



Geographic Information Science Concentration
College of Arts and Sciences
Department of Geography
Bulletin Year: 2023-2024

This course plan is a recommended sequence for this major. Courses designated as critical (!) may have a deadline for completion and/or affect time to graduation. Please see the Program Notes section for details regarding "critical courses" for this particular Program of Study.

ne Program	n Notes section for details regarding "critical courses" for this pa	Credit		Major			
Critical		Hours	Grade <sup>1</sup>	GPA <sup>2</sup>		Prerequisites	Notes
	er One (15-17 Credit Hours)			ı	00.01.01		
	ENGL 101 Critical Reading and Composition	3	С		CC-CMW	O b - tt i NATIL 444/4441/445 /MATIL	
	MATH 122 Calculus for Bus. Admin. & Soc. Sciences or MATH 141 Calculus 1 <sup>3</sup>	3-4			CC-ARP	C or better in MATH 111/111/115 (MATH 122); C or better in MATH 115 (MATH 141); or Math placement test score	
	Foreign language <sup>4</sup> <i>or</i> other Carolina Core Requirement⁵	3-4			CC-GFL	111), or main placement test essee	
	Carolina Core Requirement <sup>5</sup>	3			CC		
	UNIV 101 The Student in the University	3			PR/CC		
	or Carolina Core Requirement⁵						
	er Two (15-16 Credit Hours)						
	ENGL 102 Rhetoric and Composition	3	С		CC-CMW CC-INF		
	MATH 142 Calculus II	3-4			CC-ARP	C or better in MATH 141 (MATH 142);	
	or MATH 170 Finite Mathematics					C or better in MATH 111/ 1111 or Math	
	or MATH 172 Math. Modeling for the Life Sciences					placement test (MATH 170); C or better	
	STAT 201 Elementary Statistics	3			CR	in MATH 122 or 141 (MATH 172)  MATH 111 or higher or STAT 110	
	Foreign language <sup>4</sup> or other Carolina Core	3			CC-GFL	MATH TIT OF HIGHER OF STATE TIO	
	Requirement <sup>5</sup>						
	Carolina Core Requirement⁵	3			CC		
Semeste	er Three (15-16 Credit Hours) GEOG 363 Geographic Information Systems	2	C	1	MR		
	Choose 1 of the following:	3 3-4	C		CC		
	GEOG 103 Introduction to Geography (CC-GSS)	3-4			CC		
	GEOG 104 Introduction to Physical Geog. (CC-SCI)						
	GEOG 105 The Digital Earth (CC-ARP)						
	GEOG 121 Geographies of Global Change (CC-GSS)						
	GEOG 201 Landform Geography (CC-SCI)						
	GEOG 202 Weather and Climate (CC-SCI)						
	GEOG 210 People, Places, & Envr. (CC-GSS)						
	CSCE 102 General Applications Programming	3			CR		
	Foreign language <sup>4</sup> or Carolina Core Requirement <sup>5</sup>	3			CR/CC		
	History <sup>6</sup>	3			CR		
	er Four (15-16 Credit Hours)	0		ı	MD		
	GEOG 341 Cartography or GEOG 345 Interpretation of Aerial Photographs	3	С		MR		
	or GEOG 531 Quant. Methods in Geographic						
	Research	2	С		MD	Coo Dullatia liatia a	
	GEOG Major Course <sup>7</sup>	3			MR	See Bulletin listing	
	Cognate <i>or</i> Minor Course <sup>8</sup> Social Science	3	C (minor)		PR CR		
	Carolina Core Requirement <sup>5</sup>	3-4			CC		
	er Five (15-16 Credit Hours)	3-4			CC		
	GEOG 341 Cartography	3	С		MR		
	or GEOG 345 Interpretation of Aerial Photographs	3			IVIIX		
	or GEOG 531 Quant. Methods in Geographic						
	Research						
	Cognate or Minor Course8	3	C (minor)		PR		
	Cognate or Minor Course <sup>8</sup>		C (minor)		PR		
	Carolina Core Requirement <sup>5</sup> or Approved Elective <sup>9</sup>	3-4			CC/PR		
	Carolina Core Requirement <sup>5</sup> or Approved Elective <sup>9</sup>	3			CC/PR		
Semeste	er Six (15 Credit Hours)						
	GEOG Major Course <sup>7</sup>	3	С		MR	See Bulletin listing	
	Cognate or Minor Course <sup>8</sup>	3	C (minor)		PR		
	Humanities or Fine Arts	3			CR		
	Approved Elective9	3			PR		
	Approved Elective <sup>9</sup>	3			PR		
0 -	0						
Semeste	er Seven (15-16 Credit Hours)	^	^		8.45		
	GEOG 495 Seminar in Geography (offered fall only)	3	С		MR CC-INT	At least 15 hrs. GEOG credit	
	GEOG 495 Seminar in Geography (offered fall only)  Non-Geog. Info. Science Elective <sup>10</sup> (200-level or above)	3-4	C			At least 15 hrs. GEOG credit	
	GEOG 495 Seminar in Geography (offered fall only)  Non-Geog. Info. Science Elective <sup>10</sup> (200-level or				CC-INT	At least 15 hrs. GEOG credit	

Semester Eight (13 Credit Hours)						
GEOG Major Course <sup>7</sup>	3	С		MR	See Bulletin listing.	
Minor Course <sup>8</sup> or Approved Elective <sup>9</sup>	3	C (minor)		PR		
Approved Elective <sup>9</sup>	3			PR		
Approved Elective <sup>9</sup>	3			PR		
Approved Elective <sup>9</sup>	1			PR		

