

## Geography (BS)

## B.S. Geography Mission

## Introduction

Geography offers a Bachelor of Arts and Bachelor of Science. Departmental teaching and research interests fall under four broad headings of Human –Environment Interactions, Medical Geography, Physical Geography and Economic Geography, although there is active interaction and exchange among them. Our students learn quantitative methods and geospatial technologies such as geographic information systems (GIS) and satellite remote sensing. Many of our graduates find work relevant to their degrees, in government, geospatial technology industries (including defense contractors), local and global conservation organizations, the military, teaching and more.

## Mission Statement

The geography programs at the University of Florida are guided by the following mission:

The Geography B.A. and B.S. degree programs in the University of Florida's College of Liberal Arts and Sciences prepare students for employment or graduate study by educating them about the complex relations among people, places, and environments. Our degrees are flexible and allow students to combine fundamental background knowledge with specialized coursework in natural resources, physical/environmental geography, geospatial technologies, planning and economic geography, medical geography and other areas to tailor their degrees to enter professional careers in geosciences, geospatial fields, planning, real estate, medical geography and other related professions. Through teaching, research and service, the Geography department is focused on understanding human-environmental relations on Earth through posing questions and analyzing data with statistics, mapping and geospatial technologies.

This mission aligns directly with the College of Liberal Arts and Sciences mission (<http://www.clas.ufl.edu/about/>), specifically its foremost mission

"...to lead the academic quest to understand our place in the universe, and to help shape our society and environment." As in the college "students acquire an intellectual foundation based on a well-rounded and comprehensive education designed for an increasingly technological and rapidly changing society."

This mission aligns directly with the University of Florida's mission listed in the catalog (<https://catalog.ufl.edu/ugrad/current/uf-mission/pages/home.aspx>). Complementing the university's land-grant, sea-grant and space-grant status, geographers study the Earth's surface, oceans and atmosphere, and how humans are transforming Earth. The department, as the University,

"...participates in an educational process that links the history of Western Europe with the traditions and cultures of all societies, explores the physical and biological universes and nurtures generations of young people from diverse backgrounds to address the needs of the world's societies." We also work to "create the broadly diverse environment necessary to foster multi-cultural skills and perspectives in its teaching and research for its students to contribute and succeed in the world of the 21st century" by promoting more international and social understanding, and introducing students to geographic technologies. As such, Geography "aspires to advance by strengthening the human condition and improving the quality of life."

**2014-15 SLO 1: Content Knowledge**

Identify, describe and define the earth's physical environment and geographic perspectives regarding the relationship between environment and society.

**SLO Area (select one):** Content (UG)

**Assessment Method**

Capstone exam

100% Pass rate (70% grade) on physical geography portion of capstone exam

**2014-15 SLO 2: Content Knowledge**

Identify and examine the social, cultural and economic concepts from spatial and regional perspectives.

**SLO Area (select one):** Content (UG)

**Assessment Method**

Capstone exam

100% Pass rate (70% grade) on human geography portion of capstone exam

**2014-15 SLO 3: Content Knowledge**

Identify and use geographic techniques, skills and concepts are applied by professionals.

**SLO Area (select one):** Content (UG)

**Assessment Method**

Capstone exam

100% with passing score (70%) on quantitative and geospatial portions of capstone exam

**2014-15 SLO 4: Critical Thinking**

Analyze geographic information and apply interpretation of data toward problem solving or modeling.

**SLO Area (select one):** Critical Thinking (UG)

**Assessment Method**

Capstone Portfolio

Rubric

**2014-15 SLO 5: Communication**

Interpret and effectively communicate information spatially, graphically and/or with statistics.

**SLO Area (select one):** Communication (UG)

**Assessment Method**

Capstone Portfolio

Rubric

**B.S. Geography Detail**

Start: 7/1/2014

End: 6/30/2015

Progress: Ongoing

Providing Department: Geography (BS)

Responsible Roles: Undergraduate Coord (Mossa, Joann)

Research (Graduate and Professional AAPs only)

Assessment Timeline (Graduate and Professional AAPs only)

Curriculum Map (UG AAPs only)

