

Computer Science

Please refer to the current [Undergraduate Academic Catalog](#) to see the course descriptions and a major description with requirements for Computer Science.

Computer Science offers **two choices** for students majoring in computer science - the traditional program and the computer information systems concentration. Each is tailor-made for a challenging and practical course of study and paves the way for a dynamic career path or graduate school. Students interested in studying the breadth of the computer science discipline including topics: artificial intelligence, gaming, graphics, hardware, simulation, and the theoretical foundations of computing, will be attracted to the traditional computer science program.

Students who have LITTLE or NO PRIOR computer programming experience should enroll in **CPSC 110**. This course partially satisfies the General Education requirement for Quantitative Reasoning and provides the programming experience necessary for further study in computer science.

Students interested in either program with prior computer programming experience should enroll in **CPSC 220**. Students who do not have AP credit for CPSC 110 but have sufficient experience to skip CPSC 110 and go directly to CPSC 220 should send email to pscdept@umw.edu to arrange for permission to register for CPSC 220. This course partially satisfies the General Education requirement for Quantitative Reasoning and provides the programming experience necessary for further study in computer science.

If a student has had prior programming experience, but is unsure about the appropriate starting point to continue his or her studies, he or she can request to take the CPSC department's online placement test by sending email to cpscdept@umw.edu.

Course Placement Based on AP Score:

Students who earned a 3 or better on the A exam will be awarded three credits and be exempted from CPSC 110. These students should select **CPSC 220** to continue their studies in computer science or the computer information systems concentration.

Students who earned a 4 or better on the AB exam will be awarded four credits and be exempted from CPSC 220. These students should select **CPSC 230A** and **CPSC 125A** to continue their studies in computer science or the computer information systems concentration.

Students who earned a 3 on the AB exam will be awarded three credits and be exempted from CPSC 110. These students should select **CPSC 220** to continue their studies in computer science or the computer information systems concentration.

Students who earned a 5 or higher on the HL exam will be awarded three credits and be exempted from CPSC 110. These students should select **CPSC 220** to continue their studies in computer science or the computer information systems concentration.

Students who earned a 5 or higher on the HL exam (IB Information Technology in a Global Society) earn credit for CPSC 103 but do not receive SI credit.

In all cases, placement adjustments can be made during the first week of the semester.

In addition to **CPSC 110** or **220**, students should take **CPSC 125**, *Introduction to Discrete Mathematics* since it is a prerequisite to CPSC 305 and 414. CPSC 125 should be taken before the junior year.

Students should also complete through **MATH 122**, *Calculus II*, prior to the junior year. Below please find some examples of first semester schedules for a computer science major. There are many variations of a first semester schedule; the examples are just meant to help you see that there are many ways to reach the same goals.

For information about the General Education Requirements Met below visit the [General Education Requirements](#) website.

Example 1:

Course (credits)	Requirement(s) Met
1. CPSC 110** - Intro Computer Science (3)	Major Prerequisite, QR
2. CPSC 125A - Intro to Discrete Mathematics (3)	Major Prerequisite
3. MATH 121** - Calculus I (3)	Major Prerequisite, QR
4. ARAB 101** - Beginning Arabic (3)	FL

Example 2:

Course (credits)	Requirement(s) Met
1. CPSC 110** - Intro Computer Science (3)	Major Prerequisite, QR
2. FSEM 100F8 – Beauty/Brains: Women in Science (3)	FSEM
3. ENGL 202E - Writing About Hiking and Climbing (3)	ALPP, WI*
4. GERM 101** - Beginning German (3)	FL
5. MUPR 205A - Class Piano I (1)	Elective

Example 3: Athletes for varsity sports must register for the 400-level course of the sport. Practice times for varsity sports can vary, but generally speaking, athletes should allow for enough time to get to and from practice on weekdays from 3 - 6 p.m. Please check with the individual coach for your sport to verify specific practice times each semester.

Course (credits)	Requirement(s) Met
1. CPSC 110** - Intro Computer Science (3)	Major Prerequisite, QR
2. CPSC 125A - Intro to Discrete Mathematics (3)	Major Prerequisite, QR
3. BIOL 121 - Bio Concepts I with Lab (4)	NS
4. FSEM 100D – Mathematics of Chaos (3)	FSEM
5. PHYD 418 - Intercollegiate Rowing - Women (1)	Elective

*These paths assume fall matriculation. Students entering in the spring semester will make appropriate adjustment for sequencing issues.

**Please note that not all sections of a course may have the Across-the-Curriculum (ATC) attribute(s). Across-the-Curriculum designations for a course are dependent on instructor and semester. ATC designations for each course are listed in the Banner description for the semester in which you are registering.*

***This particular course is in a discipline that allows students with demonstrated competence upon admission to UMW (such as AP/IB credit, dual enrollment, etc.) to begin courses at a higher level. Please read the Academic Planning Guide carefully to see if you meet the requirements. For example: students may begin at any level language course for which they feel prepared (101, 102, 105, 201, 202 or 205), but must then complete the rest of the sequence in order without repeating or skipping any levels.*