COMPUTER SCIENCE - PSU / OSU / UO - TRANSFER - DEGREE

Associate of Science Transfer (AST) in Computer Science

Faculty Adviser

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Computer science is the study of computers, hardware, software design, and the way humans work with technology. Students will study programming in a variety of languages for different purposes. MHCC's program prepares students to transfer to a four year degree at PSU, OSU, or UO.

Students who complete this program will also complete the Oregon Computer Science Major Transfer Map (MTM) (https://www.oregon.gov/highered/about/transfer/pages/transfer-maps.aspx) and Core Transfer Map (CTM).

Curricular Outcomes

At the completion of this curriculum, students should be able to:

- Develop software using both structured and object-oriented paradigms that meets the requirements of a written specification.
- Explain the software development lifecycle and the specific tools and processes used to create software.
- Design, analyze, and implement algorithms to solve computational problems using various data structures as problem-solving tools. These data structures must include arrays, stacks, queues, linked lists, trees, and hash tables.
- Communicate effectively in a variety of professional contexts.
- Function effectively as a members or leader of a team engaged in activities appropriate to the programs' discipline.

General education courses (such as math, writing, health, etc.) can be taken during any term, or before starting the program.

Please note:

- Students majoring in Computer Science will need to know their transfer plans early on in order to complete the correct courses.
- This degree aligns with Oregon's Computer Science Major Transfer Map (https://www.oregon.gov/highered/about/transfer/pages/transfer-maps.aspx) (MTM) for students planning to transfer to PSU, OSU, or UO after completion.
- Students who do not place directly into MTH251 Calculus I: Differential Calculus or higher will need to complete MTH111Z Precalculus I: Functions ★ and/or MTH112Z Precalculus II: Trigonometry before enrolling in computer science courses.
- Please contact the faculty adviser as soon as possible for assistance with course planning.

First Quarter		
Fall		**Credits**
CS160	Computer Science Orientation ★	4
MTH251	Calculus I: Differential Calculus	5
WR121Z	Composition I ★	4
COMM111Z	Public Speaking ★	4
	Credits	**17**
Second Quarter		
Winter		
CS161	Computer Science I	4
MTH252	Calculus II: Integral Calculus	5
WR227Z	Technical Writing ★	4
Social Science requirement (https://catalog.mhcc.edu/degree-certificate-requirements/ast-cs-psu-osu-uo/#ss)		3-4
	Credits	**16**
Third Quarter		
Spring		
CS162	Computer Science II	4
Arts and Letters requirement (https://catalog.mhcc.edu/degree-certificate-requirements/ast-cs-psu-osu-uo/#al)		3-4
Social Science requirement (https://catalog.mhcc.edu/degree-certificate-requirements/ast-cs-psu-osu-uo/#ss)		3-4
	Credits	**12**
Fourth Quarter		
Fall		
CS250	Discrete Structures I	4
CS260	Data Structures	4
BI211 or CH221 or PH211	Principles of Biology I or General Chemistry I or General Physics with Calculus I	5
Arts and Letters requirement (https://catalog.mhcc.edu/degree-certificate-requirements/ast-cs-psu-osu-uo/#al)		3-4
	Credits	**17**
Fifth Quarter		
Winter		
CS251	Discrete Structures II	4
BI212 or CH222 or PH212	Principles of Biology II or General Chemistry II or General Physics with Calculus II	5
Elective, if needed to reach 90 credits		4
	Credits	**13**
Sixth Quarter		
Spring		
CS205	Systems Programming and Architecture	4
BI213 or CH223 or PH213	Principles of Biology III or General Chemistry III or General Physics with Calculus III	5
Electives, if needed to reach 90 credits (MTH253 or MTH261 recommended if transferring to PSU)		6
	Credits	**15**
	Total Credits	**90**

Transfer Schools

- Portland State University (https://www.pdx.edu/computer-science/)
- Oregon State University (http://eecs.oregonstate.edu/academics/undergraduates/computer-science/)
- University of Oregon (https://cs.uoregon.edu/)