

Computer Science

AWARDS

Computer Science Transfer Pathway A.S. Degree 60 cr

Computer Programmer A.A.S. Degree 60 cr

CAMPUS CONTACT FOR THIS PROGRAM

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COMPUTER SCIENCE TRANSFER PATHWAY A.S., 60 CREDITS

Computer Science Curriculum 22 cr

Liberal Arts Curriculum 38 cr

PURPOSE

The Computer Science Transfer Pathway A.S. offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated Computer Science bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing the pathway degree and transferring to one of the seven Minnesota State Universities* enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

The Computer Science Pathway consists of the Required Pathway Curriculum and select Minnesota Transfer Curriculum (MnTC) requirements to bring your credit total to 60 credits.

**Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University, Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.*

TRANSFER PATHWAYS

With this transfer pathway, you will be able to transfer to the following majors: at

Bemidji State University

Computer Science - BS

Metropolitan State University

Computer Science - BS

Minnesota State University, Moorhead

Computer Science - BS

Southwest Minnesota State University

Computer Science - BS

St. Cloud State University

Computer Science - BS

Winona State University

Computer Science - BS (Bioinformatics Emphasis, Computer Information Systems Emphasis or Human Computer Interaction Emphasis)

Computer Science Pathway Curriculum 22 credits

- ITC 2000 PC Hardware and Software (A+)3
- CS 1110 Computer Science I with Java3
- CS 1119 Computer Programming in C++.....4
- CS 2200 Computer Architecture4
- CS 2300 Algorithms and Data Structures.....4
- CS 2350 Discrete Structures.....4

Liberal Arts 38 credits

- ENG 1108 Writing and Research Skills.4
- ENG 1111 Research Writing in the Disciplines **OR**
 ENG 1114 The Research Paper **OR**
 ENG 1130 Writing & Research for the Professions2-3
- COMM1100 Interpersonal Communication **OR**
 COMM1110 Public Speaking **OR**
 COMM2230 Small Group Communication3
- MnTC Goal 3 elective (Recommend: PHYS 1081) 3-5
- MATH 1133 Calculus I.5
- MnTC Goal 5 elective.....3
- MnTC Goal 6 elective.....3
- MnTC Goal 7-10 any course3
- Liberal Arts electives (MnTC courses only) 9-12

Recommended Elective Courses

Depending on Transfer plans, students may wish to consider taking some/all of the following courses as part of the Liberal Arts electives:

- MATH 1134 Calculus II
- PHYS 1081 Calculus-Based Physics I
- PHYS 1082 Calculus-Based Physics II
- PHIL 1120 Logic

TOTAL CREDITS 60

RECOMMENDED FULL-TIME COURSE OF STUDY

Note: Not all courses will be available every semester. For a complete list of Minnesota Transfer Curriculum (MnTC) Goal Area course choices, please visit: inverhills.edu/MnTC

Semester 1 15 credits

- CS 1110 Computer Science I with Java.3
- ITC 2000 PC Hardware and Software (A+).3
- ENG 1108 Writing & Research Skills (Goal 1, 2)4
- MATH 1133 Calculus I (Goal 4).5

Semester 2 16 credits

- CS 1119 Computer Programming in C++4
- COMM1100 Interpersonal Communication (Goal 1, 7).....3
- MnTC Goal 5 elective.....3
- MnTC Goal 6 elective3
- Liberal Arts elective (MnTC courses only).....3

Semester 3 15 credits

- CS 2200 Computer Architecture.4
- MnTC Goal 3 elective.....3-5
- Liberal Arts elective (MnTC courses only).....3-5
- MnTC Goal 7-10 elective.3

Semester 4 14 credits

- CS 2300 Algorithms and Data Structures.....4
- CS 2350 Discrete Structures4
- ENG 1111 Research Writing in the Disciplines **OR**
 ENG 1114 The Research Paper **OR**
 ENG 1130 Writing & Research for the Professions 2-3
- Liberal Arts elective (MnTC courses only).....3-4

TOTAL CREDITS 60

COMPUTER PROGRAMMER

A.A.S., 60 CREDITS

Computer Programmer Core Curriculum	27 cr
Program Electives	13 cr
Liberal Arts Curriculum	20 cr

PURPOSE

Graduates of this program are well-prepared in software programming and software engineering abilities to help execute a wide variety of information technology projects.

Required Computer Programmer Core 27 credits

- ITC 2000 PC Hardware & Software (A+) 3
- ITC 1480 Linux Essentials 3
- CS 1110 Computer Science I with Java 3
- CS 1119 Computer Programming with C++ 4
- CS 1127 Advanced Java Programming 3
- CS 2200 Computer Systems Architecture 4
- CS 2300 Algorithms and Data Structures 4
- ITC 2480 Administering Linux Servers 3

Program Electives 13 credits

- Any Computer Science course
- MATH 1120 or higher
- ITC 2000 or higher
- PHIL 1120

Liberal Arts Curriculum 20 credits

- ENG 1108 Writing and Research Skills 4
- COMM1100 Interpersonal Communication 3
- MATH 1118 **OR** 1127 4
- MnTC Goal 5 elective 3
- MnTC Goal 6 elective 3
- Liberal Arts elective (MnTC courses only) 3

TOTAL CREDITS 60



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