



Computer Science and Engineering

CS 009 SERIES VS. CS 010 SERIES

WHICH ONE SHOULD I TAKE?

Introducing the new CS 009 series, a new sequence in computing that teaches Python, the No. 1 most commonly used computer programming language in the sciences.

No Priority Enrollment Requirements

NEW! CS 009 Sequence (Python)

IDEAL FOR CAREERS IN:

- Life sciences
- Social sciences
- Business
- Economics
- Web development
- Information sciences
- Data analytics

COURSE FOCUS AREAS

- Application and data-oriented approach
- Real-world examples and problem-solving focus
- Packages and API's
- Interdisciplinary
- Artificial intelligence
- Machine learning
- Data science
- Bioinformatics

CS 010 Sequence (C++)

IDEAL FOR CAREERS IN:

- Electrical engineering
- Embedded systems
- Software engineering
- Systems architecture
- Library and compiler developers
- Graphics

COURSE FOCUS AREAS

- Algorithms and systems-orientated approach
- Computational efficiency considerations
- Memory management
- Object-orientated design
- Artificial intelligence
- Machine learning
- Data science
- Bioinformatics

READY TO ENROLL?

Contact your academic advisor for approval to enroll.



Flip over to view:
Course Descriptions
Course Map

CS 009 A/B/C Sequence Course Descriptions

CS009A*

Data-oriented

Introduction to Computing I

4 units: Lecture, 3 hours;
laboratory, 3 hours

Prerequisite(s): A college mathematics course (may be taken concurrently) or credit for MATH 009A from the AP Examination or the Mathematics Advisory Examination

Course description: Covers computational thinking, problem-solving, and data analysis through application-based data manipulation tasks from science, engineering, business, and the humanities. Concepts covered includes variables, expressions, branches, loops, functions, parameters, lists, strings, file I/O, and exception handling. Also covers software design, testing, and debugging. Credit is awarded for one of the following: CS 010A or CS009A.

CS009B

Data-oriented

Introduction to Computing II

4 units: Lecture, 3 hours; laboratory,
2 hours; individual study 1 hour

Prerequisite(s): CS009A

Course description: Covers advanced programming concepts and algorithms. Emphasizes good programming principles in the design and development of substantial programs. Topics include abstract data types, objects and classes, recursion, and basic software engineering principles. Credit is awarded for only the following: CS 010B or CS 009B.

OPTIONAL BRIDGE

CS009C

C++ for Programmers

2 units: Lecture, 1 hour; laboratory, 2
hours; individual study 1 hour

Prerequisite(s): CS009B or equivalent, may be taken concurrently. MATH 008B, may be taken concurrently or MATH 006B, may be taken concurrently or MATH 007A, may be taken concurrently or MATH 09HA, may be taken concurrently or MATH 008A, may be taken concurrently or MATH 005, may be taken concurrently or MATH 009A, may be taken concurrently

Course description: Provides an introduction to the constructs provided in the C++ programming language for procedural and object-oriented programming aimed for students who have prior programming experience. No credit will be provided for those who have taken CS010A and/or CS010B.

* CS 009P is being officially renamed CS 009A. Enroll in CS 009P until the course is officially renamed in Winter 2022.

Course Map

