

Computer Science Advising Manual

This document assumes you are aware of the current requirements for a Major/Minor in Computer Science.

1. The Major

The Computer Science (CS) major can be completed in 3-4 years. *It is highly recommended that the student begin the major their first year at Monmouth. Failure to do so could cause scheduling issues due to the rotation of 300 level electives within the Major.*

	<i>Fall Semester</i>	<i>Spring Semester</i>
First Year	• COMP 160	• COMP 161
Second Year	• MATH 260 • COMP 220	• MATH 241 • COMP 210 • COMP 230
Third Year	• COMP 3xx	• COMP3xx
Fourth Year	• COMP 401 • COMP 3xx	• COMP402 • COMP3xx

a. *Years Three and Four – 3xx Courses*

The key thing to be aware of is that *300 level courses are taught on a two year rotation and students will only have one opportunity to take the course during their time here.* Students should identify the upper level courses that they wish to take early on (First or second year) and determine during which year they will be offered.

While students may take any combination of upper level courses they wish, we offer the following recommendations based on career/area interests. These selections of 300 level electives are guidelines and are not mandatory.

- **Industry – Information Systems (IS)/Information Technology (IT)**
 - i. COMP 337
 - ii. COMP 310
 - iii. COMP 345
- **Software Engineering/Computer Programming**
 - i. COMP 335
 - ii. COMP 325
 - iii. COMP 345
- **Graduate Studies/Research/Theoretical Computer Science**
 - i. COMP 343
 - ii. COMP 340
- **General Study of Computer Systems**
 - i. COMP 337
 - ii. COMP 345
 - iii. COMP 325

Students can pursue additional areas of interest through Independent Study and possibly in COMP 350, the Topics course.

2. **The Minor**

The CS minor can be completed in two years and offers a variety of possibilities to “specialize” the minor. We recommend that students take one or both of the non-required 2xx courses in addition to the required 3xx course:

- **Software Engineering/Programming/Industry**
 - COMP 210
- **Computing Technology/Computation/Theory**
 - COMP 230

In planning their minor, students may find that they need to take a second 2xx course (beyond 220) to meet the prerequisite for a desired 3xx Course. Additionally, MATH 260 is required for a few 3xx COMP courses, and so students should be prepared for this.

3. **Complementary Disciplines**

Students seeking a Major in CS may also wish to major/minor in another field of study at Monmouth. Computer Scientists and those with backgrounds in computing disciplines are often called upon to assist in a wide variety of tasks. For this reason, many of the majors/minors offered here at Monmouth are complementary to a Major in CS. Additionally, a minor in CS is complementary to many of the other Majors. If your student has a career path in mind, here are some possible choices to combine with CS for a double major or major/minor:

- Accounting/PEC → *Industry/IS/IT*
- Art → Graphics, Video Games, Web Design
- Biology/Biochemistry → Bioinformatics, Research
- History/English/Communications and Theater → Video Game Development
- Mathematics → Advanced Studies in CS
- Psychology → Human Computer Interaction

This is by no means a definitive list but simply represents some likely choices students may make. A major or minor in Mathematics is a common pairing with a major in CS, particularly for students interested in continuing on to graduate school and/or research.