

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

## Option 2: Geospatial Technologies (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 120 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 with a 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 CSC 242
_____	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
_____	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 <b>Oral Communication Requirement</b> )
_____	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 <b>Applied Learning Requirement</b> )
_____	CSC 455	Database Design and Implementation (3) Prerequisite: CSC 331 with a grade of “C” or better (Meets <b>Applied Learning Requirement</b> )
_____	+*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
_____	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 322	Introduction to Remote Sensing (3) Prereq: 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.
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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>