Key: Introduced      Reinforced      Assessed

Courses	GEO 2200	GEO 2200L	Human Geog. GEO 2000-level	Regional Geog. GEA2000-4000 level	STA2023	GEO3162C	GIS 3043 or GIS 4001C	Other degree reqmts. *	GEO 4930
<b>Content Knowledge</b>									
#1 Identify, describe and define the earth's physical environment and geographic perspectives regarding the relationship between environment and society.	I	R		R				R	A1
#2 Identify and examine the social, cultural and economic concepts from spatial and regional perspectives.			I	R				R	A1
#3 Identify and use geographic techniques, skills and concepts are applied by professionals.						I	R	R	R, A1
<b>Critical Thinking</b>									
#4 Analyze geographic information and apply interpretation of data toward problem solving or modeling.						I	R	R	A2*
<b>Communication</b>									
#5 Interpret and effectively communicate information spatially, graphically and/or with statistics					I	R	R	R	A2*

Legend: A1: Capstone Exam with questions contributed from multiple faculty, assessing knowledge in four areas: 1) Physical Geography; 2) Human Geography; 3) Statistics and Quantitative Analysis; and 4) Geospatial Technologies; A2\*(not yet approved):

Capstone Portfolio; \*B.A. students take 15 or more additional credits in the department and BS students take 12 additional credits in the department plus 22 credits outside the department (CHM, PHY, MET, GLY, SWS). These reinforce other learning outcomes in geography and teach basic concepts related to the earth and its atmosphere.

#### Assessment Cycle (All AAPs)

Analysis and Interpretation: May-August  
 Improvement Actions: Completed by September 15  
 Dissemination: Completed by October 15

Year	10-11	11-12	12-13	13-14	14-15	15-16
<b>SLOs</b>						
<b>Content Knowledge</b>						
#1	X	X	X	X	X	X
#2	X	X	X	X	X	X
#3	X	X	X	X	X	X
<b>Critical Thinking</b>						
#4	No data collected	No data collected	X	X	X	X
<b>Communication</b>						
#5	No data collected	No data collected	X	X	X	X

#### Methods and Procedures (UG and Certificate AAPs) & SLO Assessment Matrix (UG AAPs only)

Student Learning Outcome	Assessment Method	Measurement Procedure
Identify, describe and define the earth's physical environment and geographic perspectives regarding the relationship between environment and society.	Capstone exam	Exam score
Identify and examine the social, cultural and economic concepts from spatial and regional perspectives.	Capstone exam	Exam score
Identify and use geographic techniques, skills and concepts are applied by professionals.	Capstone exam	Exam score
Analyze geographic information and apply interpretation of data toward problem solving or modeling.	Capstone portfolio	Rubric
Interpret and effectively communicate information spatially, graphically and/or with statistics.	Capstone portfolio	Rubric

Our assessment will have two direct components which tie to our Student Learning Outcomes. Both are assessed in GEO 4930 Senior Seminar, a required departmental-permission course for all geography majors that students can take once they have attained 4LS status. Because we are a discovered major, with only few first-year and sophomore students, and a large proportion of juniors and seniors, an entry-to-exit exam comparison is of questionable validity (many students declare after they have taken several courses in our department). As such, we assess only after students have achieved 4LS or Senior status.

The first assessment is a Capstone Exam which is divided into four parts, Physical Geography, Human Geography, Geospatial Technologies and Quantitative Methods; each section has ten multiple choice questions and the results can be evaluated to assess whether students perform well or poorly on different sections. Questions were developed by multiple geography faculty members, whose teaching and expertise falls within the areas tested. The exam is administered by the instructor of Senior Seminar (also the Undergraduate Coordinator, and Chair of the Undergraduate Student Learning Outcomes (UGSLO) Committee). Results of this exam are part of all students' Senior Seminar grade, are compiled by the Undergraduate Coordinator and reviewed by the UGSLO Committee for feedback into the program. The exam was recently modified into four sections to facilitate learning about which topics require more reinforcement.

The second assessment is a Capstone Portfolio, consisting of items demonstrating specific critical thinking and communication skills; it is being planned for implementation starting Fall 2012. Three of our required upper division classes (GEO3162C Introduction to Quantitative Analysis for Geographers; GIS3043 Foundations of Geographic Information Systems, and one optional) are techniques classes. These courses involve projects, in which students analyze geographic information and interpret data toward problem solving or modeling. There are also several other upper division courses in which students do projects, papers and presentations supported by graphs, statistics and maps. Instead of having diverse faculty separate out majors from non-majors in these classes, and submit grades to the Chair of the UGSLO Committee, we plan to implement a new requirement for the student to keep, compile and synthesize their best academic work into a portfolio which will then be graded by a rubric developed and reviewed by the UGSLO committee. The rubric will be part of the GEO 4930 Senior Seminar syllabus, so students have a clear understanding of the requirements and expectations. In coming semesters, the department chair will request that all instructors of courses involving data analysis and communication have statements on their syllabi regarding maintaining data files and work products for the Capstone Portfolio. Once approved, official announcements of the new Capstone Portfolio requirement will also be sent out biannually to majors on the list-serves, announced at meetings of Faculty and TAs, and added to our web page. The Capstone Portfolio will be part of their Senior Seminar grade; grades will be compiled by the Undergraduate Coordinator and the rubric and portfolios will be reviewed by the UGSLO Committee for feedback into the program.

