

B. S. Computer Science (CSC)*College: Arts & Sciences*

Option 2: With Selected Concentration

Course requirements for all UNCW degrees include: (1) University Studies, (2) specific major requirements, and (3) sufficient elective hours for a combined total of a minimum of 120 hours.

MAJOR REQUIREMENTS – CSC Option 2 – SE (Minimum 73 – 79 hours)**Core Courses:** (55 hours)

___ CSC 131	Introduction to Computer Science (4) Prerequisite: MAT 111 or 115, or equivalent, or sufficient math placement
___ +CSC 133	Discrete Mathematical Structures (3) Prerequisite: MAT 111 or 115, or equivalent, or sufficient math placement
___ CSC 231	Introduction to Data Structures (4) Prerequisite: CSC 131 with grade of "C" or better; Corequisite: CSC 133
___ CSC 242	Computer Organization (3) Prerequisites: CSC 131 with a grade of "C" or better and 133
___ CSC 331	Object-Oriented Programming and Design (3) Prerequisite: CSC 231 with a grade of "C" or better
___ CSC 344	Computer Networks (3) Prerequisite: CSC 231 with a grade of "C" or better and 242
or	
___ CSC 544	Network Programming (3) Prerequisites: CSC 500 or approval of the graduate coordinator
___ CSC 360	Formal Languages and Computability (3) Prerequisites: CSC 231 with a grade of "C" or better and 242
___ CSC 380	Design and Analysis of Algorithms (3) Prerequisites: CSC 133, 231 with a grade of "C" or better, and MAT 161
or	
___ CSC 532	Design and Analysis of Algorithms I (3) Prerequisites: CSC 500 or approval of the graduate coordinator
___ CSC 385	Professional and Ethical Issues in Computer Science (3) Prerequisites: ENG 101 or equivalent and junior/senior standing in computer science or information technology (Meets Oral Communication Requirement)
___ CSC 434	Programming Languages (3) Prerequisites: CSC 331 with a grade of "C" or better and 360
___ CSC 450	Software Engineering (3) Prerequisites: CSC 331 with a grade of "C" or better and senior standing (Meets Applied Learning Requirement)
or	
___ CSC 550	Software Engineering (3) Prerequisites: CSC 500 or approval of the graduate coordinator (Meets Applied Learning Requirement)
___ CSC 455	Database Design and Implementation (3) Corequisite: CSC 331 with a grade of "C" or better (Meets Applied Learning Requirement)
___ CSC ___	Choose 6 additional hours in CSC at the 300-400 level; must be approved by advisor. 3 hours should be at the graduate level (500 or higher) §.
___ +*MAT 161	Calculus with Analytical Geometry I (4) Prerequisite: MAT 112 or 115 or equivalent preparation
___ +*MAT 162	Calculus with Analytical Geometry II (4) Prerequisite: MAT 161
___ +BAN 280	Statistical Analysis for Business and Economics (3) Prerequisite: MAT 111
or	
___ +STT 215	Introduction to Statistics (3) Prereq: Satisfactory performance on the UNCW math test or MAT 105

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 University Studies Foundations & Approaches and Perspectives requirements

§ No more than 12 hours total of graduate-level courses may be applied to the undergraduate degree.

Concentration Courses: (18 – 21 hours)

Biology Concentration: (21 hours)

- ___ +*BIO 201 Principles of Biology: Cells (4)
- ___ +*BIO 202 Principles of Biology: Biodiversity (4)
- ___ BIO ___ ** Additional 13 hours in BIO above the 200 level
- ___ BIO ___
- ___ BIO ___
- ___ BIO ___

Business Concentration: (21 hours)

- ___ *ACG 201 Financial Accounting (3), Lab(1) Pre/Corequisite: MAT 111, Corequisite: ACGL 201
- ___ ACG 201 Managerial Accounting (3), Prerequisite: ACGL *201 and ACGL 201
- ___ +ECN 221 Principles of Economics – Micro (3) Prerequisite: MAT 111
- ___ +ECN 221 Principles of Economics – Micro (3) Prerequisite: MAT 111
- ___ FIN 335 Principles of Financial Management (3) Prerequisite: ACG 201, ECN 222, and BAN 280
- ___ MKT 340 Principles of Marketing (3) Prerequisite: Junior standing or admission to CSB
- ___ MGT 350 Principles of Management – Micro (3) Prerequisite: Junior standing or admission to CSB

Chemistry Concentration: (21 hours)

- ___ +*CHM 101 General Chemistry I (4)
 - ___ *CHM 102 General Chemistry II (4), Prerequisite: CHM +*101
 - ___ CHM 211 Organic Chemistry I (3) Prerequisite: CHM *102 with a grade of “C” or better
 - ___ *CHM212 Organic Chemistry II (3) Prerequisite: CHM 211
- or
- ___ *CHM 235 Quantitative Analysis (3), Lab (1), Prerequisite: CHM +*101 & *102 with a grade of “C” or better
 - ___ CHM ___ ** Choose 6 additional in CHM at the 300-400 level

