Program of Study: Computer Science
Bachelor of Science in Computer Science (B.S.C.S.)
College of Engineering and Computing
Department of Computer Science & Engineering
Catalog Year: 2017-2018

Program of Study

Degree Requirements (122 hours)

1. **Carolina Core (35-44 hours)**
   a. **CMW** (6 hours) –*must be passed with a grade of C or higher*
      i. ENGL 101 - Critical Reading and Composition
      ii. ENGL 102 - Rhetoric and Composition
   b. **ARP** (8 hours) –*must be passed with a grade of C or higher*
      i. MATH 141 - Calculus I
      ii. MATH 142 - Calculus II
   c. **SCI** (8 hours)
      i. Either all of:
         1. CHEM 111 - General Chemistry I –*must be passed with a grade of C or higher*
         2. CHEM 111L - General Chemistry I Laboratory –*must be passed with a grade of C or higher*
         3. CHEM 112 - General Chemistry II (not approved for CC-SCI)
         4. CHEM 112L - General Chemistry II Laboratory (not approved for CC-SCI)
      ii. Or all of:
         1. PHYS 211 - Essentials of Physics I –*must be passed with a grade of C or higher*
         2. PHYS 211L - Essentials of Physics I Lab –*must be passed with a grade of C or higher*
         3. PHYS 212 - Essentials of Physics II
         4. PHYS 212L - Essentials of Physics II Lab
   d. **GFL** (0-6 hours): Students in the College of Engineering and Computing are required to demonstrate proficiency in one foreign language equivalent to the 121 course by 1) a score of two or better on the foreign language placement test; or 2) completion of the 109 and 110 courses in FREN, GERM, LATN, or SPAN or completion of the 121 course in another foreign language.
   e. **GHS** (3 hours): any approved CC-GHS course
   f. **GSS** (3 hours): any approved CC-GSS course
   g. **AIU** (3 hours): any approved CC-AIU course

   Carolina Core Stand Alone or Overlay Eligible Requirements:
   Up to two of these requirements may be met in overlay courses. At least one of these requirements must be satisfied by a course not applied elsewhere in general education. (3-9 Hours)

   h. **CMS** (3 hours)
      i. SPCH 140 - Public Communication
   i. **INF** (0-3 hours): ENGL 102 *or* any approved overlay or stand-alone CC-INF course
   j. **VSR** (1 hour)
      i. CSCE 390 - Professional Issues in Computer Science and Engineering –*must be passed with a grade of C or higher*

2. **College Requirements:** None required by the College of Engineering and Computing

3. **Program Requirements (57 hours)**
   a. **Supporting Courses** (57 hours)
      i. MATH 241 - Vector Calculus
      ii. MATH 344 - Applied Linear Algebra
      iii. MATH 344L - Applied Linear Algebra Lab
      iv. MATH 374 - Discrete Structures –*must be passed with a grade of C or higher*
      v. STAT 509 - Statistics for Engineers

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ENGL 462 - Technical Writing *or* ENGL 463 - Business Writing
Laboratory Science Elective (4 hours)

BIOL 101 - Biological Principles I *and* BIOL 101L - Biological Principles I Laboratory
CHEM 111 - General Chemistry I *and* CHEM 111L - General Chemistry I Laboratory
GEOL 101 - Introduction to the Earth
GEOL 201 - Observing the Earth
GEOL 302 - Rocks and Minerals
MSCI 101 - The Ocean Environment
MSCI 102 - The Living Ocean
PHYS 211 - Essentials of Physics I *and* PHYS 211L - Essentials of Physics I Lab

Liberal Arts Electives (9 hours): A list of acceptable Liberal Arts Elective courses is maintained in the department office and on its website.
Lower Division Computing (19 hours) —*must be passed with a grade of C or higher*

CSCE 145 - Algorithmic Design I
CSCE 146 - Algorithmic Design II
CSCE 190 - Computing in the Modern World
CSCE 211 - Digital Logic Design
CSCE 212 - Introduction to Computer Architecture
CSCE 215 - UNIX/Linux Fundamentals
CSCE 240 - Introduction to Software Engineering

Application Area (9 hours)

An application area consists of three courses (9 hours) in a single area offered by another department. This coursework must display a distinct curriculum pattern. If a defined minor exists in the discipline of the application area, then a good set of suggested courses for the application area would be a subset of the minor. Students should consult their advisor to ensure their application area courses will meet this graduation requirement.

4. **Major Requirements (30 hours)** —*must be passed with a grade of C or higher*
   a. **Major Courses** (21 hours)
      i. CSCE 311 - Operating Systems
      ii. CSCE 330 - Programming Language Structures
      iii. CSCE 350 - Data Structures and Algorithms
      iv. CSCE 355 - Foundations of Computation
      v. CSCE 416 - Introduction to Computer Networks
      vi. CSCE 490 - Capstone Computing Project I
      vii. CSCE 492 - Capstone Computing Project II
   b. **Major Electives** (9 hours): Choose from CSCE 317 or other approved CSCE courses numbered 500 and higher. A list of acceptable Major Elective courses is also maintained in the department office and on its website.

Major GPA

Major GPA requirement policies are described in the College of Engineering and Computing section of this bulletin. For the purpose of these policies, the following courses are used to determine the Major GPA for the Computer Science B.S.C.S. program: all Lower Division Computing, Computer Science Major, and Computer Science Elective courses, and CSCE 390.

Exclusions

No Lower Division Computing, Computer Science Major, or Computer Science Elective course may be counted toward a minor or application area. All other degree-required courses and electives may be used for a minor as appropriate. CSCE 101 and CSCE 102 are not major courses and may not be used for degree.