The CS major asks you to fulfill a number of requirements.

Required classes:

- CS 141, CS 241, CS 243, CS 301, CS 303, CS 304, Cs 312, Cs 423
- 4 Electives on the 400-level classes
- Math proficiency: Math 111, Math 112, Math 211
- Writing requirement: CS 423W (common choice), Honors thesis (rare choice)
- Possible substitution: Math 214 for CS 243

The prerequisites for individual classes create a number of constraints on how to order this classes. The prerequisite chart from [http://www.wm.edu/as/computerscience/undergraduate/courses/prerequisite/index.php](http://www.wm.edu/as/computerscience/undergraduate/courses/prerequisite/index.php) visualizes this quite handily.
Following the prerequisites, a typical schedule of classes for a CS major with a common workload of two CS courses per semester is this:

- **Semester 1**: CS 141, Math 111
- **Semester 2**: CS 241, CS 243, Math 112
- **Semester 3**: 2 of the 300 level classes, e.g. CS 301, CS 303, Math 211
- **Semester 4**: 2 of the remaining 300 level classes, e.g. CS 304 and CS 312
- **Semester 5**: CS 423W and 1 400 level CS elective course, e.g. CS 415
- **Semester 6**: 2 400 level CS elective courses, e.g. CS 435, CS 454
- **Semester 7**: 1 400 level CS elective courses, e.g. CS 421

Please note:

- The Math courses have a sequence based on their prerequisites but there is no particular reason to start that sequence in semester 1. You can do this later as well or spread them out over more semesters. There is only one CS course (CS 427) with an explicit prerequisite for Math 211. However, the understanding is that students are familiar with basic math concepts as taught in the math classes, so pushing the math courses to the very end of the schedule is not a good idea.

- For CS 423, there is no particular reason to take it in Semester 5, you could switch places of CS 423 and a CS 400 level elective in that schedule without problems.

So the schedule above assumes that you have seven semesters left before graduation. If for some reason you are closer to graduation, you can shorten the schedule in various ways. The following scenarios are based on a few basic options:

1. **Summer classes taken at William and Mary or elsewhere**
2. **More than two CS courses per semester**

Let's look into some possible scenarios.
If you can start with CS classes in the summer, then this could be your schedule (please add Math 111, 112, 211 as needed):

- Summer Section 1: CS 141
- Summer Section 2: CS 241, CS 243
- Semester 1: 2 of the 300 level classes, e.g. CS 301, CS 303
- Semester 2: 2 of the remaining 300 level classes, e.g. CS 304 and CS 3012
- Semester 3: CS 423W and 1 400 level CS elective course, e.g. CS 415,
- Semester 4: 3 400 level CS elective courses, e.g. CS 421, CS 435, CS 454

If you can start with CS classes in the fall, then this could be your schedule (please add Math 111, 112, 211 as needed):

- Semester 1: CS 141
- Semester 2: CS 241, CS 243
- Summer Section 1: CS 301
- Summer Section 2: CS 303, and one other 300 level class
- Semester 3: the remaining 300 level class and CS 423W
- Semester 4: 2 400 level CS elective courses, e.g. CS 435, CS 454
- Semester 5: 1 400 level CS elective courses, e.g. CS 421, CS 454

If you can start with CS classes in the spring, then this could be your schedule (please add Math 111, 112, 211 as needed):

- Semester 1: CS 141
- Summer Section 1: CS 241, CS 243
- Summer Section 2: CS 303, and one other 300 level class
- Semester 2: 2 of the 300 level classes, e.g. CS 301, CS 304
- Semester 3: the remaining 300 level class and CS 423W
• Semester 4: 2 400 level CS elective courses, e.g. CS 435, CS 454
• Semester 5: 2 400 level CS elective courses, e.g. CS 435, CS 454

From past experience, students are able to do three CS courses per semester, which usually implies a stressful workload that is still doable with good grades. When it comes to four CS courses, this is really extreme and students sometimes opt for it if there is only one semester left before graduation. Please consider this as a last fallback option.

This scenario works without summer classes and packs more CS courses into a single semester (please add Math 111, 112, 211 as needed):

• Semester 1: CS 141
• Semester 2: CS 241, CS 243
• Semester 3: 3 of the 300 level classes, e.g. CS 301, CS 303, CS 304
• Semester 4: 1 300 level class + 2 400 level classes, e.g. CS 312, CS 423W, and CS 424
• Semester 5: 3 400 level CS elective courses, e.g. CS 421, CS 435, CS 454

This scenario works with summer classes and packs more CS courses into a single semester (please add Math 111, 112, 211 as needed). Warning: this is the shortest possible, but also a really high workload schedule:

• Summer Section 1: CS 141
• Summer Section 2: CS 241, CS 243
• Semester 1: 3 of the 300 level classes, e.g. CS 301, CS 303, CS 304
• Semester 2: 1 300 level class + 2 400 level classes, e.g. CS 312, CS 423W, and CS 424
• Semester 3: 3 400 level CS elective courses, e.g. CS 421, CS 435, CS 454
Schedules for a CS minor

The CS minor asks for a subset of classes of the major. In this way the CS minor was a natural fall back for student who start with a CS major but can not or want not complete all requirements.

A minor in Computer Science requires Computer Science 141, Computer Science 241, either Computer Science 243 or Mathematics 214, and any nine elective credits chosen from 300-400 level Computer Science courses excluding Computer Science 320, 430, and 498. Math 413 and 414 may be counted toward partial fulfillment of the requirement for nine elective credits.

If you match these requirements with the prerequisites from the requisite chart, you see that this becomes:

- Semester 1: CS 141
- Semester 2: CS 241, CS 243
- Semester 3: 2 of the 300 level classes, e.g. CS 301, CS 303
- Semester 4: 1 of the remaining 300 level classes, e.g. CS 304

If you look into the CS major schedules above, you note that you can do two things to shorten the schedule:

- Summer classes taken at William and Mary or elsewhere
- More than two CS courses per semester

Let’s look into some possible scenarios. So obviously one can short the schedule above by putting three CS course in the last semester.

- Semester 1: CS 141
- Semester 2: CS 241, CS 243
- Semester 3: 3 of the 300 level classes, e.g. CS 301, CS 303, CS 304
If you can start with CS classes in the summer, then this could be your schedule:

- Summer Section 1: CS 141
- Summer Section 2: CS 241, CS 243
- Semester 1: 2 of the 300 level classes, e.g. CS 301, CS 303
- Semester 2: 1 of the remaining 300 level classes, e.g. CS 304

Of course you can tighten this by putting the 300 level classes into one semester.

- Summer Section 1: CS 141
- Summer Section 2: CS 241, CS 243
- Semester 1: 3 of the 300 level classes, e.g. CS 301, CS 303, CS 304

If you can start with CS classes in the spring, then this could be your schedule:

- Semester 1: CS 141
- Summer Section 1: CS 241, CS 243
- Summer Section 2: 1 or 2 300 level classes
- Semester 2: 1 or 2 of the remaining 300 level classes

As summer classes operate on a short, five week timeline, it does not seem reasonable to put 3 300 level classes into a single summer section.