# COMPUTER SCIENCE - CSC

**CSC 511 Introduction to Programming**                    3 Credits
This foundational course will teach you the basics of computer programming
using the Python language. You will design, code, test, and debug computer
programs for textual and graphical applications.
**Corequisite:** CSC 511L.
**Offered:** every fall & spring.

**CSC 511L Introduction to Programming Lab**               0 Credits
Required lab for CSC 511.
**Corequisite:** CSC 511.
**Offered:** every fall & spring.

**CSC 512 Data Structures and Algorithms**                 3 Credits
Introduction to object-oriented programming, recursion, and data
structures, including lists, stacks, queues, trees and maps. Rudimentary
discussion of analysis of algorithms. Python language used.
**Prerequisite:** CSC 511 or CSC 111. **Corequisite:** CSC 512L.
**Offered:** every fall & spring.

**CSC 512L Data Structures and Algorithms Lab**            0 Credits
Required lab for CSC 512.
**Corequisite:** CSC 512.
**Offered:** every fall & spring.

**CSC 530 Operating System Design**                        3 Credits
The design of operating system software, including classic OS topics
(scheduling, memory management, resource allocation and security) along
with newer concepts including cloud computing and virtual machines. Taking
CSC 253+lab or equivalent hardware course before this course is highly
advised.
**Prerequisite:** A minimum grade of C in CSC 512 & CSC 512L.
**Offered:** every fall.

**CSC 610 Database Management**                            3 Credits
Databases, SQL language, concepts of normalization and database design.
Rudimentary discussion of data ethics and security. MySQL or SQLite used.
**Prerequisite:** CSC 112 or CSC 512; may be taken concurrently.
**Offered:** every fall.

**CSC 610L Database Management Lab**                       0 Credits
Required lab for CSC 610.
**Prerequisite:** CSC 512L. **Corequisite:** CSC 610.
**Offered:** every fall.