

(Sections: 4A28 and 4G27, Distance Lectures & Labs)

**Description:**

Concepts, principles, and applications of forest informatics, remote sensing, and global/local positioning, emphasizing applications in forest resource management are introduced. Topics include: geospatial data sources and data collection, data structures and quality, map projections, and remote sensing, Global Positioning System (GPS), spatial and tabular data analyses, cartographic modeling and layout. Computer and field laboratory exercises provide practical experiences that complement the lectures.

**Meetings:**

- Lecture Hours: Mon and Tue: Recorded lectures (link will be posted for each class)
- Computer Lab Hours: Wed periods 5-6 (2:00-4:45): online virtual classroom by Adobe Connect
- Field Lab Hours: Flexible

Office Hours: -By phone/email/Adobe Connect for Plant City instructors  
-Live (by appointment) for teaching assistants and Mr. Joe Aufmuth

Website: <https://lss.at.ufl.edu> (e-Learning Support Services)

<b>Instructors:</b>	<b>Office</b>	<b>Phone</b>	<b>Email</b>
Amr Abd-Elrahman	Plant City, PEPC Bldg, Rm 112	813.757.2283	<a href="mailto:aamr@ufl.edu">aamr@ufl.edu</a>
Joe Aufmuth	UF Map Library	352.273.0367	<a href="mailto:mapper@uflib.ufl.edu">mapper@uflib.ufl.edu</a>
Justin Harris	Plant City, PEPC Bldg, Rm 111	813.757.2183	<a href="mailto:justin98@ufl.edu">justin98@ufl.edu</a>

**Objectives:**

At the conclusion of this course, the student will be able to:

- Implement basic spatial measurement techniques
- Read maps and use GPS and compass for navigation
- Recognize map projections and their geodetic implications
- Utilize aerial and satellite imagery and other sources of digital data
- Assess and Integrate GPS data into geospatial databases
- Practice vector and raster geospatial analyses
- Implement ArcGIS software in building and analyzing GIS data

**Resources**

**REQUIRED TEXTBOOK (LAB EXERCISES):**

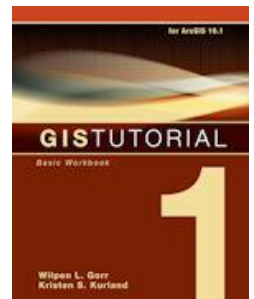
Gorr, Wilpen L. and Kristen S. Kurland, *GIS Tutorial 1: Basic Workbook, 10.1*, ESRI Press-fifth edition, ISBN: 978-1589483354.

(\*A new book is required to access and use the included 180 day trial license for ArcGIS 10.1 software. If you purchase a used book, it is likely that the 180 day trial license has been used as well. You will not be able to renew or extend the trial license on a used book.)

**HIGHLY RECOMMENDED TEXTBOOK**

Paul Bolstad (2008). *GIS Fundamentals* (3rd edition). Eider Press. ISBN: 9780971764729.

(Note: The second edition version of the book will work too.)



**ADDITIONAL MATERIALS:**

- Reading and multimedia assignments will be issued as needed
- Links to websites covering GIS topics and data sources will be given throughout the course period.

**Grading:**

Grading Item	Grade Percentage	Description
GIS Tutorials	30%	This includes lab participation, performing assigned tutorials from 'GIS Tutorial' book and submitting lab reports. Please see the 'Computer Labs' section for more details.
Class Participation	5%	Class participation includes class attendance and participation in field/online/group discussions. Please see the 'Participation' section for more details.
Exams	40%	Two exams will be delivered. Exact exam dates and nature (i.e. in-class vs. online) will be posted in the course schedule table and online on the course website (e-Learning).
Field Labs	10%	At least three field labs through the semester. Please see the 'Field Labs' section for more details.
Final Project	15%	Graduate level students are required to do a comprehensive final project and present it to class by the end of the semester.

**Grading Scheme:**

Please note we use the + and – grading scale encouraged by UF. For more information about the new grading system, please visit <http://www.isis.ufl.edu/minusgrades.html>

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Course Score	100-95	94-90	89-85	84-80	79-75	74-70	69-65	64-60	59-55	54-50	49-45	44-0
Grade Points	4	3.67	3.33	3	2.67	2.33	2	1.67	1.33	1	0.67	0

**GIS Sessions/Tutorials**

Unless announced differently, GIS sessions will be conducted on Wednesdays according to the schedule. The sessions will be held using the Adobe Connect web conferencing software. Please refer to the '[Using Adobe Connect Software](#)' section of this syllabus. For students who cannot attend, recording links for lab material (GIS sessions) will be posted online for later review.

