

B.S. Computer Science (CSC)
(Option 2 – Chemistry 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 – Chemistry (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) Corequisite: 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**)

CHEMISTRY CONCENTRATION (22 Hours):

- CHM 101 General Chemistry (4)
- CHM 102 General Chemistry (4) Prerequisite: CHM 101
- CHM 211 CHM211L Organic Chemistry I/Lab (4) Prerequisite: CHM 102 and CHM 102L
- and** CHM 212 CHM212L Organic Chemistry II/Lab (4) Prerequisite: CHM 102 and CHM 102L
- or**
- CHM 211 CHM 211L Organic Chemistry I/Lab (4)
- and** CHM 235 Quantitative Analysis (2) Prerequisite: CHM 101 and CHM 102
- 6 additional hours in chemistry at the 300-400 level

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/undergraduate/catalogue/91010COU%20DESC.pdf#page=29>

COMPUTER SCIENCE COURSES

- CSC 100.** Orientation to Computer Science (1)
CSC 105. Introduction to Computing and Computer Applications (3) [For non-CSC majors]
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 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 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 430. (FST 430) Digital Special Effects (3) Prerequisite: CSC 332 and 220
CSC 434. Programming Languages (3) Prerequisite: CSC 332 and CSC 360
CSC 437. (CSC 537) Parallel Computing (3) Prerequisite: CSC 340
CSC 442. Computer System Architecture (3) Prerequisite: CSC 242
CSC 444. Network Programming (3) Prerequisite: CSC 342 and CSC 344
CSC 446. (CSC 546) Grid Computing (3) Prerequisite: CSC 344 or 332
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