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

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/)

2. College Requirements (0 hours)

No college-required courses for this program.

3. Program Requirements (60 hours)

Supporting Courses (60 hours)

Foundation Courses (16 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 241</td>
<td>Vector Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MATH 344</td>
<td>Applied Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 344L</td>
<td>Applied Linear Algebra Lab</td>
<td>1</td>
</tr>
<tr>
<td>MATH 374</td>
<td>Discrete Structures (must be passed with a grade of C or higher)</td>
<td>3</td>
</tr>
<tr>
<td>STAT 509</td>
<td>Statistics for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 462</td>
<td>Technical Writing</td>
<td>3</td>
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<tr>
<td>or ENGL 463</td>
<td>Business Writing</td>
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</tr>
</tbody>
</table>

Total Credit Hours 16

Laboratory Science Elective (4 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 161</td>
<td>Human Origins: An Introduction to Biological Anthropology</td>
<td>4</td>
</tr>
<tr>
<td>ASTR 101</td>
<td>Introduction to Astronomy</td>
<td></td>
</tr>
</tbody>
</table>
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

ENV 101 & 101L Introduction to the Environment and Introduction to the Environment Lab

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 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 US (Laboratory)

PHYS 211 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 201-580
ANTE 101-ANTH 499
ARMY 401, ARMY 502
ART 101, ARTE 260
ARTH 105-ARTH 366
ARTS 103-ARTS 261
CHIN 103-CHIN 550
CLAS 220-CLAS 598
CPLT 50-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
LASC 201-LASC 451
LATN 109-LATN 615
LING 300-LING 600
MART 110-MART 341
MUSC 110-MUSC 140
NAVY 401, NAVY 402

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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE 311</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CSCE 330</td>
<td>Programming Language Structures</td>
<td>3</td>
</tr>
<tr>
<td>CSCE 350</td>
<td>Data Structures and Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CSCE 355</td>
<td>Foundations of Computation</td>
<td>3</td>
</tr>
<tr>
<td>CSCE 416</td>
<td>Introduction to Computer Networks</td>
<td>3</td>
</tr>
<tr>
<td>CSCE 490</td>
<td>Capstone Computing Project I</td>
<td>3</td>
</tr>
<tr>
<td>CSCE 492</td>
<td>Capstone Computing Project II</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 21

Major Electives (9 hours)
Select from the following:

CSCE 317 or any CSCE course 500 or higher

Select any approved CSCE courses, 500 and higher - a list of acceptable courses is also maintained in the department office and on its website

Total Credit Hours 9