

Survey of Planning Information Systems

URP4273 (Section: 22988)

Class Periods: Monday Period 4-5 (10:40AM-12:35PM), Wednesday Period 5 (11:45AM-12:35PM)

Location: ARCH 215

Academic Term: Fall 2019

Instructor:

Seungbeom Kang, Assistant Professor (Department of Urban and Regional Planning)

Room: 450 Architecture Building

Email: s.kang1@ufl.edu, Office: 352-294-1490

Office Hours: Wednesday 2:00-5:00 PM or by appointment

Teaching Assistants: No TA for this course

Course Description

This course introduces the foundational concepts and components of a geographic information system (GIS). This course will teach the essential skills of operating a functional GIS through the use of ArcGIS software package. By completing this course, students will understand basic concepts and skills for data management, editing, and analysis in the ArcGIS Desktop program.

Course Pre-Requisites / Co-Requisites

None (knowledge of basic computer skills, Windows Operating Systems, Excel, etc. is useful, but not required).

Course Objectives

At the successful completion of this course, students will be able to:

- Explain the fundamental concepts and theoretical basis of GIS
- Identify ways to find data for their GIS tasks and to assess data quality and fitness.
- Utilize essential functions of the ArcGIS Desktop software
- Explain the concept of coordinate systems and projects and ways to minimize mapping distortions
- Create and edit geographic features and attributes within GIS data
- Manage and organize GIS files in different formats efficiently
- Present GIS data and map products in professional formats
- Analyze the two models for representing spatial data: vector and raster data
- Identify and access various sources for GIS data and explore ArcGIS extensions
- Use skills to design and conduct GIS projects to solve spatial problems

Materials and Supply Fees

The instructor posts all materials on the Canvas E-Learning University of Florida (<http://elearning.ufl.edu/>).

Required Textbooks and Software

- **Getting to Know ArcGIS Desktop fifth edition, ESRI Press, 2018** (by Michael Law and Amy Collins)
 - ISBN-13: 978-1589485105
 - ISBN-10: 1589485106
 - **Renting the textbook is highly recommended.** This textbook is an elementary-level book with an emphasis on well-designed exercises. If students want to equip theoretical knowledge about GIS after completing the course, the instructor will provide a list of recommended books.
- **ArcGIS Desktop 10.7**
 - This course will be using ArcGIS Desktop 10.7. I advise that you download and run ArcGIS Desktop on your personal computer. Alternatively, you can choose to run ArcGIS via UFApps; however, performance has been noted to be slow at sometimes.
 - Acquiring Desktop software license for ArcGIS (Recommended)
 - <https://www.geoplan.ufl.edu/software/arcgis-DESKTOP/>

- Note: Carefully read the detailed instructions on the web page. Students can acquire the latest version of ArcGIS software and a student license from the GeoPlan Center. It may take up to 24 hours to receive your software license. It is strongly recommended that students install ArcGIS software prior to the second week of the semester.
- Accessing ArcGIS via UFApps (Optional)
 - The ArcGIS software is also available on UFApps (<http://info.apps.ufl.edu/>). UFApps provides access to software applications from any computing device--laptops, tablets, desktops, and smartphones--from any location, at any time.
 - To access UFApps and ArcGIS, you will need to install the Citrix Receiver which is available from the UFApps website.
 - Open your browser and navigate to <http://info.apps.ufl.edu/>.
 - Scroll down to the First Time Use Questions section and
 - Click on Access UFApps from a PC if you are using a PC,
 - Click on Access UFApps from a Mac if using a Mac.
 - The instructions will guide you through installing Citrix Receiver and logging in to UFApps.
- Computer Requirements
 - Students need to check the system requirements to make sure that your computer has the hardware and software required.
 - Click Here to see ESRI's ArcGIS Desktop 10.7 system requirements: <http://desktop.arcgis.com/en/system-requirements/latest/arcgis-desktop-system-requirements.htm>
- Lecture notes developed by the instructor are posted on the Canvas.

Recommended Materials

- ArcGIS 9, Getting Started with ArcGIS, ESRI Press, 2004
- ArcGIS 9, Using ArcGIS Spatial Analyst, ESRI Press, 2004
- Mastering ArcGIS seventh edition (by Maribeth Price), McGraw Hill Education, 2016
- Modeling Our World: The ESRI Guide to Geodatabase Design, ESRI Press, 1999 (by Michael Zeiler)
- All books above are available in .PDF format for download on the course website.

Course Website and Communications

Students communicate via Canvas email within e-Learning (Emails that are received outside the e-Learning system may not receive a prompt reply).

Attendance Policy, Class Expectations, and Make-Up Policy

Students are expected to attend all classes. Important announcements will be made during lecture sections, and guidelines for assignments will be provided. Absence of one class incurs an approximate deduction of 0.5 points of your final grade (of 100 points). **A student's grade will drop one letter grade after the three unexcused absences, and a student with five unexcused absences can be dropped from the course and given an "E."** There will be no make-up opportunity if you miss homework or exams. If you miss class, it will be your responsibility to find out about the discussions and activities you missed. Excused absences must be consistent with university policies in the Graduate Catalog (<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>) and require appropriate documentation. Additional information can be found here: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Evaluation of Grades

Item	Grade Percentage	Remarks
Attendance	5% of final grade	
Exercise	30% of final grade	2% per exercise
Assignment	30% of final grade	3% per assignment
Midterm Exam	20% of final grade	Sum of lab and lecture tests scores
Final Project	15% of final grade	

Grading Policy

Final grades will be calculated as follows:

Percent	Grade	Percent	Grade
94.0 – 100.0	A	74.0 – 76.9	C
90.0 – 93.9	A-	70.0 – 73.9	C-
87.0 – 89.9	B+	67.0 – 69.9	D+
84.0 – 86.9	B	64.0 – 66.9	D
80.0 – 83.9	B-	60.0 – 63.9	D-
77.0 – 79.9	C+	59.9 or below	E

Grades are determined only by points earned from the items presented in the *Evaluation of Grades* given during the semester. There is no opportunity other than those that are explicitly stated in the syllabus to earn points. Thus, there is no special assignments nor make-ups.

