Student ID:_____	Catalog: 2019-2020 Undergraduate Catalog
Student Name:_____	Program: Computer Science, BS
Adviser Name:_____	Minimum Credits Required:_____

Computer Science, BS

Program Description

The Computer Science program is oriented toward design, implementation, and application of software systems to solve information processing problems. This program is more technically oriented than the Computer Information Systems curriculum. It prepares students for employment in the computer software field or for continued study toward an advanced degree in computer science. This program is accredited by the Computing Accreditation Commission (CAC) of ABET, http://www.abet.org. Additional information about the major, curriculum, and advising can be found at http://www.clemson.edu/computing/.

Students who change majors into Computer Science must have a cumulative grade-point average of 2.0 or higher.

Bachelor's to Master's Plan

The School of Computing allows students to apply up to nine hours of graduate credit (6000- and 8000-level courses) toward both the bachelor's and master's degrees. Students participating in this program must have a minimum grade-point average of 3.4 and be admitted to the Graduate School prior to registering for graduate courses. Details of the suggested curriculum and program information are available from the School.

Program Requirements

Freshman Year

First Semester

Course Name	Credit Hours	Term Taken	Grade	Gen Ed
ENGL 1030 - Composition and Rhetoric	3 Credits			
MATH 1060 - Calculus of One Variable I	4 Credits			
• Introduction to Computing Requirement 4 Credits [1] • Natural Science Requirement 4 Credits [2]				

Credit Hours: 15

Second Semester

Course Name	Credit Hours	Term Taken	Grade	Gen Ed
MATH 1080 - Calculus of One Variable II	4 Credits			
• Arts and Humanities (Non-Lit.) Requirement 3 Credits [3] • Introduction to Computing Requirement 4 Credits [1] • Natural Science Requirement 4 Credits [2]				

Credit Hours: 15

Sophomore Year

First Semester

Course Name	Credit Hours	Term Taken	Grade	Gen Ed
CPSC 2070 - Discrete Structures for Computing [4]	3 Credits			
CPSC 2120 - Algorithms and Data Structures	4 Credits			
• Arts and Humanities (Literature) Requirement 3 Credits [3] • Natural Science Requirement 3 Credits [2] • Oral Communication Requirement 3 Credits [5]				

Credit Hours: 16

Second Semester

Course Name	Credit Hours	Term Taken	Grade	Gen Ed
CPSC 2150 - Software Development Foundations	3 Credits			
CPSC 2310 - Introduction to Computer Organization	4 Credits			
CPSC 2910 - Seminar in Professional Issues I	1 Credits			
STAT 3090 - Introductory Business Statistics [6]	3 Credits			
• Natural Science Requirement 3 Credits [2] • Elective 2 Credits				

Credit Hours: 16

Junior Year

First Semester

Course Name	Credit Hours	Term Taken	Grade	Gen Ed
CPSC 3300 - Computer Systems Organization	3 Credits			
CPSC 3600 - Networks and Network Programming	3 Credits			
CPSC 3720 - Introduction to Software Engineering	3 Credits			
MATH 3110 - Linear Algebra	3 Credits			
• Social Science Requirement 3 Credits [3]				

Credit Hours: 15

Second Semester

Course Name	Credit Hours	Term Taken	Grade	Gen Ed
CPSC (ECE) 3220 - Introduction to Operating Systems	3 Credits			
• Breadth Requirement 3 Credits [7] • Computer Science Technical Requirement 3 Credits [8] • Social Science Requirement 3 Credits [3] • Theory Requirement 3 Credits [9]				

Credit Hours: 15

Senior Year

First Semester

Course Name	Credit Hours	Term Taken	Grade	Gen Ed
CPSC (ECE) 3520 - Programming Systems	3 Credits			
• Computer Science Technical Requirement 6 Credits [8] • Writing Requirement 3 Credits [10] • Elective 3 Credits				

Credit Hours: 15

Second Semester

Course Name	Credit Hours	Term Taken	Grade	Gen Ed
CPSC 4910 - Seminar in Professional Issues II	3 Credits			
• Breadth Requirement 3 Credits [7] • Computer Science Technical Requirement 6 Credits [8] • Elective 3 Credits				

Credit Hours: 15

Total Credits: 122

Footnotes

[1] Select either the CPSC 1010 and CPSC 1020 sequence; or the CPSC 1060 and CPSC 1070 sequence. The sequence of CPSC 1110 and CPSC 1020 is also acceptable with one elective credit taken in the first semester.

[2] Two-semester sequence in the same physical or biological science, each including a laboratory, is required. Select one of the following sequences:

- BIOL 1030/BIOL 1050 and BIOL 1040/BIOL 1060
- BIOL 1100 and BIOL 1110
- CH 1010 and CH 1020
- GEOL 1010/GEOL 1030 and GEOL 2020
- GEOL 1010/GEOL 1030 and GEOL 1120/GEOL 1140
- PHYS 1220/PHYS 1240 and PHYS 2210/PHYS 2230

The six remaining credits may be selected from BIOL, BCHM, CH, GEN, GEOL, MICR, PHYS courses; or ENSP 2000. Excess credits in the lab sciences may apply to the remaining science requirements.

[3] See General Education Requirements.

[4] MATH 1190 or MATH 4190 may be substituted.

[5] Select from: COMM 1500, COMM 2500, HON 2230; or the cluster of courses AS 3090, AS 3100, AS 4090, AS 4100; or ML 1010, ML 1020.

[6] MATH 3020 or STAT 3300 may be substituted.

[7] Select from courses in AAH, ANTH, ART, CHIN, COMM, DANC, EAS, ECON, ENGL, FR, GEOG, GER, HIST, HUM, ITAL, JAPN, MUSC, PA, PAS, PHIL, POSC, PSYC, REL, RUSS, SOC, SPAN, THEA, WS. Courses selected to satisfy this requirement may not also be used to satisfy the Communication; Mathematical, Scientific and Technological Literacy; Arts and Humanities; or Social Sciences General Education Requirements.

[8] Select from 3000-level or higher CPSC courses. No more than three credits of CPSC 3990 or CPSC 4810 may be applied to this requirement, and no more than six credits of CPSC 4820 may be applied. Up to three credits of ECE 3000-level or higher courses; or MATH 3650; or MATH 4000-level courses may be substituted (except MATH 4190). Courses selected to satisfy this requirement may not also be used to satisfy other major requirements.

[9] Select CPSC 3120 or CPSC 3500

[10] Select from: ENGL 3040, ENGL 3120, ENGL 3140 ENGL 3150, ENGL 3330

Notes:

1. For graduation, a candidate for the BS degree in Computer Science must have earned a grade of *C* or better in each CPSC course applied to the non-elective requirements of the degree.
2. A grade of *C* or better must be earned in all prerequisite courses (including CPSC and MATH courses) before enrolling in the next CPSC course.
3. General Education Cross-Cultural Awareness and Science and Technology in Society requirements must be satisfied.

Notes: