

COMPUTER SCIENCE, B.S.C.S.

Degree Requirements (125 hours)

See College of Engineering and Computing (<https://academicbulletins.sc.edu/undergraduate/engineering-computing/>) for progression requirements and special academic opportunities.

Program of Study

| Requirements | Credit Hours |
|-------------------------|--------------|
| 1. Carolina Core | 35-44 |
| 2. College Requirements | 0 |
| 3. Program Requirements | 60 |
| 4. Major Requirements | 30 |

Founding Documents Requirement

All undergraduate students must take a 3-credit course or its equivalent with a passing grade in the subject areas of History, Political Science, or African American Studies that covers the founding documents including the United State Constitution, the Declaration of Independence, the Emancipation Proclamation and one or more documents that are foundational to the African American Freedom struggle, and a minimum of five essays from the Federalist papers. This course may count as a requirement in any part of the program of study including the Carolina Core, the major, minor or cognate, or as a general elective. Courses that meet this requirement are listed here (<https://academicbulletins.sc.edu/undergraduate/founding-document-courses/>).

1. Carolina Core Requirements (35-44 hours)

CMW – Effective, Engaged, and Persuasive Communication: Written (6 hours)

Must be passed with a grade of C or higher.

- ENGL 101
- ENGL 102

ARP – Analytical Reasoning and Problem Solving (8 hours)

Must be passed with a grade of C or higher.

- MATH 141
- MATH 142

SCI – Scientific Literacy (8 hours)

Select **all** of **one** of the following:

Either

- CHEM 111 & CHEM 111L - *both must be passed with a grade of C or higher*
- CHEM 112 & CHEM 112L (both not approved for CC-SCI)

or

- PHYS 211 & PHYS 211L - *both must be passed with a grade of C or higher*
- PHYS 212 & PHYS 212L

GFL – Global Citizenship and Multicultural Understanding: Foreign Language (0-6 hours)

Score two or better on foreign language placement test; or complete the 109 and 110 courses in FREN, GERM, LATN or SPAN; or complete the 121 course in another foreign language.

- CC-GFL courses (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

GHS – Global Citizenship and Multicultural Understanding: Historical Thinking (3 hours)

- any CC-GHS course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

GSS – Global Citizenship and Multicultural Understanding: Social Sciences (3 hours)

- any CC-GSS course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

AIU – Aesthetic and Interpretive Understanding (3 hours)

- any CC-AIU course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

CMS – Effective, Engaged, and Persuasive Communication: Spoken Component ¹ (3 hours)

- SPCH 140, SPCH 145, or SPCH 230

INF – Information Literacy ¹ (0-3 hours)

- any overlay or stand-alone CC-INF course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

VSR – Values, Ethics, and Social Responsibility ¹ (1 hour)

- CSCE 390 - *must be passed with a grade of C or higher*

¹ **Carolina Core Stand Alone or Overlay Eligible Requirements** – Overlay-approved courses offer students the option of meeting two Carolina Core components in a single course. A maximum of two overlays is allowed. The total Carolina Core credit hours for this program must add up to a minimum of 35 hours.

2. College Requirements (0 hours)

No college-required courses for this program.

3. Program Requirements (60 hours)

Supporting Courses (60 hours)

Foundational Courses (16 hours)

| Course | Title | Credits |
|-----------|--|---------|
| MATH 241 | Vector Calculus | 3 |
| MATH 344 | Applied Linear Algebra | 3 |
| MATH 344L | Applied Linear Algebra Lab | 1 |
| MATH 374 | Discrete Structures (must be passed with a grade of C or higher) | 3 |
| STAT 509 | Statistics for Engineers | 3 |
| ENGL 462 | Technical Writing | 3 |

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| or ENGL 463 Business Writing | |
| Total Credit Hours | 16 |

