

# DEPARTMENT OF COMPUTER & INFORMATION SCIENCE

## BACHELOR OF SCIENCE IN COMPUTER SCIENCE

The program in computer science prepares students for careers as systems programmers in a scientific and/or engineering environment and for graduate work in computer science. Mathematics and engineering courses supplement a strong core of computer science courses, enabling students to design and implement software that requires complicated computations, data structures and interfaces.

### Curriculum

The matrix below is a sample plan for all coursework required for this program.

#### Freshman

Fall	Credits
ENGL 1013 Composition I <sup>1</sup>	3
CSEC 1003 Introduction to Cybersecurity	3
COMS 1333 Web and Mobile Technologies	3
TECH 1001 Orientation to the University <sup>2</sup>	1
MATH 2914 Calculus I	4
<b>Total Hours</b>	<b>14</b>

Spring	Credits
ENGL 1023 Composition II <sup>1</sup>	3
CSEC 1113 Introduction to Networking	3
COMS 1011 Programming Foundations I Lab and COMS 1013 Programming Foundations I	4
MATH 2924 Calculus II	4
<b>Total Hours</b>	<b>14</b>

#### Sophomore

Fall	Credits
COMM 2173 Business and Professional Speaking	3
COMS 2203 Programming Foundations II	3
COMS 2703 Computer Hardware and Architecture	3
MATH 2703 Discrete Mathematics	3
SS 1xxx <sup>1</sup>	3
<b>Total Hours</b>	<b>15</b>

Spring	Credits
ENGL 2053 Technical Writing	3

Spring	Credits
SCIL 1XXX Science with Laboratory <sup>1</sup>	4
COMS 2213 Data Structures	3
COMS 2223 Computer Organization and Programming	3
COMS 2163 Scripting Languages	3
<b>Total Hours</b>	<b>16</b>

**Junior**

Fall	Credits
COMS 3703 Advanced Operating Systems	3
FAH 1XXX Fine Arts and Humanities Courses <sup>1</sup>	3
COMS 3213 Algorithm Design and Analysis	3
COMS 2323 Programming in Python	3
Approved 3000-4000 level Elective	3
<b>Total Hours</b>	<b>15</b>

Spring	Credits
COMS 3053 Ethical Issues in Technology	3
SCIL 1XXX Science with Laboratory <sup>1</sup>	4
COMS 3233 Database Design and Implementation	3
COMS 3313 Software Engineering	3
Approved 3000-4000 level Elective	3
<b>Total Hours</b>	<b>16</b>

**Senior**

Fall	Credits
USHG 1XXX U.S. History and Government <sup>1</sup>	3
FAH 1XXX Fine Arts and Humanities Courses <sup>1</sup>	3
STAT 3153 Applied Statistics	3
COMS 4913 Capstone I	3
COMS 4103 Organization of Programming Languages	3
<b>Total Hours</b>	<b>15</b>

Spring	Credits
SS 1XXX Social Science Courses <sup>1</sup>	3
COMS 4413 Parallel and Distributed Computing	3
MATH 4003 Linear Algebra I	3

<b>Spring</b>	<b>Credits</b>
COMS 4923 Capstone II	3
Approved 3000-4000 level Elective	3
<b>Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>TECH 1013 Introduction to the University is a substitution for TECH 1001 Orientation to the University.

<sup>3</sup>COMM 2003 Public Speaking is a substitution for COMM 2173 Business and Professional Speaking.