

Course Syllabus

Foundations of GIS

GIS3043

Office Hours: Find me on GroupMe and arrange a Zoom Meeting via Canvas Calendars.

Course Description

The purpose of this course is to introduce students to the practice and theory of utilizing Geographic Information Systems (GIS) as a method for analysis of the environment. Students will examine the fundamentals of GIS and their applications with an emphasis on the concepts needed to effectively manipulate, query, analyze, and visualize spatial-based data. At the end of the semester, students should feel comfortable applying GIS to a range of environmental issues and have a solid understanding of the procedures and data necessary to conduct a geographical analysis. Students on the Graduate level should be able to apply GIS into their own research endeavors.

COURSE OBJECTIVES

1. To understand the concepts and principles of Geographic Information Science (GISc), including Geographic Information Systems (GIS), Remote Sensing (RS), Cartography, Geography, and Global Positioning Systems (GPS)
2. To become competent in solving environmental problems with GISc Tools
3. To understand and communicate in the technical language associated with GISc

INSTRUCTOR EXPECTATIONS OF STUDENTS

You are expected to engage with materials on canvas, attend labs (on-campus sections), participate in discussions, and to read the assigned material. The instructor expects students to be curious and interested in the topic and want to engage with the materials. Students not interested in the subject should not take the course. Choose something that engages you. This is your education!

CREATIVITY

GIS is a versatile technique. Its applications are limitless. Students are expected to take this into account when doing coursework. Customizing coursework to fit your own academic goals is not only allowed but encouraged.

Prerequisites

There are no formal prerequisites for this course, however, a basic statistical methods course (e.g. GEO3162C/GEO6160). If there are concerns about readiness for the course please contact the instructor for guidance on which courses to take to prepare.

Course Resources

This course participates in the Affordable UF Initiative. The high cost of instructional materials can be a burden. This course is working to keep your material costs at less than \$20 per-credit-hour. To accomplish this, there is no required text for this course. All course material will be provided on the eLearning Platform. The software will also be provided through the UF Apps framework as well as in TUR 3006 on campus. At the request of the student to the Instructor, license codes can be provided for the Esri GIS platforms for personal laptop use.



Class Demands

In general, concepts and theory will be presented through videos online. You are expected to commit four to six hours per week in-lab time during the normal semester and ten-twenty hours a week during accelerated summer. Instructors and TAs will hold virtual office hours as requested to have one-on-one instruction. Please take advantage of the various digital interactions available in the course to get feedback and foster the sense of community with the class.

Peer Review

Many assignments will require peer-review. This is a time to give feedback to your fellow students as well as see what others are turning in. It is fine to be harsh and give feedback, but it is not appropriate to be disparaging, rude, or just plain mean. Give the peer review that you hope that you would get. Constructive feedback so you can make better GIS products.

This course uses moderated grading for some assignments. Any assignment that is moderated graded that you believe should be graded higher should be appealed directly to the instructor. Send an email to the instructor requesting a regrading, and the instructor will regrade the assignment.

Academic Honesty

You are all bound by the student academic honor code:

"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

Despite the course emphasis on code-reuse and collaboration, the final work you hand in for labs and for exams **MUST** be your own work or clearly cited as not your own. Do not plagiarize code or material.

The first time a student is caught cheating they will get a zero in the lab/test. On the second offense, the student will be reported to the appropriate student body.

UF Counseling Services

Resources are available on campus for students having personal problems or lacking clear career and academic goals that interfere with their academic performance. These resources are available on campus for students having personal problems or lacking clear career and academic goals that interfere with their academic performance. These resources include University Counseling Center, 301 Peabody Hall, 392-1575 (personal and career counseling); Student Mental Health, Student Health Care Center, 392-1171 (personal counseling); Center for Sexual Assault /Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161 ext. 4231 (counseling related to sexual assault and abuse); Career Resource Center, Reitz Union, 392-1601 (career development assistance and counseling).

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.

Americans With Disabilities Act

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Student Services before bringing your request to the instructor.