Laboratory Science Elective (4 hours)

| Course | Title | Credits |
|------------------------------|--|----------|
| Select one of the following: | | |
| ANTH 161 | Human Origins: An Introduction to Biological Anthropology | 4 |
| ASTR 101 | Introduction to Astronomy | |
| BIOL 101 & 101L | Biological Principles I and Biological Principles I Laboratory | |
| BIOL 110 | General Biology | |
| CHEM 111 & 111L | General Chemistry I and General Chemistry I Lab | |
| CHEM 141 | Principles of Chemistry I | |
| ENVR 101 & 101L | Introduction to the Environment and Introduction to the Environment Lab | |
| ENVR 200 | Natural History of South Carolina | |
| GEOG 201 | Landform Geography | |
| GEOG 202 | Weather and Climate | |
| GEOL 101 | Introduction to the Earth | |
| GEOL 103 | Environment of the Earth | |
| GEOL 201 | Observing the Earth | |
| GEOL 215 & 215L | Coastal Environments of the Southeastern U.S. and Coastal Environments of the Southeastern U.S. (Laboratory) | |
| GEOL 302 | Rocks and Minerals | |
| MSCI 101 | The Ocean Environment | |
| MSCI 102 | The Living Ocean | |
| MSCI 210 & 210L | Oceans and Society and Oceans and Society Laboratory | |
| MSCI 215 & 215L | Coastal Environments of the Southeastern US and Coastal Environments of the Southeastern U.S. (Laboratory) | |
| PHYS 211 & 211L | Essentials of Physics I and Essentials of Physics I Lab | |
| Total Credit Hours | | 4 |

Liberal Arts Electives (9 hours)

Select 9 hours of the following:

AERO 401, AERO 402
 AFAM 201-AFAM 580
 ANTH 101-ANTH 499
 ARMY 401, ARMY 402
 ARTE 101, ARTE 260
 ARTH 105-ARTH 366
 ARTS 103-ARTS 261
 CHIN 103-CHIN 550
 CLAS 220-CLAS 598
 CPLT 150-CPLT 597
 CRJU 101-CRJU 494
 DANC 101-DANC 381
 ECON 123-ECON 499
 ENGL 270-ENGL 499
 FAMS 180-FAMS 597
 FREN 109-FREN 615
 GEOG 103-GEOG 595

GERM 109-GERM 615
 HIST 101-HIST 692
 ITAL 101-ITAL 615
 JAPA 121-JAPA 500
 LASP 201-LASP 451
 LATN 109-LATN 615
 LING 101- LING 600, but only one of LING 300, LING 301, and LING 600 can be used
 MART 110-MART 341
 MUSC 110-MUSC 140
 NAVY 401, NAVY 402
 PHIL 101-PHIL 109, PHIL 112-PHIL 598
 POLI 101-POLI 499
 PORT 121-PORT 615
 PSYC 101-PSYC 499
 RELG 101-RELG 552
 RUSS 121-RUSS 616
 SOCY 101-SOCY 499
 SOST 101-SOST 500
 SPAN 109-SPAN 615
 THEA 170-THEA 565
 WGST 112-WGST 555

Lower Division Computing (22 hours)*Must be passed with a grade of C or higher.*

| Course | Title | Credits |
|---------------------------|---------------------------------------|-----------|
| CSC 145 | Algorithmic Design I | 4 |
| CSC 146 | Algorithmic Design II | 4 |
| CSC 190 | Computing in the Modern World | 1 |
| CSC 211 | Digital Logic Design | 3 |
| CSC 212 | Introduction to Computer Architecture | 3 |
| CSC 215 | UNIX/Linux Fundamentals | 1 |
| CSC 240 | Advanced Programming Techniques | 3 |
| CSC 247 | Software Engineering | 3 |
| Total Credit Hours | | 22 |

Application Area (9 hours)

An application area consists of three courses (9 hours) that display a distinct curricular pattern that is different from computer science. Any three non-CSCE courses that are from one department or are a subset of a defined minor, and that are each 3 credit hours or more, may satisfy this requirement. Students may petition the department for approval of other sets of application area courses.

4. Major Requirements (30 hours)*Must be passed with a grade of C or higher.***Major Courses (21 hours)**

| Course | Title | Credits |
|---------|-----------------------------------|---------|
| CSC 311 | Operating Systems | 3 |
| CSC 330 | Programming Language Structures | 3 |
| CSC 350 | Data Structures and Algorithms | 3 |
| CSC 355 | Foundations of Computation | 3 |
| CSC 416 | Introduction to Computer Networks | 3 |
| CSC 490 | Capstone Computing Project I | 3 |

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|---------------------------|-------------------------------|-----------|
| CSCE 492 | Capstone Computing Project II | 3 |
| Total Credit Hours | | 21 |

Major Electives (9 hours)

| Course | Title | Credits |
|---------------------------|--|----------|
| | Select from the following: | 9 |
| | CSCE 317 or any CSCE course 500 or higher | |
| | Select any approved CSCE courses, 500 and higher | |
| Total Credit Hours | | 9 |