#### SLO Assessment Rubric (All AAPs)

Below is the current rubric for the Capstone Portfolio.

CRITERIA & RANKING	4 (Excellent)	3 (Good)	2 (Fair)	1 (Poor)
<b>CRITICAL AND ANALYTICAL THINKING</b>				
<b>Analyze Geographic Information</b> (Understands issues, evaluates geographic literature, data, methods and assumptions, interprets patterns, relationships, differences and trends, and synthesizes information into coherent explanations)	Meets all criteria	Meets most criteria	Meets some criteria	Rarely meets criteria
<b>Apply Interpretation of Data Towards Problem Solving or Modeling</b> (Understands problem, poses research question, gathers and organizes data, evaluates data and applies appropriate methods, interprets and understands findings, implications and limitations)	Meets all criteria	Meets most criteria	Meets some criteria	Rarely meets criteria
<b>COMMUNICATION</b>				
<b>Spatial Communication /Mapping</b> (Presents meaningful spatial data effectively, without distortion and chartjunk; uses appropriate map and design elements, i.e. title and sources, scale, direction, labels, inset, appropriate categories, colors, tones, symbols, line weights, fonts, legend, etc.)	Meets all criteria	Meets most criteria	Meets some criteria	Rarely meets criteria
<b>Graphical Communication</b> (Presents meaningful graphical data effectively, without distortion and chartjunk; uses appropriate graph and design elements, i.e. title and sources, including axis labels and units, feature labels, categories, color, tones, symbols, line weights, fonts, legend, etc.)	Meets all criteria	Meets most criteria	Meets some criteria	Rarely meets criteria
<b>Statistical Interpretation and communication</b> (Understands variables, data, hypotheses, correctly chooses statistical tests or models, interprets and communicates statistical findings)	Meets all criteria	Meets most criteria	Meets some criteria	Rarely meets criteria

#### Measurement Tools (Graduate and Professional AAPs Only)

##### Assessment Oversight (All AAPs)

Because our field does not have professional certification, our students are doing well professionally, and faculty are tasked with many other academic matters, assessing student learning outcomes is discussed infrequently at meetings of the UGSLO committee and at departmental faculty meetings. The Undergraduate Coordinator, Joann Mossa ([jmossa@ufl.edu](mailto:jmossa@ufl.edu)) is Chair of the UGSLO Committee and is charged with the responsibility of assessment oversight, compiling data, and facilitating committee reviews. As needed, she compiles draft materials regarding the assessment and communicates with the Department Chair, Michael Binford ([mbinford@ufl.edu](mailto:mbinford@ufl.edu)) to get appropriate feedback. She has appointed a committee to assist in review of the annual data. Currently, the UGSLO Committee includes four members representing the four areas tested: Mossa (Chair, also represents Physical Geography), Barbara McDade-Gordon ([bmcdade@ufl.edu](mailto:bmcdade@ufl.edu); Human Geography), Youliang Qiu ([yqiu@ufl.edu](mailto:yqiu@ufl.edu); Geospatial Technologies) and Timothy Fik ([tfik@ufl.edu](mailto:tfik@ufl.edu); Statistics/Quantitative Methods).

Name	Department Affiliation	Email Address	Phone Number
Joann Mossa, Ph.D.	Associate Professor and Geography Undergraduate Coordinator & Physical Geographer	mossa@ufl.edu	392-0494 or 294-7510
Michael Binford, Ph.D.	Professor and Chair, Geography <i>Ex Officio</i>	mbinford@ufl.edu	392-0494 or 294-7500
Timothy Fik, Ph.D.	Associate Professor, Quantitative Geographer, Human Geographer	fik@ufl.edu	392-0494 or 294-7504
Liang Mao, Ph.D.	Assistant Professor, Geospatial Techniques, Human Geography	liangmao@ufl.edu	392-0494

Academic Assessment Plan Entry Complete: