

**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 (70-76 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 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 (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) Corequisite: 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: (16 hours)**

- \_\_\_\_\_ GGY 215 The Digital Globe
- Or GGY 220 Cartography (3) Prerequisite: GGY 130 or GGY 140
- \_\_\_\_\_ GGY 222 Quantitative Methods in Earth Sciences (3)
- or +STT 215 Introduction to Statistics (3) Prerequisite: Satisfactory on the UNCW math test or MAT 105
- \_\_\_\_\_ GGY 328 Introduction to Geographic Information Systems (3) Prerequisite: GGY 220 or consent of instructor
- or EVS 281 Introduction to Geographic Information Systems in Environmental Sciences (3) Prerequisite: EVS 195 or consent of instructor
- \_\_\_\_\_ 6 credit hours at 300-level or above selected from the following: ANT 311, BIO 366, 466, 478, 480, BIOL 366, CSC 332, 370, 415, 455, GGY 205, 422, 424, 426, GLY 390, 470, or MIS 213, 315

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.**