaluate how ideas about race and color have framed the societies in which Americans lived, and examine the struggle of African Americans to gain freedom, full citizenship, civil rights, and equality. (Prerequisite(s): Grade of “C” or better in READ 0721 or appropriate assessment score) (MnTC: Goals 5 & 7) 3C/3/0/0

HIST 2740 Immigration and Ethnic History of the United States

This course surveys the experiences of immigrant groups and ethnic minorities within the United States from the colonial period to the present. The experiences of American Indians and immigrant groups from Europe, Africa, Asia and Latin America are explored and their contributions to a multi-cultural America are discussed. Additional course themes include: slavery and its legacies, US government American Indian policy and US government immigration policy. (Prerequisite(s): READ 0721 with a grade of “C” or better or concurrent enrollment or appropriate assessment score.) (MnTC: Goals 5 & 9) 3C/3/0/0

HIST 2780 Special Topics in History

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (Prerequisite(s): READ 0721 with a grade of “C” or better or concurrent enrollment or appropriate assessment score.) (MnTC: Goals 5 & 7) Variable credits 1-6

HIST 2790 Historical Methods

This course is a capstone experience intended for students pursuing an AA degree with an emphasis in history. Students will arrange this course with a history instructor and, along with the instructor, tailor their course to their interests and/or intended future area of study. Students will be exposed to the profession’s methodology and produce a research-based semester-long capstone project. (Prerequisite(s): Instructor approval) (MnTC: Goals 5 & 7) 2C/2/0/0

Hospitality Management

HSPM 1410 Introduction to Hospitality Management

This course provides an orientation to the hospitality industry. This includes an introduction to the structure of lodging, food service and tourism organizations, the role of lodging departments, the future of the industry and career opportunities. Course structure includes lecture, projects, discussion and guest speakers. 3C/3/0/0

HSPM 1440 Event Management and Planning

This course will provide an overview of Event Management. Topics include identifying the purpose of special events, planning timelines, organization, managing volunteers, evaluation, invitations and logistics. Emphasis will be placed on the principles of management and marketing and how they apply in event planning. Career opportunities in event planning will also be explored. 3C/3/0/0

HSPM 2420 Hotel and Lodging Operations

This course provides students the key principles in the lodging industry, focusing on strategic planning as the foundation for operation effectiveness. 3C/3/0/0

HSPM 2440 Hospitality Marketing and Sales

This course provides principles and practices of marketing the services of the hospitality industry. Emphasis includes the marketing concept with applications leading to customer satisfaction. 3C/3/0/0

HSPM 2591 Hospitality, Management Internship

This course provides students the hands-on opportunity to work in the hospitality industry. (Prerequisite(s): Advisor approval) Variable credits 1-3

Human Resources

HMRS 1400 Human Resource Management

Covers an introduction to the basic principles of Human Resource functions and services. It will provide background and understanding for further Human Resources courses in the Human Resource Program. 3C/3/0/0

HMRS 1490 Talent Management

This course provides students with a basic understanding of the employment and staffing functions in an organization. Attention will be devoted to the recruitment process, effective interviewing, applicant evaluation techniques, legal requirements, reference checking, and new employee orientation. This course also covers basic information about the training and development functions in an organization and its role in building an effective workforce. Students study effective training techniques including needs assessments, transfer of training, training evaluation, training methods, technology in training, and employee development issues. 3C/3/0/0

HMRS 1510 Human Resources Information Systems and Records

Covers basic information on, and an understanding of, types of Human Resource records, employers’ information needs, and government recordkeeping/reporting needs. It also includes an introduction to various HRIS software programs, with hands-on applications. 3C/2/1/0

HMRS 1520 Compensation and Benefits Administration

Covers basic information about various types of benefits that are typically offered by employers. The course covers mandatory government benefits and voluntary benefits. Also included is information about employee compensation and related federal laws. 3C/3/0/0

HMRS 2410 Employee/Labor Relations

This course focuses on employee relations techniques such as: coaching, mentoring, performance management, employee discipline, workplace violence prevention, employee crisis management and effective communication, including gender and generational communication in the workplace. Also covered are the labor relations issues that supervisors need to deal with on a daily basis when working in a union environment. 3C/3/0/0

HMRS 2420 Employment Law and HR Policies

Provides students with an understanding of EEO legislation and other federal laws relating to employment and the impact of these laws on an organization. Students will also study the emerging legal issues facing today's Human Resource Departments. The course will also define the needs for HR policies and the development of a variety of policies. 3C/3/0/0

HMRS 2591 Human Resource Internship

Designed to provide the student with a purposeful, occupational experience in the Human Resource field. Each internship is an individualized experience. A training plan is created for each student, in conjunction with the training site, to provide experience related to the skills and knowledge acquired in the program. (Prerequisite(s): Advisor approval) Variable credits 3–6

Humanities

HUMA 1720 The Ancient and Medieval World

This course introduces students to the global humanities and shows the relationship between the culture of the past and life in the present. The course includes an examination of written works, art, and architecture religion from Greece, Rome, the Middle Ages and the Renaissance. Texts, materials and interdisciplinary assignments will examine the arts and ideas of the West in relation to those of other world cultures, including India, East Asia, Africa and Native America. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 8) 4C/4/0/0

HUMA 1730 The Modern World

This course introduces students to the global humanities and shows the relationship between the culture of the past and life in the present. The course includes an examination of written works, art, architecture and music from the Modern World (roughly the 16th century to the present). Texts, materials and interdisciplinary assignments will examine the arts and ideas of the West in relation to those of other world cultures, including India, East Asia, Africa and Native America. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 8) 4C/4/0/0

HUMA 1750 Culture and Civilization: Spanish-Speaking Cultures

Taught in English, this course introduces students to the mosaic of qualities that make up the culture and civilization of Spanish-speaking people of the Americas, Spain and elsewhere across the globe. To provide students with an awareness of the cultural, social, religious and linguistic values of Spanish speaking cultures, multi-media resources (Internet, music, video) will be used to illustrate course topics, including the arts, literature and history. This course may include guest speakers and visits to local Latino/Hispanic cultural centers. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 8) 3C/3/0/0

HUMA 1770 The Art of Film

This course is an introduction to film as an art form and as a medium for portraying ideas, myths, human concerns and aesthetic principles. The course includes an examination of film techniques, film theories and artistic styles of films such as formalism, surrealism, expressionism and neorealism. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 6) 3C/3/0/0

HUMA 1780 American Film

Students will be introduced to American film as an art form and as a medium of cultural communication. The course is designed to improve "visual literacy" and to cultivate an ability to deal with film in an intelligent and critical way. The works of Edison, Porter, Griffith, Keaton, Chaplin, Ford, Capra, Welles, and Hitchcock are examples of works to be studied. The course will offer representative examples of the major film genres and styles, including comedy, the western, film noir, and others. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 7) 3C/3/0/0

HUMA 1790 International Film

A study of film as an art form and as a means of cultural communication from an international perspective. The course is designed to cultivate an ability to engage with film in a critical way, as well as broaden understanding of film and culture in a global context. Each semester a variety of national cinematic traditions will be examined including films from Europe, Japan, India, China, Africa, and Latin America. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 8) 3C/3/0/0

HUMA 1795 Special Topics in Humanities

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 6) Variable credits 1-6

Individualized Studies

INDS 1400 Individualized Studies Development

This course covers the development of the individualized studies degree plan. Upon completion of the course, students will have a completed individualized studies plan which meets their career and employment goals. 1C/1/0/0

Interpreter/Transliterater Sign Language

IINTP 1440 Orientation to Interpreting

This course introduces students to the profession of sign language interpreting. It covers the history of interpreting as a field of professional practice, the required professional ethical and performance standards, the impact of legislation on the field, the phenomena of cross cultural dynamics, oppression of minority groups and the role of an interpreter as a cultural mediator. (Prerequisite(s): INTP 1500 Interpreting Process with a grade of "C" or better) 3C/3/0/0

INTP 1442 English Grammar for Sign Language Interpreters

This course covers fundamentals of English grammar and writing and their relationship to the study of ASL and interpreting/transliterating. Topics include: parts of speech; prepositional phrases; simple, perfect, and progressive verb tenses; passive and active voice sentences; direct and indirect objects; predicate adjectives, predicate nouns, and predicate pronouns; fundamentals of English sentence structure; punctuation; capitalization; proofreading strategies; and grammatical aspects of English that create challenges for interpreters/transliterators. The course provides terminology and skill-building exercises which will enable students to: more clearly talk about and analyze aspects of English and ASL; more accurately evaluate their interpreting/transliterating work; identify non-standard English; and evaluate and develop their use of spoken and written standard English. (Prerequisite(s): Completion of ASLS 1413 American Sign Language 3 with a grade of "C" or better) 2C/2/0/0

INTP 1465 Special Topics

A variable credit granting course in the area of interpreting/transliterating, American Sign Language, specific sign forms, linguistic skills, Deaf Culture or a related area, that is designed to meet the needs of specific groups of students. Each course is designed and accepted based on a written syllabus outlining the objectives and procedures for delivery. Variable credits 1–5

INTP 1500 Interpreting Process

This course introduces students to the theory and application of the interpreting process. Application of interpreting process skills occurs through consecutive interpretation. The goal of the course is to develop cognitive processing skills involved in the interpreting process. (Prerequisite(s): Acceptance into the Sign Language Interpreter/Transliterating Program and ASLS 1420 ASL Linguistics and/or INTP 1442 English Grammar for Sign Language Interpreters with a grade of “C” or better or taken concurrently with ASLS 1420 ASL Linguistics and INTP 1442 English Grammar for Sign Language Interpreters. It is necessary for students in the Sign Language Interpreter/Transliterating Program to be able to process auditory and visual information.) 2C/2/0/0

INTP 1512 Consecutive Interpreting 1

This course develops consecutive interpreting skills introduced in INTP 1500 and prepares students for the simultaneous interpreting process. Students compare American Sign Language and English semantic/syntactic structures to the consecutive interpreting process. Focus in this course will be on text translation, vocabulary expansion and interpreting process skill development. (Prerequisite(s): Grade of “C” or better in ASLS 1420 and INTP 1500) 4C/2/2/0

INTP 1513 Consecutive Interpreting 2

This course builds upon Consecutive Interpreting skills to prepare students for the simultaneous interpreting process. Students will analyze and compare more complex American Sign Language and English texts in order to prepare for the simultaneous interpreting task. (Prerequisite(s): Grade of “C” or better in ASLS 1430 and INTP 1512) 2C/2/0/0

INTP 2410 Video Relay Interpreting/ Video Remote Interpreting

This course introduces students to Video Remote Interpreting and Video Relay Interpreting. It consists of the history of VRI and VRS as a field of professional practice. It covers the call opening, middle and closing, call management, special populations, cultural considerations, register, affect, current technology, ethical considerations, federal and state governing rules, and similarities and differences between VRI and VRS. Vicarious trauma, self-care, and team interpreting topics will be included. Practical application will be made through real-time phone calls. Course content is at an intermediate to advanced level of complexity. (Prerequisite(s): INTP 2592 Interpreter Internship with a grade of “C” or better) 2C/1/1/0

INTP 2411 Sign to Voice Interpreting 1

Focuses on the process of interpretation, provides practice of requisite skills and process tasks and applies skills and theory to the translation process. The course of study focuses on lexical development, syntactical language comparisons, voice production techniques, text/discourse/interpreting process analysis, semantic mapping and diagnostic assessment. (Prerequisite(s): INTP 1513 with a “C” or better) 4C/1/3/0

INTP 2412 Sign to Voice Interpreting 2

Provides students with additional practice in specific skill areas related to sign-to-voice interpretation. Text/discourse/process analysis, lexical and syntactic development, voice production techniques for simultaneous sign-to-voice interpretation will be the focus. Course content is at an intermediate to advanced level of speed and complexity. Students will work primarily from videotaped language models. (Prerequisite(s): INTP 2411 with a grade of “C” or better) 2C/1/1/0

INTP 2421 Voice to Sign Interpreting 1

Provides students techniques for translating the source language English to the target language American Sign Language (ASL) in simultaneous manner. (Prerequisite(s): Grade of “C” or better in INTP 1513) 4C/1/3/0

INTP 2422 Voice to Sign Interpreting 2

This course allows students to continue practicing rendering the target language (ASL) from the source language (English) simultaneously. It also provides preparation for Internship. Continued emphasis and focus is on appropriate uses of lexical and syntactic principles and non-manual behaviors of ASL. (Prerequisite(s): Completion of INTP 2421 with grade of “C” or better) 2C/1/1/0

INTP 2431 Transliterating 1

This course covers the process of Transliteration (changing a message expressed in spoken English into a coded form of the language). The process moves along a continuum from Contact Language to a signed form of English. Specific subtasks are isolated in order to focus on transliterating skill development, enhancing component skills and incorporating ASL features. These skills are integrated into the performance of beginning to intermediate tasks. (Prerequisite(s): Grade of “C” or better in INTP 1513) 4C/1/3/0

INTP 2432 Transliterating 2

This course expands the process of visually representing English. Students will focus on the expansion and enhancement of transliterating skills at the English end of the ASL-English continuum. Students will incorporate ASL features into intermediate to advanced level texts presented in a simultaneous mode. (Prerequisite(s): Grade of “C” or better in INTP 2431) 2C/1/1/0

INTP 2450 Deaf/Blind Interpreting

Provides students with a working knowledge of the requirements, skills and communication techniques needed to interact and/or interpret with consumers who are Deaf/Blind. (Prerequisite(s): INTP 2411, INTP 2421, INTP 2431) 2C/2/0/0

INTP 2585 Internship Seminar

This course introduces students to the requirements, guidelines, professional practices and types of placements for field experience. Students will discuss protocol, skills, ethics and business practices needed for specific site placements. (Prerequisite(s): Grade of “C” or better in INTP 1513) 1C/1/0/0

INTP 2592 Interpreter Internship

This course is a career-related, supervised work experience that integrates classroom theory and skills with real-life experiences; further develops skills and abilities initiated in program coursework; develops mentoring relationships and skills; identifies resources; expands application of ethical decision making and problem-solving; and prepares students for national certification and employment. (Internship Eligibility: Grade of “C” or better in INTP 2411, 2421, and 2431. Internship Placement: Grade of “C” or better in Interactive Performance Skills Evaluations in INTP 2412 Sign to Voice 2, INTP 2422 Voice to Sign 2 and INTP 2432 Transliterating 2) 5C/0/0/5

Massage Therapy**MASS 1400 Introduction to Therapeutic Massage**

This course will enable the student to track the history and development of massage therapy, understand the scope of practice, body mechanics for the practitioner, contraindications for therapy and professional ethics for practitioners. Students will review massage-specific anatomy and physiology with emphasis on muscle identification, actions and insertions on the skeleton. Students will be introduced to basic massage techniques through demonstration and practice. Students will practice correct table set-up and sanitation. Must earn a grade of “C” or better to proceed. (Prerequisite(s): Declared Massage Therapy major) 4C/2/2/0

MASS 1421 Massage Spa Techniques

Students will refine previously learned techniques from the MASS 1400 course. Advanced techniques in chair massage, hydrotherapy, stone therapy, lymphatic drainage massage, reflexology, aromatherapy, pregnancy massage and body wraps will be introduced. Students will learn to integrate various spa techniques in a single massage session. Must earn a grade of “C” or better in this course. (Prerequisite(s): MASS 1400 with a grade of “C” or better) 2C/0/2/0

MASS 1422 Massage Clinical Techniques

Students will refine previously learned techniques in Swedish massage and deep-tissue massage by demonstrating mastery of massage therapy contraindications, body mechanics, muscle actions and insertions. Students will learn stretches for both client and self-care. Advanced techniques in chair massage, reflexology, myofascial release, lymph drainage and neuromuscular therapy will be introduced. Must earn a grade of “C” or better in this course. (Prerequisite(s): MASS 1400 with a grade of “C” or better) 4C/2/2/0

MASS 1423 Advanced Clinical Sports Massage Techniques

Students will refine previously learned techniques. Students will investigate various treatment protocols utilizing scientifically proven, outcome-based techniques including Neuromuscular Therapy, Manual Lymphatic Drainage, Myofascial Release, Travel Trigger Point Therapy, Muscle Energy Technique, Proprioceptive Neuromuscular Facilitated Stretching, Active Isolated Stretching and Positional Release Technique. Students will learn to perform thorough patient assessments utilizing medical histories and objective findings through palpation, functional muscle testing, range of motion testing, postural examination and gait examination. Students will learn to create a care-plan based on evaluations; create treatment plans using carefully selected techniques for the given pathology; and learn to recommend exercises to the patient. Students will learn to give supplementary care as prescribed by a licensed Physician, Chiropractor or Physical Therapist for pathologies including multiple sclerosis, spinal cord injury, traumatic brain injury, stroke, diabetes, AIDS, cancer, burns, post-surgical scarring, chronic pain and fibromyalgia. (Prerequisite(s): Certificate in Massage Therapy or equivalent as evaluated by faculty) 5C/2/3/0

MASS 1480 Massage Therapy Practicum

This course meets the requirement of the performance and documentation of the minimum 50 full-body sessions. Students will demonstrate and apply all previously learned techniques including use of client intake information, knowledge of massage therapy contraindications and skills in charting for each client. Must earn a grade of “C” or better in this course. (Prerequisite(s): MASS 1400 and MASS 1422 with a grade of “C”) 4C/0/0/4

MASS 1490 Clinical Massage Internship

Students will refine all previously learned techniques and put them into practice. Students are placed in a traditional clinical setting at Chiropractic offices, Medical Sport Institutes and Physical Therapy clinics for half of the internship. For the second half students may choose to focus on an area of choice such as oncology, pre and post natal, geriatric, AIDS, infant massage, or orthopedic settings. Must earn a grade of “C” or better in this course. (Prerequisite(s): MASS 1423 (with a grade of “C” or better), Instructor approval or completion of entire clinical massage curriculum and professional membership with ABMP including liability insurance. Students must have current CPR certificate and liability insurance on file at Saint Paul College before starting internship.) 5C/0/0/5

Mathematics

MATH 0910 Introductory Algebra

This course is intended for students who need to master the fundamentals of algebra. The topics include a review of the real number system, solving equations and inequalities, and their applications, graphing linear equations, solving systems of linear equations, exponents, polynomials and quadratic equation solving and applications. (Prerequisite(s): Appropriate assessment score) 3C/3/0/0

MATH 0920 Intermediate Algebra

This course is intended for students who have had one year of high school algebra and need a refresher before taking courses such as College Algebra and/or Pre-Calculus. The topics include a review of solving equations and inequalities and their applications, exponents and polynomials, factoring polynomials, solving quadratic equations and their applications, rational expressions, rational exponents and radicals, and graphing functions (linear and quadratic). Students wanting to take Calculus will have the option of taking either Pre-Calculus or both College Algebra and Trigonometry as their prerequisites. (Prerequisite(s): Grade of “C” or better in MATH 0910, or appropriate assessment score) 3C/3/0/0

MATH 1411 Applied Mathematics

This course is required for students in certain trade programs. It is designed to help students develop the numerical skills needed to perform tasks in their trade. Topics include whole numbers, fractions, decimals, percents, ratios and proportions, powers, roots, integers, polynomials, equations, plane and solid geometry, trigonometric functions, and word problems relevant to the trades. (Placement into this course will be according to college assessment score.) 3C/2/1/0

MATH 1420 Trade Algebra and Trigonometry

This course is intended for the student who needs to master the fundamentals of algebra and right triangle trigonometry as they apply to the construction trades. The content of this course includes a review of basic math, simplifying expressions involving constants and variables, solving algebraic equations, solving literal problems using spreadsheets and graphing calculators and solving construction trade problems with algebra and right triangle trigonometry. (Placement into this course will be according to college assessment score.) 3C/3/0/0

MATH 1710 Liberal Arts Mathematics

This class includes selected topics from the mathematics of social choice, growth and symmetry, and probability and statistics. Real-life applications are used to illustrate mathematical concepts. Modern discoveries, as well as classic problems, are described using straightforward examples. A fundamental objective is to develop an appreciation for the aesthetic elements of mathematics. The development of critical thinking skills through the application of mathematics is also emphasized. This course is designed for students who are not planning to take any further mathematics courses. This course can be used to satisfy the general education requirement for math. (Prerequisite(s): MATH 0920 Intermediate Algebra with a grade of “C” or better or appropriate assessment score) (MnTC: Goal 4) 3C/3/0/0

MATH 1730 College Algebra

This course covers algebraic functions and their applications. Topics include linear and quadratic functions, functions and graphs, polynomial and rational functions, exponential and logarithmic functions, systems of equations and inequalities, matrix algebra, discrete algebra, the binomial theorem and probability. Graphing calculators are used to further the student’s understanding of essential mathematical concepts. Students wanting to take Calculus will have the option of taking either Pre-Calculus or both College Algebra and Trigonometry as their prerequisites. (Prerequisite(s): MATH 0920 with a grade of “C” or better, or appropriate assessment score) (MnTC: Goal 4) 3C/3/0/0

MATH 1740 Introduction to Statistics

This course covers concepts and applications of descriptive and inferential statistics. Measures of central tendency and variance, confidence intervals, normal distributions and central limit theorem are explored. The student learns about probability distributions and random variables. Techniques of estimation, hypothesis testing, z-scores, t-tests, F-tests, Chi-square tests, analysis of variance (ANOVA) and linear regression are covered in this course. This course can be used to fulfill the general education requirement for math, and transfer to 2 and 4 year institutions. (Prerequisite(s): MATH 0920 Intermediate Algebra with a grade of “C” or better or appropriate assessment score) (MnTC: Goal 4) 4C/4/0/0

MATH 1750 Trigonometry

This course introduces trigonometric functions and their applications. Topics in trigonometry include angles and the unit circle, graphs of functions, equations, identities, triangles, and the Laws of Sines and Cosines. Vectors, polar coordinates, and parametric equations will also be explored. A review of the fundamentals of functions will be included at the beginning of the course. Students wanting to take Calculus will have the option of taking either Pre-calculus or both College Algebra and Trigonometry as their prerequisites. (Prerequisite(s): MATH 1730 College Algebra with a grade of "C" or better, or appropriate assessment score) (MnTC: Goal 4) 3C/3/0/0

MATH 1762 Pre-Calculus

Pre-Calculus is often described as an accelerated version of College Algebra and Trigonometry. This course introduces algebraic and trigonometric functions and their applications. Topics include polynomial, rational, exponential, logarithmic functions, sequences, series, and limits. Vectors, parametric equations, and analytic geometry will also be explored. In addition, this course covers trigonometric functions, identities and equations and the laws of sines and cosines. (Prerequisite(s): MATH 0920 Intermediate Algebra with a grade of "C" or better, or MATH 1730 College Algebra with a grade of "C" or better, or appropriate assessment score) (MnTC: Goal 4) 5C/5/0/0

MATH 1790 Special Topics in Mathematics

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 4) Variable credits 1-6

MATH 2749 Calculus 1

This course is a beginning calculus course, which introduces the concepts of limits, derivative, differentiation and integration of functions with emphasis on applications. Topics include introduction to the derivatives and limits, tangent to a curve, properties of limits, derivative of a real function, the power rule and the algebra of derivatives, the chain rules, the mean value theorem, applications of differentiation including max-min problems and related rate problems, anti-derivatives and the definite integral. Graphing calculators are used to further the student's understanding of essential concepts. (Prerequisite(s): MATH 1750 Trigonometry or MATH 1760 Pre-Calculus with a grade of "C" or better, or appropriate assessment score) (MnTC: Goal 4) 4C/4/0/0

MATH 2750 Calculus 2

This course is a continuation of MATH 2749 Calculus 1 and the continued development of the properties and applications of integration. Topics include applications of integral, transcendental functions, techniques of integration, L'Hopital's rule, sequences and series and parametric equations and polar coordinates. A graphing calculator is required. (Prerequisite(s): A grade of "C" or better in MATH 2749) (MnTC: Goal 4) 4C/4/0/0

MATH 2753 Multivariable Calculus

This course is intended for students who have successfully completed MATH 2750 Calculus 2 and covers the calculus of several variables. Topics include functions of several variables, three-dimensional analytic geometry, vectors, partial derivatives, multiple integrals, vector fields, surface integrals, Green's Theorem, Stokes Theorem, and the Divergence Theorem. (Prerequisite(s): MATH 2750 Calculus 2 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 4) 4C/4/0/0

MATH 2760 Differential Equations and Linear Algebra

This course is an introduction to differential equations and linear algebra, which focuses on ordinary differential equations but students will be introduced to partial differential equations. Topics include the basic definition, terminology and ideas of ordinary differential equation, finding solutions of and working with applications of first and second order differential equations, existence and uniqueness of solutions, variation of parameters, undetermined coefficients, matrix formulation of linear systems, Laplace transforms, and an introduction to numerical and graphical methods of solutions. Additional topics include Gauss-Jordan reduction and system of Linear equations, matrices and coordinates relative to different bases, general linear spaces, orthogonality, determinants, eigenvalues, eigenvectors, and phase plane analysis of linear and nonlinear systems of ordinary differential equations. (Prerequisite(s): MATH 2750 Calculus 2 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 4) 4C/4/0/0

Medical Laboratory Technician

MDLT 1400 Orientation

This course is designed to introduce students to the field of medical laboratory science and the role of the Medical Laboratory Technician in healthcare. The history of the medical laboratory science profession, and its scope of practice including lab practice areas and personnel will be discussed. In addition, the course will cover educational requirements, employment opportunities, certification, licensure, regulation and professional and patient codes of ethics. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Enrollment in MDLT Major courses) 1C/1/0/0

MDLT 1410 Laboratory Techniques

Basic skills and techniques will be explained and performed including basic instrumentation. Major topics covered are: safety and standard precautions, laboratory glassware and pipettes, microscopy, balances and weighing, specimen collection and processing, spectrophotometry, metric/chemistry math and solutions, and laboratory information systems. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): CHEM 1711 and BIOL 1730 or concurrent enrollment) 3C/2/1/0

MDLT 1421 Hematology 1

This course covers basic hematology procedures involving manual methods of cell counting and hemoglobin analysis. Emphasis is placed on hematopoiesis theory and blood cell structure concepts including function, appearance, and cell differentiation. Students will employ a laboratory information system to order tests and report results. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Enrollment in MDLT Major courses) 2C/1/1/0

MDLT 1422 Hematology 2

This course is a continuation of Hematology 1 in which blood cell differentiation study continues. Hematology instrumentation will be introduced and students will evaluate quality control. Emphasis is placed on correlating laboratory findings with hematologic diseases. Coagulation theory and laboratory procedures are used to evaluate homeostasis. Students will employ a laboratory information system to order tests and report results. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): MDLT 1421) 4C/1/3/0

MDLT 1430 Urinalysis/Body Fluids

This course covers basic urinalysis procedures used in the clinical laboratory in the examination of a patient's urine. Students study urine formation, renal physiology, the role of the kidney in health and disease, urine specimen types, and components of the routine urinalysis test. The course also includes an overview of other non-urine body fluids analyzed in the clinical laboratory. In the laboratory, students will perform routine urinalysis using both manual and automated methods. Students will practice using a laboratory information system to order tests and report results. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Enrollment in MDLT Major courses) 3C/2/1/0

MDLT 1441 Clinical Chemistry 1

This course covers the analysis of various chemical constituents of plasma and serum. The physiology, methodology, and clinical significance of carbohydrates, non-protein nitrogen, and bilirubin is addressed. The course includes a review/overview of renal and liver function including blood tests to assess each. Laboratory Techniques concepts of solution math, spectrophotometry, pipetting and safety will be reviewed and emphasized. Quality assurance concepts, quality control procedures, and manual laboratory techniques will be presented and practiced. POCT procedures will be discussed and practiced. Students will employ a laboratory information system to order tests and report results. (Prerequisite(s): CHEM 1711 or concurrent enrollment and MDLT 1410) 2C/1/1/0

MDLT 1442 Clinical Chemistry 2

This course covers the continued study of various chemicals in plasma/serum that are routinely analyzed to contribute to patient care. The physiology, test methodology and clinical correlations of proteins, enzymes, electrolytes, lipids, acid/base balance, and endocrinology are discussed. The course also includes a brief overview of therapeutic drug monitoring and toxicology. Instrumentation principles/methodologies found in modern clinical chemistry laboratories and concepts that are basic to the operation and maintenance of automated laboratory instruments are covered. Students will test samples and controls using a variety of automated analyzers. Students will employ a laboratory information system to order tests and report results. (Prerequisite(s): CHEM 1712 or concurrent enrollment and a grade of "C" or better in MDLT 1441 and HLTH 1410) 4C/1/3/0

MDLT 1446 Phlebotomy

This course provides beginning instruction in blood specimen collection skills and procedures. The course addresses safety, legal issues, customer service, professionalism, the circulatory system, equipment, venipuncture, skin puncture procedures, and specimen transport/processing. Students may employ a laboratory information system to document specimen collection. Emphasis is placed on attaining competency in safe blood specimen collection as well as on demonstration of effective communication and professional skills to perform phlebotomy in a health care setting. (Prerequisite(s): MDLT 1410) 1C/0/1/0

MDLT 1451 Learning Lab 1-Introductory Skills

This course reinforces the basic skills required for gaining proficiency in performing introductory medical laboratory procedures in hematology and basic skills. It is designed to allow completion of hands-on skill activities and enhance practical aspects of introductory MDLT courses. The student will be given the opportunity to perform a variety of laboratory techniques with direct instructor supervision. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Concurrent enrollment in MDLT 1410 and MDLT 1421) 1C/0/1/0

MDLT 1452 Learning Lab 2-Introductory Skills

This course reinforces the basic skills required for gaining proficiency in performing introductory medical laboratory procedures in urinalysis, clinical chemistry, phlebotomy. It is designed to allow completion of hands-on skill activities and enhance practical aspects of introductory MDLT courses. The student will be given the opportunity to perform a variety of laboratory techniques with direct instructor supervision. Safety, problem solving and quality assurance are emphasized. (Prerequisite(s): Concurrent enrollment in MDLT 1441, MDLT 1430, and MDLT 1446) 1C/0/1/0

MDLT 1453 Learning Lab 3-Intermediate Skills

This course reinforces the basic skills required for attaining proficiency in performing intermediate level medical laboratory procedures in phlebotomy, and clinical chemistry. It is designed to allow completion of hands-on skill activities and enhance practical aspects of intermediate MDLT courses. The student will be given the opportunity to perform a variety of laboratory techniques with direct instructor supervision. Safety, problem-solving and quality assurance are emphasized. (Prerequisite(s): Concurrent enrollment in MDLT 1442) 1C/0/1/0

MDLT 1454 Learning Lab 4-Intermediate Skills

This course reinforces the basic skills required for attaining proficiency in performing intermediate level medical laboratory procedures in phlebotomy and clinical chemistry. It is designed to allow completion of hands-on skill activities and enhance practical aspects of intermediate MDLT courses. The student will be given the opportunity to perform a variety of laboratory techniques with direct instructor supervision. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Concurrent enrollment in MDLT 1422 and MDLT 1510) 1C/0/1/0

MDLT 1510 Immunology

This course covers basic theory in immunology, non-specific immunity and serological procedures. The reactions of antibodies and antigens are studied and performed in the laboratory. Laboratory procedures are designed to instruct the student in basic serology procedures such as serial dilutions, the use of commercial kits and interpretation of results. Students will employ a laboratory information system to order tests and report results. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Enrollment in MDLT Major courses) 2C/1/1/0

MDLT 2400 Mycology/Parasitology

This course covers parasites and fungi of medical importance. An emphasis is placed on identification of diagnostic stages and knowledge of specimen collection, handling, processing, and identification techniques. Students will employ a laboratory information system to order tests and report results. Must earn a grade of "C" or better in this course to proceed. . Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Must earn a grade of "C" or better in MDLT 1510) 2C/1/1/0

MDLT 2410 Immunohematology

This course covers the introduction to both the theoretical and practical aspects of Immunohematology, a specialized branch of laboratory medicine which involves the study of blood group antigens and antibodies. Areas of study include a review of immunology concepts, blood group genetics, reagents and quality assurance, antigens and antibodies of the ABO, Rh and other blood group systems, pre-transfusion testing procedures (ABO/Rh typing, antibody screening and identification, cross-match), hemolytic disease of the fetus and newborn, neonatal and obstetric transfusion medicine testing, adverse effects of transfusion, donor screening, and blood component preparation and usage. Students will perform a variety of transfusion medicine laboratory tests utilizing both tube and gel system methods. (Prerequisite(s): Grade of "C" or better in MDLT 1510) 3C/1/2/0

MDLT 2420 Clinical Microbiology

This course covers the isolation and identification of clinically significant microorganisms. Emphasis is placed on organism's growth characteristics, techniques for identification, safety, and quality assurance. Students will study conventional instrumentation used in the clinical microbiology lab and are introduced to advances in organism identification techniques. The correlation between pathogens, types of infection, and specimen sources is explored. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Grade of "C" or better in MDLT 1510) 4C/1/3/0 is course covers the isolation and identification of clinically significant microorganisms. Emphasis is placed on specimen sources, growth characteristics, techniques for identification, safety, and quality assurance. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Enrollment in MDLT Major courses) 4C/1/3/0

MDLT 2430 Clinical Practice Orientation

This course explains role of the MDLT student during the practicum phase of the program. Students prepare for the Clinical Practice experience and review theoretical concepts and procedures of testing performed in various clinical laboratory departments. Clinical practice policies and expectations are addressed. Additionally, the application process and timeline of certification is discussed. (Prerequisite(s): Grade of "C" or better in all coursework required through the first year including summer term) 1C/1/0/0

MDLT 2455 Learning Lab 5-Advanced Skills

This course reinforces the basic skills required for attaining proficiency in performing medical laboratory procedures in phlebotomy and immunohematology. It is designed to allow completion of hands-on skill activities and enhance practical aspects of advanced MDLT courses. It also provides an opportunity for the enrolled students to recall and practice key laboratory skills from first-year MDLT courses in preparation for the upcoming MLT clinical practice. The student will be given the opportunity to perform a variety of laboratory techniques with direct instructor supervision. Safety, problem-solving and quality assurance are emphasized. (Prerequisite(s): MDLT 1446 and MDLT 2410) 1C/0/1/0

MDLT 2456 Learning Lab 6-Advanced Skills

This course reinforces the basic skills required for attaining proficiency in performing advanced level medical laboratory procedures in phlebotomy, microbiology, mycology, and parasitology. It is designed to allow completion of hands-on skill activities and enhance practical aspects of advanced MDLT courses. The student will be given the opportunity to perform a variety of laboratory techniques with direct instructor supervision. Safety, problem solving, and quality assurance will be emphasized. Must earn a grade of "C" or better in this course to proceed. Prerequisite(s): Concurrent enrollment in MDLT 2400 and MDLT 2420) 1C/0/1/0

MDLT 2591 Clinical Practice

In this clinical laboratory course, the student is provided competency-based instruction in an affiliate hospital/clinic laboratory under the supervision of laboratory professionals. The work-based experience provides an opportunity for students to refine lab techniques and apply knowledge learned in the didactic phase in an employment-like setting with direct patient care that offers realistic experiences unavailable in student laboratory sessions. The experience also allows students to enhance non-technical attributes including, but not limited to, communication, critical thinking, multi-tasking and independent work skills. Students are evaluated in each clinical department (hematology, chemistry, urinalysis, microbiology, transfusion medicine, and coagulation) and specimen collection and processing on their clinical skills, application of knowledge, and professional behaviors and attributes. Required on-campus afternoons provide learning activities on special topics that assist students in attaining competency in the clinical practice setting. Additional required learning activities assigned by campus faculty that are supplemental to the Clinical Practice competency checklists assist students in maintaining mastery of cognitive theory in major clinical laboratory departments. (Prerequisite(s): Grade of "C" or better in all MDLT program requirements) Variable credits 1-9

MDLT 2593 Comprehensive Examinations

Students' knowledge of theory and practical applications in all department areas of the clinical laboratory will be evaluated by comprehensive examinations to assist them in their preparation for the national certification examination desired by potential employers. Students complete final summative evaluations of Clinical Practice experiences and of various components they experienced as a MLT Major. Job placement tracking efforts are described and forms provided. Prerequisite(s): Grade of "C" or better in all required courses in the Medical Laboratory AAS degree including successful completion of MDLT 2591 Clinical Practice) 1C/0/1/0

Medical Office**MEDS 1420 Health Information Foundations**

This course introduces the student to the health information management profession by covering topics fundamental to the field such as content, function, structure, and uses of health information, along with the health information profession itself. It covers prominent healthcare data sets, their purpose and use, as well as typical departmental functions associated with managing health information. An introduction of clinical vocabularies and classification systems is covered, as well as secondary data sources such as registries and indexes. Finally, students will learn the history, organization, financing, and delivery of health care services in the United States. Must earn a grade of "C" or better in this course to proceed. 3C/3/0/0

MEDS 1470 Anatomy and Physiology/Medical Office

This course provides the student with an understanding of anatomy and physiology of all systems of the human body. Common disease conditions of each body system will be highlighted. This course provides the student with a fundamental knowledge base for work in the medical office careers field. Must earn a grade of "C" or better in this course to proceed. 3C/3/0/0

MEDS 1480 Medical Terminology

This course exposes the student to the language of healthcare known as medical terminology. The student will develop an understanding of medical terminology by studying the pronunciation and definition of word parts as well as the proper format in bringing word parts together to form medical terms. Development of this foundation is designed to provide a medical vocabulary for future healthcare staff. Must earn a grade of "C" or better in this course to proceed. 3C/3/0/0

MEDS 1551 Medical Formatting/Transcription 1

This course covers formatting and transcription of a variety of medical documents. Emphasis will be on authentic forms and material, formatting, spelling, building speed and accuracy, and proofreading and correcting errors. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): MEDS 1480 or concurrent enrollment) 3C/2/1/0

MEDS 1552 Medical Transcription 2

A continuation of MEDS 1551. A variety of dictated medical material will be produced using electronic equipment. Emphasis will be on authentic forms and material, building speed and accuracy, advanced editing, proofreading and correcting errors. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): MEDS 1551) 3C/2/1/0

MEDS 1553 Medical Transcription 3

Advanced course that continues the development of medical transcription skills using word processing equipment to produce a variety of usable medical documents. Emphasis will be on authentic material, building speed and accuracy, advanced editing, proofreading and correcting errors. Material will be from physicians from various ethnic backgrounds and will cover various medical specialty areas. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): MEDS 1552) 3C/2/1/0

MEDS 1560 Computerized Health Information

An introduction to the concepts of computer technology associated with healthcare and the tools and techniques for collecting, storing and retrieving health care data. This course will explain the difference between data and information as well as discuss networks, data integrity and security, document imaging and automatic identification. Health information systems including administrative, patient registration, ADT, HIM applications, clinical, point of care, lab, radiology, pharmacy and voice recognition, will also be discussed. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): MEDS 1420) 3C/3/0/0

MEDS 1562 Billing and Reimbursement

This course provides an introduction to commercial, managed care and federal insurance plans, including medical claim form preparation and processing, as well as the reimbursement systems and prospective payment systems (PPS) used in the healthcare industry. Billing processes and procedures will be discussed and practiced including clean claims and denials and adherence to the National Correct Coding Initiatives. Chargemaster maintenance, regulatory guidelines, and reimbursement monitoring and reporting will be covered, in addition to compliance strategies. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): MEDS 1420) 2C/2/0/0

MEDS 1570 Human Disease

This course provides basic information about major disease conditions affecting all the major body systems. Information about diagnostic, treatment, and surgical procedures is also included. Students will do in-depth research on selected disease conditions using Merck Manual and the Internet. They will review and analyze medical reports reflecting the disease conditions that are presented in class. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): MEDS 1480 or MEDS 1470 or instructor permission) 3C/3/0/0

MEDS 2430 Pharmacology for the Medical Office

This course offers basic information about drug terminology, drug names (generic and brand), drug classes, and the use of drugs. Drugs frequently prescribed for common disease conditions will be reviewed by body system. Students will use electronic resources and text-based references such as the Physician’s Desk Reference (PDR) to look up detailed information about selected drugs that are being reviewed in class. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): MEDS 1480) 2C/2/0/0

MEDS 2432 Alternative Health Record Systems

This course focuses on managing health information in health care facilities other than acute care hospitals. An introduction to the basic components of the content, use and structure of health care data and data sets and how these components link to primary and secondary record systems. Topics to be discussed include the content of the health record, documentation requirements, health care data sets, registries and indices, forms and screen design and primary versus secondary records. An explanation of the organization, financing and delivery of healthcare services will be discussed, as well as a discussion of such topics as accreditation standards and licensure and regulatory agencies. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): MEDS 1420) 2C/2/0/0

MEDS 2434 Legal and Ethical Aspects of Health Information

An introduction to the legal and ethical issues that are relevant to health information. The court system and legislative process, as well as legal vocabulary will be communicated. Topics to be discussed include confidentiality, release of information, retention guidelines, patient rights and advocacy, advanced directives, and ethics. The new HIPAA guidelines will also be reviewed. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): MEDS 1420) 2C/2/0/0

MEDS 2440 Supervision of Health Information

An introduction to the principles of supervision and organization in order to develop effective skills in leadership, motivation and team building approaches. Topics will include basic management principles, human resource supervision, budgeting basics, ergonomics, how to market HIM services and performance or quality improvement. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): MEDS 1420) 2C/2/0/0

