

**GEOGRAPHY-ANTHROPOLOGY MAJOR – APPLIED GIS & GEOSPATIAL SPECIALIZATION  
CATALOG YEAR 2019-2020**

<b>CORE REQUIREMENTS</b> Catalog Year:	<b>Course</b>	<b>Date</b>	<b>Cr.</b>	<b>Grade</b>
Writing Proficiency				
Mathematics Proficiency				
Entry Year Experience (3 credits – during first semester at USM) only for students entering USM with less than 24 transfer credits				
College Writing (3-4 credits)				
Quantitative Reasoning (3-4 credits) – majors must take MAT 120 Introduction to Statistics				
Creative Expression (3 credits)				
Cultural Interpretation (3 credits)				
Science Exploration with Lab (4 credits)				
Socio-Cultural Analysis (3 credits)				
Ethical Inquiry, Social Responsibility & Citizenship (3 credits)				
Diversity (3 credits - may overlap with other core or major requirement, except International requirement)				
International (3 credits - may overlap with other core or major requirement, except Diversity requirement)				
Engaged Learning (3 credits)				
Thematic Cluster (3 courses for 9 minimum credits – one course may overlap with Major) OR Minor – in lieu of Thematic Cluster (minimum 15 credits) Only 1 course in Minor may be applied to Major				
<b>MAJOR REQUIREMENTS - MAT 120 Intro to Statistics</b>				
GEO/ANT 105 Society, Environment, and Change				
GEO 107 Maps and Math <b>OR</b> GEO 270 Mapping Environments and People				
GEO 370 Maps, Territory, Power				
Capstone (may include internship, independent study, summer travel course, field school, or study abroad. 3 credit min)				
Demonstrated Competency in Research Writing				
<b>APPLIED GIS &amp; GEOSPATIAL ANALYSIS</b>	<b>Course</b>	<b>Date</b>	<b>Cr.</b>	<b>Grade</b>
<u>Methods: 15 Credits</u>				
GEO 305 Remote Sensing				
GEO 308 GIS Applications I				
GEO 408 GIS Applications II				
GEO 340 Digital Mapping				
<u>Topical Electives: 12 Credits</u> (list on reverse)				

## GEOGRAPHY-ANTHROPOLOGY MAJOR – APPLIED GIS & GEOSPATIAL ANALYSIS SPECIALIZATION CATALOG YEAR 2019-2020

The minimum number of credits (exclusive of the University's Core Curriculum) required for the major: 39.

Students who specialize in the **Applied GIS and Geospatial Analysis** track are not eligible for the Certificate in GIS and must take:

**All students must take:**

- ANT 105/GEO 105 Society, Environment, and Change
- GEO 107 Maps and Math **OR** GEO 270 Mapping Environments and People: Data Visualization and Analysis
- GEO 370 Maps, Territory, Power
- MAT 120 Introduction to Statistics (satisfies QR requirement in Core also)

**Required Methods** (15 credits):

- GEO 305/GEO 505/GEO 605 Remote Sensing
- GEO 308/GEO 508/GEO 608 GIS Applications I
- GEO 408/GEO 518/GEO 618 GIS Applications II
- GEO 340 Digital Mapping

**Topical Electives** Select courses from the following list to total at least 12 credits. Select at least 3 credits from Group 1 and at least 3 credits from Group 2 with at least 6 credits at or above 300 level:

Group 1

- BUS 301 Business Analytics
- BUS 345 Information Technology/Management Information Systems
- BUS 377 Information Visualization
- COS 160 Structured Problem Solving: Java (3 cr.) and COS 170 Structured Programming Laboratory (1 cr.)
- COS 184 Python Programming
- COS 246 Programming Topics: Programming Handheld Devices
- COS 246 Programming Topics: Web Mapping Systems
- COS 375 Web Applications Development
- COS 457 Database Systems
- LOS 318/LAC 318 Database Management

Group 2

- ANT 204 Gulf of Maine: Archaeology, Ecology, and Environmental Change
- ANT 306 Analysis of Archaeological Materials
- ANT 308/ANT 508 Environmental Archaeology
- ANT 315/ANT 515 Ethnography: Methods, Ethics, and Practice
- ANT 360/ANT 560 Public Archaeology
- GEO 203 Urban & Regional Development
- GEO 204 Coastal and Marine Geography
- GEO 209 Introduction to Land Use Planning
- GEO 210 Planning Maine Communities
- GEO 303/GEO 503 Economic Geography
- GEO 304/504 Arctic and North Atlantic Regions
- GEO 445/GEO 545/GEO 645 Drone Mapping
- GEO 455/GEO 555 Gender, Race, and Class in the City
- GEO 481/GEO 581 Megacities and Global Planning Issues
- ESP 285 Global Environmental Issues and Sustainability

**Capstone** (3 credits minimum, choose one):

- GEO 438/538/638 Independent Study in GIS
- GEO 448/548/ 648 GIS Internship
- GEO 458/558/658 Research Applications in GIS
- GYA 300 Archaeology Field School
- GYA 400 Independent Study, summer travel course, Study Abroad, or other courses as approved.

Additionally, all geography-anthropology majors are required to demonstrate writing competence by completing either two research papers or one research paper and one research product (e.g., poster, media project) in the major with grades of C or better, from two different professors, at least one semester prior to graduation.

The maximum number of hours of internships, field experience, and/or independent studies that can be applied toward the major is nine hours. All students must meet with their advisors before registering for courses each semester. Updated 04/30/2019