# COMPUTER SCIENCE, ASSOCIATE OF SCIENCE TRANSFER

## Program Description

The Computer Science program is designed to provide students with a quality education that motivates students to reach their full potential through computer programing, and computer logic skills necessary for transfer, career success, and lifelong learning.

The Associate of Science, Computer Science (AST-CS) follows Oregon state Major Transfer Maps (MTMs), which represent a streamlined path for students transferring from an Oregon community college to an Oregon university, who know which major/bachelor's degree program they want to pursue. In contrast to other statewide transfer tools that prioritize university general education requirements (i.e. AAOT and ASOT), MTMs specify clear course-taking paths necessary for on-track progress towards a specific major/bachelor's degree, with a guarantee of transfer from any Oregon community college to any Oregon public university. For more information see Major Transfer Maps: Memoranda of Understanding (https://www.oregon.gov/highered/policy-collaboration/Pages/transfer-2998-implementation-resources.aspx).

## Program Outcomes

Students who complete the Computer Science AST will have the knowledge, skills, and abilities to:

1. Acquire new information and adapt to changes in the computer technology field
2. Apply a logical and systematic approach to solve problems
3. Use written, oral, and visual interpersonal skills to communicate with individuals or small groups
4. Design and implement computer software applications
5. Evaluate and compare different algorithms applicable to a given task

## Career Considerations

Computer science knowledge is built upon a foundation that allows graduates to explore a wide range of career possibilities. Popular computer science careers include programming and software development, computer hardware innovation and development, testing mathematical algorithms, managing the technological infrastructure of an organization, and digital security.

## Program Course Requirements

| Course | Title | Credits |
|---|---|---|
| **First Year** | | |
| **First Term** | | |
| AI 120 | Intro to AI [2] | 4 |
| CS 160 | Orientation-Computer Science | 4 |
| MTH 111Z | Precalculus I Functions | 4 |
| WR 121Z | Composition I | 4 |
| | **Credits** | **16** |
| **Second Term** | | |
| CS 161 | Computer Science I | 4 |
| MTH 112Z | Precalculus II Trigonometry | 4 |
| MTH 231 | Elem Discrete Math I | 4 |
| WR 227Z | Technical Writing [3] | 4 |
| | **Credits** | **16** |
| **Third Term** | | |
| CIS 275 | Intro to Database Mgmt Sys I [2] | 4 |
| COM 105 | Listening [1] | 3 |
| CS 162 | Computer Science II | 4 |
| MTH 299 | Elem Discrete Math II | 4 |
| | **Credits** | **15** |
| **Second Year** | | |
| **First Term** | | |
| CIS 195 | Authoring for the Web I [2] | 4 |
| CS 260 | Data Structures | 4 |
| MTH 251 | Calculus I | 5 |
| PH 211 | General Physics w-Calculus I [4] | 5 |
| | **Credits** | **18** |
| **Second Term** | | |
| COM 112 | Persuasive Speech [1] | 3 |
| HST 202 | History of United States II [1] | 3 |
| MTH 252 | Calculus II | 4 |
| PH 212 | General Physics w-Calculus II [4] | 5 |
| | **Credits** | **15** |
| **Third Term** | | |
| COM 111Z | Public Speaking | 4 |
| CS 205 | Syst Programming Architecture | 4 |
| PH 213 | General Physics w-Calculus III [4] | 5 |
| SOC 206 | Social Problems-Issues [1] | 3 |
| | **Credits** | **16** |
| | **Total Minimum Credits** | **96** |

[1] One Arts & Letters Elective or Social Sciences Elective must meet Cultural Literacy requirement.
[2] Recommended Computer Science Electives.
[3] Students who transfer to EOU/ SOU/ WOU must take WR122Z. Students who transfer to OSU/ PSU/ UO must take WR227Z.
[4] Choose one (1) sequence: (BI 211, 212, 213) or (CH 221, 222, 223) or (PH 211, 212, 213).

## Advising Notes

- All courses must be completed with a grade of "C" or better. Have a minimum cumulative GPA of 2.00 at the time the AST is awarded. Many CS programs have competitive admission. Minimum GPA and grades may not generally be high enough to guarantee admission into any transfer institution.
- Advisor can approve CIS275 if a student has taken CS161.
- If students choose to vary from this suggested sequence, then prerequisites and term availability must be watched closely because class time conflicts may arise, and/or desired courses may not be available.