

Computer Science Transfer Pathway AS DEGREE

Program Overview

The Computer Science Transfer Pathway AS Degree 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 develop and implement complex algorithms in computer-programming languages.
2. Graduates implement complex data structures to insure efficient program execution.
3. Graduates utilize sound mathematical principles to solve complex programming problems.
4. Graduates implement algorithms in programming languages utilizing proper coding conventions and appropriate documentation standards.
5. Graduates apply effective technical communication skills.

Program Faculty

- Mary Anderson
mary.anderson@saintpaul.edu
- Warren Sheaffer
warren.sheaffer@saintpaul.edu
- Cheng Thao
cheng.thao@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 & Info Systems	4
<input type="checkbox"/> CSCI 1523 Intro to Computing and Programming Concepts	4
<input type="checkbox"/> CSCI 1524 Intro to Algorithms & 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	9
ENGL 1711 Composition 1 – 4 cr	
ENGL 1712 Composition 2 -- 2 cr	
COMM 17XX – 3 cr	
<input type="checkbox"/> Goal 3: Natural Sciences	5
PHYS 2700 General Physics 1 – 5 cr	
<input type="checkbox"/> Goal 4: Mathematical/Logical Reasoning	8
MATH 2749 Calculus 1 - 4 cr	
MATH 2750 Calculus 2 OR	
MATH 1740 Introduction to Statistics - 4 cr	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
<input type="checkbox"/> Goals 1-10 of the Minnesota Transfer Curriculum	2
Select a minimum of 2 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 & Info Systems	4
Goal 1: ENGL 1711 Composition 1	4
Goal 4: MATH 2749 Calculus 1	4
Goals 1-10 of the Minnesota Transfer Curriculum	2
Total Semester Credits	14

Second Semester

CSCI 1523 Intro to Computing and Programming Concepts	4
Goal 3: PHYS 2700 General Physics 1	5
Goal 4: MATH 2750 Calculus 2 OR MATH 1740 Intro to Statistics	4
Goal 5: History, Social Sciences, Behavioral	3
Total Semester Credits	16

Third Semester

CSCI 1524 Intro to Algorithms and Data Structures	4
CSCI 1533 ANSI C Language Programming	2
CSCI 1541 Java Programming 1	4
CSCI 2570 Machine Architecture & Organization	4
Goal 1: ENGL 1712 Composition 2	2
Total Semester Credits	16

Fourth Semester

CSCI 2460 Discrete Structures of Comp Science	4
CSCI 2469 Advanced Programming Principles	4
Goal 1: COMM 17XX	3
Goal 6: Humanities and Fine Arts	3
Total Semester Credits	14

Total Program Credits 60

See back of this guide for Transfer Opportunities

Minimum Program Entry Requirements

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

Reading: Score of 250+ or grade of "C" or better in READ 0722 or READ 0724 or EAPP 0900

Writing: Score of 250+ on Reading Comprehension or grade of "C" or better in ENGL 0922 or EAPP 0900

Adv. Algebra & Functions: Score of 250+ 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.

TPCS

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

Transfer Opportunities

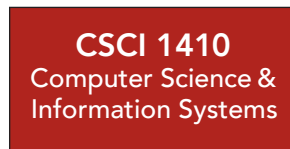
Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please go to saintpaul.edu/Transfer.

Computer Science Transfer Pathway AS

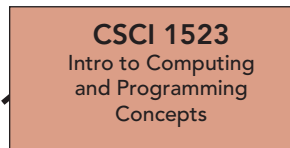
BS	Computer Science Bemidji State University	BS	Computer Science (Bioinformatics, Computer Information, Human Interaction) Winona State University
BS	Computer Science Minnesota State University, Moorhead	BS	Computer Science Southwest Minnesota State University
BS	Computer Science	BS	Computer Science St. Cloud State University
BA	Individualized Studies Metropolitan State University		

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

Introductory



Intermediate



Advanced