Grade Breakdowns





100	A
99	A
98	A
97	A
96	A
95	A
94	A
93	A
92	A
91	A
90	A














89	B+
88	B+
87	B+
86	B+
85	B+
84	B
83	B
82	B
81	B
80	B
79	C+
78	C+
77	C+
76	C+
75	C+
74	C
73	C
72	C
71	C
70	C
69	D+
68	D+
67	D+
66	D+
65	D+
64	D
63	D
62	D
61	D
60	D
59	E
58	E
57	E
56	E
55	E













54	E
53	E
52	E
51	E
50	E
49	E
48	E
47	E
46	E
45	E
44	E
43	E
42	E
41	E
40	E
39	E
38	E
37	E
36	E
35	E
34	E
33	E
32	E
31	E
30	E
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28	E
27	E
26	E
25	E
24	E
23	E
22	E
21	E
20	E














19	E
18	E
17	E
16	E
15	E
14	E
13	E
12	E
11	E
10	E
9	E
8	E
7	E
6	E
5	E
4	E
3	E
2	E
1	E
0	E













Course Summary:







Date	Details	
Mon Aug 31, 2020	 First Day of Class https://ufl.instructure.com/calendar?event_id=1611856&include_contexts=course_407971	12am
Tue Sep 1, 2020	 Anwar's Office Hours https://ufl.instructure.com/appointment_groups/7446	6pm to Sep 8 at 7pm
Fri Sep 4, 2020	 Where is the Southwest? https://ufl.instructure.com/courses/407971/assignments/4411506	due by 11:45pm
	 Lab Setup https://ufl.instructure.com/courses/407971/assignments/4411499	due by 11:59pm

Date	Details	
	 Questionnaire https://ufl.instructure.com/courses/407971/assignments/4411472	due by 11:59pm
	 GroupMe!	to do: 11:59pm
	 Welcome to GIS!	to do: 11:59pm
Mon Sep 7, 2020	 Labor Day https://ufl.instructure.com/calendar?event_id=1612259&include_contexts=course_407971	12am
Wed Sep 9, 2020	 A Simple Map - ArcGIS https://ufl.instructure.com/courses/407971/assignments/4411480	due by 11:59pm
	 What is GIS? The Quiz https://ufl.instructure.com/courses/407971/assignments/4411461	due by 11:59pm
	 ESRI: Getting Started with GIS https://ufl.instructure.com/courses/407971/assignments/4411486	due by 11:59pm
Wed Sep 16, 2020	 Spatial Data Quiz https://ufl.instructure.com/courses/407971/assignments/4411467	due by 11:55pm
	 Data and File Structures in ArcGIS https://ufl.instructure.com/courses/407971/assignments/4411473	due by 11:59pm
	 ESRI: Map Design Fundamentals https://ufl.instructure.com/courses/407971/assignments/4411488	due by 11:59pm
	 Mapping Disaster Trends https://ufl.instructure.com/courses/407971/assignments/4411502	due by 11:59pm
	 Top 10 List - Top Cities For..... (Geocoding) https://ufl.instructure.com/courses/407971/assignments/4411505	due by 11:59pm
Wed Sep 23, 2020	 Alaska vs Texas - Does Projection Matter when measure size of state? https://ufl.instructure.com/courses/407971/assignments/4411478	due by 11:59pm

Date	Details	
	 Blue Marble Quiz (https://ufl.instructure.com/courses/407971/assignments/4411475)	due by 11:59pm
	 Coordinate Systems and Map Projections (https://ufl.instructure.com/courses/407971/assignments/4411455)	due by 11:59pm
	 Coordinate Systems and Map Projections - Map - Question 10 (https://ufl.instructure.com/courses/407971/assignments/4411482)	due by 11:59pm
	 ESRI: Basics of Map Projections (https://ufl.instructure.com/courses/407971/assignments/4411484)	due by 11:59pm
	 ESRI: Referencing Data to Real-World Locations Using ArcGIS (https://ufl.instructure.com/courses/407971/assignments/4411489)	due by 11:59pm
	 How big is the Earth? (https://ufl.instructure.com/courses/407971/assignments/4411496)	due by 11:59pm
	 Projections Lecture Quiz (https://ufl.instructure.com/courses/407971/assignments/4411464)	due by 11:59pm
Wed Sep 30, 2020	 GPS Lecture Quiz (https://ufl.instructure.com/courses/407971/assignments/4411470)	due by 11:59pm
	 GPS Long Lats of the SEC (https://ufl.instructure.com/courses/407971/assignments/4411493)	due by 11:59pm
Sat Oct 3, 2020	 Homecoming (https://ufl.instructure.com/calendar?event_id=1611876&include_contexts=course_407971)	12am
Wed Oct 7, 2020	 NDVI (https://ufl.instructure.com/courses/407971/assignments/4411503)	due by 11:30pm
	 Remote Sensing Lecture Quiz (https://ufl.instructure.com/courses/407971/assignments/4411468)	due by 11:59pm