Digital Arts Concentration: (24 hours)

- ___ +ARH 202 Renaissance Through Early Twentieth Century (3)
 - ___ ART 101 Two-Dimensional Design (3) Studio Art and Digital Arts minors only or instructor consent
 - ___ ART 260 Introduction to Graphic Design (3) Prerequisite: ART 101 or consent of instructor
 - ___ MIS 310 Web and Device Development Languages (3) Prerequisite: CIT 110 or CSC 131 or MIS 213.
- ___ CSC 112 Introduction to Computer Programming (3) Prerequisite: MAT 111 or 115
 - or CSC 131 Introduction to Computer Science (4) Prerequisite: MAT 111 or 115
 - or MIS 216 Introduction to Business Application Development (3)
 - or MIS 316 Business Application Development (3) Prerequisite: MIS 216 or CSC 112 or CSC 131
- ___ CSC 220/ART220/FST 220 3-D Computer Graphics (3) Prerequisite: CSC 105,131 or instructor consent Coreq: ART 260
 - ___ **6 hours electives – at least 3 hours at the 300-400 level, and at least 3 hours outside major. Choose from
 - ___ CSC 315, 320, 368, 370, 421, 430, 475, 491; ARH 202, 206, 308, 386, ART 280, 282, 311, 312, 320, 341, 343, 360, 365, 380,382, 411, 412, 475, 491, 495, CIT 410, COM +160, +211, 280, 380,480,491, CRW 210, 301, 302, 318, 320, 330, 331, 332, 333, 368, 392, 393, 394, 397, 398, 430, 491, 495, 497, MUS 110, 210, 310, 491, THR,211, 305, 306, 411, 491.

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Concentration Courses: (18 – 21 hours)

GIS Concentration: (21 hours)

___ +GGY 215 The Digital Globe (3)
or GGY 220 Cartography (3) Prerequisite: GGY 130 or GGY 140
___ GGY 281 Intro to Geographic Information Systems (3) Prerequisite: GGY 130, 140, EVS 195 or instructor consent
___ GGY 322 Introduction to Remote Sensing (3) Prerequisite: GGY 130 or GLY 120 or GGY 215
___ **Choose 12 additional hours of electives, 6 credit hours at 300-level, and at least 9 hours outside
___ major, selected from the following: ANT 311, *BIO 366, 466, BIOL 366, CSC 370, 415, 455,
___ GGY 220, 222, 328, 333,424, 426, 428, 433, GLY 390, 470, 471, MIS 315, OCN 390 or 471.

Neuroscience Concentration: (23 hours)

___ BIO 201 Principles of Biology: Cells (0-4)
___ PSY 105 General Psychology (3)
___ PSY 256 Brain and Behavior (3) Prerequisite: BIO 105 and PSY 105 or higher
___ BIO 443 Neurobiology (3) Prerequisite: BIO 240, BIO 345, or PSY 256
or PSY 456 Advanced Biological Psychology (3) Prerequisite: PSY 256 and BIO 105 or 201, or instructor consent
___ BIO 495 Seminar (1-3) Prerequisite: Senior standing
or PSY 495 Topical Seminar (1-3) Prerequisite: PSY 105
___ **Choose at least 9 hours of the following with at least 3 hours at 400 level or higher, and at least
___ 9 hours outside the major: BIO 240, 335, 368, 415, 440, 443, 459, 484, 491, 499, CHM 101, 102,
___ CSC 415, PAR 320, PSY 245, 356, 456, 457, 491 or 499.

Security Concentration: (18 hours)

___ CYBR 201 Fundamentals of Cybersecurity (3)
___ CSC 324 Cyber Operations (3). Prerequisite: CYBR 201 and CSC 242.
___ CSC 342 Operating Systems (3) Prerequisite: CSC 231 and CSC 242.
___ CSC 424 Computer Security (3) Prerequisite: CSC 331
___ CSC 350 Secure Programming (3) Prerequisite: CSC 331 or
___ CSC 354 Computer and Mobile Forensics (3) Prerequisite: CSC 242.
___ CSC ___ **Choose 3 hours from CSC 350, 354, 365, 465, 475, 491, 498. <i>May double count with core electives</i>

Statistics Concentration: (18 hours)

___ STT 215 Introduction to Statistics (3) Prerequisite: Satisfactory math placement or MAT 105
___ STT 305 Statistical Programming (3) Prerequisite: STT 215 or equivalent
___ STT ___ **Choose 12 additional hours in STT at the 300-400 level.
___ STT ___
___ STT ___
___ STT ___

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