**Graduation Requirements Summary** 

Minimum Total Hours	Minimum Major Requirements Hours	College & Program Requirements Hours	Carolina Core Hours	Minimum Institutional GPA
120	24	52-64	32-44	2.000

- 1. Regardless of individual course grades, students must maintain a minimum 2.000 cumulative GPA.
- 2. Some colleges require a minimum GPA for major courses. Courses indicated in this column are included in the major GPA for this program of study.
- 3. Students who do not place into MATH 122 or 141 will be required to take the required prerequisite before proceeding with MATH 122 or 141.
- 4. Students in the College of Arts and Sciences are required to demonstrate proficiency in one foreign language equivalent to the 122 course through course credit or the corresponding foreign language placement score.
- 5. The Carolina Core provides the common core of knowledge, skill and academic experience for all Carolina undergraduate students.
- 6. The College of Arts and Sciences requires one U.S. History and one non-U.S. History course, both of which must be chosen from the approved Carolina Core GHS courses. Whichever is not fulfilled through the Carolina Core GHS requirement must be fulfilled through this college requirement.

7. Geography Major Courses (9 credit hours): At least 2 courses from the major must be from the 500-level.

Choose from the following:			
GEOG 349 Cartographic Animation (3)	GEOG 562 Satellite Mapping and the Global Positioning System (3)		
GEOG 535 Hazards Analysis & Planning (3)	GEOG 563 Advanced Geographic Information Systems (3)		
GEOG 541 Advanced Cartography (3)	GEOG 564 GIS-Based Modeling (3)		
GEOG 542 Dynamic Cartography (3)	GEOG 565 Geog. Info. Systems (GIS) Databases & Their Use (3)		
GEOG 551 Principles of Remote Sensing(3)	GEOG 575 Digital Techniques & Applications in Remote Sensing (3)		
GEOG 552 LiDARgrammetric & Photo. Digital Surface Mapping (3)	GEOG 341, 345, or 531 may be used, if not used above		
GEOG 554 Spatial Programming (3)			

- 8. The cognate is intended to support the course work in the major. The cognate must consist of twelve hours of courses at the advanced level, outside of, but related to the major. In place of a cognate, a student may choose a minor consisting of at least 18 credit hours of courses concentrated in one area that follow a structured sequence. All minor courses must be passed with a grade of C or higher. For B.S. degrees, grades of D are acceptable for completion of the cognate requirement. A second major eliminates the minor/cognate requirement.
- 9. No courses of a remedial, developmental, skill-acquiring, or vocational nature may apply as credit toward degrees in the College of Arts and Sciences. The College of Arts and Sciences allows the use of the Pass-Fail option on elective courses. Further clarification on inapplicable courses can be obtained from the College of Arts and Sciences.
- 10. GEOG 595 can be used to fulfill up to 3 hours of geography elective credit, but not the 500-level requirement. A list of non-Geographic Information Science electives can be found in the Bulletin.

## **Program Notes:**

- Courses identified as "critical" must be completed in the student's first 60 semester hours of work in order for these courses to be credited toward graduation.
- All undergraduate students must take a 3-credit course or its equivalent with a passing grade that covers the founding documents. This course may
  fulfill any requirement in the program of study. Courses that meet this requirement are listed in the academic bulletin.
- · Any exceptions or additional options in the Geography major may be made with the consultation and approval of the departmental advisor.
- BA with Distinction in Geography (36 hours): Available to students majoring in Geography who wish to participate in significant research activities in their major field under the supervision of a faculty mentor. A minimum GPA of 3.50 in the major and 3.30 cumulative is required to apply for a BA or BS with Distinction in Geography. Requirements:
  - o Students must submit a written application for the BS with Distinction in Geography at least eight months before completion of the degree.
  - o Written sponsorship agreement from a Geography faculty mentor on file in the department.
  - An established thesis committee consisting of a tenure-track faculty member in Geography & at least one other tenure-track or research faculty member at the University of South Carolina.
  - o A written thesis demonstrating significant original work and approved by the thesis committee.
  - o A public presentation of the Senior Thesis research.
  - General major requirements, plus 12 additional credit hours including: a minimum of 9 credit hours in GEOG 498, or any GEOG 500-level courses, and GEOG 499-Senior Thesis (3).
- The last 30 credit hours toward your degree must be earned in residence at the University of South Carolina-Columbia.

University Requirements: Bachelor's degree-seeking students must meet Carolina Core (general education) requirements. For more information regarding these requirements, please visit the <u>Carolina Core</u> page on the University website.

Codes:					
CC	Carolina Core	CC-INF	Carolina Core – Information Literacy		
CC-AIU	Carolina Core-Aesthetic and Interpretive Understanding	CC-INT	Carolina Core – Integrative Course		
CC-ARP	Carolina Core-Analytical Reasoning and Problem-Solving	CC-SCI	Carolina Core – Scientific Literacy		
CC-CMS	Carolina Core-Effective, Engaged, and Persuasive Communication: Spoken Component	CC-VSR	Carolina Core - Values, Ethics, and Social Responsibility		
CC-CMW	Effective, Engaged, and Persuasive Communication: Written Component	CR	College Requirement		
CC-GFL	Carolina Core-Global Citizenship and Multicultural Understanding: Foreign Language	MR	Major Requirement		
CC-GHS	Carolina Core – Historical Thinking	PR	Program Requirement		
CC-GSS	Carolina Core – Social Sciences				

Disclaimer: Major maps are only a suggested or recommended sequence of courses required in a program of study. Please contact your academic advisor for assistance in the application of specific coursework to a program of study and course selection and planning for upcoming semesters.