

**B.S. Computer Science (CSC)**

(Option 1 - Systems)

*College: Arts & Sciences***DEGREE REQUIREMENTS**

Course requirements for all UNCW degrees include: (1) Basic Studies, (2) specific major requirements, and (3) sufficient elective hours for a combined total of a minimum of 124 hours.

**(1) BASIC STUDIES** (45 semester hours)

See Basic Studies sheet and/or information on the WEB at <http://www.uncw.edu/uc/basicstudies.htm>

**(2) MAJOR REQUIREMENTS – CSC Option 1 – Systems** (Minimum 70 hours)

Check when complete:

- CSC 100 Orientation to Computer Science (1)  
 +CSC 121 Introduction to Computer Science (3) Prerequisite: MAT 111 or 115 [note: students w/no programming experience should complete CSC 112 prior to CSC 121]  
 (Meets **Computer Competency Requirement**)  
 CSC 133 Discrete Structures (4) Prerequisite: MAT 111 or 115; corequisite: CSC 121  
 CSC 221 Introduction to Computer Science II (4) Prerequisite: CSC 121  
 CSC 242 Digital Logic, Computer Organization and Assembly Language (4) Prerequisites: CSC 121 and CSC 133  
 CSC 332 Data Structures (3) Prerequisite: CSC 221; prerequisite or corequisite MAT 161  
 CSC 340 Scientific Computing (3) Prerequisites: MAT 162 and CSC 221  
 CSC 342 Operating Systems (3) Prerequisite: CSC 242 and 332  
 CSC 360 Formal Languages and Computability I (3) Prerequisite: CSC 242 and CSC 332  
 CSC 385 Professional and Ethical Issues in Computer Science (1) Prerequisite: Junior or senior standing in CSC  
 CSC 434 Programming Languages (3) Prerequisite: CSC 332 and CSC 360  
 CSC 450 Software Engineering (3) Prerequisite: CSC 332 and senior standing  
 CSC 455 Data Base Management Systems (3) Corequisite: CSC 332  
 +MAT 161 Calculus with Analytical Geometry (4) Prerequisite: MAT 112 or 115 or equivalent preparation in algebra and trigonometry  
 +MAT 162 Calculus with Analytical Geometry (4) Prerequisite: MAT 112 or 115 or equivalent preparation in algebra and trigonometry  
 +STT 215 Introduction to Statistics (3) Prerequisite: MAT 111 or 115  
 +PHY 201\* and 202\* or +BIO 240\* and 241\* or +CHM 101\* and 102\*  
 Select one additional lab science course chosen from  
     +\*CHM 101 (if not selected above) General Chemistry (4)  
     \*CHM and CHML 211 Organic Chemistry (4) Prerequisite: CHM 102  
     +\*GLY 101 Physical Geology (4)  
     +\*GLY and GLYL 120 (EVS 120) Environmental Geology (4)  
     +\*PHY 201 (if not selected above) General Physics (4) Corequisite: MAT 161  
     \*PHY 211 Electric Circuits (4) Corequisite: MAT 161  
     +\*BIO 204 Principles of Biology (4)  
     +\*BIO 205 Plant Biology (4)  
     +\*BIO 206 Animal Biology (4)  
     +\*BIO 240 (if not selected above) Human Anatomy and Physiology (4) Prerequisite: BIO 204 & CHM 101  
 CSC \_\_\_\_ 300 or 400 level CSC course approved by the advisor  
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 CSC 495 Seminar in Computer Science (1) Prerequisite: Junior or senior standing and consent of instructor (or any other approved oral intensive course – see UNCW catalogue)  
 (Meets **Oral Communication Competency Requirement**)

A grade point average of "C" (2.00) or better computed over the CSC courses and all the courses used to fulfill the requirements of the major are required.

*\*These courses either include a lab or require a corequisite lab*

*+May also be used to satisfy Basic Studies requirements*

**(3) ELECTIVES**

\_\_\_\_ Elective hours to equal a minimum of 124 hours

**Requirements to declare PRE-CSC:** Completion of 24 hours

**Requirements to declare CSC:** CSC 100, CSC 121, 133, and 221 with a GPA of at least 2.5 on these three courses.

For further information see the CSC WEB sites: <http://www.uncw.edu/csc> and <http://www.uncw.edu/catalogue/documents/catalogue.pdf#page=245>

## COMPUTER SCIENCE COURSES

- CSC 100.** Orientation to Computer Science (1)  
**CSC 105.** Introduction to Computing and Computer Applications (3)  
**CSC 110.** Fluency in Information Technology (3)  
**CSC 112.** Introduction to Computer Programming (3) Prerequisite: MAT 111 or 115  
**CSC 121.** Introduction to Computer Science I (3) Prerequisite: MAT 111 or 115  
**CSC 133.** Discrete Structures (4) Prerequisite: MAT 111 or 115; corequisite CSC 121  
**CSC 204.** Multimedia Systems (3) Prerequisite: CSC 105 or 110 or equivalent  
**CSC 220.** (ART 220) (FST 220) 3-D Computer Graphics Tools and Literacy (3) Prerequisite: CSC 105, 121 or permission of instructor  
**CSC 221.** Introduction to Computer Science II (4) Prerequisite: CSC 121  
**CSC 242.** Digital Logic, Computer Organization and Assembly Language (4) Prerequisite: CSC 121 and CSC 133  
**CSC 255.** Database Management With Internet Applications (3)  
**CSC 275.** Topics in Computer Science and Technology (3) Prerequisite: Permission of instructor  
**CSC 320.** (ART 320) (FST 320) Computer Animation (3) Prerequisite: CSC 220 (ART 220) (FST 220) or permission of instructor  
**CSC 325.** (MAT 325) Numerical Algorithms (3) Prerequisite: CSC 112 or 121, MAT 162  
**CSC 332.** Data Structures (3) Prerequisite: CSC 221; prerequisite or corequisite MAT 161  
**CSC 337.** Parallel Computing (3) Prerequisite: CSC 242 and 332  
**CSC 340.** Scientific Computing (3) Prerequisites: MAT 162 and CSC 221  
**CSC 342.** Operating Systems (3) Prerequisite: CSC 242 and CSC 332  
**CSC 344.** Computer Networks (3) Prerequisite: CSC 242  
**CSC 360.** Formal Languages and Computability I (3) Prerequisite: CSC 242 and CSC 332  
**CSC 370.** Computer Graphics (3) Prerequisite: CSC 332 and MAT 162  
**CSC 385.** Professional and Ethical Issues in Computer Science (1) Prerequisite: Junior or senior standing in CSC  
**CSC 415.** (515) Artificial Intelligence (3) Prerequisite: CSC 332  
**CSC 421.** Computer Gaming (3) Prerequisite: CSC 320 (ART 320) (FST 320), 340, and 370.  
**CSC 422.** Performance Evaluation of Computer Systems (3) Prerequisite: STT 215, MAT 162, and CSC 221  
**CSC 425.** (525; MAT 425/525) Numerical Analysis (3) Prerequisite: MAT 325, 335, and 361  
**CSC 434.** Programming Languages (3) Prerequisite: CSC 332 and CSC 360  
**CSC 442.** Computer System Architecture (3) Prerequisite: CSC 242  
**CSC 444.** Network Programming (3) Prerequisite: CSC 342 and CSC 344  
**CSC 450.** Software Engineering (3) Prerequisite: CSC 332 and senior standing  
**CSC 453.** Object-Oriented Analysis and Design (3) Prerequisite: CSC 332 and senior standing  
**CSC 455.** Data Base Management Systems (3) Corequisite: CSC 332  
**CSC 457.** Compiler Construction (3) Prerequisite: CSC 434 and senior standing  
**CSC 460.** Formal Languages and Computability II (3) Prerequisite: CSC 360  
**CSC 475.** Topics in Computer Science (3) Prerequisite: Senior standing and permission of instructor  
**CSC 491.** Directed Individual Study (1-3) Prerequisite: Overall GPA of at least 2.00, junior or senior standing, and consent of instructor, department chair and dean  
**CSC 495.** Seminar in Computer Science (1) Prerequisite: Junior or senior standing and consent of instructor  
**CSC 498.** Internship in Computer Science (1-3) Prerequisite: Overall GPA of at least 2.50 and a GPA in CSC of at least a 2.80  
**CSC 499.** Honors Work in Computer Science (2-3) Prerequisite: Eligibility for honors program