Date	Details	due by 11:59pm
Wed Oct 14, 2020	 ArcGIS Pro: Make a Map of Turlington Plaza (https://ufl.instructure.com/courses/407971/assignments/4411479)	due by 11:59pm
	 Georeferencing (https://ufl.instructure.com/courses/407971/assignments/4411492)	due by 11:59pm
	 Georeferencing and Digitizing UF campus image (https://ufl.instructure.com/courses/407971/assignments/4411465)	due by 11:59pm
	 Georeferencing Lecture Quiz (https://ufl.instructure.com/courses/407971/assignments/4411477)	due by 11:59pm
	 Making a Campus Map (https://ufl.instructure.com/courses/407971/assignments/4411501)	due by 11:59pm
Wed Oct 21, 2020	 Image Classification (https://ufl.instructure.com/courses/407971/assignments/4411497)	due by 11:59pm
	 LCS - Von Thünen model (https://ufl.instructure.com/courses/407971/assignments/4411500)	due by 11:59pm
Wed Oct 28, 2020	 ArcGIS File, Geodatabase, and Database Operations (https://ufl.instructure.com/courses/407971/assignments/4411476)	due by 11:59pm
	 Census Choropleth Map (https://ufl.instructure.com/courses/407971/assignments/4411481)	due by 11:59pm
	 Creating Maps Using Census Data (https://ufl.instructure.com/courses/407971/assignments/4411457)	due by 11:59pm
	 ESRI: Getting Started with the Geodatabase (https://ufl.instructure.com/courses/407971/assignments/4411487)	due by 11:59pm
Wed Nov 4, 2020	 Crime Scene Investigation (https://ufl.instructure.com/courses/407971/assignments/4411463)	due by 11:59pm
	 Map Algebra Quiz (https://ufl.instructure.com/courses/407971/assignments/4411460)	due by 11:59pm

Date	Details	
	 Terrain Analysis Quiz https://ufl.instructure.com/courses/407971/assignments/4411474	due by 11:59pm
	 ESRI: Building Models for GIS Analysis Using ArcGIS https://ufl.instructure.com/courses/407971/assignments/4411485	due by 11:59pm
Wed Nov 11, 2020	 Veterans Day https://ufl.instructure.com/calendar?event_id=1611860&include_contexts=course_407971	12am
	 Campsite Selection https://ufl.instructure.com/courses/407971/assignments/4411454	due by 11:59pm
	 GWR https://ufl.instructure.com/courses/407971/assignments/4411495	due by 11:59pm
Thu Nov 12, 2020	 Spatial Analysis, Interpolation, Modeling Quiz https://ufl.instructure.com/courses/407971/assignments/4411456	due by 11:59pm
	 Vector Analysis https://ufl.instructure.com/courses/407971/assignments/4411458	due by 11:59pm
	 Happy GIS Day! https://ufl.instructure.com/calendar?event_id=1611880&include_contexts=course_407971	12am
Wed Nov 18, 2020	 Final Project Proposal https://ufl.instructure.com/courses/407971/assignments/4411491	due by 11:59pm
	 John Snow Map - Spatial Analysis https://ufl.instructure.com/courses/407971/assignments/4411498	due by 11:59pm
Thu Nov 26, 2020	 Thanksgiving https://ufl.instructure.com/calendar?event_id=1611864&include_contexts=course_407971	12am
Wed Dec 2, 2020	 Acronyms Quiz https://ufl.instructure.com/courses/407971/assignments/4411462	due by 11:59pm

Date	Details	
	 Course Evaluation (https://ufl.instructure.com/courses/407971/assignments/4411459)	due by 11:59pm
	 Ecological Niche Modeling (https://ufl.instructure.com/courses/407971/assignments/4411483)	due by 11:59pm
	 Extensions Quiz (https://ufl.instructure.com/courses/407971/assignments/4411471)	due by 11:59pm
	 Last Day of Class (https://ufl.instructure.com/calendar?event_id=1611884&include_contexts=course_407971)	12am
Wed Dec 9, 2020	 Exam 1 (https://ufl.instructure.com/courses/407971/assignments/4411466)	due by 11:59pm
	 Exam 2 (https://ufl.instructure.com/courses/407971/assignments/4411469)	due by 11:59pm
Wed Dec 16, 2020	 Final Project Poster (https://ufl.instructure.com/courses/407971/assignments/4411490)	due by 11:59pm
Fri Dec 18, 2020	 All Work Due (https://ufl.instructure.com/calendar?event_id=1611868&include_contexts=course_407971)	12am
Mon Dec 21, 2020	 Grades Due by Noon (https://ufl.instructure.com/calendar?event_id=1611872&include_contexts=course_407971)	12am
Fri Jan 8, 2021	 University of Florida GatorEvals – Summer 2020 (https://ufl.instructure.com/calendar?event_id=1612223&include_contexts=course_407971)	11:59pm
	 GroupMe Activity (https://ufl.instructure.com/courses/407971/assignments/4411494)	
	 Peer Review (https://ufl.instructure.com/courses/407971/assignments/4411504)	