

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 Pathway Advisor 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 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 2460 Discrete Structures of Computer Science	4
<input type="checkbox"/> CSCI 2469 Advanced Programming Principles	4
<input type="checkbox"/> CSCI 2570 Machine Architecture & Organization	4
Subtotal	30

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	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
Goal 1: ENGL 1711 Composition 1	4
Goal 4: MATH 1730 College Algebra or higher	3-4
Goals 1-10 of the Minnesota Transfer Curriculum	3
Total Semester Credits	15

Second Semester

CSCI 1523 Intro to Computing and Programming Concepts	4
CSCI 1541 Java Programming 1	4
Goal 3: PHYS 1720 Principles of Physics 1 OR PHYS 2700 General Physics 1	4-5
Goal 4: PHIL 1710 Logic	3
Total Semester Credits	15-16

Third Semester

CSCI 1524 Intro to Algorithms and Data Structures	4
CSCI 1533 ANSI C Language Programming	2
CSCI 2460 Discrete Structures of Comp Science	4
Goal 5: ECON 1730 Microeconomics	3
Goals 1-10 of the Minnesota Transfer Curriculum	3
Total Semester Credits	16

Fourth Semester

CSCI 2469 Advanced Programming Principles	4
CSCI 2570 Machine Architecture & Organization	4
Goal 1: SPCH XXXX	3
Goal 6: PHIL 1720 Ethics	3
Total Semester Credits	14

Total Program Credits 60

See back of this guide for Course Chart

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:

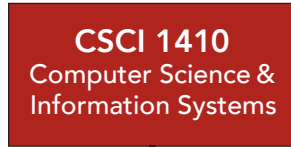
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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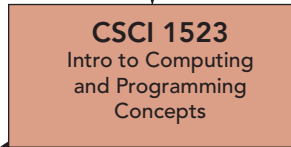
Computer Science AS DEGREE *(continued)*
 (30 credits + 30 GenEd credits)

The below chart illustrates the courses required for completion of this degree.

Introductory



Intermediate



Advanced