Students are asked to perform the step-by-step activities in the 'GIS Tutorial 1' book. The software and data needed to perform the tutorials (ArcGIS 10.1) are on the CDs that come with the text book. More lab activities will be issued as needed throughout the semester. The primary method of accessing the ArcGIS Desktop software will be via the College of Agricultural and Life Sciences (CALS) Virtual Machine. This method, as well as additional methods of access, are explained in additional resources/documents provided to the students. (See Accessing ArcGIS Desktop Software.)

A summary lab report on each chapter (tutorials) that includes tutorial objectives and snapshots of the screens captured while applying the tutorial steps is due on Thursday of the week following the lab activities. For example, if activities for chapter 2 in the book are scheduled for the July 9<sup>th</sup> Wednesday lab session, the chapter

lab report will be due on Thursday July 17<sup>th</sup>. PLEASE MAKE SURE THAT YOUR SCREEN CAPTURES INCLUDE THE COMPUTER DATE AND TIME AT THE LOWER RIGHT CORNER OF THE SCREEN. Your report should also include the answers to the questions within the tutorials. You may choose to enrich the reports with other items such as summary of learned skills or alternative methods to achieve objectives for extra (5) points. This report should be considered as your notes for future referencing of the tutorials.

**Late Policy** – Reports turned in after the due date will be deducted points. To receive points, the reports must be turned in no later than one week past the due date. This will result in a 25% reduction in points. Lab reports will not be accepted after one week from the assignment deadline.

## Participation

Discussion topics will be created on the course website. The students are encouraged to introduce new discussion items, initiate discussions on the course e-learning website (Sakai), and enrich course resources with online material.

## Field Labs

Three field labs will be conducted during the semester. In these labs, the students choose a site of interest and use field data collection techniques to achieve lab objectives. Details of lab activities will be announced on e-Learning. Lab reports detailing lab objectives, methods and final map are required. No late lab assignments will be accepted.

## Final Project

A final project is required from all graduate level students. The time frame for the project is 2-4 weeks. Please feel free to suggest/discuss your ideas for the project as early as possible during the course. The basic deliverable for the project is a power point presentation illustrating, at least, project objectives, methodology, data and data preparation steps, analysis, results and discussion, and conclusion. Some projects may be chosen for in-class presentation and discussion.

## Lecture Schedule:

The lectures are recordings of the in-class live lectures offered Monday and Tuesday of each week. Links will be provided to the recorded lectures to allow student viewing. Lecture topics listed in the schedule are flexible and subject to change according to course progress. Please frequently check the course e-Learning website for important announcements regarding any schedule changes.

## Using Adobe Connect Software:

GIS sessions (for the distance section) and office hour meetings (per request) will be conducted using **Adobe Connect** web conferencing software. The software is accessed by clicking a link posted by the instructor through e-Learning. The instructor will schedule the sessions and post the link to you earlier in the semester. You should click on the link each time you need to join the GIS or office hour sessions.

The following [link](#) explains how to participate in Adobe Connect meetings/sessions. Adobe Connect only requires an internet connection, a web browser, and Adobe Flash Player version 10.1 or higher. Adobe Connect supports nearly any operating system including Windows, Macintosh, Linux and Solaris, as well as the most

widely used browsers including Internet Explorer, Firefox, Safari, and Chrome. A microphone is also needed to communicate with the instructors and the students attending the session.

### **Academic Honesty Policy:**

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

### **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.

### **Additional Gainesville Campus Resources:**

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university’s counseling resources. The Counseling and Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance. The Counseling and Wellness Center is located at 3190 Radio Road (across from Bledsoe Drive).

- **For Emergencies: Dial 9-1-1**
- *UF Counseling and Wellness Center*, 3190 Radio Road, (352)392-1575, [www.counseling.ufl.edu](http://www.counseling.ufl.edu)
- *Career Resource Center*, First Floor J. Wayne Reitz Union, (352) 392-1601, [www.crc.ufl.edu](http://www.crc.ufl.edu)
- *Crisis and Emergency Resource Center (CERC)*, Fourth Floor of Peabody Hall, (352) 392-1575 (ask for the CERC receptionist), <http://www.counseling.ufl.edu/cwc/cerc-crisis-and-emergency-services>
- *University Police Department*, Building 51, Museum Road. (352) 392-1111, <http://www.police.ufl.edu>

### **Accommodations for Students with Disabilities:**

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

### **Online Course Evaluations:**

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.