# Computer Science B.S.

## Computer Science B.S.C.S. Eight-Semester Degree Program

The following sections contain the list of courses required for the Bachelor of Science in Computer Science (B.S.C.S.) degree with a suggested sequence below.

Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see the Eight-Semester Degree Policy (http://catalog.uark.edu/undergraduatecatalog/academicregulations/eightsemesterdegreecompletionpolicy/) in the Academic Regulations chapter for university requirements of the program.

| First Year | Units | |
|---|---|---|
| | Fall | Spring |
| GNEG 1111 Introduction to Engineering I | 1 | |
| ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1) | 3 | |
| CHEM 1103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture) | 3 | |
| MATH 2554 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1)[1] | 4 | |
| History Elective (Satisfies General Education Outcomes 3.2 and 4.2). Choose from one of the following courses: | 3 | |
|    HIST 2003 History of the American People to 1877 (ACTS Equivalency = HIST 2113) | | |
|    HIST 2013 History of the American People, 1877 to Present (ACTS Equivalency = HIST 2123) | | |
| GNEG 1121 Introduction to Engineering II | | 1 |
| MATH 2564 Calculus II (ACTS Equivalency = MATH 2505) | | 4 |
| PHYS 2054 University Physics I (ACTS Equivalency = PHYS 2034) | | 4 |
| Freshman Science Elective (Satisfies General Education Outcome 3.4) Choose one of the following science and corresponding lab options: | | 4 |
|    BIOL 1543 Principles of Biology (ACTS Equivalency = BIOL 1014 Lecture) | | |
|    BIOL 1541L Principles of Biology Laboratory (ACTS Equivalency = BIOL 1014 Lab) | | |
|    CHEM 1123 University Chemistry II (ACTS Equivalency = CHEM 1424 Lecture) | | |
|    CHEM 1121L University Chemistry II Laboratory (ACTS Equivalency = CHEM 1424 Lab) | | |
|    GEOS 1113 Physical Geology (ACTS Equivalency = GEOL 1114 Lecture) | | |
|    GEOS 1111L Physical Geology Laboratory (ACTS Equivalency = GEOL 1114 Lab) | | |
|    PHYS 2074 University Physics II (ACTS Equivalency = PHYS 2044 Lecture) (For students who already have credit for PHYS 2054, they may wish to select PHYS 2074 for their Freshman Science Elective.) | | |
| ENGL 1033 Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2) | | 3 |
| Year Total: | 14 | 16 |

| Second Year | | Units |
|---|---|---|
| | Fall | Spring |
| CSCE 2004 Programming Foundations I | 4 | |
| CSCE 2114 Digital Design | 4 | |
| MATH 2603 Discrete Mathematics | 3 | |
| Fine Arts Elective (Satisfies General Education Outcome 3.1)[2] | 3 | |
| Social Sciences Elective (Satisfies General Education Outcomes 3.3 and 4.1)[3] | 3 | |
| CSCE 2014 Programming Foundations II | | 4 |
| CSCE 2214 Computer Organization | | 4 |
| MATH 3083 Linear Algebra | | 3 |
| Social Sciences Elective (Satisfies General Education Outcome 3.3)[4] | | 3 |
| Year Total: | 17 | 14 |

| Third Year | | Units |
|---|---|---|
| | Fall | Spring |
| CSCE 3193 Programming Paradigms | 3 | |
| CSCE 3613 Operating Systems | 3 | |
| INEG 3313 Engineering Probability and Statistics[5] | 3 | |
| PHIL 3103 Ethics and the Professions (Satisfies General Education Outcome 5.1) | 3 | |
| General Elective | 3 | |
| CSCE 3513 Software Engineering (Satisfies General Education Outcome 6.1) | | 3 |
| CSCE 4523 Database Management Systems | | 3 |
| CSCE Elective (4000 level) | | 3 |
| MATH 3103 Combinatorics | | 3 |
| COMM 1313 Public Speaking (ACTS Equivalency = SPCH 1003) (Satisfies General Education Outcome 1.2) | | 3 |
| Year Total: | 15 | 15 |

| Fourth Year | | Units |
|---|---|---|
| | Fall | Spring |
| CSCE 4561 Capstone I | 1 | |
| CSCE 4133 Algorithms | 3 | |
| CSCE 4753 Computer Networks | 3 | |
| CSCE Elective (4000 level) | 3 | |
| General Elective | 3 | |
| General Elective | 3 | |
| CSCE 4963 Capstone II | | 3 |
| CSCE 4323 Formal Languages and Computability | | 3 |

| | | |
|---|---|---|
| CSCE Elective (4000 level) | | 3 |
| General Elective | | 3 |
| Social Sciences Elective (Satisfies General Education Outcome 3.3)[4] | | 3 |
| Year Total: | 16 | 15 |

**Total Units in Sequence:**                                       **122**

[1] Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for MATH 2554.

[2] The Fine Arts Elective courses which satisfy General Education Outcome 3.1 include:  ARCH 1003, ARHS 1003,  COMM 1003, DANC 1003, LARC 1003, MLIT 1003, MLIT 1003H,  MLIT 1013, MLIT 1013H, MLIT 1333,  THTR 1003, THTR 1013, or THTR 1013H.

[3] The Social Sciences Elective courses which satisfy General Education Outcomes 3.3 and 4.1 include:  ANTH 1023,  COMM 1023,  HDFS 1403,  HDFS 2413, HIST 1113, HIST 1113H, HIST 1123, HIST 1123H, HIST 2093, HUMN 1114H,  HUMN 2114H, INST 2013, INST 2813, INST 2813H, PLSC 2013, PLSC 2813, PLSC 2813H, RESM 2853, SOCI 2013, SOCI 2013H, or SOCI 2033.

[4] The Social Sciences Elective courses which satisfy General Education Outcome 3.3 include:  AGEC 1103, AGEC 2103,  ANTH 1023, COMM 1023, ECON 2013, ECON 2023,  ECON 2143,  EDST 2003, HDFS 1403,  HDFS 2413,  HDFS 2603,  HIST 1113, HIST 1113H, HIST 1123, HIST 1123H, HIST 2003,  HIST 2013, HIST 2093, HUMN 1114H, HUMN 2114H, INST 2013, INST 2813, INST 2813H, PLSC 2003,  PLSC 2013,  PLSC 2203, PLSC 2813, PLSC 2813H, PSYC 2003,  RESM 2853,  SOCI 2013, SOCI 2013H,  SOCI 2033. Note, courses cannot be counted twice in degree requirements.

[5] Student may petition to take the two-course sequence, STAT 3013 and STAT 3113, instead of INEG 3313.