MEDS 2461 ICD-10-CM Coding

This course teaches the student to accurately code diagnoses using the ICD-10-CM coding system. This class brings the student through all of the coding conventions in order to develop a basic coding foundation. Coding of diagnoses from each body system will be covered as well as coding from healthcare documents. Emphasis is on Principle Diagnosis, Secondary Diagnoses, Complications, and Comorbidities. Other topics include DRG’s, coding compliance, over-coding and under-coding. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): A grade of “C” or better in MEDS 1470 and MEDS 1480) 3C/3/0/0

MEDS 2462 ICD-10-PCS Coding

This course teaches the student to accurately code procedures using the ICD-10-PCS coding system. This class brings the student through all of the coding conventions in order to develop a basic coding foundation. Coding procedures from each section of ICD-10-PCS will be covered as well as coding from healthcare documents. Emphasis will be on Principle Procedure and Secondary Procedures, DRG’s, coding compliance, over-coding and under-coding. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): A grade of “C” or better in MEDS 1470 and MEDS 1480) 4C/4/0/0

MEDS 2470 CPT-4 Coding

This course teaches the student to accurately code procedures using the CPT-4 coding system. This class brings the student through all of the coding conventions in order to develop a basic coding foundation. Coding of procedures from each body system will be covered as well as coding from operative reports, emergency room reports, physician office reports and other healthcare documents. Students will also be trained in coding from all sections within the CPT-4 system as well as Evaluation and Management coding and HCPCS Level 2-National coding. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): A grade of “C” or better in MEDS 1470 and MEDS 1480) 3C/3/0/0

MEDS 2480 Advanced Coding

In this course, students will use their basic ICD and CPT coding skills while learning to correctly code diagnoses and procedures from a multitude of source documents such as Inpatient Records; Ambulatory Surgery Records; Emergency Room Reports; Physician Office Cases and Ancillary Service Reports. Students will also become familiar with Diagnosis Related Groups and Ambulatory Payment Classifications. Through instruction in coding these cases, the students will become familiar with what will be expected of them in a real coding position in a healthcare organization. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): A grade of “C” or better in MEDS 2461, MEDS 2462 and MEDS 2470) 3C/3/0/0

MEDS 2510 Quality Management and Health Statistics

This course is an introduction to the principles of the quality assessment process which encompasses a framework for gaining skills in collecting and analyzing data. This course covers quality assessment and improvement including collection tools, data analysis and reporting techniques. Utilization management, risk management and case management will also be discussed. This course is also a study of the effective use, collection, arrangement, presentation and verification of health care data. Vital statistics, healthcare statistics and descriptive statistics, as well as reliability and validity of data will be discussed. Research techniques and the IRB process will also be covered. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): MEDS 1420 with a grade of “C” or better) 3C/3/0/0

MEDS 2590 HIT Internship/Capstone Project

Students will apply the coursework, theories, skills, and ethics learned during the program to the HIT Internship/Capstone. Under the supervision of a qualified health information professional, the student will gain professional practice and experience, when available, in a healthcare facility. Students will meet written goals and objectives and be evaluated by the Health Information Supervisor and the College Internship Coordinator. The capstone includes a focused review and objective measurement of the Domains and Subdomains required for writing the national certification examination. Students are required to select an independent area of study from a wide-range of topics and disciplines to broaden their scope of interest in health information management. Students work with faculty advisors to schedule the internship, independent study, and healthcare project. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): All required coursework for the Health Information Technology AAS Degree with a “C” or better in all MEDS-prefix courses and instructor approval.) 3C/3/0/0

MEDS 2594 Medical Coding Capstone Project

The focus of this class is to simulate 3 credits of on the job experience as a medical coding specialist at a multi-specialty healthcare facility. This internship will provide you with an opportunity to utilize your coding skills and knowledge in an electronic environment. The coding capstone is a vital part of your education that serves as a format to demonstrate your level of expertise. All coding assignments in this course may be compiled into a portfolio to present to a future employer. (Prerequisite(s): All required coursework for the Medical Coding Diploma with a grade of “C” or better or instructor approval.) 3C/3/0/0

Music

MUSC 1700 Music Theory and Lab 1

This course is Part 1 of a four-semester sequence in Music Theory and Lab focusing on the development of written music notation, including scales, tonality, key modes, intervals, transposition, chords, cadences, non-harmonic tones and melodic organization. Aural Skills laboratory focuses on practical musicianship training in keyboard, sight singing, and ear training. (Prerequisite(s): READ 0722 Reading 2 with a grade of “C” or better, or appropriate assessment score) (MnTC: Goal 6) 4C/2/2/0

MUSC 1705 Music Theory and Lab 2

Part 2 of a four-semester sequence in Music Theory and Lab focusing on the development of written music notation, including scales, tonality, key modes, intervals, transposition, chords, cadences, non-harmonic tones and melodic organization. Aural Skills laboratory focuses on practical musicianship training in keyboard, sight singing, and ear training. (Prerequisite(s): MUSC 1700 with a grade of “C” or better) (MnTC: Goal 6) 4C/2/2/0

MUSC 1710 Music Theory and Lab 3

Part 3 of a four-semester sequence in Music Theory and Lab focusing on the development of written music notation, including scales, tonality, key modes, intervals, transposition, chords, cadences, non-harmonic tones and melodic organization. Aural Skills laboratory focuses on practical musicianship training in keyboard, sight singing, and ear training. (Prerequisite(s): MUSC 1705 with a grade of “C” or better) (MnTC: Goal 6) 4C/2/2/0

MUSC 1715 Music Theory and Lab 4

Part 4 of a four-semester sequence in Music Theory and Lab focusing on the development of written music notation, including scales, tonality, key modes, intervals, transposition, chords, cadences, non-harmonic tones and melodic organization. Aural Skills laboratory focuses on practical musicianship training in keyboard, sight singing, and ear training. (Prerequisite(s): MUSC 1710 with a grade of “C” or better) (MnTC: Goal 6) 4C/2/2/0

MUSC 1720 Fundamentals of Music

This course has been designed and structured for students with very little or no musical background. Its goal is to provide you with the tools for a basic understanding of the rudiments of music. Course topics include: The Keyboard, Notation: Staff, and Melody, Clefs, Major Scales, Key Signatures, Minor Scales, Intervals, Triads and The Dominant Seventh Chord, Introduction to Rhythm and Meter, Basic Ear Training Exercises. (Prerequisite(s): READ 0722 Reading 2 with a grade of “C” or better or appropriate assessment score) (MnTC: Goal 6) 3C/3/0/0

MUSC 1730 Concert Choir

This course is a mixed choral ensemble specializing in a wide range of sacred and secular choral literature of all historical periods and nationalities. The ensemble provides singers the opportunity to rehearse, learn and perform repertoire for an a cappella choir as well as repertoire performed with professional instrumental ensembles. The Saint Paul College Concert Choir is open to all students, regardless of major. (MnTC: Goal 6) 2C/0/2/0

MUSC 1735 Classical Piano 1

Part 1 of a two-semester sequence designed to develop basic keyboard and musicianship skills including technique, sight reading, harmonization, accompaniment, theory, and piano repertoire in preparation for the Piano Proficiency Exam. (MnTC: Goal 6) 2C/0/2/0

MUSC 1736 Classical Piano 2

Part 2 of a two-semester sequence designed to develop basic keyboard and musicianship skills including technique, sight reading, harmonization, accompaniment, theory, and piano repertoire in preparation for the Piano Proficiency Exam. (Prerequisite(s): MUSC 1735 with a grade of “C” or better or instructor approval) (MnTC: Goal 6) 2C/0/2/0

MUSC 1740 Music Appreciation

This course is designed to heighten the enjoyment of music by improving listening skills, increasing musical knowledge, and exploring new forms and styles of Western music throughout the centuries. Course topics students will learn include basic elements of music, musical form and style throughout history, and representative composers and their music. (Prerequisite(s): READ 0722 Reading 2 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 6 & 8) 3C/3/0/0

MUSC 1745 History of Rock and Roll

The purpose of this course is to explore the emergence of rock and roll music as a cultural phenomenon in the United States. Besides rock and roll, American musical styles including rhythm and blues, country, folk and rock will be studied within a historical and cultural perspective. (Prerequisite(s): READ 0722 Reading 2 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 6 & 7) 3C/3/0/0

MUSC 1750 Jazz History

This introductory course is designed to help students become familiar with and appreciate jazz as an important American art form. The course follows the historical development of jazz style and innovations to Post-Modern developments and integration with other musical forms. Attendance at a live performance is required. (Prerequisite(s): READ 0722 Reading 2 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 6 & 7) 3C/3/0/0

MUSC 1760 American Music

This course provides an introduction to folk, ethnic, popular and classical music in the United States. It is designed to help students become familiar with the music from diverse cultural groups and regions of the country. America’s Music is an historical overview of the evolution of musical traditions in American society. Attendance at a live performance is required. (Prerequisite(s): READ 0722 Reading 2 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 6 & 7) 3C/3/0/0

MUSC 1765 Music of Latin America and the Caribbean

This course introduces the musical styles and genres of Latin American and Caribbean music and the mix of aesthetic, cultural, and geographical distinctions that have emerged over time to define and identify the music of the continent. (Prerequisite(s): READ 0722 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 6 & 7) 3C/3/0/0

MUSC 1770 Music in World Cultures

The aim of this course is to gain a broader understanding of music as worldwide phenomenon through the study of selected musical traditions and cultures of the world. This course will concentrate on the development and historical background of the music, the introduction of typical musical instruments and most well-known musicians of each region, and the relationship between music and the society. (Prerequisite(s): READ 0722 Reading 2 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 6 & 8) 3C/3/0/0

MUSC 1790 Special Topics in Music

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 6) Variable credits 1-6

Nanoscience

NANO 1100 Fundamentals of Nanotechnology 1

This course provides an introduction to nanoscience and includes the history of nanotechnology and also an introduction into the tools used to study the world at the nanoscale. This course also covers a sense of scale, exponential notation, surface area to volume ratio, molecular and atomic structure and the various forces that are predominant at various scale levels (macro, micro and nano). Understanding of these concepts is fundamental to learning how nanoscale interactions and phenomena differ from those in our common macroscale world. Societal impacts along with a technology maturity model are also considered as they apply to nanoscience. Finally this first course provides specific study of the application of nanotechnology to biological areas such as the study of proteins, drug interactions, cell operation and ion channels. Sensing systems and newly developed diagnostic tools that are a result of understanding the biological system at the nanoscale are also discussed. Students taking this course should either have successfully completed a college biology course, physics course (first semester) and algebra or be taking these courses concurrently with the 1100 course. 3C/3/0/0

NANO 1110 Student Lab Experience and Research

This course will provide introductory experience with nanoscience equipment, investigative research approaches and critical thinking methodologies. The students will work on industry provided problems and examples, traditional nanoscience experiments and independent work. This class will focus on the investigative process, scientific method and project planning. Students will apply and investigate foundational nanotechnology concepts while learning basic equipment operation, safety techniques and basic lab procedures. (Prerequisite(s): None.) 3C/2/1/0

NANO 1200 Fundamentals of Nanotechnology 2

The second semester course focuses on the material science, chemistry and physics aspects of the nanoscale. The course begins with the discussion of elemental material attributes and how environment can impact properties and performance of the starting material. Crystal structure and material properties are then discussed with an emphasis on differences in interactions and measurements at various scale realms. Using the current semiconductor fabrication process as a foundation, students are introduced to the concepts and limitations of current photolithography and etching processes. New approaches toward electronic circuits are introduced as students gain an understanding of the current process and necessary operation concepts for today's electronic devices. Finally, the concepts of fluid mechanics, optics, photonics and lasers are discussed with an emphasis on new devices and applications based on nanoscale properties. Students taking this course should either have taken chemistry and the second semester of physics or be enrolled in these courses concurrent with the 1200 course. (Prerequisite(s): MATH 1730, BIOL 1740, NANO 1100, and PHYS 1720 with grades of “C” or better) 3C/3/0/0

NANO 1210 Computer Simulation

This course will cover the application of computer simulation (modeling) to nanoscale systems. In addition, this course provides a visualization of concepts and interactions covered in NANO 1100 and NANO 1200. The course will cover applied statistics, design of experiments and impact of input parameter variations for biological and mechanical systems. (Prerequisite(s): NANO 1100 with a grade of “C” or better) 1C/0/1/0

NANO 2101 Nanoelectronics

This course will increase the depth of topics and discussion of those covered in NANO 1200. Quantum physics will be reintroduced at a greater depth with coverage of band structure, conduction, diffusion, thin film response and optical properties from a modern physics perspective. Students will study, measure, evaluate and create fabricated structures such as nanowires, cantilevers and nano channels. Application of nanoscale principles will be used to discuss imprint lithography, etching, component block assembly of nanotransistors, quantum computing, magnetic and electron spin memory and holographic memory devices. (Prerequisite(s): NANO 1100, NANO 1200, and NANO 1210 with a “C” or better. Concurrent registration in NANO 2111, NANO 2121, NANO 2131, NANO 2140 and NANO 2151.) 3C/3/0/0

NANO 2111 Nanobiotechnology/Architecture

This course will increase the depth of topics and discussion of those covered in NANO 1100. Students will investigate the potential of nanoscience in multiple biological applications including nanopore, nanoparticle and nanochannel structures, diagnostics and treatment. Emphasis will be placed on interactions between biological and non-biological systems and understanding biochemistry. (Prerequisite(s): NANO 1100 with a grade of “C” or better. Concurrent registration in NANO 2101, NANO 2121, NANO 2131, NANO 2140 and NANO 2151.) 3C/3/0/0

NANO 2121 Nanomaterials

This course will increase the depth of covered topics and discussion of those covered in NANO1100 and NANO1200 courses. Subjects covered include single walled and multiwalled carbon nanotubes (fabrication, property measurement and compound formulation), creation of nanomaterials, particles and crystals by various processes including colloidal suspensions, deposition, evaporation and plating. Properties (hardness, wear resistance, adhesion, conductivity etc.) and measurement techniques of nanomaterials will be covered. Interactions between organic and inorganic materials such as micro array techniques and bacteria molding will be discussed. (Prerequisite(s): NANO 1100 and NANO 1200 with a grade of “C” or better. Concurrent registration in NANO2101, NANO2111, NANO2131, NANO 2140 and NANO2151.) 3C/3/0/0

NANO 2131 Manufacturing Quality Assurance

This course will cover multiple manufacturing methodologies (chemical solutions, electro filament, molding, coating, rolling etc. first in the traditional sense and second as these techniques apply to the nanoscale. Quality Assurance (Six Sigma) practices will be discussed with an emphasis on QA and reliability at the nanoscale. Design of experiments, measurements, approaches, data tracking, process improvement and statistical analysis and reporting will be discussed. (Prerequisite(s): A grade of “C” or better in NANO 1100, NANO 1200, and NANO 1210. Concurrent registration in NANO 2101, NANO 2111, NANO 2121, NANO 2140 and NANO 2151.) 2C/2/0/0

NANO 2140 Interdisciplinary Lab

This course will cover the experimental aspects of the accompanying third semester nano courses. Four major lab activities are planned for the course. Each lab will be a series of creation, measurement, assessment, improvement and rework. This circular understanding and assessment/improvement cycle will be included in the detail lab descriptions. (Prerequisite(s): A grade of “C” or better in NANO 1100, NANO 1200 and NANO 1210. Concurrent registration in NANO 2101, NANO 2111, NANO 2121, NANO 2131 and NANO 2151.) 3C/0/3/0

NANO 2151 Career Planning and Industry Tours

This course will prepare students for the Nanoscience Technician Program fourth semester at the University of Minnesota and also for the job market upon graduation. Class discussion and guest speakers will advise students in selection of a specific career path, creation of a resume and portfolio, preparation and practice in job interviewing and options for continuing education. The industry tours will provide students with a broad experience of potential jobs and activities related to nanoscience in a variety of industrial settings. This internship will support career decisions and provide visual application of the concepts studied. Each student will spend a total of approximately 20 hours in various industrial settings, visiting 4 to 6 companies from various industries to complete the total 20 hours. (Prerequisite(s): A grade of “C” or better in NANO 1100, NANO 1200 and NANO 1210. Concurrent registration in NANO 2101, NANO 2111, NANO 2121, NANO 2131 and NANO 2140.) 1C/1/0/0

NANO 2970 Industry Internship

Students will participate in observational internship at one or more industry locations. This internship will provide a broad base of application knowledge, which will complement and enhance specific course materials. Industry Task Force members have committed to providing internships. (Prerequisite(s): NANO 2131 with a grade of “C” or better.) 1C/0/0/1

Natural Sciences

NSCI 1710 Earth Science

This course introduces students to topics in geology, oceanography, meteorology and astronomy. The solid earth and earth processes, the liquid hydrosphere and the gaseous atmosphere are studied, as well as the earth as a part of the solar system. It is intended for students interested in the natural sciences and can be used to fulfill the lab science requirement. Two hours of lab per week are required. Lab time will be used to reinforce lecture concepts and will include experiments, hands-on activities, and field trips. Traditional, hybrid, and online sections are available. (Prerequisite(s): READ 0722 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 3 & 10) 4C/3/1/0

NSCI 1721 Introduction to Geology

This course introduces students to the fundamentals of geology, including rock and mineral formation, geologic time, global tectonic processes such as earthquakes and volcanoes, and earth surface processes that change our landscape. Current issues relating to geology, such as global climate change and energy resources will be addressed as well. Two hours of lab per week are required. Lab time will be used to reinforce lecture concepts and will include experiments, hands-on activities and field trips. Traditional and hybrid sections are available. (Prerequisite(s): READ 0722 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 3 & 10) 4C/3/1/0

NSCI 1730 Introduction to Oceanography

This course introduces students to basic scientific principles of oceanography. Topics covered will include the geological, biological, atmospheric, and chemical processes at work in the oceans, as well as contemporary issues related to marine pollution and resource use. Course includes lab-like learning activities. Traditional and online sections are available. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 3 & 10) 3C/3/0/0

NSCI 1740 Introduction to Meteorology

This course introduces students to basic scientific principles of meteorology. Topics include basic properties of the atmosphere, weather terminology, weather phenomena, instrumentation and forecasting. Course includes lab-like learning activities. Traditional and hybrid sections are available. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 3 & 10) 3C/3/0/0

NSCI 1750 Natural Disasters

This course introduces students to the investigation of the physical processes, origins of natural disasters and human and economic impacts caused by natural disasters. Content covered will include earthquakes, volcanoes, severe weather, climate change, wildfires, floods and other catastrophic phenomena. Course includes lab-like learning activities. Traditional, online and hybrid sections are available. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 3 & 10) 3C/3/0/0

NSCI 1770 Introduction to Energy and the Environment

This course introduces students to energy production, supply, efficiency and the projections of future needs. The potential of solar, biomass, photovoltaics, wind and other continuous flow sources are covered. Crude oil, natural gas, coal and nuclear sources of energy are studied. Environmental, political, economic and ethical considerations are reviewed. Course includes lab-like learning activities. Traditional and hybrid sections are available. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 3 & 10) 3C/3/0/0

NSCI 1780 Contemporary Issues in Science

Scientific dilemmas and advances in science make headlines every day. Without knowing the science behind the top issues, it is difficult to separate fact from hype. In this course we will focus on contemporary issues such as climate change, renewable energy, environmental toxins, stem cell research, gene therapy, and pandemic diseases. Students will learn the basic scientific concepts behind each issue and will then explore the ethical dilemmas that each issue brings up. Course includes lab-like learning activities. Traditional, hybrid, and online sections are available. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 3 & 9) 3C/3/0/0

NSCI 1782 Minnesota Geology

This course surveys Minnesota’s geological history, from exploring the formation of the bedrock more than 2 billion years ago to the current processes that shape the land usage in this State today. Students will learn about the many ways the state’s geology contributed to the economic, environmental and political development. Topics include: geologic time, plate tectonics, rock and mineral identification, topographic and geologic maps, superficial processes, and environmental concerns. Through numerous field trips, we will look to the Twin Cities metro area to provide examples of many different earth and environmental processes, and to give us hands-on experience understanding how these processes work (glacial history, rock formations, caves and ancient ocean floor, rivers, and other geologic sites). Course includes lab-like learning activities. Traditional and hybrid sections are available. (Prerequisite(s): READ 0722 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 3 & 10) 3C/3/0/0

NSCI 1790 Special Topics in Natural Science

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goals 3 & 10) Variable credits 1-6

NSCI 2770 Natural Sciences Internship

This course provides students with an opportunity to design and carry out a science research project under the supervision of a faculty advisor. The research report will be prepared using literature review, problem identification, procedural documentation, data collection, data analysis, findings, conclusions, and recommendations. Evaluation will be carried out by faculty teams and experts in the field. The course will also provide an opportunity for field study in an approved internship setting. (Prerequisite(s): Instructor approval) (MnTC: Goal 3) Variable credits 1-4

Nursing Assistant/Home Health Aide

NAST 1111 Nursing Assistant & Home Health Aide

This course introduces concepts of basic human needs, health illness continuum, and basic nursing assistant and home health aide skills. Skills are demonstrated in a supervised laboratory setting. (Prerequisite(s): Nursing Assistant Seminar and appropriate assessment score or grade of "C" or better in READ 0721) 4C/3/1/0

NAST 1112 Nursing Assistant-Clinical

This course will give the student clinical experience in a long-term care facility. Completion of NAST 1111 and NAST 1112 will meet the state and federal criteria for employment in long-term care. The student must attend all hours of clinical. (Prerequisite(s): NAST 1111) 1C/0/1/0

Personal Trainer

PTRN 1410 Personal Training 1

This course introduces the student to the major components of fitness analysis, basic exercise program design, and the skills necessary for teaching individual activities. Components of exercise physiology are included throughout. Must earn a grade of "C" or better to proceed. (Prerequisite(s): Must be enrolled in Personal Trainer program.) 5C/3/2/0

PTRN 1420 Personal Training 2

This course explores advanced components of fitness analysis, functional training program design, and the skills necessary for teaching group activities. Components of exercise physiology are included throughout. (Prerequisite(s): PTRN 1410 with a grade of "C" or better) 5C/3/2/0

PTRN 1430 Functional Exercise Physiology

The emphasis of this class is to prepare Personal Trainers to be Metabolic Testing Specialists. Exploration of the effects of various types of exercise on body systems complete with testing protocols will be performed. VO₂ max test, power tests, plyometric tests, Lactate testing, body fat testing, and speed testing will be performed. Progressions based on testing outcomes will be created. (Prerequisite(s): PTRN 1410 with a grade of "C" or better) 3C/1/2/0

PTRN 1490 Personal Training Internship

This course is the final component of the personal trainer curriculum that serves to integrate all materials learned in a practical setting. Students will be placed at various training facilities providing direct application of personal training techniques and methodologies. Must earn a grade of "C" or better in this course. (Prerequisite(s): Instructor approval or completion of entire personal trainer curriculum and current CPR certificate) 5C/0/5/0

Pharmacy Technology

PHAR 1710 Pharmacy Law and Ethics

This course will provide the student with the Federal and State laws as they pertain to pharmacy. This course will also address ethical theories and principles as they apply to the area of pharmacy practice. It will assist in preparing the student for the Pharmacy Technician Certification Exam. Must earn a grade of "C" or better to proceed in the Pharmacy Technician program. 3C/3/0/0

PHAR 1715 Fundamentals of Pharmacy Technology 1

Fundamentals of Pharmacy Technology will provide students with a detailed, interactive experience that leads to the understanding of community pharmacy practice, medication safety and communications in health care. Students will participate in active learning activities in the classroom, online and in the pharmacy lab. This course is intended to meet the goals of the model curriculum for pharmacy technician training developed by the American Society of Health-System Pharmacists. This class will provide to the student information necessary for preparation of the Technician Certification Exam in prescription processing. Must earn a grade of "C" or better to proceed in the Pharmacy Technician program. 5C/4/1/0

PHAR 1720 Foundations of Pharmaceutical Calculations

This course will introduce the student to foundational mathematical calculations utilized in pharmacy practice. This course will teach mathematical calculation and problem solving for production of pharmaceutical products. Must earn a grade of "C" or better to proceed in the Pharmacy Technician program. (Prerequisite(s): MATH 0742 or appropriate assessment score) 4C/4/0/0

PHAR 1730 Principles of Pharmacy

This course offers a didactic review of prescription processing with laboratory application. Students will receive skill development and problem solving in non-sterile product preparation. (Prerequisite(s): PHAR 1720 Foundations of Pharmaceutical Calculations) 5C/3/2/0

PHAR 1735 Pharmacy Medication Technology

The student will use technologies within the scope of pharmacy practice. (Prerequisite(s): PHAR 1715 Fundamentals of Pharmacy Technology 1) 1C/1/0/0

PHAR 1750 Pharmacy Internship 1 - Retail

Students will receive pharmacy practice experience to refine skills necessary for employment as a pharmacy technician in a retail setting. (Prerequisite(s): PHAR 1730 Principles of Pharmacy with a grade of "C" or better) 3C/0/0/3

PHAR 2710 Fundamentals of Pharmacy Technology 2

Systems, regulations and applications of pharmacy practice in institutional settings. (Prerequisite(s): PHAR 1715 Fundamentals of Pharmacy Technology 1 with a grade of "C" or better) 5C/4/1/0

PHAR 2720 Pharmacy Sterile Products Lab

This class will provide the student with the knowledge and skills to prepare, calculate, or produce sterile products for pharmaceutical use. (Prerequisite(s): PHAR 2710 Fundamentals of Pharmacy Technology 2) 5C/4/1/0

PHAR 2740 Pharmacotherapy of Disease Processes

The basic concepts of diseases and the mechanisms of disease will be presented. It will include the general physiologic principles for the following systems: nervous, endocrine, skeletal, muscular, cardiovascular, respiratory, gastrointestinal, renal, reproductive, skin, hematologic. The course will discuss immune disorders and immune system responses along with infectious diseases and effects of nutrition and heredity on disease. (Prerequisite(s): PHAR 1715 Fundamentals of Pharmacy Technology 1 with a grade of "C" or better) 4C/4/0/0

PHAR 2750 Pharmacy Internship 2 - Hospital

Experience in the institutional/hospital setting to refine skills learned in previous pharmacy technician coursework. (Prerequisite(s): PHAR 1750 Pharmacy Internship 1 - Retail) 4C/0/0/4

Philosophy

PHIL 1700 Introduction to Philosophy

The purpose of this course is to engage the student in a number of central topics in philosophy through the examination and analysis of the writings of contemporary and major Western philosophers, as well as through the close study of several fundamental issues which have arisen in the course of the development of the Western philosophical tradition. Topics of study will include areas such as the nature of human knowledge, perception and illusion, the nature of consciousness, personal identity, minds, brains and machines, freedom and determinism, philosophy of religion, and the meaning of life. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 6) 3C/3/0/0

PHIL 1710 Logic

Logic is the study of arguments. In this course the student will be introduced to the principles of logic and will be able to use these principles in evaluating verbal and written communication. Students will learn both about formal logic, which includes syllogisms and truth-functional logic, as well as informal logic, which includes fallacies and looking at arguments in context. Although this course falls within the goal of mathematics, it may not apply to certain technical programs or meet certain transfer requirements for mathematics. (MnTC: Goal 4) 3C/3/0/0

PHIL 1715 Philosophy of Scientific Reasoning This course explores philosophical questions about the nature of science and scientific reasoning and helps students build skill at using and evaluating scientific reasoning. For instance, the course will address questions such as: What is the nature of science? Is science compatible with religion? How does science work? Are there limits to the knowledge science can give us? What is the difference between science and pseudoscience? How can we do a good job of understanding and evaluating scientific reasoning, especially when it is reported in the popular media? The course will explore these questions using historical and contemporary case studies about a variety of subjects, including evolution, astronomy and astrology, and theories and ideas in the social sciences, physics, and biology. The goal of the course will be to use these case studies to explore philosophical questions about the nature of scientific reasoning and to develop their own ability to understand and evaluate scientific reasoning in their lives and career fields. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 6) 3C/3/0/0

PHIL 1720 Ethics

The purpose of this course is to acquaint the student with the rich and varied tradition of ethical thought found in Western Civilization. Its historical focus will provide a background for perennial ethical themes. Students will examine a variety of theoretical frameworks through which to approach moral issues and will practice using the principles of each to make judgments about issues. Students are expected to develop a philosophical perspective on moral questions, as evidenced in the ability to relate the positions of various ethical philosophers to contemporary issues, both in written work and in classroom discussion. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 9) 3C/3/0/0

PHIL 1722 Health Care Ethics

This course introduces basic ethical theories, principles, and decision-making guidelines used in health care ethics. It examines moral issues confronting health care practitioners, patients, and others involved in medicine. The course includes philosophical analysis of contemporary, moral decision-making on topics such as disclosure, confidentiality, human cloning, medical research, abortion, transplantation, allocation of limited resources, cultural differences regarding medical practices, and euthanasia. The course is open to all students interested in health care ethics. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 9) 3C/3/0/0

PHIL 1740 World Mythology

This survey course introduces students to myths from around the world: stories about gods, heroes and heroines, monsters, the workings of the universe, and how human beings fit in. Myths address various important questions people have, such as "why are human beings on the earth?" "what is the best way to live a life?" and "why is there death?" We will look at how people have attempted to answer and make sense of these questions, as well as consider how these stories are a product of a particular culture and why they were so important to the people that produced them. We will also look at how they have continued to influence (Western) culture into the present time. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 8) 3C/3/0/0

PHIL 1742 Greek and Roman Mythology

This survey course introduces students to Greek and Roman myths: stories about gods, heroes and heroines, monsters, the workings of the universe, and how human beings fit in. Myths address various important questions people have, such as "why are human beings on the earth?" "what is the best way to live a life?" and "why is there death?" We will look at how people have attempted to answer and make sense of these questions, as well as consider how these stories are a product of a particular culture and why they were so important to the people that produced them. We will also look at how they have continued to influence culture into the present time. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 8) 3C/3/0/0

PHIL 1750 Eastern Philosophy

The purpose of this course is to acquaint the student with the major Asian philosophies. Students will engage in study of the history and ideas of the following schools of thought: Hinduism, Taoism, Confucianism and Buddhism. This will include examination and analysis of selections from works such as the Upanishads, the Tao Te Ching, the Analects of Confucius and the writings of the Dhammapada. Topics of study will include the nature of reality and being, social philosophy and ways of attaining knowledge. We will compare the ideas of Eastern philosophers on certain fundamental issues with the conclusions of various Western philosophies. The course will be conducted in a discussion format supplemented by instructor lectures. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 8) 3C/3/0/0

PHIL 1760 World Religions

This course is an introduction to the world religions of Hinduism, Buddhism, Judaism, Christianity and Islam. Attention may also be given to indigenous religions and new religious movements. The course will focus on the main practices and beliefs, scriptures, formative periods and historical development of these religions. It will also include ways fundamental religious questions are answered and a critique of religion from a secular perspective. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 8) 3C/3/0/0

PHIL 1770 Feminist Philosophy

Feminist philosophers seek to understand and critique practices and institutions that oppress and subordinate women. They explore questions like: what is the nature of gender oppression, and how is it related to other types of oppression, such as racial oppression? What makes someone a woman or man? Is there a difference between a person's sex and their gender? Are women "naturally" different from men, and would it matter if they were? Is there a male bias in science and ethics? Can a pluralistic society like ours fight women's oppression while also recognizing the rights of cultures to maintain their distinctive practices? In this class, students will work to understand and evaluate prominent feminist answers to these questions, with an emphasis on helping students develop their own well-reasoned views on feminist issues and apply those views to their own lives. (MnTC: Goal 6 & 7) 3C/3/0/0

PHIL 1790 Special Topics in Philosophy

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (Prerequisite(s): READ 0722 with a grade of "C" or better, or appropriate assessment score) (MnTC: Goal 6) Variable credits 1-6

Phlebotomy

PHLB 1405 Phlebotomy

This course provides instruction in blood specimen collection skills and procedures. The course addresses safety, legal issues, customer service, professionalism, equipment, venipuncture, skin puncture procedures, and specimen transport/processing. Emphasis is placed on attaining competency in safe blood specimen collection and effective sample processing/handling to preserve specimen integrity as well as on demonstration of effective communication and professional skills to function in a health care setting. (Prerequisite(s): HLTH 1410, BIOL 1730, PHIL 1722, SPCH 1710 or SPCH 1720, HLTH 1430 or HLTH 1432 or concurrent enrollment) 4C/2/2/0

PHLB 1410 Phlebotomy Clinical Experience

This course provides concentrated practice and phlebotomy skill development in a health care setting (affiliate) where information learned in PHLB 1400 can be applied. Students work under the guidance and supervision of clinical staff at the assigned affiliate. Demonstration of a minimum of 100 successful blood collection procedures is required. The specific class times will vary according to the assigned site. (Prerequisite(s): PHLB 1400) 2C/0/0/2

Physics

PHYS 1720 Principles of Physics 1

This course introduces students to fundamental principles of physics and their application to familiar phenomena. Topics include motion, fluids, heat, work, forces, gravity, waves and sound, and energy. The topics will be related to modern technology and everyday phenomena. The course is intended for students who have not had a high school physics course. Class includes lecture and lab. (Prerequisite(s): MATH 1730 with a grade of "C" or better) (MnTC: Goal 3) 4C/3/1/0

PHYS 1722 Principles of Physics 2

This course is a continuation of PHYS 1720 Principles of Physics 1. It covers electricity and magnetism, light and optics, simple circuits, topics in modern physics and applications and technology. Class includes lecture and lab. (Prerequisite: PHYS 1720 Principles of Physics 1) (MnTC: Goal 3) 4C/3/1/0

PHYS 1760 Descriptive Astronomy (no lab)

This course introduces students to astronomy. It includes the observation of the planets and stars weather permitting. The course will include topics such as life and death of stars, dark matter, formation of a solar system, the Big Bang Theory and more. Course includes lab-like learning activities. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 3 & 10) 3C/3/0/0

PHYS 2700 General Physics 1 (with Calculus)

Calculus-based course with a study of Kinematics, Dynamics, Laws of Motion, Gravitation, Kinetic and Potential Energy; Conservation of Energy; Linear and Angular momentum; Equilibrium and Fluid Dynamics. Designed to fulfill physics requirements for students in liberal arts and sciences, engineering, and other related science fields. Class includes lecture and lab. High School Physics is recommended. (Prerequisite(s): MATH 2749 Calculus 1 with a grade of "C" or better) (MnTC: Goal 3) 5C/4/1/0

PHYS 2710 General Physics 2 (with Calculus)

Continuation of General Physics 1 (with Calculus). Topics include: Wave Phenomenon, Fluids, Electricity and Magnetism; electrical circuits, light and optics and modern physics. Designed to fulfill physics requirements for students in liberal arts and sciences, engineering, and other related science fields. Class includes lecture and lab. (Prerequisite(s): PHYS 2700 General Physics 1 with a grade of "C" or better) (MnTC: Goal 3) 5C/4/1/0

PHYS 2760 Introductory Astronomy (with lab)

This course is designed for the non-science student who wants to know more about astronomy. We'll be studying the motion of the night sky, the planets and what shapes them, how stars are made and what happens when stars die all the way out to the edges of the known universe. Topics of note will include Planetary Formation, Extra Solar Planet Search, Dark Matter, Dark Energy, the Expanding Universe, and many more fun topics! This course includes a laboratory component with hands on activities to help build understanding. (Prerequisite(s): MATH 0742 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 3 & 10) 4C/3/1/0

PHYS 2790 Special Topics in Physics

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 3) Variable credits 1-6

Pipefitting

PIPE 1410 Pipe Science/Math

Study of selected branches of physics and math applied to pipefitting. Areas covered include properties of matter, heat, math and mechanics. (Prerequisite(s): Must be enrolled in Pipefitting pre-apprenticeship program) 5C/2/3/0

PIPE 1420 Pipe Blueprint Reading

Study of basic drafting principles as they relate to piping drawing and blueprints. (Prerequisite(s): Must be enrolled in Pipefitting pre-apprenticeship program) 3C/1/2/0

PIPE 1430 Pipe Welding 1

Basic course in oxyacetylene welding and cutting of pipe. (Prerequisite(s): Must be enrolled in Pipefitting pre-apprenticeship program) 5C/1/4/0

PIPE 1441 Basic Heating 1

Introductory course on low pressure steam. Areas include boiler, piping and heat transfer units. (Prerequisite(s): Must be enrolled in Pipefitting pre-apprenticeship program) 3C/1/2/0

PIPE 1442 Basic Heating 2

This course is a basic study of hydronic heating systems. Areas include systems, piping layout and figuring heat loss. (Prerequisite(s): Must be enrolled in Pipefitting pre-apprenticeship program) 3C/1/2/0

PIPE 1445 Apprentice Pipefitting Theory

Introductory course on pipefitting apprenticeship programs. Areas include heating, cooling and piping procedures. (Prerequisite(s): Must be enrolled in Pipefitting apprenticeship program.) 2C/0/2/0

PIPE 1451 Pipe Shop 1

Care and use of tools and equipment and uses of different types of pipe fittings, hangers and the assembly of pipe and fittings are covered. (Prerequisite(s): Must be enrolled in Pipefitting pre-apprenticeship program) 4C/0/4/0

PIPE 1452 Pipe Shop 2

Course consists of tube bending, flaring, soldering, brazing and rigging. (Prerequisite(s): PIPE 1451 and must be enrolled in Pipefitting pre-apprenticeship program) 4C/0/4/0

PIPE 1455 Introduction to Apprentice Pipe Welding 1

Basic course in pipe welding and cutting of pipe. (Prerequisite(s): Must be enrolled in Pipefitting apprenticeship program.) 2C/0/2/0

PIPE 1522 Basic Air Conditioning and Refrigeration

Fundamental concepts of air conditioning are presented. Areas include air treatment, moisture content, ventilation and purity. (Prerequisite(s): PIPE 1451 and must be enrolled in Pipefitting pre-apprenticeship program) 2C/1/1/0

PIPE 1530 Pipe Welding 2

Basic course in arc welding on plate and pipe. (Prerequisite(s): PIPE 1451 and must be enrolled in Pipefitting pre-apprenticeship program) 5C/0/5/0

PIPE 1540 Electric Controls

Fundamentals of electricity and electrical circuits are covered. (Prerequisite(s): PIPE 1451 and must be enrolled in Pipefitting pre-apprenticeship program) 3C/1/2/0

PIPE 1550 Basic Gas

This is an introductory course on gas used in gas fired heating systems. Areas covered include natural gas burners, LP gas burners, pipe sizing, flue venting, electricity and safety pertaining to gas fired systems. (Prerequisite(s): PIPE 1451 and must be enrolled in Pipefitting pre-apprenticeship program) 3C/2/1/0

PIPE 1716 Certified Pipe Welding Layout (Lab)

Students will learn pipe math layout for weld fittings in a lab setting. 2C/0/2/0

PIPE 2611 Gas and Gas Controls

This course is intended to provide a fundamental understanding of the various gas-fired mechanical systems and gas controls associated with heating and air conditioning equipment. To include residential furnaces, rooftop units, unit heaters, makeup air units, and hot water boilers, in field troubleshooting techniques will be covered. (Prerequisite(s): Must be enrolled in the Pipefitters apprenticeship training program) 2C/0/2/0

PIPE 2614 Boiler Systems

This course is intended to provide the apprentice a strong foundation in stationary steam engineering, separate or combined low and high pressure and liquid systems. 2C/0/2/0

PIPE 2615 Pipe Layout and Installation 1

Care and use of tools and equipment used by the pipefitter. Study the pipe math necessary for pipe installation. Different types of pipe, pipe fittings, hangers and supports. Skills needed to install steel threaded pipe with both straight and offset runs. (Prerequisite(s): Must be enrolled in the Pipefitter apprenticeship program) 2C/0/2/0

PIPE 2616 Pipe Layout and Installation 2

Advanced pipe layout math skills. Skills needed to run copper, PVC, CPVC. This will include soldering, bending, and flaring copper. Threading, gluing, and fusing of plastic pipe. Students will have the opportunity to receive a Certification in Fusion Installation. (Prerequisite(s): Must be enrolled in the Pipefitter apprenticeship program) 2C/0/2/0

PIPE 2622 Rigging, Industrial Safety and OSHA

This course is designed to cover a broad range of OSHA safety standards in the construction industry. The second half of the course will concentrate on industrial rigging of pipe and equipment. (Prerequisite(s): Must be enrolled in the Pipefitter apprenticeship program) 2C/0/2/0

PIPE 2623 Apprenticeship Refrigeration & Air Conditioning

This course covers applied refrigeration and air conditioning for first year pipe trade apprentices. The course focuses on the understanding of refrigeration theory and its application as it relates to the installation, operation, maintenance, troubleshooting, and repair of residential, commercial, industrial, and institutional refrigeration and air conditioning systems. A strong emphasis is placed on electrical theory, electrical application, electrical code, and electrical safety, as it applies to both low and high voltage circuits of air conditioning and refrigeration equipment. 2C/0/2/0

PIPE 2625 Ammonia/Steam/Hot Water Systems

This course is intended to provide the apprentice with information and skill for the proper piping of refrigeration, hot water and high-pressure steam. 2C/0/2/0

PIPE 2626 Basic Service Applications

This course is intended to provide a fundamental understanding of the various mechanical equipment and controls associated with heating and air conditioning equipment. Basic schematics, fundamentals of electricity and in-field troubleshooting techniques will also be covered. 2C/0/2/0

PIPE 2627 Basic Electricity

This course is intended to provide the apprentice a basic understanding of electricity. This course will combine both text and practical hands-on work. 2C/0/2/0

PIPE 2628 Commercial Pneumatics

This course is on learning control of modern air conditioning, ventilation, and heating equipment. Part of the course will be on design, service, and basic understanding of various air handling systems. Another part will be hands on pneumatic and electric controls. (Prerequisite(s): Must be enrolled in the Pipefitters apprenticeship program) 2C/0/2/0

PIPE 2631 Industrial Pneumatics

This course provides an understanding of instrumentation, controls and pneumatics for industrial, manufacturing and process plants. 2C/0/2/0

PIPE 2632 Commercial Refrigeration

This course encompasses electrical wiring diagrams electronic control theory and circuits related to the components used in the installation and repair of Refrigeration systems. Refrigeration mechanical components and related equipment and tools used for installation and repair. (Prerequisite(s): Must be enrolled in the Pipefitting pre-apprentice program) 2C/0/2/0

PIPE 2635 Apprenticeship Pipe Science

Basic understanding on electrical devices, circuits, and electric measuring instruments as they relate to the installation of mechanical equipment and piping systems. 2C/0/2/0

PIPE 2636 Electrical Controls and Diagrams

This course is intended to provide the apprentice a strong foundation in the fundamentals of electrical theory, terminology, and application. This information will provide the apprentice with a background for understanding the basic operation of various types of electrical circuits and equipment. 2C/0/2/0

PIPE 2638 Computer Controls

This course is designed to assist students in understanding computer concepts including the functions of the Internet and the Web. 2C/0/2/0

PIPE 2641 Supervisory Training/Public Relations

This course will cover both the METAL and the MENTAL aspect of the role of Foreman/Supervisor, as well as how to deal with both employers (management) needs and wants, and following the rules of labor unions, OSHA, demanding General Contractors and others. 2C/0/2/0

PIPE 2642 Piping Design

This course will introduce the fundamentals in the design of ASNE B31.1 Power Piping, material selection, and supports. The course will provide the UA Apprentice examples of applications of power piping codes, and proper piping material selection and installation. Classroom examples will be demonstrated on the fundamentals of ordering materials, calculating pipe hanger loads, flexibility analysis, design of expansion loops, cold springing, hanger selection and installation, hanger spacing and inspection, and reaction forces on piping systems. The course will provide hands-on experience in the installation of constant and variable spring hangers and proper piping installation practices. 2C/0/2/0

PIPE 2643 Test and Balance of Systems

This course covers the necessary steps for pipe trades apprentices and journeymen to start up, test, and balance heating, ventilation, and air conditioning systems. Students shall learn to test and balance systems by instruction and hands-on experience in measuring quantities such as pressures, temperature, the rates at which air and water are flowing, and electrical current and voltage. These measurements are then compared with corresponding quantities called for by the design specifications, and any necessary regulating is done to make actual measurements meet required values. 2C/0/2/0

PIPE 2644 Power Burners and Controls

This is a course on gas and oil power burners and related control systems. The course will include flame safety controls and boiler controls. Also included will be different boiler and burner types and designs. 2C/0/2/0

PIPE 2645 Direct Digital Controls

This course is focused on computer based electronic control systems that control a wide variety of heating, ventilating, air conditioning, refrigeration (HVACR) and other equipment installed in buildings which regulate environmental systems. 2C/0/2/0

PIPE 2651 Refrigeration Code

This course is designed to prepare students for the City of Saint Paul Competency Card in refrigeration code. (Prerequisite(s): Must be enrolled in the Pipefitting pre-apprentice program) 1C/0/1/0

PIPE 2652 Oil Code

This course covers the installation and repair of fuel oil burning equipment, storage tanks and piping systems. Codes governing the installation and start up and service of this equipment will be covered. The emphasis in this course will be to apply knowledge learned in this class to the safe and proper installation and service of equipment and to obtain a certificate of competency for this work. (Prerequisite(s): Graduate of Pipefitting day school program or pipefitting work experience) 1C/0/1/0

PIPE 2653 Gas Code

This course covers the installation and repair of gas burning equipment and piping systems. Codes governing the installation and start up and service of this equipment will be covered. (Prerequisite(s): Graduate of Pipefitting day school program or pipefitting work experience) 1C/0/1/0

PIPE 2654 Hot Water Code

This course is intended to provide the student with information on the proper and safe piping of hot water. (Prerequisite(s): Graduate of Pipefitting day school program or pipefitting work experience) 1C/0/1/0

PIPE 2655 Ammonia Code

The purpose of this course is for registered Pipefitter Apprentices to learn and understand the Minnesota Department of Labor and Industry, High Pressure Piping and Code for Power Piping Systems. Registered apprentices shall also be instructed in the current proper piping practices for the installation of steam, hot water, oil, and ammonia refrigeration systems. 2C/0/2/0

PIPE 2656 High Pressure Steam Code

The purpose of this course is for registered pipefitter apprentices to learn and understand the Minnesota Department of Labor and Industry, High Pressure Piping and Code for Power Piping Systems. Registered apprentices shall also be instructed in the current proper piping practices for the installation of high steam pressure steam systems. 2C/0/2/0

PIPE 2657 Advanced Boiler Systems

Review of Hydronics heating and cooling systems. Introduction to boiler types, such as fire tube, water tube, condensing, and no condensing boilers. Students will understand hot water, low pressure steam, and high pressure steam boilers. Learning how to size pipe to attain delivery of desired BTU's to equipment. Discussion and understanding of the different burner fuel systems, as in natural gas, oil, propane, and electric. Students will understand burner ignition, and flame safety. Thorough coverage of pumps for HVAC systems, covering different types, i.e. positive displacement, and non positive displacement, pump installation, alignment, and repair. Pumping system calculations on pumping head & GPMs and pump curve analysis. 2C/0/2/0

Plumbing

PLMB 2610 PreApprentice Plumbing

This is an introductory course on the use of tools, materials and fittings used in the plumbing field. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 2C/0/2/0

PLMB 2612 Job Safety & Health

This course provides knowledge of jobsite hazards and work safety. (Prerequisite(s): Must be accepted into the Plumbing apprentice program) 2C/0/2/0

PLMB 2614 Applied Math for Plumbing

This course covers basic mathematics and practical application to plumbing. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 4C/0/4/0

PLMB 2616 Plumbing Welding

This is an introductory course in welding and the principles used in welding. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 4C/0/4/0

PLMB 2617 Plumbing Welding 2

This course is for apprentice and journeyman plumbers with prior experience in welding and the plumbing field who wish to upgrade their skills and knowledge. The student must demonstrate safe use of cutting and welding equipment. The student must meet with the Coordinator prior to registration for this class. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 1C/0/1/0

PLMB 2618 Basic Drawing

This course introduces the student to basic concepts of drafting, blueprints and plan specifications used in the construction field. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 4C/0/4/0

PLMB 2621 Plumbing 1

This course introduces the student to basic scientific principles applied in plumbing. It will introduce the student to drainage and vent systems and the Minnesota State Plumbing Code. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 4C/0/4/0

PLMB 2622 Plumbing 2

This course covers proper pipe sizing and installation of piping systems, the installation of plumbing fixtures, appliances and methods used in the installation and repair of these systems. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 4C/0/4/0

PLMB 2623 Plumbing 3 Gas Installations & Gas Controls

This course introduces the student to fundamental principles of gas burning appliances and the service and repair of these appliances and systems. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 4C/0/4/0

PLMB 2624 Plumbing 4 Commercial & Residential Service

This course introduces students to tools and methods used in servicing and repair of plumbing systems in residential and commercial buildings. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 4C/0/4/0

PLMB 2631 Plumbing Code 1

This course covers the Minnesota State Plumbing code and looks at each section in detail. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 2C/0/2/0

PLMB 2632 Plumbing Code 2

This course covers the Minnesota State Plumbing code and is a continuation of Plumbing Code 1. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 2C/0/2/0

PLMB 2633 Plumbing Code 3

This course covers the Minnesota State Plumbing code and is a continuation of Plumbing Code 2. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 2C/0/2/0

PLMB 2634 Plumbing Code 4

This course covers the Minnesota State Plumbing code and is a continuation of Plumbing Code 3. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 2C/0/2/0

PLMB 2640 Advanced Blueprint Reading & Heavy Rigging

Study of basic blueprint reading and layout and pipe drawings related to the plumbing field. This course also introduces the student to basic rigging. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 4C/0/4/0

PLMB 2650 Industrial Plumbing

This is an introductory course to industrial plumbing work. It focuses on welding, rigging and materials used in industrial plumbing work. (Prerequisite(s): Must be enrolled in the Plumbing apprentice program) 4C/1/3/0

Political Science

POLS 1720 Introduction to American Government

This course provides an overview of the American political system. This course focuses on the principles of the constitution; the concept and processes of federalism; the interaction between the executive, legislative and judicial branches of government; the emergence of political parties, popular opinion, political campaigns; the evolution of domestic and foreign policy; and the role of the media in US politics. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score.) (MnTC: Goals 5 & 9) 3C/3/0/0

POLS 1740 Introduction to World Politics

This course introduces core themes, concepts, and debates in the study of international politics. This course will focus on the causes of war, the global economy, human rights, and humanitarian intervention. Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score.) (MnTC: Goals 5 & 8) 3C/3/0/0

POLS 1750 Introduction to Political Science

This course provides an introduction to political science with an emphasis on democracy, ideologies and current issues. We will explore how ideological differences lead to disagreements on a variety of global and domestic issues. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 9) 3C/3/0/0

POLS 1760 Introduction to Political Philosophy

This course provides an introduction to enduring themes and questions in the history of political philosophy. We will study a selection of both historical and contemporary thinkers as a way to investigate the social, moral and political foundations of modern society. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 9) 3C/3/0/0

POLS 1790 Special Topics in Political Science

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goals 5 & 9) Variable credits 1-6

Practical Nursing

PRNS 1425 Essentials of Clinical Pharmacology

This course introduces the concepts of pharmaceuticals and dosage math. Included is information on pharmacokinetics, pharmacodynamics, common adverse side effects, and contraindications to drug use. Emphasis is placed on drug classifications and safe administration of medications to patients across the life span. Dosage math includes information on the systems of measurement, conversions, solving for x, ratio and proportions, pediatric formulas, and IV drip rate problems. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): MATH 0742 or appropriate assessment score. Grade of "C" or better in HLTH 1410, BIOL 1730, ENGL 1711 and PSYC 1720. Must be accepted as a Practical Nursing major.) 2C/2/0/0

PRNS 1435 Foundations of Nursing

Students in Foundations of Nursing are introduced to basic theory and nursing skills required to care for patients of both genders throughout the lifespan, with particular emphasis on the geriatric patient. Students are given the opportunity to demonstrate these skills in the laboratory setting. An introduction to the nursing process provides the student with a beginning framework for decision making. The concepts of teamwork, collaboration, safety, quality improvement, professional identity/behavior, patient-centered care, evidence based practice, and care management are introduced. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): Grade of “C” or better in HLTH 1410, BIOL 1730, ENGL 1711 and PSYC 1720. Must be accepted as a Practical Nursing major.) 4C/1/3/0

PRNS 1481 Clinical 1

This course provides students the opportunity to work with health care personnel, apply learned basic skills, the nursing process, and critical thinking in caring for assigned patients. Students will follow plans of care, deliver safe and competent cares to patients of both genders, and complete written clinical assignments applying to theory learned in Level I. Students will demonstrate competency within the Practical Nurse scope of practice under the direction of a nursing instructor. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): Grade of “C” or better in PRNS 1425, PRNS 1435, PRNS 2410 and PRNS 1521) 3C/0/3/0

PRNS 1482 Clinical 2

In this clinical course, the Practical Nursing students will maintain a safe and effective care environment while taking care of selected patients throughout the life span. Students will implement cares and skills learned in prior Practical Nursing theory and lab courses while functioning within the roles and limitations of the LPN scope of practice. Students will use patient centered cares in collaboration with teamwork to meet the basic needs of assigned patients. Students will maintain professional identity by demonstrating dependability and accountability. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): Grade of “C” or better in PRNS 1481, PRNS 1524 and PRNS 2410) 3C/0/3/0

PRNS 1483 Clinical 3

In this clinical course, the Practical Nursing students will care for selected patients in specialty areas (med/surg, psychosocial nursing, pediatrics and obstetrics) to afford them a well-rounded experience. Students will implement patient centered cares learned in prior theory and lab courses. Students will continue to use LPN scope of practice as a guide to implement a safe and effective care environment, and medication administration will be safe. Students will demonstrate professional identity by being dependable and accountable for actions. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): Grade of “C” or better in PRNS 1482 and PRNS 1530) 3C/0/3/0

PRNS 1521 Nursing Care of Adults 1

This theory course is a detailed study of pathophysiology of adult patients. Students use their knowledge of normal physiology. Sensory, neurological, musculoskeletal, integumentary, hematologic, lymphatic, immune and infectious disease disorders are studied. Course topics also include fluid/electrolyte imbalance, pain management, pre- and post-operative care, oncology and gerontology. Students apply knowledge based on patient-centered care within the practical nurse scope of practice in preparation to provide safe, quality care. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): Grade of “C” or better in HLTH 1410, BIOL 1730, ENGL 1711, PSYC 1720. Must be accepted as a Practical Nursing major.) 4C/4/0/0

PRNS 1524 Nursing Care of Adults 2

This theory course continues the study of pathophysiology of adult patients. Genitourinary/reproductive, cardiovascular, gastrointestinal, respiratory and endocrine system disorders are studied. Students at this level continue utilizing critical thinking to apply information to situations in a safe and effective care environment. Principles of inter-professional teams and shared decision-making are studied and discussed in preparation for clinical experiences. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): Grade of “C” or better in HLTH 1410, BIOL 1730, ENGL 1711, PSYC 1720. Must be accepted as a Practical Nursing major.) 3C/3/0/0

PRNS 1530 Maternal Child Health

This course is designed to build on the student’s understanding of child growth and development and the basic health needs of the mother, the newborn infant, and the family during pregnancy, labor, delivery, and post-partum period. It provides an overview of the LPN scope of practice when caring for the obstetric and pediatric patient. Patient centered care is emphasized while discussing common pediatric disorders, recommended plans of care, and the concepts of prevention and treatment. Concepts of teamwork and collaboration are integrated throughout the course along with a specific group project each student must complete and present. Upon completion of this course, students will be able to describe safe and effective care utilizing the nursing process for the obstetric and pediatric patient. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): Grade of “C” or better in PRNS 1482 and PRNS 1524) 3C/3/0/0

PRNS 2410 Psycho/Social Nursing

This course is designed to build on the student’s understanding of human behavior and provides an overview of the LPN scope of practice when caring for patients with alterations in mental health. Patient-centered care is emphasized while exploring common mental health disorders such as depression, anxiety, schizophrenia, bipolar disorder, eating disorders, and cognitive disorders. Concepts of teamwork and collaboration are integrated throughout the course. The basic components of evidence-based practice are introduced. Upon completion of this course, students will be able to describe safe and effective patient care to maintain psychosocial integrity by using the nursing process. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): Grade of “C” or better in, HLTH 1410, BIOL 1730, ENGL 1711, and PSYC 1720. Must be accepted as a Practical Nursing major.) 2C/2/0/0

PRNS 2491 Transition to Practice

In this course additional topics and skills are taught that relate to the professional scope of practice for the graduate practical nurse, demonstrating the progression from education to practice. Students will work in a clinical setting applying the knowledge, skills, attitude and the practice of safe effective care expected of the Practical Nursing graduate. They have progressed from a novice level to an accomplished level in the areas of communication, teamwork, problem-solving and the practice of safe effective care. In depth NCLEX-PN preparation is also emphasized in this course. Must earn a grade of “C” or better in this course to complete the program. (Prerequisite(s): Grade of “C” or better in all Nursing Program course requirements) 2C/1/1/0

Psychology

PSYC 1710 General Psychology

This course introduces psychological theory, experimental findings and applications of human behavior. Topics include research methodology, the nervous system, perception, cognition and memory, learning theory, human development, personality, emotions, attitudes, motivation, socialization and psychological disorders and related treatments. The course will explore current research and issues in psychology, including the influence of heredity and the environment on behavior. (Prerequisite(s): READ 0721 with a grade of “C” or better, or concurrent enrollment, or appropriate assessment score.) (MnTC: Goal 5) 4C/4/0/0

PSYC 1720 Psychology throughout the Lifespan

The focus of this course is on human development throughout the lifespan. The course includes research methodology, theoretical perspectives and the physical, cognitive and psychosocial changes that influence people throughout their development. An application of research and theory to current issues will be addressed. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 9) 3C/3/0/0

PSYC 1740 Abnormal Psychology

This course offers an integrated and multidimensional perspective of the study of psychopathology. Students learn about research methods, clinical assessment and diagnosis of psychological disorders using DSM codes as a reference. Students also explore the ways in which mental illness affects peoples' lives. (Prerequisite(s): PSYC 1710 General Psychology) (MnTC: Goals 5 & 7) 4C/4/0/0

PSYC 1750 Introduction to Health Psychology

This course examines how psychological, social and biological factors interact with and affect individuals' efforts to promote their own health and prevent or cope with illness. Topics include individual responses by gender, age and ethnicity; variations in health-related behaviors, stress and illness; whether, and what kind of, treatment individuals seek for health problems and whether they adhere to treatment recommendations; and the theories and methods used by psychologists to understand these issues. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 7) 3C/3/0/0

PSYC 1790 Special Topics in Psychology

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 5) Variable credits 1-6

PSYC 2720 Social Psychology

This course focuses on social psychological theories and research to analyze how an individual's thoughts, feelings, and actions influence other people, social settings, and institutions. Specific emphasis will be placed on the ways in which an individual's cognitive processes affect their emotions and behaviors as well as their interpretation of social interactions. Topics include perception, attribution, socialization, attitudes, conflict, altruism, groups, power, conformity, prejudice, collective behaviors, and social movements. (Prerequisite(s): PSYC 1710 or SOCI 1710. READ 0721 with a grade of "C" or better or appropriate assessment score.) (MnTC: Goal 5 & 7) 4C/4/0/0

Public Health

PUBH 1700 Personal and Community Health

This course is designed to look at health from a personal, community, and populations perspective. Students will explore the many dimensions of health practices, behaviors, and concerns by covering topics such as, mental/emotional health, dietary practices, physical fitness, disease prevention and management guidelines, and health promotion. 3C/3/0/0

PUBH 1710 Consumer Health

Students will explore the selection, evaluation, and understanding of health information, medical services, advertising of products, health quackery, and socio-cultural factors revolving around consumer health. Students will learn basic knowledge and skills to navigate through consumer health issues, services, and products. 3C/3/0/0

PUBH 1790 Special Topics in Public Health

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. Variable credits 1-6

PUBH 2700 Public Health Education

This is a foundations course in health education and promotion for health educators. Students will learn the theories and models of health education, promotion, behavior change, and health promotion within government, worksites, public health agencies, and community organizations. Students will also explore determinants of disease, health, prevention, and interventions. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) 3C/3/0/0

PUBH 2710 Public Health Overview

A foundation course that introduces students to the concept, history and practice of public health. The course examines the environmental, social, political and behavioral determinants of health and disease from a population perspective. It also looks at options for intervening to maintain the public's health through the use of the health care, public health, environmental health, and safety systems as well as laws and taxation. (Prerequisite(s): Any Goal 1 SPCH or instructor approval) 3C/3/0/0

PUBH 2720 Global Health

This course introduces key principles and concepts of global health. Students will examine how culture, human rights, economics, policies, and health care systems contribute to the global burden of disease and health promotion. In addition to traditional methods of assessment, this course will emphasize oral presentations. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) 3C/3/0/0

PUBH 2730 Public Health Administration

This is a foundational course in health policy and management related to the delivery, quality, and cost of healthcare for individuals and populations. Students will explore local health professional training requirements, health insurance systems, the organization and management within public health settings and how they are influenced by politics. 3C/3/0/0

PUBH 2740 Environmental Health

This course is an introduction to the identification and analysis of environmental influences on health. Students will explore major environmental threats to health found in the house, air, water, solid waste, toxic waste, sanitation, and land use, as well as laws, policies, and practices associated with their control in the US and around the world. 3C/3/0/0

