# COMPUTER SCIENCE - CSC

**CSC 501 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.  
**Offered:** every fall, spring, & summer.

**CSC 501L Introduction to Programming Lab**  
0 Credits  
Required lab for CSC 501.  
**Corequisite:** CSC 501.  
**Offered:** Summer.

**CSC 502 Data Structures and Algorithms**  
3 Credits  
The primary focus of this course is data structures and their accompanying algorithms, including recursive algorithms. In order to judge between competing algorithms or alternative data structures, we will use analysis to discover the time and memory bounds of various approaches. We will also use object oriented programming as a useful way of constructing abstract data types and in general structuring complex programs. Several debugging tools and approaches will be explored, especially hand tracing of algorithms. The Python programming language will be our main vehicle.  
**Prerequisite:** CSC 501 or CSC 111 as prerequisite.  
**Corequisite:** CSC 502L.  
**Offered:** every fall, spring, & summer.

**CSC 502L Data Structures and Algorithms Lab**  
0 Credits  
Required lab for CSC 502.  
**Corequisite:** CSC 502.  
**Offered:** Summer.

**CSC 530 Operating System Design and Distributed Computing**  
3 Credits  
The design of operating system software, distributed applications, client/server and other models, security issues, and parallel programming on a High Performance Computing Cluster.  
**Prerequisite:** A minimum grade of C in CSC 502 & CSC 502L.  
**Corequisite:** CSC 530L.  
**Offered:** every fall.

**CSC 530L Operating System Design and Distributed Computing Laboratory**  
0 Credits  
Required lab for CSC 530.  
**Prerequisite:** A minimum grade of C in CSC 502 & CSC 502L.  
**Corequisite:** CSC 530L.  
**Offered:** every fall.