

B.S. Computer Science (CSC)
(Option 2 – Applied w/Biology Concentration)
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/basic/basic.html>

(2) MAJOR REQUIREMENTS – CSC Option 2 – Applied (67-74 hours [core plus concentration])

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 133
- _____ CSC 332 Data Structures (3) Prerequisite: CSC 221; prerequisite or corequisite MAT 161
- _____ CSC 344 Computer Networks (3) Prerequisite: CSC 242
- _____ 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 Comp. Sci.
- _____ 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) Corerequisite: CSC 332
- _____ +MAT 161 Calculus w/Analytical Geometry (4) Prerequisite: MAT 112 or 115 or equivalent prep in algebra and trig
- _____ +MAT 162 Calculus with Analytical Geometry (4) Prerequisite: MAT 161
- _____ QMM 280 **or** Statistical Analysis for Business and Economics (3) Prerequisite: MAT 111 or 115
- _____ +STT 215 Introduction to Statistics (3) Prerequisite: MAT 111 or 115
- _____ CSC _____ 300 or 400 level CSC course approved by the advisor
- _____ CSC _____ 300 or 400 level CSC course approved by the advisor
- _____ CSC 495 Sem. in Computer Sci. (1) Prerequisite: Junior or senior standing & consent of instructor (or any other approved oral intensive course – see UNCW catalogue) (Meets **Oral Communication Competency Requirement**)

BIOLOGY CONCENTRATION (21 Hours):

- _____ BIO 201 Principles of Biology: Cells (4)
- _____ BIO 202 Principles of Biology: Biodiversity (4)
- _____ Select 2 courses (with or without laboratory) selected from BIO 335 or 366
- _____ or 1 from BIO 325 or 340 or 345
- _____ 7 additional hours in biology at the 300-400 level, one of which must be a laboratory course

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 require a 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 four courses.

For further information see the CSC WEB sites: <http://www.uncw.edu/csc> and

http://www.uncw.edu/catalogue/documents/08-09_OnlineUndergradCatalogue.pdf#page=251

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 Mathematical Structures (4) Prerequisite: MAT 111 or 115
- 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 (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