PUBH 2750 Public Health Advocacy & Leadership in Action

Take your public health education knowledge to the next level. In this course, students will develop an understanding of advocacy and their personal leadership style within public health promotion and education. Students will be prepared to participate within in a community organization addressing a health issue important to them. Students will focus on the ways in which advocacy and leadership are connected to the assessment, planning, and implementation of health education and promotion programs. (Prerequisite(s): PUBH 2710) 3C/3/0/0

PUBH 2770 Public Health Practicum

This course is designed to provide public health students with 80 hours of worksite experience in the community. Students will apply public health knowledge gained throughout the program under the supervision of a public health professional. Students will have a shared responsibility in choosing the worksite, participating in appropriate worksite tasks, and reporting on their experience. (Prerequisite(s): Instructor approval) 2C/0/0/2

Reading

READ 0721 Reading 1

This course emphasizes comprehension and learning strategies necessary to respond effectively to a variety of college texts, readings and assignments. The course focuses on identifying main ideas, supporting details, organizational patterns typically found in college texts, summarizing, and developing college level vocabulary. (Placement into this course will be according to college assessment score.) 3C/3/0/0

READ 0722 Reading 2

This course emphasizes critical reading strategies and college level vocabulary. It presents college reading as information processing and focuses on strategies for improving comprehension, selection, organization and recall. Materials represent a variety of academic disciplines and occupational areas. (Placement into this course will be according to assessment score or successful completion of READ 0721 with a grade of "C" or better.) 3C/3/0/0

READ 0725 Vocabulary Development

This course emphasizes strategies and practice to build college-level and major-specific vocabulary, including guessing meaning from context, and identification of Latin/Greek roots and word parts. The course presents a variety of methods to increase reading, writing, and speaking vocabularies, as well as to foster lifelong vocabulary development. In addition to general academic vocabulary, students will build career-specific vocabulary through nonfiction and research reading in the major areas. 1C/1/0/0

READ 1490 Special Topics in Reading

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. Variable credits 1-6

Respiratory Therapist

RESP 1411 Respiratory Care Essentials

This course introduces the basic sciences and concepts required for the study of Respiratory Care. This includes fundamentals of chemistry, cardiopulmonary anatomy, physiology, mathematics, physics, and an introduction to the equipment used in basic respiratory care. An introduction to the sim lab and patient's medical record will be provided. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Acceptance into the program major. Must be taken concurrently with RESP 1412) 2C/1/1/0

RESP 1412 Respiratory Care Essentials Lab

This introductory lab course provides a hands on experience with basic oxygen devices and equipment used in the practice of Respiratory Care. This will take place in the lab and simulation center. Vital signs, oxygen and pulse oximetry competencies will be done. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Must be taken concurrently with RESP 1411) 1C/0/1/0

RESP 1510 Cardiopulmonary Pathophysiology 1

This course is an introduction to the assessment and pathophysiology of the patient with cardiopulmonary disease. Emphasis is on assessment of oxygenation, ventilation and acid-Base balance. Students are introduced to pulmonary pathophysiology emphasizing differences in obstructive and restrictive lung disease. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): CHEM 1711, HLTH 1410, BIOL 1730, RESP 1411 and 1412) 3C/1/2/0

RESP 1521 Respiratory Care Therapeutics

This course introduces the student to basic respiratory care therapeutics including: oxygen administration, aerosol delivery devices, bronchial hygiene methods and lung hyperinflation techniques. Specific equipment, indications, contraindications, and adverse reactions associated with each therapeutic procedure are covered. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): CHEM 1711, RESP 1411 and 1412, BIOL 1730; Co-Requisite(s): RESP 1522, RESP 1540) 4C/3/1/0

RESP 1522 Respiratory Care Therapeutics Lab

This course provides demonstrations and hands on practice in the use of equipment and procedures required for basic Respiratory Care Therapeutics. This will take place in a supervised lab and sim lab. Modalities included are High Flow, Hyperinflation therapy, Bronchial Hygiene therapy and Airway Management. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): Must be taken concurrently with RESP 1521) 1C/0/1/0

RESP 1540 Respiratory Care Pharmacology

This is an in-depth course in cardiopulmonary pharmacology emphasizing drug classification, basic chemistry and action on tissue receptors. Describes indications, actions and dosages of drugs used in cardiopulmonary care. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): CHEM 1711, RESP 1411 and 1412, HLTH 1410 & BIOL 1730; Co-Requisite(s): RESP 1521 and 1522) 2C/1/1/0

RESP 1591 Respiratory Care Clinical 1

Students will have direct patient contact and provide basic patient care procedures as directed by the clinic instructor. Emphasis is on data collection, application of oxygen, aerosol and humidification devices. Students will collect vital signs and practice physical assessment techniques. Students will record pertinent information in patient's computerized chart. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): RESP 1411 and 1412) 2C/0/0/2

RESP 1592 Respiratory Care Clinical 2

A continuation of clinical practice procedures for administration of routine patient care therapy. Emphasis is on bedside patient assessment and introduction to the critically ill patient. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): RESP 1510, RESP 1520, RESP 1540, RESP 1591; Co-Requisite(s): RESP 2410) 3C/0/0/3

RESP 1593 Respiratory Care Clinical 3

A continuation in clinical practice with emphasis given to acute care therapy. Mechanical ventilation and critical care skills are practiced and evaluated. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): RESP 1592, RESP 2410, RESP 2420) 4C/0/0/4

RESP 1597 Respiratory Care Clinical 4

A continuation of clinical practice skills with emphasis on critical care monitoring and procedures. Students will rotate through pediatrics, long term care and adult critical care. Specialty rotations also are done this semester. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): RESP 1593) 5C/0/0/5

RESP 1598 Respiratory Care Clinical 5

A continuation of clinical practice skills with emphasis on critical care time management at an Adult ICU of the students choosing. Students will also rotate through Pediatric ICU and Neonatal ICU. A sleep rotation in a sleep lab will also occur. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): RESP 1597) 5C/0/0/5

RESP 2411 Mechanical Ventilation

This is an introductory course in the use of mechanical ventilation. Positive and negative pressure machines are discussed, as well as other equipment and procedures related to mechanical ventilation. Methods of monitoring ventilator patient response to therapy are also described. Must earn a grade of "C" or better in this course to proceed. (Prerequisite(s): RESP 1510, RESP 1521, RESP 1522, RESP 1540, RESP 1591; Co-Requisite(s): RESP 1592) 3C/1/2/0

RESP 2412 Mechanical Ventilation Lab

This course provides hands-on practice in the clinical application and safety of mechanical ventilation. This will take place in a supervised lab. Must be taken concurrently with RESP 2411 Mechanical Ventilation. Must earn a grade of “C” or better in this course to proceed. 1C/0/1/0

RESP 2420 Cardiopulmonary Pathophysiology 2

This course continues the study of cardiopulmonary pathophysiology. Emphasis is placed on specific obstructive, restrictive and hemodynamic abnormalities. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): RESP 1510; Co-Requisite(s): RESP 1592) 1C/0/1/0

RESP 2430 Neonatal/Pediatric Respiratory Care

This course introduces the student to principles of neonatal and pediatric respiratory care. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): RESP 2420) 2C/1/1/0

RESP 2440 Management of the Critically Ill Patient

This is an advanced course in mechanical ventilation and medical management of the critically ill patient. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): RESP 2411, 2412, and RESP 2420; Co-Requisite(s): RESP 1593) 4C/1/3/0

RESP 2450 Cardiopulmonary Diagnostics

This course will examine cardiopulmonary function studies, the techniques used and the significance of the individual tests with regard to pulmonary disease. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): RESP 2420) 1C/0/1/0

RESP 2470 Registry Review

This course is an advanced study in Respiratory Care Procedures and prep for the NBRC CRT and RRT exam. Each student will need to successfully pass an entry level CRT self-assessment exam at the end of the course. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): RESP 2411, RESP 2412, and RESP 1593) 3C/1/2/0

RESP 2510 Survey of Human Disease

This is a course in human pathology in which all body systems will be studied in relation to common diseases. This course is designed to assist the respiratory care student to acquire a basic knowledge of pathology required for the practice of respiratory care. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): RESP 2411 and 2412) 2C/1/1/0

RESP 2572 Advanced Clinical Life Support Simulation Training

This advanced course is designed to train allied health program students in advanced critical care life support skills in a medical simulation lab setting. Students will demonstrate competencies on mock simulation patients in the lab, case study and scenario programs. Students will be videotaped while they perform skills. Training is according to American Heart Association Standards. Upon successful completion of the competencies, students will have the option to receive AHA cards documenting their training. Students will be required to submit an intensive research paper within the course. Must earn a grade of “C” or better in this course to proceed. (Prerequisite(s): RESP 2440; Co-Requisite(s): BLS Card through AHA) 4/0/4/0

Sheet Metal

SMET 1410 Sheet Metal Fitting Layout & Design

Covers sheet metal layout using parallel line development, radial line development and triangulation. Duct design and sizing will be included. 4C/2/2/0

SMET 1415 OSHA 30 HR Training

Students will be given information on fire, ladders, scaffolding, electrical, cranes and personal protective equipment. Students will be trained in welding shop, sheet metal shop and field safety practices. 2C/2/0/0

SMET 1420 Sheet Metal Fitting Fabrication

Covers the procedures used to fabricate sheet metal fittings. Common seams and fasteners will be described. 4C/1/3/0

SMET 1430 Sheet Metal Drafting & Blueprint Reading

Covers principles of mechanical drawing. Students will interpret sheet metal blueprints. 2C/1/1/0

SMET 1440 Sheet Metal Welding

Covers the four processes used to weld sheet metal: Oxyacetylene, Shielded Metal Arc Welding, Gas Metal Arc Welding (Wirefeed) and Gas Tungsten Arc Welding (Tig or Heliarc). 5C/1/4/0

SMET 1450 Sheet Metal Practical Problem Solving

This course covers math used in the sheet metal trade. 2C/1/1/0

SMET 1510 Duct System Layout & Design

Covers the layout and design of duct systems used for HVAC and industrial ventilation systems. (Prerequisite(s): SMET 1410, SMET 1415, SMET 1420, SMET 1430, SMET 1440, SMET 1450) 4C/2/2/0

SMET 1520 Duct System Fabrication

Covers the fabrication and assembly of various types of duct systems. (Prerequisite(s): SMET 1410, SMET 1415, SMET 1420, SMET 1430, SMET 1440, SMET 1450) 4C/1/3/0

SMET 1530 Architectural Sheet Metal

Covers the fabrication and assembly of various types of architectural sheet metal systems. Installation techniques will also be described. (Prerequisite(s): SMET 1410, SMET 1415, SMET 1420, SMET 1430, SMET 1440, SMET 1450) 4C/2/2/0

SMET 1540 Power Machine Operation

Covers the fabrication of sheet metal items using the power shear, press brake, power rolls, punch press and spotwelder. (Prerequisite(s): SMET 1410, SMET 1415, SMET 1420, SMET 1430, SMET 1440, SMET 1450) 3C/1/2/0

SMET 1550 Sheet Metal CAD/CAM Systems

Covers the setup and operation of plasma cutting systems and computer aided drafting systems. (Prerequisite(s): SMET 1410, SMET 1415, SMET 1420, SMET 1430, SMET 1440, SMET 1450) 3C/1/2/0

Sociology

SOCI 1710 Introduction to Sociology

This course introduces students to sociology: the systematic study of human interaction and society. Major theoretical perspectives and research methods of sociology will be examined. The primary goal is to create an awareness of, and appreciation for, the range of social and cultural variations throughout the United States and worldwide, stressing characteristics shared by all people. Readings and social science examples will be drawn from cultures around the world, including the pluralistic culture of the United States. Another focus of the class is to dispel common myths and stereotypes surrounding society and human behavior. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score.) (MnTC: Goals 5 & 7) 4C/4/0/0

SOCI 1720 Social Problems

This course introduces students to modern issues of societal concern, including social problems that have endured over time and those that have emerged as societies modernize and cultures change. The influence of globalization on cultures around the world will be discussed. Specific topics include: inequalities of race, class, gender, age, and sexual orientation, modern family issues, crime and violence, drugs, war and terrorism, global health, environmental factors affecting society and culture, poverty, and population growth. Critical thinking skills will be developed through class discussions, debates, and course assignments. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score.) (MnTC: Goals 5 & 8) 3C/3/0/0

SOCI 1730 Sociology of Families and Relationships

This course introduces students to the central ideas, challenges, theoretical perspectives and the diversity of human relationships, marriages and families. Global perspectives regarding families and the diversity of intimate relationships in contemporary societies will be discussed. Topics in this course could include the origins of marriage and diverse patterns of love, conflict, sexuality, parenting, single-hood, interpersonal violence, divorce, extended families and gender roles. Reading and examples will be drawn from societies around the world. Common myths and challenges related to stereotypes of the “typical” family and “functional” relationships will be explored. Critical thinking skills will be developed through class discussions, debates and course assignments. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score.) (MnTC: Goals 5 & 7) 3C/3/0/0

SOCI 1740 Sociology of Work

Sociology of Work introduces students to theories, issues and perspectives about work and workplaces in a global economy. The course explores occupations and professions in historical and contemporary settings. The interdependence of economic, social and political factors that shape and change the nature of work are covered within a global context. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score.) (MnTC: Goals 5 & 8) 3C/3/0/0

SOCI 1760 Mass Media and Society

This course provides students with a general understanding of how mass media operates in society and the influence of media messages in the areas of print media, recordings, radio, film, advertising, public relations, digital media and the Web. The course will emphasize basic definitions and the functions of mass media forms and practices; the impact of mass media on society; and major theoretical perspectives and research methods of society will be used to analyze various examples of media. Specific areas of discourse explored in this course may include racism, sexism, heterosexism, ageism, stereotypes, discrimination, violence, and crime. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goal 5) 4C/4/0/0

SOCI 1765 Sociology of Crime and Deviance

This course will offer students an introduction to the sociological study of crime and deviance. We will examine the major types of crimes, such as violent crime, property crime, cybercrime, white-collar crime, and organized crime. This course will cover major sociological theories used to explain crime and deviance. Students will also learn about the relativity of deviance, how power, social control, and labeling are used to socially construct definitions of deviance, and the consequences of being labeled deviant. Topics in deviance may include suicide, mental illness, obesity, body modification, substance abuse, and sexual diversity. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 5 & 7) 3C/3/0/0

SOCI 1766 Juvenile Delinquency

This course is designed to familiarize students with the sociological study of juvenile delinquency in the United States, while simultaneously cultivating an historical and international perspective on delinquency. Topics include the nature of delinquency, means of measuring delinquency, theoretical understandings of delinquency, societal influences upon and responses to delinquency, as well as the development of the juvenile justice system. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC Goals: 5 & 9) 3C/3/0/0

SOCI 1772 Introduction to Criminal Justice

This course will introduce students to the major components of the American Criminal Justice System, specifically the police, corrections and the courts. Students will discuss the various types of crime and how crime is measured. Additional topics may include: a brief history of crime and punishment, the development of the criminal justice system, causes of crime and victimization, styles of policing, levels of the court system, philosophies of punishment, juvenile justice and prison life. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score) (MnTC: Goals 5 & 9) 3C/3/0/0

SOCI 1774 Introduction to Corrections

This is an introductory course designed to provide students with an overview of the problems and ethical dilemmas that face America’s correctional system. The institution of corrections is not only a study of our prison system but is, in fact, the study of a complex network of societal relationships and institutions. This course examines the history, present, and future of U.S. corrections. The role of penitentiaries, prisons, jails, and grass roots organizations is explored along with the concepts of punishment, rehabilitation, retribution, restoration and transformation. (Prerequisite(s): Grade of “C” or better in READ 0721 or appropriate assessment score) (MnTC: Goals 5 & 9) 3C/3/0/0

SOCI 1776 Probation, Parole and Alternative Sentencing

This course is designed to introduce students to the fields of probation and parole. We will examine a variety of community-based correctional practices and strive to understand the roles of individuals who work within community programming. Most importantly, we will begin to gain an understanding of those individuals who receive the services of these fields. The ultimate goal of this course is for students to develop their ability to critically examine a diverse range of correctional programming. (Prerequisite(s): Grade of “C” or better in READ 0721 or appropriate assessment score) (MnTC: Goals 5 & 9) 3C/3/0/0

SOCI 1790 Special Topics in Sociology

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (Prerequisite(s): READ 0721 with a grade of “C” or better or appropriate assessment score.) (MnTC: Goal 5) Variable credits 1-6

SOCI 2720 Social Psychology

This course focuses on social psychological theories and research to analyze how an individual’s thoughts, feelings, and actions influence other people, social settings, and institutions. Specific emphasis will be placed on the ways in which an individual’s cognitive processes affect their emotions and behaviors as well as their interpretation of social interactions. Topics include perception, attribution, socialization, attitudes, conflict, altruism, groups, power, conformity, prejudice, collective behaviors, and social movements. (Prerequisite(s): PSYC 1710 or SOCI 1710. READ 0721 with a grade of “C” or better or appropriate assessment score.) (MnTC: Goal 5 & 7) 4C/4/0/0

Spanish

SPAN 1710 Beginning Spanish 1

An introduction to Spanish based on real-life situations, as well as an introduction to various aspects of Hispanic societies. Comprehension and basic speaking skills are emphasized. Some reading and writing is required. The overall goal of this course is to provide students with the linguistic foundation necessary to later achieve proficiency in the Spanish language. No previous knowledge of Spanish is necessary. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 8) 5C/4/1/0

SPAN 1720 Beginning Spanish 2

A continuation of SPAN 1710. Emphasis is on extending skills in everyday spoken Spanish. (Prerequisite(s): SPAN 1710 with a grade of "C" or better or Placement Exam or instructor approval) (MnTC: Goal 8) 5C/4/1/0

SPAN 1730 Intermediate Spanish 1

This course provides continued development of communication in reading, writing, listening and speaking. There is an emphasis on communicating ideas in writing and conversation. As a part of the course, students will be exposed to the cultures of Spanish-speaking people through art, literature and history. (Prerequisite(s): SPAN 1720 with a grade of "C" or better or Placement Exam or instructor approval) (MnTC: Goals 6 & 8) 5C/4/1/0

SPAN 1740 Intermediate Spanish 2

This course is a continuation of SPAN 1730. The course provides continued development of communication in reading, writing, listening and speaking. There is an emphasis on communicating ideas in writing and conversation. As a part of the course, students will be exposed to the cultures of Spanish speaking people through art, literature and history. This course is usually offered during the spring term (Prerequisite(s): SPAN 1730 with a grade of "C" or better, or Placement Exam or instructor approval) (MnTC: Goals 6 & 8) 5C/4/1/0

SPAN 1790 Spanish for the Workplace

An introduction to basic Spanish conversational communication focusing on the specific context and situations of the workplace. The aim of this course is to achieve a basic level of proficiency in conversational Spanish to exchange information and perform basic everyday tasks. This class may be offered for specific career industries such as the Hospitality or Healthcare industries. When this happens, the career industry will be specified in the title. No previous knowledge of Spanish is necessary. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goal 8) 3C/3/0/0

SPAN 1795 Special Topics in Spanish

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 8) Variable credits 1-6

Speech

SPCH 1700 Introduction to Speech Communications

This course introduces the various principles of spoken human communication. Students will explore and practice the principles of effective oral communication within contexts of 21st Century life. Instructional methodologies instruct students on computer-mediated communication issues as well as international audience analysis and multi-cultural demands of interpersonal dyads. Students will first practice the basic skills of this discipline and then demonstrate how to adapt these abilities to practical applications in both personal and business environments, within various situations. (MnTC: Goals 1 & 8) 3C/3/0/0

SPCH 1710 Fundamentals of Public Speaking

This course covers the basic principles of preparing, researching, and delivering informative, persuasive, impromptu, and extemporaneous speeches. Instructional methodologies instruct students on computer-mediated communication issues as well as international audience analysis and multi-cultural demands of public speaking venues. In addition, this course will include audience analysis and suggestions for overcoming speech anxiety. Students will analyze and evaluate the arguments and rhetorical methods used in public communication. (MnTC: Goals 1 & 8) 3C/3/0/0

SPCH 1720 Interpersonal Communication

This course focuses on the practical and theoretical concepts of human communications and the styles used in personal, social and professional environments. Students will also acquire skills in critical thinking, perception, listening, verbal and non-verbal expressions and conflict resolution. Students will evaluate their individual strengths and weaknesses in depth and develop techniques to improve interpersonal relations. (MnTC: Goals 1 & 7) 3C/3/0/0

SPCH 1730 Intercultural Communication

This course will study the influence of cultural differences on communication from both the sender and receiver of information. The course views the human communication process as it is influenced by nationality, ethnicity, linguistic development and gender. The course will explore the ways in which culture can shape the view of "reality" held by its members and influence communication patterns and cross-cultural relationships. Specifically, the United States cultural orientations will be compared to those in other regions of the world. (MnTC: Goals 1 & 8) 3C/3/0/0

SPCH 1740 Mass Media and Communications

The influence of mass media communications on today's culture is an important issue in the United States and throughout many parts of the world. Students will research the influence of mass media on society. Topics include: advertising, propaganda, ethics, First Amendment issues, the role of government, literacy requirements of a digital world, and problems and criticisms of media. (Prerequisite(s): Grade of "C" or better in READ 0721 or appropriate assessment score) (MnTC: Goals 5 & 9) 3C/3/0/0

SPCH 1750 Small Group Communication

In this course students will study communication in small groups. Topics include effective group communication theory and skills; group leadership, cohesion and roles; conflict resolution and decision making; planning and conducting meetings; and parliamentary procedure. The course explores group functioning in a variety of settings, including the workplace. There is an emphasis on the practical application of the content and the practice of oral communication skills. (MnTC: Goals 1 & 9) 3C/3/0/0

SPCH 1770 Family Communication

This course centers upon the human communication process from within the contextual dimensions of diverse family units. Elements of study include family patterns and functions, which drive communication, relationship development and its barriers, and family role definitions and functions. The course is designed to provide a sense of understanding of how a family communicates, and the forces which influence the family unit, from both the inside and outside of various family configurations. (MnTC: Goals 1 & 7) 3C/3/0/0

SPCH 1780 Gender Communication

This course explores the many interconnected aspects of gender communication, enabling students to experience how gender, within communication and culture, creates, maintains, and changes interpersonal relationships. Communication contexts covered in the course will include family, friendships, education, the media, the workplace, and other markers of identity. (MnTC: Goals 1 & 7) 3C/3/0/0

SPCH 1790 Special Topics in Speech

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 1) Variable credits 1-6

Supply Chain Logistics

BSLM 1410 Transportation Management

Introduction to basic transportation concepts and the relevance of transportation in our economy. Characteristics of each mode of transportation including rail, highway, carrier pricing, pipelines, air and water will be discussed and evaluated. 3C/3/0/0

BSLM 1510 Distribution Management

Designed to clarify and define the primary role of warehousing and logistics in today's economy. This course includes inventory control, material handling equipment, just-in-time productivity and quality control. 3C/3/0/0

BSLM 2420 Supply Chain Management

Supply chain management provides training in the areas of efficient administration and control of logistical components: transportation, inventory, packaging, warehousing, materials handling, customer service and their eventual integration into a logistics system. 4C/4/0/0

BSLM 2450 Procurement Principles and Applications

The course covers a broad overview of the objectives of Procurement; its authority, responsibility, management function and expectations. Students learn how and why the procurement function has far-reaching effects on a company's profit or loss. Procurement is a dynamic business function and is important in controlling costs in large dollar expenditures. The Procurement department deals with Production, Engineering, Marketing, Sales, Logistics, Stores, Inventory Control, Transportation, Quality Assurance and Finance. The primary objective of procurement is to buy the right materials, of the right quality, in the right quantity, at the right time, at the right price, from the right source. 3C/3/0/0

BSLM 2491 Business Logistics Management Internship

Students who participate in an internship gain first-hand knowledge in the industry under the guidance of a faculty member and a worksite supervisor. Students must state their goals and planned outcomes to participate in an internship. (Prerequisite(s): Instructor approval) Variable credits 1-3

BSLM 2497 Business Logistics Management Special Topics

The intent of this course is to allow flexibility in providing learning experiences to meet a special need of the student, the major program and the College. (Prerequisite(s): Instructor approval) Variable credits 1-3

Theatre and Drama

THTR 1710 Introduction to Theatre

This course introduces students to the study and exploration of theatre. Students will study the diversity of drama and explore the methods and styles of actors, directors, playwrights and designers. (MnTC: Goal 6) 3C/3/0/0

THTR 1716 Theatre Around the World

This course provides an introduction to the diverse theatrical styles and plays performed around the world. Students will explore a variety of theatre focusing on Eastern and Western cultures around the globe exploring the cultural, historical, social, religious, and linguistic significance of this work. Students will examine the aspects that go into creating these forms of theatre including, acting, design, and stagecraft. Students will explore these forms of theatre and their impact on theatre around the world today. (Prerequisite(s): READ 0722 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 6 & 8) 3C/3/0/0

THTR 1720 Exploring the Theatre Arts

This course provides an introduction to the study of the various forms of theatrical arts and sciences. Students will participate in dramatic readings, acting, improvisation, stagecraft, costuming, stage management, scenic design, dramatic analysis and related practicum of the business of theatre. Students will visit local productions to assist in their understanding of the activities of theatrical professionals. (MnTC: Goal 6) 3C/3/0/0

THTR 1725 Acting 1

This course provides students an Introduction to Acting. Students engage in physical and vocal exercises training the actor's voice and body. Students will also develop the skills to respond critically to theatrical performances. Students engage in vocal and physical warm-ups and exercises, read and analyze plays, use improvisation towards developing characters in scenes from a variety of plays. (Prerequisite(s): Grade of "C" or better in READ 0722 or appropriate assessment score) (MnTC: Goal 6) 3C/3/0/0

THTR 1730 Theatre Stagecraft and Production

This course provides an introduction to Theatre Stagecraft and Production with units on acting, stage movement, set construction, painting, lighting, special effects, and scenic design, among other topics. Participation in current theatre production is required. This course may be repeated for credit. (MnTC: Goal 6) 3C/3/0/0

THTR 1731 Theatre Performance Practicum

Students who are interested in pursuing active participation as a performer in a Saint Paul College theatrical production will be eligible for this course. Students will take an active role as a live performer within a college production. This course may be replaced in subsequent terms for a maximum of 4 credits. (Prerequisite(s): Instructor approval) (MnTC: Goal 6) 1C/0/1/0

THTR 1732 Technical Theatre Practicum

Students who are interested in pursuing active participation as a technical worker in a Saint Paul College theatrical production will be eligible for this course. Students will take an active role as a technical worker within a college production. This course may be replaced in subsequent terms for a maximum of 4 credits. (Prerequisite(s): Instructor approval) (MnTC: Goal 6) 1C/0/1/0

THTR 1740 Fundamentals of Playwriting – Playwriting 1

This course focuses on the skills necessary for writers who write for the stage rather than the page. Students work to develop an ability to create stage plots and dialogue. Through a series of writing and reading activities, exercises and assignments, students work to explore character, conflict and drama through their writing. Students also work through writing exercises to develop the skills to structure a play with a clear beginning, middle and end. Students are encouraged to develop their work and the course culminates in a reading of short plays. (Prerequisite(s): READ 0722 Reading 2 with a grade of "C" or better, or appropriate assessment score) (MnTC Goal: 6) 3C/3/0/0

THTR 1790 Special Topics in Drama and Theatre

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goal 6) Variable credits 1-6

THTR 2725 Acting 2

This course provides students continued study in acting skills. Students work to develop and exercise basic acting skills through practical application of the fundamental elements of the actor's art and work. Students will become more familiar with the actor's tools and a variety of acting techniques and the best ways to utilize them. Students engage in more detailed physical and vocal exercises training the actor's voice and body. Students read and analyze plays and develop character analysis and script analysis skills. Through acting exercises, activities, development of acting techniques, and scene work, students will develop the skills required to create three-dimensional characters in scene work. (Prerequisite(s): THTR 1725 Acting 1 or instructor approval) (MnTC: Goal 6) 3C/3/0/0

Truck Technician

TRKM 1400 Introduction and Safety

This course will introduce the student to the trucking industry and the role of the student as a truck technician within this industry. Personal, shop, tool and environmental safety will be emphasized. 1C/0/1/0

TRKM 1445 Truck Welding 1

Beginning course includes a combination of oxyacetylene welding, cutting, arc and MIG welding in a limited time. Basic shop procedures and safety are emphasized as is proper care of tools and equipment. Instruction will be conducted by lecture-demonstrations and shop practice. Practice on four basic joints in three basic positions is provided. Building an understanding and skill in the use of welding and manual cutting equipment are developed. 2C/0/2/0

TRKM 1455 Truck Welding 2

Continuation of skills developed in TRKM 1445. Includes advanced Arc and MIG welding techniques for frame repair in the trucking industry. Emphasis on safety procedures. 2C/0/2/0

TRKM 1521 Electrical 1

This course covers the design, theory of operation, repair procedures, and diagnosis of batteries, lighting systems, instruments and accessories used in commercial trucks. 5C/1/4/0

TRKM 1522 Electrical 2

This course covers the design, theory of operation, repair procedures and diagnosis of starting systems, charging systems and an introduction to electronic systems used in commercial trucks. 5C/1/4/0

TRKM 1551 Clutch and Transmission

This course covers the design, theory of operation, repair procedures, and diagnosis of clutches and manual transmissions used in commercial trucks. 5C/1/4/0

TRKM 1552 Driveshafts and Differentials

This course covers the design, theory of operation, repair procedures and diagnosis of drive shafts and differentials used in commercial trucks. 4C/1/3/0

TRKM 1553 Automatic and Automated Transmission

This course covers the design, theory of operation, repair procedures, and diagnosis of automated manual transmissions and automatic transmissions used in commercial trucks. 4C/1/3/0

TRKM 1560 Truck Brake Systems

This course covers the design, theory of operation, repair procedures, and diagnosis of hydraulic and air brake systems used in commercial trucks. 6C/1/5/0

TRKM 2401 Steering and Suspension Systems

This course covers the design, theory of operation, repair procedures, and diagnosis of steering, suspension and chassis components used in commercial trucks. 6C/1/5/0

TRKM 2425 Truck Cab Climate Control Systems

This course covers the design, theory of operation, repair procedures, and diagnosis of the heating, ventilation and air conditioning systems used in commercial trucks. 3C/1/2/0

TRKM 2440 Gasoline Engines

This course covers the design, theory of operation, repair procedures, and diagnosis of gasoline engine fuel and ignition systems used in commercial trucks. Engine overhaul procedures will also be covered. 6C/1/5/0

TRKM 2511 Diesel Engines 1

This course covers the design, theory of operation, repair procedures, and diagnosis of diesel engines used in commercial trucks. 6C/1/5/0

TRKM 2512 Diesel Engines 2

This course covers the design, theory of operation, repair procedures, and diagnosis of mechanical and electronic fuel systems used on diesel engines in commercial trucks. 6C/1/5/0

TRKM 2540 Preventive Maintenance

This course covers the preventive maintenance practices used to keep commercial trucks and trailers in proper and safe working order. Shop procedures, record keeping, computer use and job seeking skills will also be covered. 3C/1/2/0

Welding Technology

WLDG 1400 Industrial Shop Practices 1

This core course covers all the required safety instruction for all the 1400 category welding processes and the related shop equipment used. Instruction on welding equipment set-up and parameter settings along with welding theory will be covered for all welding processes. Students will be able to identify and demonstrate proper safety practices and usage on shop and welding equipment. (Co-Requisite(s): WLDG 1400-1450 will be taken in succession within the same semester block) 4C/4/0/0

WLDG 1410 Welding Basics

This introductory course will cover shop safety practices, the theories and concepts necessary for an understanding of basic oxyacetylene welding, cutting and brazing processes. Emphasis will be on safe work habits based on current industry standards. It will also cover carbon arc and plasma arc cutting. (Co-Requisite(s): WLDG 1400-1450 will be taken in succession within the same semester block) 2C/0/2/0

WLDG 1420 SMAW: E6010

This course covers the introduction of the theories and concepts necessary for the SMAW process using the E6010 electrode in the various welding positions, according to current industry and AWS standards. Instruction on the use, care and safety practices of SMAW equipment will also be emphasized. (Co-Requisite(s): WLDG 1400-1450 will be taken in succession within the same semester block) 2C/0/2/0

WLDG 1430 SMAW: E7018

Covers the manipulative skills and procedures required to attain entry level proficiency of E7018 Shielded Metal Arc welds in all positions. Weld plate testing procedures will be offered allowing the student the opportunity to achieve qualification. (Co-Requisite(s): WLDG 1400-1450 will be taken in succession within the same semester block) 3C/0/3/0

WLDG 1440 GMAW Short Arc

Provides students with the opportunity to build proficiency in the GMAW (Gas Metal Arc Welding) process using the short arc transfer on mild steel. All positions will be covered. Students will be expected to work to industry and AWS standards for apprentice welders in the area of quality and efficiency. (Co-Requisite(s): WLDG 1400-1450 will be taken in succession within the same semester block) 2C/0/2/0

WLDG 1450 Intro to Blueprint/Measuring Devices

This course is designed to cover such fundamental principles of drawing interpretation as may be required by a layout welder and setup person. To accomplish this objective, basic lines and blueprint viewing functions are studied and projects are assigned to reinforce base knowledge. This course also covers the use of different measuring devices used in the welding trades. (Co-Requisite(s): WLDG 1400-1450 will be taken in succession within the same semester block) 3C/3/0/0

WLDG 1500 Industrial Shop Practices 2

This core course covers all the required safety instruction for all the 1500 category welding processes and the related shop equipment used. Instruction on welding equipment set-up and parameter settings along with welding theory will be covered for all welding processes. Students will be able to identify and demonstrate proper safety practices and usage on shop and welding equipment. (Prerequisite(s): Must complete 1st semester core group 1400-1450 prior to advancing to 2nd semester core group 1500-1540; Co-Requisite(s): WLDG 1500-1540 will be taken in succession within the same semester block) 4C/4/0/0

WLDG 1510 GMAW Spray and Pulse Spray

Provides students with the opportunity to build proficiency in the GMAW process using the spray and pulse spray transfers on mild steel. All positions will be covered. Students will be expected to work to industry standards for apprentice welders in the area or quality and efficiency. Weld testing plate procedures will be offered allowing the student the opportunity to achieve qualification. (Prerequisite(s): Must complete 1st semester core group 1400-1450 prior to advancing to 2nd semester core group 1500-1540; Co-Requisite(s): WLDG 1500-1540 will be taken in succession within the same semester block) 3C/0/3/0

WLDG 1520 GMAW Core Wires

Designed to build proficiency in FCAW, FCAW-G, Metal Core and SAW processes. The student will be expected to perform to industry standards as required for apprentice welders. Weld plate testing procedures will be stressed, allowing the student the opportunity to achieve qualification. (Prerequisite(s): Must complete 1st semester core group 1400-1450 prior to advancing to 2nd semester core group 1500-1540; Co-Requisite(s): WLDG 1500-1540 will be taken in succession within the same semester block) 3C/0/3/0

WLDG 1530 Intro to GTAW

Provides students with the opportunity to build proficiency in the GTAW process on mild steel in all positions. The student will be expected to work to industry and AWS standards for apprentice welders in the area of quality and efficiency. (Prerequisite(s): Must complete 1st semester core group 1400-1450 prior to advancing to 2nd semester core group 1500-1540; Co-Requisite(s): WLDG 1500-1540 will be taken in succession within the same semester block) 3C/0/3/0

WLDG 1540 Blueprint Welding Symbols/Math/Welder Qualification

This course will focus on the knowledge of welding symbols as specified by the American Welding Society, (AWS). Welding inspection and welder qualification procedures will also be covered. (Prerequisite(s): Must complete 1st semester core group 1400-1450 prior to advancing to 2nd semester core group 1500-1540; Co-Requisite(s): WLDG 1500-1540 will be taken in succession within the same semester block) 3C/3/0/0

WLDG 2400 Industrial Shop Practices 3

This core course covers all the required safety instruction for all the 2400 category welding processes and the related shop equipment used. Instruction on welding equipment set-up and parameter settings along with welding theory will be covered for all welding processes. Students will be able to identify and demonstrate proper safety practices and usage on shop and welding equipment. (Prerequisite(s): Must complete 1st & 2nd semester core groups 1400-1540 prior to advancing to 3rd semester core group 2400-2440; Co-Requisite(s): WLDG 2400-2440 will be taken in succession within the same semester block) 4C/4/0/0

WLDG 2410 GMAW Aluminum and SST

Provides students with the opportunity to build proficiency in the GMAW process using both Aluminum and Stainless Steel. The introduction of the Aluminum and Stainless numbering system will be covered. Students will be expected to perform to industry and AWS standards as required for apprentice welders in the areas of quality and efficiency. (Prerequisite(s): Must complete 1st & 2nd semester core groups 1400-1540 prior to advancing to 3rd semester core group 2400-2440; Co-Requisite(s): WLDG 2400-2440 will be taken in succession within the same semester block) 2C/0/2/0

WLDG 2420 GTAW Aluminum and SST

Provides students with the opportunity to build proficiency in the GTAW process using aluminum & stainless steel in various weld positions. Aluminum & Stainless numbering systems will also be reviewed. Students will be expected to perform to industry and AWS standards as required for apprentice welders in the areas of quality and efficiency. (Prerequisite(s): Must complete 1st & 2nd semester core groups 1400-1540 prior to advancing to 3rd semester core group 2400-2440; Co-Requisite(s): WLDG 2400-2440 will be taken in succession within the same semester block) 4C/0/4/0

WLDG 2430 Grinding and finishing

Designed to create an in-depth knowledge of abrasives and equipment used in the welding & fabricating industry. Students will gain proficiency in both grinding and high grade finishing on various base materials according to paint, food and pharmaceutical standards. (Prerequisite(s): Must complete 1st & 2nd semester core groups 1400-1540 prior to advancing to 3rd semester core group 2400-2440; Co-Requisite(s): WLDG 2400-2440 will be taken in succession within the same semester block) 2C/1/1/0

WLDG 2440 Intro to Robotic Welding and Fabrication

Designed as an introduction to robotic welding as it applies to manufacturing. Students will be given specified projects in order to develop fabrication techniques used in industry. (Prerequisite(s): Must complete 1st & 2nd semester core groups 1400-1540 prior to advancing to 3rd semester core group 2400-2440; Co-Requisite(s): WLDG 2400-2440 will be taken in succession within the same semester block) 4C/1/3/0

WLDG 2500 2D CAD

This course introduces the practices and procedures for the use of Radan software in the Fabrication field. Students will be required to work within industry standards for 2D CAD blueprint drafting. (Prerequisite(s): Must complete 1st, 2nd & 3rd semester core groups 1400-2440 or receive instructor approval prior to advancing to 4th semester Advanced Certificate 2500-2570; Co-Requisite(s): WLDG 2500-2570 will be taken in succession within the same semester block) 2C/2/0/0

WLDG 2510 Safety

Designed to give students safety and operational instruction on all shop equipment required in the 2500 series certificate. Students will demonstrate correct safety procedures required in all the automated fabrication processes. (Prerequisite(s): Must complete 1st, 2nd & 3rd semester core groups 1400-2440 or receive instructor approval prior to advancing to 4th semester Advanced Certificate 2500-2570; Co-Requisite(s): WLDG 2500-2570 will be taken in succession within the same semester block) 1C/1/0/0

WLDG 2520 CNC Plasma

This course is designed to expose the student to CNC functions utilizing M & G coding Editing and perform CNC programing functions. Students will use proper safety equipment set up procedures and perform CNC operations according to industry standards. (Prerequisite(s): Must complete 1st, 2nd & 3rd semester core groups 1400-2440 or receive instructor approval prior to advancing to 4th semester Advanced Certificate 2500-2570; Co-Requisite(s): WLDG 2500-2570 will be taken in succession within the same semester block) 2C/1/1/0

WLDG 2530 Press Brake Operations

Designed to build proficiency in sheet metal fabrication the student will be expected to work within industry standards using math formulas, bend allowances and measuring instruments as required for apprentices. Students will program the CNC press to achieve correct bending outcomes to industry requirements. (Prerequisite(s): Must complete 1st, 2nd & 3rd semester core groups 1400-2440 or receive instructor approval prior to advancing to 4th semester Advanced Certificate 2500-2570; Co Requisite(s): WLDG 2500-2570 will be taken in succession within the same semester block) 3C/1/2/0

WLDG 2540 Robotic Welding Operations

Designed to build proficiency in fabrication skills beyond the previous diploma courses. The student will be expected to work within Industry standards as for apprentice fabricators using robotic programming, set up procedures, trouble shooting and repair of robotic functions. (Prerequisite(s): Must complete 1st, 2nd & 3rd semester core groups 1400-2440 or receive instructor approval prior to advancing to 4th semester Advanced Certificate 2500-2570; Co-Requisite(s): WLDG 2500-2570 will be taken in succession within the same semester block) 3C/1/2/0

WLDG 2550 Industrial Equipment

Designed to build proficiency in the metal fabricating field, the student will be expected to perform within industry standards for apprentice welders/fabricators. The student will be introduced to lifting devices which are encountered in live work situations, using fork truck and overhead cranes. (Prerequisite(s): Must complete 1st, 2nd & 3rd semester core groups 1400-2440 or receive instructor approval prior to advancing to 4th semester Advanced Certificate 2500-2570; Co-Requisite(s): WLDG 2500-2570 will be taken in succession within the same semester block) 2C/1/1/0

