# Computer Science Placement Guide: Course Information

## Registration information for students majoring in one of the following disciplines:
- Mathematics
- Computer Science

Or for those planning a minor in the following:
- Computer Science
- Computer Informatics

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### CS 153: Computing for Bioinformatics

**Description:**
This course covers the tools and concepts of Computer Science that are relevant to Bioinformatics with a focus on problems with genetic sequence data. Students will be programming in Python with applications to data management and web sources.

*Offered in Fall*

**Prerequisites:**
None

**Intended audience:**
CS 153 can be used towards the minor in Computer Informatics.

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### CS 170: Introduction to Computer Science I

**Description:**
This class is an introduction to computer science. The programming is done in Java. Students will be given a hands-on introduction to the UNIX operating system (OS).

*Offered in Fall, Spring, and Summer*

**Prerequisites:**
None

**Intended audience:**
CS 170 is intended for students who plan to major or minor in any of the following:
- Major in Mathematics
- Major or minor in Computer Science
- Minor in Bioinformatics

CS 170 is also recommended for students who anticipate further coursework in CS or substantive computing in other disciplines.

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### CS 171: Introduction to Computer Science II

**Description:**
This course is a continuation of CS 170 which further explores programming with Java. The emphasis is on the theory and implementation of data structures, algorithms, and object-oriented design. The problem of storing and searching for data is examined, and several approaches to this problem are evaluated for efficiency.

*Offered in Fall, Spring, and Summer*

**Prerequisites:**
CS 170

**Intended audience:**
CS 171 is intended for students who plan to major, minor, or pursue further coursework in Computer Science.

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### Note:
Many Mathematics majors defer taking CS 170 until their junior and senior years. CS is not required in the first year at Emory.
## CS 171Z: Introduction to Computer Science II

### Description:

CS 171Z is a permission-only course for students with prior programming experience. Students should have substantial coding experience in Java (for example AP CS) including data types, loops, arrays, functions/methods, and classes. The course combines a quick review of CS170 with an accelerated coverage of CS171. Programming projects are typically more complex and larger in scope than CS171, and some topics not found in CS171 may also be discussed.

Students who wish to take this course must request permission by writing to cs171z@mathcs.emory.edu. You must include a screen shot of your Computer Science AP credit or your prior Java programming experience.

**Offered in Fall only**

### Prerequisites:

The prerequisites are:

- Computer Science AP credit, or
- Prior Java programming experience

### Intended audience:

CS 171Z is intended for accelerated students who plan to major, minor, or pursue further coursework in Computer Science.

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**Note:**

CS 171 or 171Z can be used as an elective course for both the Applied Mathematics and the Applied Mathematics and Statistics majors.