

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

Option 2: Geographic Information Systems (GIS) 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 124 hours.

MAJOR REQUIREMENTS – CSC Option 2 – GIS (76 hours)**Core Courses: (55 hours)**

- _____ +CSC 131 Introduction to Computer Science (4) Prerequisite: MAT 111 or 115
 _____ +CSC 133 Discrete Mathematical Structures (3) Prerequisite: MAT 111 or 115, or equivalent
 _____ CSC 231 Introduction to Data Structures (4) Prerequisite: CSC 131, Corequisite: CSC 133
 _____ CSC 242 Computer Organization (3) Prerequisites: CSC 131 and 133
 _____ CSC 331 Object-Oriented Programming and Design (3) Prerequisite: CSC 231
 _____ CSC 344 Computer Networks (3) Prerequisite: CSC 231 and CSC 242
 _____ CSC 360 Formal Languages and Computability (3) Prerequisites: CSC 231 and 242
 _____ CSC 380 Design and Analysis of Algorithms (3) Prerequisites: CSC 133, 231, and MAT 161
 _____ 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 and 360
 _____ CSC 450 Software Engineering (3) Prerequisites: CSC 331 and senior standing (Meets **Applied Learning Requirement**)
 _____ CSC 455 Database Design and Implementation (3) Prerequisite: CSC 331
 _____ +*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
 _____ +QMM 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
 _____ CSC _____ Choose 6 additional hours in CSC at the 300-400 level; must be approved by advisor.
 _____ CSC _____

GIS Concentration: (21 hours) Complete requirements for Geospatial Technologies Minor

- _____ GGY 215 The Digital Globe (3)
 or _____ GGY 220 Cartography (3) Prerequisite: GGY 130 or GGY 140
 _____ GGY 281 Introduction to Geographic Information Systems (3) Prereq: GGY 130 or 140 or EVS 195 or consent of instructor
 _____ GGY 328 Introduction to Geographic Information Systems (3) Prerequisite: GGY 215 or GGY 220
 _____ GGY 322 Remote Sensing in Environmental Analysis (3) Prereq: GGY 130 or GLY 120 or GGY 215
 or _____ GGY 328 Introduction to Geographic Information Systems (3) Prerequisite: GGY 220 or GGY 215
 or _____ GGY 424 Advanced Geographic Information Systems (3) Prereq: GGY 328
 or _____ GGY 426 Environmental Geographic Information Systems (3) Prereq: GGY 328
 or _____ GGY 428 Advanced Remote Sensing (3) Prereq: GGY 322
 _____ Choose 12 hours of electives, 6 credit hours at 300-level or above selected from the following:
 _____ ANT 311, *BIO366, 466, 478, 480, BIOL 366, CSC 370, 415, 455, GGY 222, 322, 333, 424, 426, 428, 433, GLY 390, 470, 471, MIS 315, OCN 390 or 471.

Note: At least 9 hours must come from courses outside of the student's major.

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

Requirements to declare CSC: Completion of 24 hours

For further information, see the CSC website: <http://www.uncw.edu/csc> and <http://catalogue.uncw.edu>.

This document is considered an unofficial guide. Please refer to your degree audit for the latest updates.