Course Schedule (Subject to change)

Week	Date	Topic & Reading	Exercise Due	Assignment Due
1	8/21 (Wed)	<i>Course Introduction</i>		
2	8/26 (Mon)	<i>Part 1. Introducing GIS and ArcGIS</i> <ul style="list-style-type: none"> Law & Collins, Chapter 1. Introducing GIS 		
	8/28 (Wed)	<i>Part 1. Introducing GIS and ArcGIS</i> <ul style="list-style-type: none"> Law & Collins, Chapter 2. Introducing ArcGIS <i>Part 2. Getting started with maps and data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 3. Interacting with maps 		
3	9/2 (Mon)	No Class - Labor Day		
	9/4 (Wed)	<i>Part 2. Getting started with maps and data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 4. Interacting with data 	Exercise 3a-d	AS-1 Due
4	9/9 (Mon)	<i>Part 2. Getting started with maps and data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 4. Interacting with data <i>Part 3. Displaying and presenting data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 6. Working with coordinate systems and projections 		
	9/11 (Wed)	<i>Part 3. Displaying and presenting data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 6. Working with coordinate systems and projections 	Exercise 4a-c	AS-2 Due
5	9/16 (Mon)	<i>Part 3. Displaying and presenting data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 7, 8, 9. Symbolizing features, classifying features, labeling features 		
	9/18 (Wed)	<i>Part 3. Displaying and presenting data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 7, 8, 9, 10. Symbolizing features, classifying features, labeling features, and making maps for presentation 	Exercise 6a-d	AS-3 Due
6	9/23 (Mon)	<i>Part 5. Getting information about features</i> <ul style="list-style-type: none"> Law & Collins, Chapter 15, 16. Querying data / Selecting features by location 		
	9/25 (Wed)	<i>Part 5. Getting information about features</i> <ul style="list-style-type: none"> Law & Collins, Chapter 17. Joining and relating data 	Exercise 7a-d Exercise 8a-c Exercise 9a-d	AS-4 Due
7	9/30 (Mon)	<i>Part 5. Getting information about features</i> <ul style="list-style-type: none"> Law & Collins, Chapter 17. Joining and relating data 		
	10/2 (Wed)	<i>Part 4. Creating and editing data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 11, 12. Building a geodatabase 	Exercise 15b Exercise 16a-b	AS-5 Due

Week	Date	Topic & Reading	Exercise Due	Assignment Due
8	10/7 (Mon)	<i>Part 4. Creating and editing data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 12, 13. Creating features / Editing features 		
	10/9 (Wed)	<i>Part 4. Creating and editing data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 14. Geocoding addresses 		AS-6 Due
9	10/14 (Mon)	<i>Part 4. Creating and editing data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 11, 12. Building a geodatabase 	Exercise 12a-b Exercise 13a	
	10/16 (Wed)	<i>Part 6. Analyzing geospatial data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 18. Preparing data for analysis 	Exercise 14a-c Exercise GPS Data	AS-7 Due
10	10/21 (Mon)	Mid-term Written and Lab Exam		
	10/23 (Wed)	<i>Part 6. Analyzing geospatial data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 19. Geoprocessing vector data 		
11	10/28 (Mon)	<i>Part 6. Analyzing geospatial data</i> <ul style="list-style-type: none"> Law & Collins, Chapter 20. Using spatial analyst 		
	10/30 (Wed)	<i>Part 6. Analyzing geospatial data</i> <ul style="list-style-type: none"> Introduction to spatial analytical tools in urban planning 	Exercise 17a-c Exercise 18a-d Exercise 19a-d	AS-8 Due
12	11/4 (Mon)	<i>Part 7. Raster analysis</i> <ul style="list-style-type: none"> Chapter 4 and 5 in <i>Using Spatial Analysis</i> 		
	11/6 (Wed)	<i>Part 7. Raster analysis</i> <i>Part 8. Recent trends and online GIS</i> <ul style="list-style-type: none"> Law & Collins, Chapter 5. Exploring online resources 	Exercise 20a-b	AS-9 Due
13	11/11 (Mon)	No Class - Veterans Day		
	11/13 (Wed)	<i>Part 8. Recent trends and online GIS</i> <ul style="list-style-type: none"> Law & Collins, Chapter 5. Exploring online resources 	Exercise 5a-c	AS-10 Due
14	11/18 (Mon)	<i>Part 9. Final project works</i>		
	11/20 (Wed)	<i>Part 9. Final project works</i>		
15	11/25 (Mon)	<i>Part 9. Final project works</i>		
	11/27 (Wed)	No Class - Thanksgiving Break		
16	12/2 (Mon)	Final presentations		
	12/4 (Wed)	Final presentations		
17	12/11 (Wed)	Final Project Due		

Communication Courtesy

All members of the class are expected to follow rules of common courtesy in all email messages. Course communication should be civilized and respectful to everyone. The means of communication provided to you through e-Learning (e-mail, discussion posts, course questions, and chats) are at your full disposal to use in a respectful manner. Abuse of this system and its tools through disruptive conduct, harassment, or overall disruption of course activity will not be tolerated. Conducting such behavior will be deemed to be in violation of University rules and regulations or the Code of Student Conduct will result in a report to the Dean of Students.

Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://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.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>

University 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 (<https://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 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. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see:

<http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html>

Campus Resources:

Health and Wellness

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
<https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>.