COMP SCI & COMP ENGR (CSCE)

CSCE 101 - Introduction to Computer Concepts (3 Credits)
History, application, and social impact of computers; problem-solving, algorithm development, applications software, and programming in a procedural language.
Carolina Core: ARP

CSCE 102 - General Applications Programming (3 Credits)
Introduction to systematic computer problem-solving and programming for a variety of applications.
Carolina Core: ARP

CSCE 145 - Algorithmic Design I (4 Credits)
Problem-solving, algorithmic design, and programming. Three lectures and two laboratory hours per week.
Prerequisite or Corequisite: MATH 111 or MATH 115.

Carolina Core: ARP

CSCE 146 - Algorithmic Design II (4 Credits)
Continuation of CSCE 145. Rigorous development of algorithms and computer programs; elementary data structures. Three lecture hours and two laboratory hours per week.
Prerequisites: C or better in CSCE 145.

Prerequisite or Corequisite: MATH 122 or MATH 141.

CSCE 190 - Computing in the Modern World (1 Credit)
An introduction to the field of computing: trends in computing technology, the profession, and careers; subdisciplines in computing; the nature of research and development.
Corequisite: CSCE 145, CSCE 204, CSCE 205, CSCE 206 or equivalent.

CSCE 201 - Introduction to Computer Security (3 Credits)
Introduction to the theory and practice of computer security, including security policies, authentification, digital certificates, firewalls, malicious code, legal and ethical issues, and incident handling.
Prerequisite or Corequisite: CSCE 101 or CSCE 102 or CSCE 145.

CSCE 204 - Program Design and Development (3 Credits)
Fundamental algorithms and processes used in business information systems. Development and representation of programming logic. Introduction to implementation using a high-level programming language.
Prerequisites: CSCE 101 or MGSC 290 or ITEC 264.

Cross-listed course: ITEC 204, MGSC 298

CSCE 205 - Business Applications Programming (3 Credits)
Introduction to computer applications in business. Programming exercises in COBOL.
Prerequisites: MGSC 290 or CSCE 101 or above.

CSCE 206 - Scientific Applications Programming (3 Credits)
Introduction to computer applications in science and engineering. Programming exercises in a high-level language.
Prerequisites: MATH 122 or MATH 141.

CSCE 207 - UNIX System Administration (3 Credits)
The Unix programming environment: I/O programming, Unix processes, fork, exec, pipes and signals, and tools.
Prerequisites: CSCE 145 or CSCE 206.

CSCE 209 - Special Topics in Computer Programming (1-4 Credits)
Programming and application development using selected programming languages. Course content varies and will be announced in the schedule of classes by title.

CSCE 210 - Computer Hardware Foundations (3 Credits)
Number representation, data formats, CPU and memory organization, assembly language, I/O and peripherals, computer networks. Students may not apply both CSCE 210 and CSCE 212 to any minor or major program of study.
Prerequisites: D or better in CSCE 145, CSCE 204, CSCE 205, CSCE 206, or CSCE 207.

CSCE 211 - Digital Logic Design (3 Credits)
Number systems, Boolean algebra, logic design, sequential machines.
Prerequisites: MATH 141.

CSCE 212 - Introduction to Computer Architecture (3 Credits)
Computer architecture, components. and organization; memory addressing; Input/Output; instruction sets; interrupts; assembly-language programming. Students may not apply both CSCE 210 and CSCE 212 to any minor or major program of study.
Prerequisites: D or better in CSCE 211 and D or better in either CSCE 145 or CSCE 206.

CSCE 215 - UNIX/Linux Fundamentals (1 Credit)
UNIX operating system, user-level system commands, and programming tools. UNIX scripting languages.
Prerequisites: CSCE 145.

CSCE 240 - Advanced Programming Techniques (3 Credits)
Pointers; memory management; advanced programming language structures: operator overloading, iterators, multiple inheritance, polymorphism, templates, virtual functions; Unix programming environment.
Prerequisites: CSCE 215, C or better in CSCE 146.

CSCE 245 - Object-Oriented Programming Techniques (3 Credits)
Advanced object-oriented concepts and techniques; multiple inheritance; memory management; operator overloading; polymorphism; performance issues.
Prerequisites: C or better in CSCE 146.