

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

Option 2: Geographic Information Science (GIS) Concentration

DEGREE REQUIREMENTS

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.

(1) UNIVERSITY STUDIES

See University Studies sheet and/or information on the web at <http://www.uncw.edu/uc/basic/basic.html>

(2) MAJOR REQUIREMENTS – CSC Option 2 – GIS (69-75 hours)**Core Courses:** (49 hours)

_____	CSC 100	Orientation to Computer Science (1)
_____	+CSC 121	Computer Science I (3) Prereq: MAT 111 or 115 (Meets Computer Competency Requirement)
_____	+CSC 133	Discrete Mathematical Structures (4) Prereq: MAT 111 or 115, or equivalent, Corequisite: CSC 121
_____	CSC 221	Computer Science II (4) Prerequisite: CSC 121
_____	CSC 242	Digital Logic, Computer Organization and Assembly Language (4) Prereqs: CSC 121 and CSC 133
_____	CSC 332	Data Structures (3) Prerequisite: CSC 221, Pre/Corequisite: MAT 161
_____	CSC 344	Computer Networks (3) Prerequisite: CSC 242
_____	CSC 360	Formal Languages and Computability (3) Prerequisites: CSC 242 and 332
_____	CSC 385	Professional and Ethical Issues in Computer Science (3) Prerequisites: ENG 101 or equivalent, junior or senior standing in computer science (Meets Oral Communication Competency Requirement)
_____	CSC 434	Programming Languages (3) Prerequisites: CSC 332 and CSC 360
_____	CSC 450	Software Engineering (3) Prerequisites: CSC 332 and senior standing (Meets Applied Learning Requirement)
_____	CSC 455	Database Design and Implementation (3) Corequisite: CSC 332
_____	+MAT 161	Calculus with Analytic Geometry (4) Prerequisite: MAT 112 or 115 or equivalent preparation
_____	MAT 162	Calculus with Analytic Geometry (4) Prerequisite: MAT 161
_____	QMM 280	Statistical Analysis for Business and Economics (3) Prerequisite: MAT 111
or	+STT 215	Introduction to Statistics (3) Prerequisite: Satisfactory on the UNCW math test or MAT 105
_____	CSC _____	Choose 6 additional hours in computer science at the 300-400 level; must be approved by advisor
_____	CSC _____	

GIS Concentration: (16 hours)

_____	*GGY 220	Cartography (3) Prerequisite: GGY 130 or GGY 140
_____	GGY 222	Quantitative Methods in Earth Sciences (3)
_____	*GGY 328	Introduction to Geographic Information Systems (3) Prerequisite: GGY 220 or consent of instructor
_____	GGY 422	Remote Sensing in Environmental Analysis (3) Prerequisite: GGY 130 or GLY 205 or GLY 101 or consent of instructor
_____	GGY 424	Advanced Geographic Information Systems (4) Prerequisite: GGY 328
or	GGY 426	Environmental Geographic Information Systems (4) Prerequisite: GGY 328 or consent of instructor

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 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 website: <http://www.uncw.edu/csc> and <http://uncw.edu/catalogue/undergraduate%2011-12/Undergraduate%20Catalogue%20Master%20Word.pdf#page=127>.

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	Computer Science I (3) Prerequisite: MAT 111 or 115
CSC 133	Discrete Mathematical Structures (4) Prerequisite: MAT 111 or 115 or equivalent, Coreq: 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) Prerequisites: CSC 105, 121 or consent of instructor
CSC 221	Computer Science II (4) Prerequisite: CSC 121
CSC 242	Digital Logic, Computer Organization and Assembly Language (4) Prerequisites: CSC 121 and 133
CSC 255	Introduction to Databases: Techniques and Technologies (3)
CSC 275	Topics in Computer Science and Technology (3) Prerequisite: Consent of instructor
CSC 320	(ART 320) (FST 320) Computer Animation (3) Prerequisite: CSC 220 (ART 220) (FST 220) or consent of instructor
CSC 332	Data Structures (3) Prerequisite: CSC 221, Pre/Corequisite: MAT 161
CSC 340	Scientific Computing (3) Prerequisites: MAT 162 and CSC 221
CSC 342	Operating Systems (3) Prerequisites: CSC 242 and 332
CSC 344	Computer Networks (3) Prerequisite: CSC 242
CSC 360	Formal Languages and Computability (3) Prerequisites: CSC 242 and 332
CSC 370	Computer Graphics (3) Prerequisites: CSC 332 and MAT 162
CSC 385	Professional and Ethical Issues in Computer Science (3) Prerequisites: ENG 101 or equivalent and junior or senior standing in computer science
CSC 415	(515) Artificial Intelligence (3) Prerequisite: CSC 332
CSC 421	Computer Gaming (3) Prerequisites: CSC 320 (ART 320) (FST 320), 340, and 370
CSC 430	(FST 430) Digital Special Effects (3) Prerequisites: CSC 332 and 220, or FST 220 and 302
CSC 434	Programming Languages (3) Prerequisites: CSC 332 and 360
CSC 437	(CSC 537) Parallel Computing (3) Prerequisite: CSC 340
CSC 442	Computer System Architecture (3) Prerequisite: CSC 242
CSC 446	(CSC 546) Grid Computing (3) Prerequisite: CSC 344 or 332
CSC 450	Software Engineering (3) Prerequisites: CSC 332 and senior standing
CSC 455	Database Design and Implementation (3) Corequisite: CSC 332
CSC 457	Compiler Construction (3) Prerequisites: CSC 434 and senior standing
CSC 475	Topics in Computer Science (3) Prerequisites: Senior standing and consent of instructor
CSC 491	Directed Individual Study (1-3) Prerequisites: Overall GPA of at least 2.50 and a GPA in CSC courses of at least 2.80, junior or senior standing, and consent of instructor, department chair and dean
CSC 495	Seminar in Computer Science (1) Prerequisites: Junior or senior standing and consent of instructor
CSC 498	Internship in Computer Science (1-3) Prerequisites: 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