WLDG 2560 Layout Practices

Course 2560 will allow the student to demonstrate knowledge of manufacturing layout and planning through designated projects. These projects will require the student to use advanced techniques in design, layout and fabrication processes used in industry. (Prerequisite(s): Must complete 1st, 2nd & 3rd semester core groups 1400-2440 or receive instructor approval prior to advancing to 4th semester Advanced Certificate 2500-2570; Co-Requisite(s): WLDG 2500-2570 will be taken in succession within the same semester block) 4C/1/3/0

WLDG 2570 Robotic Welding Capstone

Through this capstone offering, students will have the opportunity to meet specified credit requirements utilizing shop experiences approved by the overseeing Instructor. (Prerequisite(s): Must complete 1st, 2nd & 3rd semester core groups 1400-2440 or receive instructor approval prior to advancing to 4th semester Advanced Certificate 2500-2570; Co-Requisite(s): WLDG 2500-2570 will be taken in succession within the same semester block) 1C/0/1/0

WLDG 2590 Welding Special Projects

The intent of this course is to allow flexibility in providing learning experiences to meet a special need of the student, the major program and the College. (Prerequisite(s): Instructor approval) Variable credits 1-4

Women's and Gender Studies

WGST 1785 Foundations in Women's Studies

This course serves as an introduction to the field of women's and gender studies. Using an interdisciplinary approach, the course examines the conditions and circumstances affecting the lives of (primarily) women in the United States. The course explores the roles that women play in society, with careful attention to the ideas and factors that shape those roles. Students will examine how ideas about gender (as well as race, ethnicity, social class, sexual orientation, physical ability and age) are informed by institutions, cultural beliefs, and social practices. Throughout the course, emphasis is placed on the diversity of women's experience in contemporary United States and connections to women worldwide. (Prerequisite(s): READ 0721 with a grade of "C" or better or appropriate assessment score) (MnTC: Goals 5 & 9) 3C/3/0/0

WGST 1790 Special Topics in Women's and Gender Studies

This course is designed to present additional or unique material and learning experiences within a specified discipline. The course will be based on student need, flexibility, and may be designed to meet various transfer and pre-major course requirements. Please see a current Course Schedule for complete course details. (MnTC: Goals 5 & 9) Variable credits 1-6

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Duthie, Kasandra

English
BA, University of Minnesota
MFA, Minnesota State University, Mankato

Faculty *continued*

Fitzgerald, David

Welding
Diploma, Riverland Community College

Flicek, Peg

Cosmetology
Diploma, Saint Paul College—A Community
& Technical College
Certificate, CIDESCO

Gabrawy, Mariann

Biology
BS, St. Cloud State University
MA, St. Cloud State University

Gage, Patti

Reading
BA, University of Northern Colorado
MAT, School for International Training

Gibbons, Nora

Psychology
BA, University of St. Thomas
MA, University of Missouri, St. Louis
PhD, University of Missouri, St. Louis

Gielissen, James

Biology
BS, University of Wisconsin, Madison
MS, University of Minnesota

Gill, Linda

Interpreter Training Program
Certificate, Saint Paul College—A Community
& Technical College
BS, University of Minnesota

Gofarsh, Sasha

Mathematics
BA, A. I. Herzen State Pedagogical University
MA, A. I. Herzen State Pedagogical University

Haider, Julie

Philosophy
BA, Valparaiso University
MA, Marquette University
MA, University of St. Thomas

Hanes-Goodlander, Lisa

Counselor
BA, Wright State University
MS, Wright State University
PhD, University of Minnesota

Hankel, Todd

Welding
Diploma, Hennepin Technical College

Hazen, Stephanie

Psychology
BA, Amherst College
MA, Boston College

Hillstead, Thomas

Cabinetmaking
Diploma, Saint Paul College—A Community
& Technical College

Hudson, Rachel

Biology
BA, Gustavus Adolphus College
MS, Iowa State University

Hulander, Kelly

English
BA, University of Minnesota
MA, University of Minnesota
PhD, University of Minnesota

Ignatjeva, Anna

Speech
BA, University of Latvia
MS, Minnesota State University, Mankato

Jacobs, Aaron

Art
BA, Minnesota State University, Moorhead
MFA, New York Academy of Art

Jones, Sean

Culinary Arts
AAS, Saint Paul College—A Community
& Technical College

Kokesh, Hannah

Pharmacy Technician
BA, Augsburg College

Kortenhof, Kurt

History
BA, University of Wisconsin, Eau Claire
MA, University of Wisconsin, Eau Claire

Kpanaku, Zubah

Chemistry
BS, Cuttington Univ. College – Liberia
MS, General Chemistry, Ohio University
MS, Analytical Chemistry, Ohio University
MS, Chemical Technology/Technician, Purdue University

Krug, Manfred

Culinary Arts
Diploma, Saint Paul College—A Community
& Technical College
BS, University of Wisconsin, Stout
AOS, Culinary Institute of America

Lawson, Peter

Economics
BS, Accounting, University of Wisconsin, Superior
BS, Economics, University of Wisconsin, Superior
MS, Utah State University

Leggs, Michael

English
BA, Kansas State University
MA, Kansas State University

Loewen, Kendal

Accounting
BS, University of Minnesota
MMIS, Metropolitan State University

Lund, Bill

English
BA, Westmar University
MA, Ball State University

Faculty *continued*

Massa, Janet

Child Development Careers
BS, University of Wisconsin, Stout
MA, Concordia College

Maus, Craig

Hospitality Management
AA, North Hennepin Community College
BA, Minnesota State University, Mankato
MBA, University of St. Thomas

Mazur, Celeste

Reading
BS, Michigan Technical University
MA, Hamline University

McClure, Laura

Practical Nursing
BS, Winona State College
MSN, Walden University

McDonald, Perpetua

Practical Nursing
BS, South Dakota State University
MSN, Walden University

McKown, Kelly

Child Development Careers
BS, California State University
MS, University of Wisconsin, Stout

Mehmood, Nasreen

Biology
BS, Osmania University
MS, Osmania University
PhD, Osmania University

Mills, Anita

Health Unit Coordinator
BA, Concordia University

Mills, Travis

Chemistry
BS, St. Cloud State University
PhD, University of Minnesota

Murray, Terry

Machine Tool Processes
Diploma, Saint Paul College—A Community
& Technical College

Nordahl, Scott

Machine Tool Processes
Diploma, Austin Technical College

Nguyen, Francois

Mathematics
BA, University of St. Thomas
MEd, University of LaVerne
EdD, Saint Mary's University

O'Connell, Patricia

Interpreter Training Program
BS, University of Wisconsin, Madison

O'Halloran, James

Accounting
BS, Minnesota State University, Mankato
MBA, University of Minnesota
MBT, University of Minnesota

Olsen-Sartain, Jennie

Reading
BS, University of Minnesota
MA, College of St. Catherine

Quatarra, Anna

Business
BA, University of Wisconsin, LaCrosse
MA, Saint Mary's University

Pardun, Greg

Automotive Service Technician
Diploma, Dakota County Technical College

Paulnock, Daniel

Speech
BS, Emerson College
MS, Emerson College

Pearson, Darren

Computer Careers
BSEE, University of North Dakota
MS, University of Minnesota

Poth, Lynn

Medical Laboratory Technician
BS, University of Texas, El Paso
MS, University of North Dakota

Pueringer, Kristin

Mathematics
BS, St. Olaf College
MS, University of Minnesota

Purcell, John

Automotive Service Technician
Diploma, Dakota County Technical College
AA, Inver Hills Community College

Purcell, Kirstin

Biology
BA, University of Minnesota
ME, University of Minnesota
MCLS, University of Maryland

Rafferty, Patrick

Truck Technician
Diploma, Saint Paul College—A Community
& Technical College

Reigstad, Shelby

Speech
BS, St. Cloud State University
MA, Bethel College

Rock, Jayne

English
BA, Saint Cloud State University
BA, South Dakota State University
MA, Saint Cloud State University

Roethke, Leigh

Art
BFA, Savannah College of Art & Design
MA, University of Minnesota

Ross, Kathy

Respiratory Care
AAS, Pima County Community College

Faculty *continued*

Russell, Judy

Respiratory Care Practitioner
AAS, Saint Paul College—A Community
& Technical College

Sartain, Jeremy

Massage Therapy
BA, University of Minnesota, Duluth

Sartain, Nathan

Culinary Arts
Diploma, Western Culinary Institute

Schmitz, Lisa

Mathematics Psychology
BS, University of Wisconsin, River Falls
MS, University of Minnesota
MA, University of St. Thomas

Schones, Edward

Electrical Technology
BA, Macalester College
MEd, University of Minnesota
Diploma, Saint Paul College—A Community
& Technical College

Schumacher, Pamela

Engineering
BS, Texas A & M University
MS, Texas A & M University

Selton, Julie

Electrical Technology
AA, Anoka Technical College

Senger, Susan

International Trade
BA, College of Saint Scholastica
MA, College of Saint Scholastica

Setley, Keith

Electrical Technology
AA, Saint Paul College—A Community
& Technical College
BS, University of Wisconsin, Stout

Seymour, Joy

Practical Nursing
AA, Saint Paul College—A Community
& Technical College
AS, Saint Paul College—A Community
& Technical College
BS, Metropolitan State University

Shah, Avani

Mathematics
BS, Gujarat University
BS, Gujarat University
BEd, Gujarat University
MBA, University of Phoenix
MS, University of Minnesota

Shariff, Ayesha

History
BA, North Central College
MA, University of Wisconsin, Madison
PhD, University of Wisconsin, Madison

Sheaffer, Warren

Computer Careers
BS, University of Pittsburgh
MBA, University of Pittsburgh
MST, Massachusetts Institute of Technology

Smith, Allen

Machine Tool Processes
Diploma, Wisconsin Indianhead Technical College
BS, University of Wisconsin Stout

Starkey, Penny

Chemistry
BS, University of St. Thomas
PhD, University of Minnesota

Stueve, Mary

Biology
BS, University of Minnesota
MS, University of Minnesota

Su, Ba

Mathematics
BS, University of Wisconsin, River Falls
BS, Metropolitan State University
MS, Iowa State University

Sundlie, Jolene

Sociology
BA, Minnesota State University, Moorhead
MS, North Dakota State University

Swartwood, James

Philosophy & Humanities
BA, College of William and Mary
MA, University of Minnesota
PhD, University of Minnesota

Tarrell-Florey, Amy

English for Speakers of Other Languages
BA, Washington University in St. Louis
MA, University of Minnesota

Taylor, Natalya

Mathematics
BA, Russian A.I. Herzen State Pedagogical University
MA, Russian A.I. Herzen State Pedagogical University

Taylor, Susan

English
BA, California State University, Los Angeles
MFA, University of Minnesota

Travers, Mindy

Business
AAS, Saint Paul College—A Community
& Technical College
BS, Saint Mary's University of Minnesota
MA, Hamline University

Trego, Shannon

Geography
BA, University of Wisconsin, Madison
MA, University of North Carolina, Chapel Hill

Tri, Ben

Librarian
BA, University of St. Thomas
MS, University of Wisconsin, Milwaukee
MPNA, Metropolitan State University

Faculty *continued*

Tsegaw, Yewondwossen

Practical Nursing

Diploma, Saint Paul College—A Community
& Technical College

BS, Metropolitan State University

MSN, Walden University

Vainshtein, Alli

Business Technology Careers

BS, University of Phoenix

MBA, University of Phoenix

Virnig, Heather

American Sign Language

BA, Gallaudet University

MS, McDaniel College

Vorderbruggen, David

Automotive Service Technician

Diploma, Saint Paul College—A Community
& Technical College

Werner, John

Truck Technician

Diploma, Saint Paul College—A Community
& Technical College

Wesley, Kathryn

Study Skills & Career Planning

Intake Assessment

BS, University of Wisconsin, Stevens Point

MS, University of Wisconsin, Stout

Wheeler, Jody

English

AA, Ridgewater Community College

BA, Bemidji State University

MA, St. Cloud State University

Widmyer, David

Machine Tool Processes

Diploma, Saint Paul College

BS, University of Wisconsin, Stout

Wojahn, Chad

Welding

AAS, Dunwoody College of Technology

Wolfson, Inna

English for Speakers of Other Languages

BA, Simferopol State University

MA, Hamline University

Yernberg, Jacob

Automotive Service Technician

Diploma, Wyoming Technical Institute

Zimmerman, Maggie

Earth Science

BA, University of St. Thomas

MS, University of Illinois, Chicago

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Directions & Parking

Easy to Find. Easy to Get To.

From the South (35E)

Take the Kellogg Boulevard Exit, turn left. Continue to John Ireland Boulevard, turn left at the traffic light. Continue to Marshall Avenue, turn right.

From the North (35E) or From the East (I-94W)

Take the Marion Street Exit, turn left passing over the freeway. Continue on Kellogg Boulevard to John Ireland Boulevard, turn right at the traffic light. Continue to Marshall Avenue, turn right.

From the West (I-94E)

Take the Marion Street Exit, at the top of the exit ramp take a right onto Kellogg Boulevard. Turn right at traffic light onto John Ireland Boulevard. Continue to Marshall Avenue, turn right.

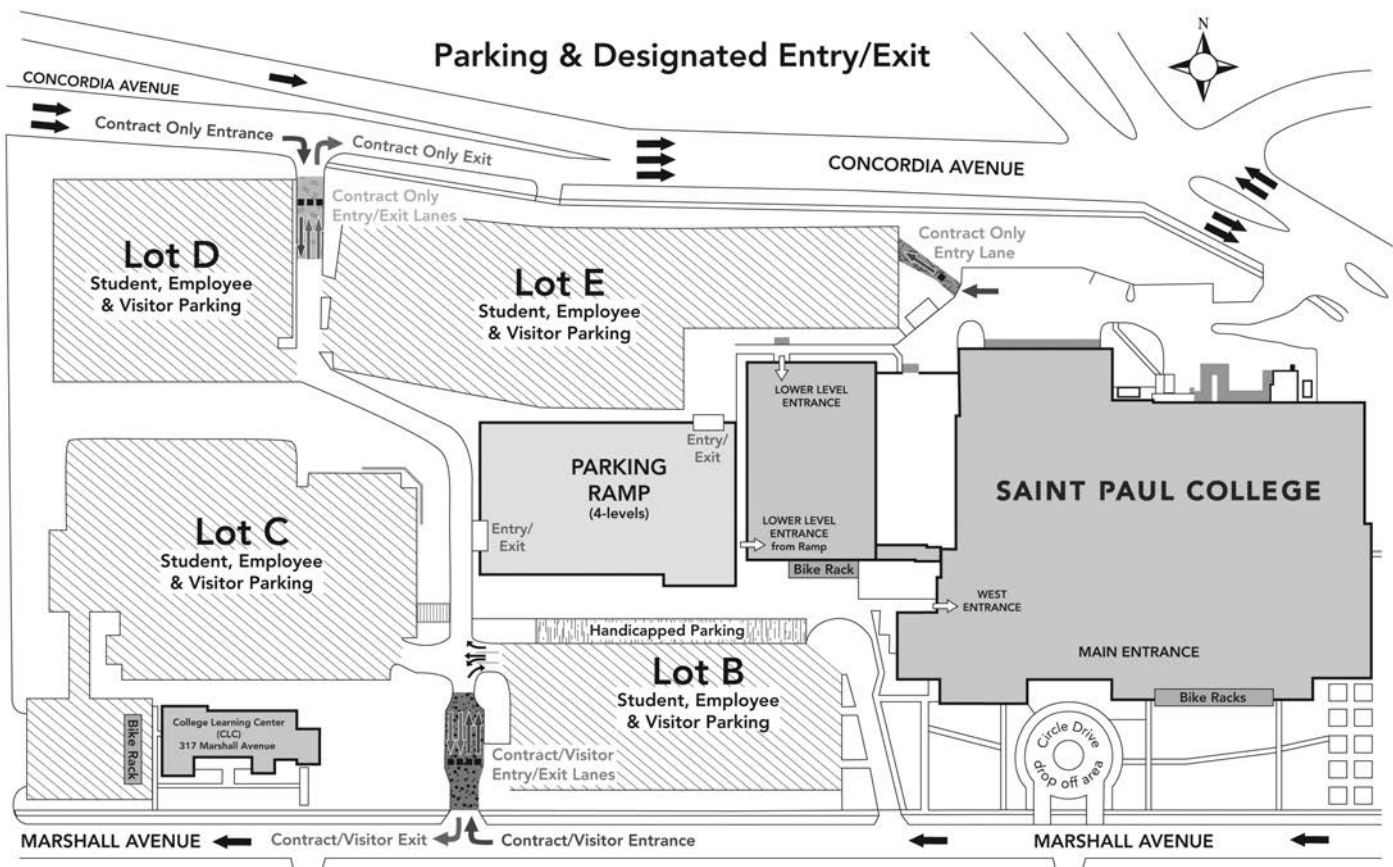
Bus Information

Saint Paul College is also easy to reach by bus. Routes 12, 21, 65, 94B and 94L service the College directly. Other routes such as 5, 9, 10, 14, 15 and 31 drop off passengers within walking distance of the College.

Visitor Parking

Visitor parking is available in any open, undesignated space in the Parking Ramp or Lot B, C, D or E.

Enter parking lot via Marshall Avenue.



SAINT PAUL COLLEGE
A Community & Technical College
235 Marshall Avenue
Saint Paul, MN 55102
www.saintpaul.edu/parking

Map Legend

- Contract/Visitor Entry/Exit
- Contract Only Entry/Exit

Bike Racks

Visitors, students and employees may park in the Parking Ramp and Lots B, C, D & E.

11/2012

For the most up-to-date information about parking and fees, go to the College Website: www.saintpaul.edu/parking

Parking Information

Parking Lots/Designated Parking Areas

For the most up-to-date information about parking and fees, please see the College Website: www.saintpaul.edu/parking

Parking Policy

It is mandatory for all motor vehicles parked on the Saint Paul College campus to use the controlled parking access system. Visitors may park anywhere in the lots and ramp except for marked reserved spaces. Vehicles parked in handicapped parking spaces require a valid State-Issued Handicapped Permit. All violators will be ticketed.

Regulations

All persons operating a vehicle on campus are responsible for being familiar with, and complying with, all traffic and parking regulations. A complete list of parking violations and parking policy may be obtained from the Office of Public Safety on the first floor. Saint Paul College assumes no liability for care of, damage to, and/or protection of any vehicle or its contents at any time while it is operated on or parked on the campus property. Possession of a parking access card neither reserves nor guarantees a parking space.

Motorcycle Parking:

Motorcycle parking is available in the designated parking areas by the Kellogg Boulevard and Marshall Avenue entrances. Visitors with motorcycles can park in either the upper or lower lot designated motorcycle parking area; however, visitors must use the Marshall Avenue entrance and then exit at Marshall Avenue by paying the hourly rate when leaving. The cement motorcycle parking areas are located to the left of the Kellogg Boulevard entrance in the lower lot and in the upper lots at the east end of Lot B.

NO PARKING ZONES:

- Any restricted parking space without a proper parking tag.
- Any handicapped space without a legally displayed sticker or license plate.
- Fire lanes. This includes leaving room for a minimum of two vehicles to pass at the end of each row.
- In front of any garage doors.
- Any Right-of-Way areas. This includes the area north of the Truck and Fabrication Shops to allow for oversized vehicle maneuvering.
- Any areas not paved or designated for parking. This includes sidewalks, curbs, and lawns.

If You Receive a Citation for a Parking Violation

Payment is to be directed to the Tuition Office and requires a copy of the citation. Payment is due fifteen (15) business days from the date the citation was issued. Checks are to be made payable to Saint Paul College. You may appeal your citation within fifteen (15) business days from the date the citation was issued. Appeal forms are available at the Public Safety Desk. The form must be filled out completely to be considered. If you fail to pay your parking citation(s), the fine(s) will be placed on your student record. If the ticket goes unpaid, a hold will be placed on your account and you will be unable to get a copy of your transcript or register until the fine is paid. Unpaid tickets will be processed through the college's normal collection process and the debt may be submitted to Minnesota Department of Revenue for collection.

It is mandatory that all motor vehicles parked on the Saint Paul College campus use the parking access system to go in and out of the parking lot.



For more information

If you need more information, please contact us. We will be glad to answer your questions.

Visit our Web site: www.saintpaul.edu

E-mail: starthere@saintpaul.edu

General information: 651.846.1600

Schedule a "Start Here" information session: www.saintpaul.edu/StartHere



SAINT PAUL COLLEGE

A Community & Technical College

235 Marshall Avenue
Saint Paul, MN 55102

TEL 651.846.1600
FAX 651.846.1703

