The Digital Earth GIS2002 – An Introduction to Geospatial Techniques

Instructor:

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Office Hours: Fridays -- 1:00PM - 4:00PM

1 Course Overview

This course provides an introduction to how the earth surface is visualized, explored, and analyzed in digital formats. It provides a systematic introduction of map-based analytical approaches to understanding the environment and human society. The topics cover the basics of cartography (map making and reading), satellite image interpretation, geographic information systems (GIS), and map-based reasoning and communication of spatial data. Through lectures and computer exercises, students will learn fundamental concepts of digital geographic data to understand vast quantities of geographic information in our ever-changing world.

2 Course Objectives

- Explain the basic concepts and principles in processing digital geographic data.
- Collect, map, and analyze spatial data as a mechanism to understand our physical and social world.
- Think spatially and develop problem-solving skills with critical understanding of geographic context.
- Demonstrate the ability to reason and communicate using map-based technologies such as online maps, Google Earth, ArcGIS, and R programming language

3 Assignments

Quizzes (4 Quizzes) 20pts: Quizzes will be multiple choice and short answer. Due dates can be found on the schedule below, and these will be taken in Canvas. You will have 4 quizzes throughout the semester, worth 5 points each.

Final project 25pts: At the end of the semester, you will create 2-3 maps using data of your choice (help with finding data will be provided if needed). You will explain your data acquisition process, your map-making process, and explain what natural or human process/phenomenon the maps depict. Additionally, you should identify and explain what scientific fields would benefit from this type of analysis/research or this type of geospatial data.

Think Critically (8 in Discussions) **& Hands-On Application** (7 in Assignments) 15pts total: Students will be asked to participate in class discussions on Canvas following critical thinking prompts from the textbook. You may also be asked to complete a short hands-on application, submission for which will be uploaded in Canvas as a word document. Each of these is worth 1 point, for a total of 15 points.

Labs (11 labs) 55pts total: Each week you will complete a lab that utilizes a geospatial data and techniques. These will be due in Canvas every week. You should submit a word document with your answers to the questions throughout the lab. You should also include screenshots when necessary (i.e. to show your mapping). These labs are meant to introduce you to software used in geospatial science and provide you with a fundamental understanding and skillset in GIS.

Exam 20pts: At the end of the semester, you will have a final exam (not proctored), which is worth 20 points. This exam is cumulative, meaning it may cover material from any of the weekly modules. More detail regarding the structure of the exam will be provided closer to the exam date.

4 Texts

Bradley A. Shellito, 2014. Introduction to Geospatial Technologies. **5th Edition**. W. H. Freeman and Company, a Macmillan Higher Education Company.

5 Grading Scheme

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
100-94	93-90	89-87	86-83	82-80	79-77	76-70	69-67	66-63	62-60	59-57	<57

6 Late Policy

Late assignments will only be accepted 24hrs after they are due and there will be a 20% penalty. In order for the assignment to be excused, official documentation must be provided.

7 Academic Honesty

Accountability to 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."

8 Special Accommodations

Students requesting disability-related academic accommodations must first register with the **Disability Resource Center (DRC)**.

- The DRC provides documentation to the student—each student requesting special accommodations must provide this documentation to the Instructor. We do not automatically receive this information, so the student is responsible for providing the DSO request to the Instructor.