

## Cover Sheet: Request 15335

### HFT 4XXX – GIS and Spatial Analysis for Tourism and Social Data

#### Info

Process	Course New Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Rachel Fu racheljuichifu@ufl.edu
Created	10/13/2020 12:16:47 AM
Updated	3/11/2021 9:59:25 PM
Description of request	The Department of Tourism, Hospitality and Event Management as an applied field foresees that the needs and wants of our industry are increasingly data driven utilizing more complex types such as those generated from Spatial and Social Data Analyses. We would like to request a new course for our undergraduate students. This proposed undergraduate course will focus on utilizing the opportunities provided by dynamically developing methods of geographical information systems (GIS) for visualization and geographic analyses. Students will learn skills in working with the industry-standard ESRI ArcGIS software and apply their newly acquired knowledge to solving model problems in tourism research, planning, and development. This course will also serve as an elective for students and a required course for our Artificial Intelligence and Data Analytics in Tourism, Hospitality and Event Management Certificate

#### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	HHP - Tourism, Hospitality, & Event Management 012609000	Rachel Fu		10/13/2020
No document changes					
College	Conditionally Approved	HHP - College of Health and Human Performance	Sarah Eberhart	1) Please elaborate under the "co-listing explanation" to provide clear evidence of the differences between the graduate and undergraduate level courses. The co-listing policy can be found here - <a href="http://aa.ufl.edu/media/aaufledu/aaufledu-listed-grad-ug-courses-policy.pdf">http://aa.ufl.edu/media/aaufledu/aaufledu-listed-grad-ug-courses-policy.pdf</a> . 2) In the textbook section in the submission form: Computers & software - please clarify the options for the software, unclear why there are 3 options, are these different ways to access the software?	12/21/2020
No document changes					
Department	Approved	HHP - Tourism, Hospitality, & Event Management 012609000	Rachel Fu		1/24/2021
No document changes					
College	Approved	HHP - College of Health and Human Performance	Christopher Janelle		2/19/2021

Step	Status	Group	User	Comment	Updated
HFT 4XXX GIS_Feb 19.docx					2/19/2021
HMG6448 GIS_Feb 19.docx					2/19/2021
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			2/19/2021
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

# Course|New for request 15335

## Info

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**Submitter:** Rachel Fu racheljuichifu@ufl.edu

**Created:** 2/19/2021 11:28:14 AM

**Form version:** 9

## Responses

### Recommended Prefix

*Enter the three letter code indicating placement of course within the discipline (e.g., POS, ATR, ENC). Note that for new course proposals, the State Common Numbering System (SCNS) may assign a different prefix.*

Response:  
HFT

### Course Level

*Select the one digit code preceding the course number that indicates the course level at which the course is taught (e.g., 1=freshman, 2=sophomore, etc.).*

Response:  
4

### Course Number

*Enter the three digit code indicating the specific content of the course based on the SCNS taxonomy and course equivalency profiles. For new course requests, this may be XXX until SCNS assigns an appropriate number.*

Response:  
XXX

### Category of Instruction

*Indicate whether the course is introductory, intermediate or advanced. Introductory courses are those that require no prerequisites and are general in nature. Intermediate courses require some prior preparation in a related area. Advanced courses require specific competencies or knowledge relevant to the topic prior to enrollment.*

Response:  
Joint (Ugrad/Grad)

- 1000 level = Introductory undergraduate
- 2000 level = Introductory undergraduate
- 3000 level = Intermediate undergraduate

- 4000 level = Advanced undergraduate
- 5000 level = Introductory graduate
- 6000 level = Intermediate graduate
- 7000 level = Advanced graduate
- 4000/5000= Joint undergraduate/graduate
- 4000/6000= Joint undergraduate/graduate

*\*Joint undergraduate/graduate courses must be approved by the UCC and the Graduate Council)*

### **Lab Code**

*Enter the lab code to indicate whether the course is lecture only (None), lab only (L), or a combined lecture and lab (C).*

Response:

C

### **Course Title**

*Enter the title of the course as it should appear in the Academic Catalog. There is a 100 character limit for course titles.&nbsp;*

Response:

GIS and Spatial Analysis for Tourism and Social Data

### **Transcript Title**

*Enter the title that will appear in the transcript and the schedule of courses. Note that this must be limited to 30 characters (including spaces and punctuation).*

Response:

GIS and Spatial Analysis

### **Degree Type**

*Select the type of degree program for which this course is intended.*

Response:

Baccalaureate

### **Delivery Method(s)**

*Indicate all platforms through which the course is currently planned to be delivered.*

Response:

On-Campus

### **Co-Listing**

*Will this course be jointly taught to undergraduate, graduate, and/or professional students?*

Response:

Yes

**Co-Listing Explanation**

*Please detail how coursework differs for undergraduate, graduate, and/or professional students. Additionally, please upload a copy of both the undergraduate and graduate syllabus to the request in .pdf format. For more information please see the [Co-Listed Graduate Undergraduate Courses Policy](#).*

Response:

Everything is the same except the intensity of the final project, grading, and amount of readings. Undergraduates will receive the topic and data (instead of selecting topic and collecting the data) and will only need to build the spatial map and interpret it (this part is for both levels).

Undergraduate Students' project will be assigned by the instructor and they will work in groups with other undergraduates. The goal of the project is to work with a data base of spatially distributed data (secondary data), build a map which would describe these data, and interpret it within the context of their topic. Project results should be presented in a form of an oral presentation in class (approx. 25 minutes) and a written research report (10-12 pages) (due prior to the last date of the class).

Graduate Students' project will be selected per their own research interest upon the instructor's approval. Working in a group, graduate students are expected to collect spatially distributed data (primary or secondary), build a map which would describe these data, and interpret it within the context of the chosen topic. Project results will be presented in a formal oral research presentation in class (approx. 25 minutes) and also in written research report (20-25 pages) (due prior to the last date of the class). Follow a general convention on report writing, that includes literature review, data collection, data analysis, discussion, and a references list.

**Effective Term**

*Select the requested term that the course will first be offered. Selecting "Earliest" will allow the course to be active in the earliest term after SCNS approval. If a specific term and year are selected, this should reflect the department's best projection. Courses cannot be implemented retroactively, and therefore the actual effective term cannot be prior to SCNS approval, which must be obtained prior to the first day of classes for the effective term. SCNS approval typically requires 2 to 6 weeks after approval of the course at UF.*

Response:

Earliest Available

**Effective Year**

*Select the requested year that the course will first be offered. See preceding item for further information.*

Response:

Earliest Available

**Rotating Topic?**

*Select "Yes" if the course can have rotating (varying) topics. These course titles can vary by topic in the Schedule of Courses.*

Response:

No

**Repeatable Credit?**

Select "Yes" if the course may be repeated for credit. If the course will also have rotating topics, be sure to indicate this in the question above.

Response:

No

**Amount of Credit**

Select the number of credits awarded to the student upon successful completion, or select "Variable" if the course will be offered with variable credit and then indicate the minimum and maximum credits per section. Note that credit hours are regulated by Rule 6A-10.033, FAC. If you select "Variable" for the amount of credit, additional fields will appear in which to indicate the minimum and maximum number of total credits.

Response:

3

**S/U Only?**

Select "Yes" if all students should be graded as S/U in the course. Note that each course must be entered into the UF curriculum inventory as either letter-graded or S/U. A course may not have both options. However, letter-graded courses allow students to take the course S/U with instructor permission.

Response:

No

**Contact Type**

Select the best option to describe course contact type. This selection determines whether base hours or headcount hours will be used to determine the total contact hours per credit hour. Note that the headcount hour options are for courses that involve contact between the student and the professor on an individual basis.

Response:

Regularly Scheduled

- Regularly Scheduled [base hr]
- Thesis/Dissertation Supervision [1.0 headcount hr]
- Directed Individual Studies [0.5 headcount hr]
- Supervision of Student Interns [0.8 headcount hr]
- Supervision of Teaching/Research [0.5 headcount hr]
- Supervision of Cooperative Education [0.8 headcount hr]

Contact the Office of Institutional Planning and Research (352-392-0456) with questions regarding contact type.

**Weekly Contact Hours**

Indicate the number of hours instructors will have contact with students each week on average throughout the duration of the course.

Response:

3

## Course Description

*Provide a brief narrative description of the course content. This description will be published in the Academic Catalog and is limited to 500 characters or less. See course description guidelines.*

Response:

Utilizes the opportunities provided by dynamically developing methods of geographical information systems (GIS) for visualization and geographic analysis of the data. Students will learn basic skills in working with the industry-standard ESRI ArcGIS software and apply their newly acquired knowledge in solving model problems in tourism research, planning, and development.

## Prerequisites

*Indicate all requirements that must be satisfied prior to enrollment in the course. Prerequisites will be automatically checked for each student attempting to register for the course. The prerequisite will be published in the Academic Catalog and must be formulated so that it can be enforced in the registration system. Please note that upper division courses (i.e., intermediate or advanced level of instruction) must have proper prerequisites to target the appropriate audience for the course.*

*Courses level 3000 and above must have a prerequisite.*

*Please verify that any prerequisite courses listed are active courses.*

Response:

Junior or senior standing; or consent of the instructor based on taking similar courses on introductory statistics and/or data analysis.

*Completing Prerequisites on UCC forms:*

- Use "&" and "or" to conjoin multiple requirements; do not use commas, semicolons, etc.
- Use parentheses to specify groupings in multiple requirements.
- Specifying a course prerequisite (without specifying a grade) assumes the required passing grade is D-. In order to specify a different grade, include the grade in parentheses immediately after the course number. For example, "MAC 2311(B)" indicates that students are required to obtain a grade of B in Calculus I. MAC2311 by itself would only require a grade of D-.
- Specify all majors or minors included (if all majors in a college are acceptable the college code is sufficient).
- "Permission of department" is always an option so it should not be included in any prerequisite or co-requisite.
- If the course prerequisite should list a specific major and/or minor, please provide the plan code for that major/minor (e.g., undergraduate Chemistry major = CHY\_BS, undergraduate Disabilities in Society minor = DIS\_UMN)

*Example: A grade of C in HSC 3502, passing grades in HSC 3057 or HSC 4558, and undergraduate PBH student should be written as follows: HSC 3502(C) & (HSC 3057 or HSC 4558) & UGPBH  
&nbsp;*

## Co-requisites

*Indicate all requirements that must be taken concurrently with the course. Co-requisites are not checked by the registration system. If there are none please enter N/A.*

Response:

N/A

## Rationale and Placement in Curriculum

*Explain the rationale for offering the course and its place in the curriculum.*

Response:

In the tourism, hospitality and event industries, integrating spatial analyses with social data analytics has become an important skill for employees, both current and future. As a leader in innovative curriculum and research institute in our field, the Department of Tourism, Hospitality and Event Management aims to equip our students with “cutting edge” knowledge and skills that will enhance students' critical thinking, enrich students' problem solving competency, and make our students more marketable. This newly proposed course is an elective and will become one of required courses for our Artificial Intelligence and Data Analytics in Tourism, Hospitality and Event Management Certificate.

### **Course Objectives**

*Describe the core knowledge and skills that student should derive from the course. The objectives should be both observable and measurable.*

Response:

Upon completion of this course the student will:

- Summarize core concepts and analytical options of GIS available to social scientists;
- Apply GIS in quantitative research using sociodemographic data, surveys, and social networks;
- Use GIS as a tool in spatial analyses on tourism-related issues;
- Organize GIS data collection;
- Apply spatial data analysis skills;
- Demonstrate spatial data visualization and presentation skills.

### **Course Textbook(s) and/or Other Assigned Reading**

*Enter the title, author(s) and publication date of textbooks and/or readings that will be assigned. &nbsp;  Please provide specific examples&nbsp;  to evaluate the course and identify required textbooks.&nbsp;*

Response:

COURSE MATERIALS:

The course materials and datasets are distributed through Canvas.

Requited textbooks

- S.L. Steinberg and Steinberg, S.J., 2015. GIS Research Methods: Incorporating Spatial Perspectives, Esri Press, Redlands, CA (e-book available from the UF library).
- M. Price, Mastering ArcGIS, 6th Ed, McGraw Hill (other editions are acceptable).

Lab assignments

- Michael Law and Amy Collins, Getting to Know ArcGIS, 4th Ed. ESRI Press, 2015 (do not use previous editions since the labs have changed).

Computers and software

Students will gain the access to the software through any of the listed three approaches. The course uses ESRI ArcGIS Desktop 10.x software (Base and Spatial Analyst), which is available:

- Locally – get the ArcGIS Desktop 10.x license from the UF GeoPlan Center at [http://www.geoplan.ufl.edu/licensed\\_software.shtml](http://www.geoplan.ufl.edu/licensed_software.shtml). The software is free.
- At a UF computer labs (<https://labs.at.ufl.edu>). Note that the computer labs may be reserved for classes – plan ahead!
- Remotely from the UFApps (<http://info.apps.ufl.edu>). The software is free but you need fast Internet connection. Install Citrix Receiver prior to using this service.

Useful Florida GIS Websites

- <http://www.fgdl.org/metadataexplorer/explorer.jsp>
- [http://www.geoplan.ufl.edu/fgdl\\_source\\_links.htm](http://www.geoplan.ufl.edu/fgdl_source_links.htm)
- <http://www.cityofgainesville.org/PlanningDepartment/MappingandGIS/DataDownloads.aspx>

### **Weekly Schedule of Topics**



*Provide a projected weekly schedule of topics. This should have sufficient detail to evaluate how the course would meet current curricular needs and the extent to which it overlaps with existing courses at UF.*

Response:

#### COURSE FORMAT:

The instruction combines lectures, method discussions, student-led presentations, and practical work with data. The course will result in a final project demonstrating students' abilities to work with spatially distributed data.

#### WEEKLY COURSE SCHEDULE:

Course schedule. Reading includes Steinberg, Steinberg (SS); Law, Collins (LC); and Price (P) books

W Lecture Lab and Assignment

- 1 Syllabus Basics of working with ArcGIS. Navigating a map. Using basic tools.
- 2 Mapping GIS data Data models. Adding data, working with map layers, creating a map
- 3 Data collection. Online data resources Explore online GIS databases. Build Gainesville zoning map.
- 4 1 GIS in socio-spatial research. 2 Map projections Defining map projection. Georeferencing rasters.
- 5 1 Measurements: type of data 2 Mapping GIS data Creating symbology. Data Labeling.
- 6 1 Socio-spatial research design. GIS data use ethics. 2 Querying GIS Building attribute and location queries.
- 7 1 Qualitative research methods and GIS. 2 Joining and relating data Joins. Spatial joins.
- 8 1 Data sampling and Measurement 2 Elementary data analysis: overlay, clipping, dissolving Proximity analysis
- 9 Project consultations Project consultations Project consultations
- 10 Raster data analysis Explore rasters; learn raster conversion; learn spatial analyst
- 11 1 Overview of basic analysis techniques 2 Introduction to Interpolation Use interpolation to map the quality of the US DMO
- 12 Data documentation and model developments Introduction to density analysis. Hotspot analysis.
- 13 Applications of GIS in social science Exploratory spatial statistics Spatial regression and Autocorrelation
- Moran's I and Local Moran's I; Interpreting Results
- 14 Mapmaking basics Map making lab
- 15-16 Final project presentations Final project presentation

#### Grading Scheme

*List the types of assessments, assignments and other activities that will be used to determine the course grade, and the percentage contribution from each. This list should have sufficient detail to evaluate the course rigor and grade integrity. Include details about the grading rubric and percentage breakdowns for determining grades. If participation and/or attendance are part of the students grade, please provide a rubric or details &nbsp;regarding how those items will be assessed.*

Response:

#### Assignments and evaluation

The emphasis is on development of practical skills, not on theoretical framework, hence the class has many assignments. Make sure you devote sufficient time to this class per week. You may find it beneficial to study material with a fellow student to get a better grasp of concepts. However, the final version of the assignment that you submit should be your own work. Do not directly copy the work of another student! Homework is preparation for quizzes; therefore, it is counterproductive to let someone else do your thinking. The final grade will be based upon your scores in quizzes, lab assignments, written research report and project presentation. The total grade G (0-100%) will be

a weighted mean of the grades in the following categories:

1. Quizzes (20%)
2. Lab assignments (30%)
3. Group Term Project: Written Research Report (30%) and Oral Presentation (20%)

TOTAL 100%

#### GRADING SCALE AND GPA POINTS:

The final percentage points are translated into the letter grades using the following scheme:

Percentage	Letter Grade, GPA pts	Percentage	Letter Grade, GPA pts
90.00 – 100	A (4.0)	70.00 – 76.99	C (2.0)
87.00 – 89.99	B+ (3.33)	67.00 – 69.99	D+ (1.33)
80.00 – 86.99	B (3.0)	60.00 – 66.99	D (1.0)
77.00 – 79.99	C+ (2.33)	Below 60	E = Failing Grade

For example, a student receiving 90% for Lab assignments, 80% for Quizzes, 95% for the Project, and 98% for Project presentation will have the final grade of  $90 \times 0.3 + 80 \times 0.2 + 95 \times 0.25 + 98 \times 0.25 = 91.25\%$  with the letter grade of A.

It will take one week to 10 days to get grades posted for each assignment. Please contact your instructor in one week after your grade is posted when you feel there is an error in grading. Your grade will not be rounded. More detailed information regarding current UF grading policies can be found here: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>. Any requests for additional extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly.

#### Quizzes (20% of grade)

A short quiz will cover material from classes that follow the last quiz, but expect occasional questions related to the earlier topics. The quizzes will be closed book.

Quizzes may include quantitative questions, please bring the calculators or use your smartphones. When a question requires computations, remember (1) to use the units properly; (2) to use the international system of units (SI) when appropriate; and (3) to report the units with your answer. Use a reasonable rounding. For example, if you are asked to calculate the mean distance to a point of interest, the answers “10” or “7 miles” or “9.55684964734 km” will not be awarded full credit. The answer “9.6 km” would be acceptable. For full credit make sure the instructor is able to read through your handwriting. 100% grade will require full answer to all questions, a returned blank paper will be scored as 0%, and a reasonable progress towards answering the questions will be evaluated somewhere in between.

#### Lab assignments (30% of grade)

The main content of a class will be completing exercises. Uncompleted exercises will become a home assignment. Return the completed assignments in a form of a short report before the time of the next class. Always submit your report through Canvas; do not return a paper copy.

#### Term Project (50% of grade – see below)

During the course, undergraduate students will work in groups with other undergraduates on a problem of their interest (subject to the approval by the instructor). The goal of the project is to collect spatially distributed data (primary or secondary), build a map which would describe these data, and interpret it within the context of the chosen topic. Project results should be presented in a form of an oral presentation in class (approx. 25 minutes) and a written research report (10-12 pages) (due prior to the last date of the class). The following list gives examples of appropriate project topics:

- Exploring destination preferences by putting Flickr travel photographs on the map;
- Tracking visitors' trips between the 2014 Winter Olympics venues by mapping Twitter communications;
- Mapping preferred physical exercise locations on the UF campus;
- Mapping the distances to Florida state parks from the local communities.

#### Project presentation (approx. 25 minutes) (20% of grade)

Students will be asked to orally present in class their research project using Power Point. Your

presentation will include all sections of the research report (e.g., introduction, literature review, data collection, data analysis, results and discussion/interpretation).

#### Research Report (10-12 pages) (30% of grade)

The research report should be 10-12 pages in length and the literature review must contain at least ten scholarly journal articles. Use sub-headings to divide up your report e.g. introduction, literature review, data collection, data analysis, results, discussion, and a references list.

#### GRADING EXPECTATIONS FOR ORAL PRESENTATION

Assignment weight is 20%: will be graded on 100% scale). The following scoring rubric will be used for the oral presentation grading with 0-20 percentage points in each category:

- Presentation content (20%): Appropriate introduction, data, analysis, and outcomes sections in the report. Well defined technical terms. Good summary of the work at the end;
- Data visualization (20%): Appropriate use of tables, maps, and scientific graphics for information delivery;
- Professional delivery (20%): clear, audible voice, appropriate gestures and eye contact that engage the audience, seamless switching between presenters, no between-reports pause for missing presentation, not playing video or similar issues;
- Answering questions (20%): questions from the audience are answered in a way that shows that presenter is familiar with the subject;
- Time management (20%): presentation time limit is not exceeded and also is not significantly shorter than allocated. For a full grade, presentation time should not be over 10% shorter or 5% longer.

#### GRADING EXPECTATIONS FOR WRITTEN RESEARCH REPORT:

The assignment weight is 30% and grades will be assigned using the following criteria:

- 90-100: Excellent. Excellent, scholarly, and advanced college-level work that exceeds requirements. Original, insightful ideas, in-depth discussion. Well organized and structured. Very good grammar, careful formatting.
- 80-89.99: Good. Good college-level work that meets requirements. Original, well organized. Good understanding of the topic is demonstrated. Acceptable grammar. Some areas are noticeably weaker than others.
- 70-79.99: Satisfactory. Average work. Assignment is not thought through and/or presentation is not cohesive. Improvement is needed on depth, originality of thought, structure, and presentation.
- 60-69.99: Marginal. Below-average work. Substantial improvements are needed in the areas of content, reasoning, and delivery, as well as grammar and formatting.
- 0-59.99: Failure. Assignment does not meet the requirements/criteria, is not submitted, or incomplete.

#### Instructor(s)

*Enter the name of the planned instructor or instructors, or "to be determined" if instructors are not yet identified.*

Response:

Dr. Andrei P. Kirilenko

Dr. Jin-Won Kim

#### Attendance & Make-up

*Please confirm that you have read and understand the University of Florida Attendance policy.*

*A required statement statement related to class attendance, make-up exams and other work will be included in the syllabus and adhered to in the course. Courses may not have any policies which conflict with the University of Florida policy. The following statement may be used directly in the syllabus.*

- *Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:*

*<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>*

Response:  
Yes

### **Accommodations**

*Please confirm that you have read and understand the University of Florida Accommodations policy.  
A statement related to accommodations for students with disabilities will be included in the syllabus and adhered to in the course. The following statement may be used directly in the syllabus:*

• *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.*

Response:  
Yes

### **UF Grading Policies for assigning Grade Points**

*Please confirm that you have read and understand the University of Florida Grading policies.  
Information on current UF grading policies for assigning grade points is required to be included in the course syllabus. The following link may be used directly in the syllabus:*

• <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Response:  
Yes

### **Course Evaluation Policy**

#### *Course Evaluation Policy*

*Please confirm that you have read and understand the University of Florida Course Evaluation Policy.  
A statement related to course evaluations will be included in the syllabus. The following statement may be used directly in the syllabus:*

• *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/public-results/>. 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/>.*

&nbsp;

Response:  
Yes

## HFT 4XXX–GIS and Spatial Analysis for Tourism and Social Data

### COURSE INFORMATION

Credits 3  
Meeting location FLG 2XX  
Meeting times xxxx

### INSTRUCTOR INFORMATION

Andrei P. Kirilenko  
Associate Professor  
Department of Tourism, Hospitality and Event Management  
College of Health and Human Performance  
University of Florida  
240B Florida Gym; 352.2941648; [andrei.kirilenko@ufl.edu](mailto:andrei.kirilenko@ufl.edu)  
Office: 240 Florida Gym  
Office hours: Tuesday, 9:30 – 11:00; Thursday, 10:30 – 12:00, or by appointment.  
TA: TBD

**Department Chair:** Rachel Fu, Ph.D., CHE  
Room FLG 240D; Email: [racheljuichifu@ufl.edu](mailto:racheljuichifu@ufl.edu)

### COURSE DESCRIPTION:

#### 50 words for the catalog

Utilizes the opportunities provided by dynamically developing methods of geographical information systems (GIS) for visualization and geographic analysis of the data. Students will learn basic skills in working with the industry-standard ESRI ArcGIS software and apply their newly acquired knowledge in solving model problems in tourism research, planning, and development.

### COURSE DESCRIPTION:

The course focuses on building spatial data analysis skills using tourism, destination management, and natural resources data. Combining lecture and lab instruction, the course teaches how to utilize the opportunities provided by dynamically developing methods of geographical information systems (GIS) for visualization and geographic analysis of the data. The students will learn basic skills in working with the industry-standard ESRI ArcGIS software and apply their newly acquired knowledge in solving model problems in tourism research, planning, and development. Sample problems include:

- Acquiring digital spatial data from the Internet;
- Mapping data;
- Spatial data analysis;
- Results interpretation.

**PREREQUISITES:**

Junior or senior standing; or consent of the instructor based on taking similar courses on introductory statistics and/or data analysis.

**COURSE MATERIALS:**

The course materials and datasets are distributed through Canvas.

**Required textbooks**

- S.L. Steinberg and Steinberg, S.J., 2015. GIS Research Methods: Incorporating Spatial Perspectives, Esri Press, Redlands, CA (e-book available from the UF library).
- M. Price, Mastering ArcGIS, 6<sup>th</sup> Ed, McGraw Hill (other editions are acceptable).

**Lab assignments**

- Michael Law and Amy Collins, Getting to Know ArcGIS, 4<sup>th</sup> Ed. ESRI Press, 2015 (do not use previous editions since the labs have changed).

**Computers and software**

Students will gain the access to the software through any of the listed three approaches. The course uses ESRI ArcGIS Desktop 10.x software (Base and Spatial Analyst), which is available:

- Locally – get the ArcGIS Desktop 10.x license from the UF GeoPlan Center at [http://www.geoplan.ufl.edu/licensed\\_software.shtml](http://www.geoplan.ufl.edu/licensed_software.shtml). The software is free.
- At a UF computer labs (<https://labs.at.ufl.edu>). Note that the computer labs may be reserved for classes – plan ahead!
- Remotely from the UFApps (<http://info.apps.ufl.edu>). The software is free but you need fast Internet connection. Install Citrix Receiver prior to using this service.

**Useful Florida GIS Websites**

- <http://www.fgdl.org/metadataexplorer/explorer.jsp>
- [http://www.geoplan.ufl.edu/fgdl\\_source\\_links.htm](http://www.geoplan.ufl.edu/fgdl_source_links.htm)
- <http://www.cityofgainesville.org/PlanningDepartment/MappingandGIS/DataDownloads.aspx>

**COURSE FORMAT:**

The instruction combines lectures, method discussions, student-led presentations, and practical work with data. The course will result in a final project demonstrating students' abilities to work with spatially distributed data.

**COURSE LEARNING OBJECTIVES:****Upon completion of this course the student will:**

- Summarize core concepts and analytical options of GIS available to social scientists;
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- Use GIS as a tool in spatial analyses on tourism-related issues;
- Generate GIS Data.
- Apply spatial data analysis skills;
- Demonstrate spatial data visualization and presentation skills.

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



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- Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>
- Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/> On-Line Students Complaints: <http://distance.ufl.edu/student-complaint-process/>

## GRADING:

### Assignments and evaluation

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1. Quizzes (20%)
2. Lab assignments (30%)
3. Group Term Project: Written Research Report (30%) and Oral Presentation (20%)

**TOTAL 100%**

### GRADING SCALE AND GPA POINTS:

The final percentage points are translated into the letter grades using the following scheme:

Percentage	Letter Grade, GPA pts	Percentage	Letter Grade, GPA pts
90.00 – 100	A (4.0)	70.00 – 76.99	C (2.0)
87.00 – 89.99	B+ (3.33)	67.00 – 69.99	D+ (1.33)
80.00 – 86.99	B (3.0)	60.00 – 66.99	D (1.0)
77.00 – 79.99	C+ (2.33)	Below 60	E = Failing Grade

For example, a student receiving 90% for Lab assignments, 80% for Quizzes, 95% for the Project, and 98% for Project presentation will have the final grade of  $90 \times 0.3 + 80 \times 0.2 + 95 \times 0.25 + 98 \times 0.25 = 91.25\%$  with the letter grade of A.

It will take one week to 10 days to get grades posted for each assignment. Please contact your instructor in one week after your grade is posted when you feel there is an error in grading. **Your grade will not be rounded.** More detailed information regarding current UF grading policies can be found here: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>." **Any requests for additional extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly.**

### ***Quizzes (20% of grade)***

A short quiz will cover material from classes that follow the last quiz, but expect occasional questions related to the earlier topics. **The quizzes will be closed book.**

Quizzes may include quantitative questions, **please bring the calculators or use your smartphones.** When a question requires computations, remember (1) to use the units properly; (2) to use the international system of units (SI) when appropriate; and (3) to report the units with your answer. Use a reasonable rounding. For example, if you are asked to calculate the mean distance to a point of interest, the answers “10” or “7 miles” or “9.55684964734 km” will not be awarded full credit. The answer “9.6 km” would be acceptable. **For full credit make sure the instructor is able to read through your handwriting.** 100% grade will require full answer to all questions, a returned blank paper will be scored as 0%, and a reasonable progress towards answering the questions will be evaluated somewhere in between.

### ***Lab assignments (30% of grade)***

The main content of a class will be completing exercises. Uncompleted exercises will become a home assignment. Return the completed assignments in a form of a short report before the time of the next class. **Always submit your report through Canvas;** do not return a paper copy.

### ***Term Group Project (50% of grade – see below)***

During the course, **undergraduate students will work in groups with other undergraduates** on a problem of their interest (subject to the approval by the instructor). The goal of the project is to collect spatially distributed data (primary or secondary), build a map which would describe these data, and interpret it within the context of the chosen topic. Project results should be presented in a form of an oral presentation in class (approx. 25 minutes) and a **written research report (10-12 pages)** (due **prior** to the last date of the class). The following list gives examples of appropriate project topics:

- Exploring destination preferences by putting Flickr travel photographs on the map;
- Tracking visitors' trips between the 2014 Winter Olympics venues by mapping Twitter communications;
- Mapping preferred physical exercise locations on the UF campus;
- Mapping the distances to Florida state parks from the local communities.

### ***Project presentation (approx. 25 minutes) (20% of grade)***

Students will be asked to orally present in class their research project using Power Point. Your presentation will include all sections of the research report (e.g., introduction, literature review, data collection, data analysis, results and discussion/interpretation).

### ***Research Report (10-12 pages) (30% of grade)***

**The research report should be 10-12 pages in length and the literature review must contain at least ten scholarly journal articles.** Use sub-headings to divide up your report e.g. introduction, literature review, data collection, data analysis, results, discussion, and a references list.

## GRADING EXPECTATIONS FOR ORAL PRESENTATION

Assignment weight is 20%: will be graded on 100% scale). The following scoring rubric will be used for the oral presentation grading with 0-20 percentage points in each category:

- **Presentation content (20%):** Appropriate introduction, data, analysis, and outcomes sections in the report. Well defined technical terms. Good summary of the work at the end;
- **Data visualization (20%):** Appropriate use of tables, maps, and scientific graphics for information delivery;
- **Professional delivery (20%):** clear, audible voice, appropriate gestures and eye contact that engage the audience, seamless switching between presenters, no between-reports pause for missing presentation, not playing video or similar issues;
- **Answering questions (20%):** questions from the audience are answered in a way that shows that presenter is familiar with the subject;
- **Time management (20%):** presentation time limit is not exceeded and also is not significantly shorter than allocated. For a full grade, presentation time should not be over 10% shorter or 5% longer.

## GRADING EXPECTATIONS FOR WRITTEN RESEARCH REPORT:

The assignment weight is 30% and grades will be assigned using the following criteria:

- **90-100: Excellent.** Excellent, scholarly, and advanced college-level work that exceeds requirements. Original, insightful ideas, in-depth discussion. Well organized and structured. Very good grammar, careful formatting.
- **80-89.99: Good.** Good college-level work that meets requirements. Original, well organized. Good understanding of the topic is demonstrated. Acceptable grammar. Some areas are noticeably weaker than others.
- **70-79.99: Satisfactory.** Average work. Assignment is not thought through and/or presentation is not cohesive. Improvement is needed on depth, originality of thought, structure, and presentation.
- **60-69.99: Marginal.** Below-average work. Substantial improvements are needed in the areas of content, reasoning, and delivery, as well as grammar and formatting.
- **0-59.99: Failure.** Assignment does not meet the requirements/criteria, is not submitted, or incomplete.

## CLASS POLICIES

### *If you are not able to make it to the class*

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>. Always contact the instructor through Canvas if are going to miss a class or unable to return an assignment in time.

### *Late assignment submission or skipping a quiz*

Closely follow the course logistics with respect to submission of your work. All assignments (quizzes, problems from the textbook, and labs) are due prior at 9 am on the date of the next class. Late submissions are penalized: Up to 48 hours later -20%. No make-up assignments or quizzes will be allowed except as required by the University Policies. An example of allowed missed assignment is a

student athlete's game travel, as requested by his/her trainer's email. **Requirements for class attendance and make-up quizzes, assignments, and other work in this course are consistent with university policies that can be found at:**

**<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.**

Note that a minor sickness or a short travel will not be considered an excuse for not returning the homework. The reason for point deduction is that you always will be given enough time to complete and return an assignment few days before the due date; **please plan ahead for possible emergency situations.**

### ***Presentations***

If you are unable to deliver a presentation due to a confirmed medical reason or family emergency, it will be re-scheduled for a later date if possible; otherwise 0% credit or an "incomplete" grade will be assigned.

### ***Food***

Water in bottles and spill-proof cups is allowed by the class policies, but may be prohibited in a specific room; food is not allowed. Remember: soft drink spills kill computer equipment.

### ***Special accommodations***

Students requesting special classroom accommodations must first register with the Dean of Students Office. Also, please let the instructor know your needs ASAP.

### ***Miscellanea***

Please switch off the sound on your phones and refrain from using the Internet, playing games, reading the books and other activity unless it is directly related to the course.

Unless an urgent business requires my attention, I will be available for questions **after** the lecture hours. For more complex questions that require substantial time please secure an appointment during my **office hours** by sending an email.

## **WEEKLY COURSE SCHEDULE:**

**Course schedule. Reading includes Steinberg, Steinberg (SS); Law, Collins (LC); and Price (P) books**

<b>W</b>	<b>Lecture</b>	<b>Lab and Assignment</b>	<b>Reading</b>
<b>1</b>	Syllabus	Basics of working with ArcGIS. Navigating a map. Using basic tools.	SS: 1, 2; LC: 1, 2, 3; P: 1
<b>2</b>	Mapping GIS data	Data models. Adding data, working with map layers, creating a map	SS: 2; LC: 4; P: 1, 2
<b>3</b>	Data collection. Online data resources	Explore online GIS databases. Build Gainesville zoning map.	SS: 6; LC: 5; P: 2
<b>4</b>	1 GIS in socio-spatial research. 2 Map projections	Defining map projection. Georeferencing rasters.	SS: 3; LC: 6; P: 3
<b>5</b>	1 Measurements: type of data 2 Mapping GIS data	Creating symbology. Data Labeling.	SS: 7; LC: 7 (8, 9 if needed); P: 4
<b>6</b>	1 Socio-spatial research design.	Building attribute and location	SS: 4; LC: 15b, 17; P: 8a

	GIS data use ethics. 2 Querying GIS	queries.	
<b>7</b>	1 Qualitative research methods and GIS. 2 Joining and relating data	Joins. Spatial joins.	SS: 5; LC: 16; P: 9
<b>8</b>	1 Data sampling and Measurement 2 Elementary data analysis: overlay, clipping, dissolving	Proximity analysis	LC: 18a-d, 19a, b; P:10
<b>9</b>	Project consultations	Project consultations	Project consultations
<b>10</b>	Raster data analysis	Explore rasters; learn raster conversion; learn spatial analyst	SS: 7; LC: 20; P: 11
<b>11</b>	1 Overview of basic analysis techniques 2 Introduction to Interpolation	Use interpolation to map the quality of the US DMO web sites	SS: 9 <a href="http://www.esri.com/news/arcuser/0704/files/interpolating.pdf">http://www.esri.com/news/arcuser/0704/files/interpolating.pdf</a>
<b>12</b>	Data documentation and model developments	Introduction to density analysis. Hotspot analysis.	SS: 10 <a href="http://www.cdc.gov/dhdsdp/maps/GISX/training/module3/files/3_hotspot_analysis_module.PDF">http://www.cdc.gov/dhdsdp/maps/GISX/training/module3/files/3_hotspot_analysis_module.PDF</a>
<b>13</b>	Applications of GIS in social science Exploratory spatial statistics	Spatial regression and Autocorrelation Moran's I and Local Moran's I; Interpreting Results	SS: 8 <a href="http://www.arcgis.com/home/item.html?id=71a65d35688a4502b123cbdfc99afdee">http://www.arcgis.com/home/item.html?id=71a65d35688a4502b123cbdfc99afdee</a>
<b>14</b>	Mapmaking basics	Map making lab	P: 5
<b>15-16</b>	Final project presentations	Final project presentation	

### SUCCESS AND STUDY TIPS:

Read all assigned materials before the class. Reach out to the instructor for further advice whenever you feel that you need help. Challenge yourself by advancing your critical thinking, re-searching more concurrent news, and being aware of the trends/needs/wants of the industries, communities, and destinations through spatial and trend analyses.

## HFT 4XXX–GIS and Spatial Analysis for Tourism and Social Data

### COURSE INFORMATION

Credits 3  
Meeting location FLG 2XX  
Meeting times xxxx

### INSTRUCTOR INFORMATION

Andrei P. Kirilenko  
Associate Professor  
Department of Tourism, Hospitality and Event Management  
College of Health and Human Performance  
University of Florida  
240B Florida Gym; 352.2941648; [andrei.kirilenko@ufl.edu](mailto:andrei.kirilenko@ufl.edu)  
Office: 240 Florida Gym  
Office hours: Tuesday, 9:30 – 11:00; Thursday, 10:30 – 12:00, or by appointment.  
TA: TBD

**Department Chair:** Rachel Fu, Ph.D., CHE  
Room FLG 240D; Email: [racheljuichifu@ufl.edu](mailto:racheljuichifu@ufl.edu)

### COURSE DESCRIPTION:

#### 50 words for the catalog

Utilizes the opportunities provided by dynamically developing methods of geographical information systems (GIS) for visualization and geographic analysis of the data. Students will learn basic skills in working with the industry-standard ESRI ArcGIS software and apply their newly acquired knowledge in solving model problems in tourism research, planning, and development.

### COURSE DESCRIPTION:

The course focuses on building spatial data analysis skills using tourism, destination management, and natural resources data. Combining lecture and lab instruction, the course teaches how to utilize the opportunities provided by dynamically developing methods of geographical information systems (GIS) for visualization and geographic analysis of the data. The students will learn basic skills in working with the industry-standard ESRI ArcGIS software and apply their newly acquired knowledge in solving model problems in tourism research, planning, and development. Sample problems include:

- Acquiring digital spatial data from the Internet;
- Mapping data;
- Spatial data analysis;
- Results interpretation.

**PREREQUISITES:**

Junior or senior standing; or consent of the instructor based on taking similar courses on introductory statistics and/or data analysis.

**COURSE MATERIALS:**

The course materials and datasets are distributed through Canvas.

**Required textbooks**

- S.L. Steinberg and Steinberg, S.J., 2015. GIS Research Methods: Incorporating Spatial Perspectives, Esri Press, Redlands, CA (e-book available from the UF library).
- M. Price, Mastering ArcGIS, 6<sup>th</sup> Ed, McGraw Hill (other editions are acceptable).

**Lab assignments**

- Michael Law and Amy Collins, Getting to Know ArcGIS, 4<sup>th</sup> Ed. ESRI Press, 2015 (do not use previous editions since the labs have changed).

**Computers and software**

Students will gain the access to the software through any of the listed three approaches. The course uses ESRI ArcGIS Desktop 10.x software (Base and Spatial Analyst), which is available:

- Locally – get the ArcGIS Desktop 10.x license from the UF GeoPlan Center at [http://www.geoplan.ufl.edu/licensed\\_software.shtml](http://www.geoplan.ufl.edu/licensed_software.shtml). The software is free.
- At a UF computer labs (<https://labs.at.ufl.edu>). Note that the computer labs may be reserved for classes – plan ahead!
- Remotely from the UFApps (<http://info.apps.ufl.edu>). The software is free but you need fast Internet connection. Install Citrix Receiver prior to using this service.

**Useful Florida GIS Websites**

- <http://www.fgdl.org/metadataexplorer/explorer.jsp>
- [http://www.geoplan.ufl.edu/fgdl\\_source\\_links.htm](http://www.geoplan.ufl.edu/fgdl_source_links.htm)
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- Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

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- Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>
- Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/> On-Line Students Complaints: <http://distance.ufl.edu/student-complaint-process/>

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3. Group Term Project: Written Research Report (30%) and Oral Presentation (20%)

**TOTAL 100%**

### GRADING SCALE AND GPA POINTS:

The final percentage points are translated into the letter grades using the following scheme:

Percentage	Letter Grade, GPA pts	Percentage	Letter Grade, GPA pts
90.00 – 100	A (4.0)	70.00 – 76.99	C (2.0)
87.00 – 89.99	B+ (3.33)	67.00 – 69.99	D+ (1.33)
80.00 – 86.99	B (3.0)	60.00 – 66.99	D (1.0)
77.00 – 79.99	C+ (2.33)	Below 60	E = Failing Grade

For example, a student receiving 90% for Lab assignments, 80% for Quizzes, 95% for the Project, and 98% for Project presentation will have the final grade of  $90 \times 0.3 + 80 \times 0.2 + 95 \times 0.25 + 98 \times 0.25 = 91.25\%$  with the letter grade of A.

It will take one week to 10 days to get grades posted for each assignment. Please contact your instructor in one week after your grade is posted when you feel there is an error in grading. **Your grade will not be rounded.** More detailed information regarding current UF grading policies can be found here: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>." Any requests for additional extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly.

### ***Quizzes (20% of grade)***

A short quiz will cover material from classes that follow the last quiz, but expect occasional questions related to the earlier topics. **The quizzes will be closed book.**

Quizzes may include quantitative questions, **please bring the calculators or use your smartphones.** When a question requires computations, remember (1) to use the units properly; (2) to use the international system of units (SI) when appropriate; and (3) to report the units with your answer. Use a reasonable rounding. For example, if you are asked to calculate the mean distance to a point of interest, the answers “10” or “7 miles” or “9.55684964734 km” will not be awarded full credit. The answer “9.6 km” would be acceptable. **For full credit make sure the instructor is able to read through your handwriting.** 100% grade will require full answer to all questions, a returned blank paper will be scored as 0%, and a reasonable progress towards answering the questions will be evaluated somewhere in between.

### ***Lab assignments (30% of grade)***

The main content of a class will be completing exercises. Uncompleted exercises will become a home assignment. Return the completed assignments in a form of a short report before the time of the next class. **Always submit your report through Canvas;** do not return a paper copy.

### ***Term Group Project (50% of grade – see below)***

During the course, **undergraduate students will work in groups with other undergraduates** on a problem of their interest (subject to the approval by the instructor). The goal of the project is to collect spatially distributed data (primary or secondary), build a map which would describe these data, and interpret it within the context of the chosen topic. Project results should be presented in a form of an oral presentation in class (approx. 25 minutes) and a **written research report (10-12 pages)** (due **prior** to the last date of the class). The following list gives examples of appropriate project topics:

- Exploring destination preferences by putting Flickr travel photographs on the map;
- Tracking visitors' trips between the 2014 Winter Olympics venues by mapping Twitter communications;
- Mapping preferred physical exercise locations on the UF campus;
- Mapping the distances to Florida state parks from the local communities.

### ***Group Contract for Group Project***

***By the third Friday of the semester, students will assigned project groups by the instructor. You will need to meet with your group and discuss, draft and sign the group contract. A copy of this contract can be found on Canvas.***

***Instructions: Please create a Google Doc drive for your group project. Please upload a copy of this form and as a group answer the following questions that involve making decisions about your group project. When you have all come to an agreement and have signed this contract, please upload it in Canvas by the third Friday of the semester.***

***When you begin work on your group assignment, please revisit your contract. If you encounter difficulties working as a group, refer to the expectations you agreed upon and if you feel that group members are not living up to these expectations then please talk to them. I am always available as well to discuss such matters.***

***Project presentation (approx. 25 minutes) (20% of grade)***

Students will be asked to orally present in class their research project using Power Point. Your presentation will include all sections of the research report (e.g., introduction, literature review, data collection, data analysis, results and discussion/interpretation).

***Research Report (10-12 pages) (30% of grade)***

**The research report should be 10-12 pages in length and the literature review must contain at least ten scholarly journal articles.** Use sub-headings to divide up your report e.g. introduction, literature review, data collection, data analysis, results, discussion, and a references list.

**GRADING EXPECTATIONS FOR ORAL PRESENTATION**

Assignment weight is 20%: will be graded on 100% scale). The following scoring rubric will be used for the oral presentation grading with 0-20 percentage points in each category:

- **Presentation content (20%):** Appropriate introduction, data, analysis, and outcomes sections in the report. Well defined technical terms. Good summary of the work at the end;
- **Data visualization (20%):** Appropriate use of tables, maps, and scientific graphics for information delivery;
- **Professional delivery (20%):** clear, audible voice, appropriate gestures and eye contact that engage the audience, seamless switching between presenters, no between-reports pause for missing presentation, not playing video or similar issues;
- **Answering questions (20%):** questions from the audience are answered in a way that shows that presenter is familiar with the subject;
- **Time management (20%):** presentation time limit is not exceeded and also is not significantly shorter than allocated. For a full grade, presentation time should not be over 10% shorter or 5% longer.

**GRADING EXPECTATIONS FOR WRITTEN RESEARCH REPORT:**

The assignment weight is 30% and grades will be assigned using the following criteria:

- **90-100: Excellent.** Excellent, scholarly, and advanced college-level work that exceeds requirements. Original, insightful ideas, in-depth discussion. Well organized and structured. Very good grammar, careful formatting.
- **80-89.99: Good.** Good college-level work that meets requirements. Original, well organized. Good understanding of the topic is demonstrated. Acceptable grammar. Some areas are noticeably weaker than others.
- **70-79.99: Satisfactory.** Average work. Assignment is not thought through and/or presentation is not cohesive. Improvement is needed on depth, originality of thought, structure, and presentation.
- **60-69.99: Marginal.** Below-average work. Substantial improvements are needed in the areas of content, reasoning, and delivery, as well as grammar and formatting.

- **0-59.99: Failure.** Assignment does not meet the requirements/criteria, is not submitted, or incomplete.

## **CLASS POLICIES**

### ***If you are not able to make it to the class***

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>. Always contact the instructor through Canvas if are going to miss a class or unable to return an assignment in time.

### ***Late assignment submission or skipping a quiz***

Closely follow the course logistics with respect to submission of your work. All assignments (quizzes, problems from the textbook, and labs) are due prior at 9 am on the date of the next class. Late submissions are penalized: Up to 48 hours later -20%. No make-up assignments or quizzes will be allowed except as required by the University Policies. An example of allowed missed assignment is a student athlete's game travel, as requested by his/her trainer's email. **Requirements for class attendance and make-up quizzes, assignments, and other work in this course are consistent with university policies that can be found at:**

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Note that a minor sickness or a short travel will not be considered an excuse for not returning the homework. The reason for point deduction is that you always will be given enough time to complete and return an assignment few days before the due date; **please plan ahead for possible emergency situations.**

### ***Presentations***

If you are unable to deliver a presentation due to a confirmed medical reason or family emergency, it will be re-scheduled for a later date if possible; otherwise 0% credit or an "incomplete" grade will be assigned.

### ***Food***

Water in bottles and spill-proof cups is allowed by the class policies, but may be prohibited in a specific room; food is not allowed. Remember: soft drink spills kill computer equipment.

### ***Special accommodations***

Students requesting special classroom accommodations must first register with the Dean of Students Office. Also, please let the instructor know your needs ASAP.

### ***Miscellanea***

Please switch off the sound on your phones and refrain from using the Internet, playing games, reading the books and other activity unless it is directly related to the course.

Unless an urgent business requires my attention, I will be available for questions **after** the lecture hours. For more complex questions that require substantial time please secure an appointment during my **office hours** by sending an email.

**WEEKLY COURSE SCHEDULE:**

Course schedule. Reading includes Steinberg, Steinberg (SS); Law, Collins (LC); and Price (P) books

W	Lecture	Lab and Assignment	Reading
1	Syllabus	Basics of working with ArcGIS. Navigating a map. Using basic tools.	SS: 1, 2; LC: 1, 2, 3; P: 1
2	Mapping GIS data	Data models. Adding data, working with map layers, creating a map	SS: 2; LC: 4; P: 1, 2
3	Data collection. Online data resources	Explore online GIS databases. Build Gainesville zoning map.	SS: 6; LC: 5; P: 2
4	1 GIS in socio-spatial research. 2 Map projections	Defining map projection. Georeferencing rasters.	SS: 3; LC: 6; P: 3
5	1 Measurements: type of data 2 Mapping GIS data	Creating symbology. Data Labeling.	SS: 7; LC: 7 (8, 9 if needed); P: 4
6	1 Socio-spatial research design. GIS data use ethics. 2 Querying GIS	Building attribute and location queries.	SS: 4; LC: 15b, 17; P: 8a
7	1 Qualitative research methods and GIS. 2 Joining and relating data	Joins. Spatial joins.	SS: 5; LC: 16; P: 9
8	1 Data sampling and Measurement 2 Elementary data analysis: overlay, clipping, dissolving	Proximity analysis	LC: 18a-d, 19a, b; P:10
9	Project consultations	Project consultations	Project consultations
10	Raster data analysis	Explore rasters; learn raster conversion; learn spatial analyst	SS: 7; LC: 20; P: 11
11	1 Overview of basic analysis techniques 2 Introduction to Interpolation	Use interpolation to map the quality of the US DMO web sites	SS: 9 <a href="http://www.esri.com/news/arcuser/0704/files/interpolating.pdf">http://www.esri.com/news/arcuser/0704/files/interpolating.pdf</a>
12	Data documentation and model developments	Introduction to density analysis. Hotspot analysis.	SS: 10 <a href="http://www.cdc.gov/dhdsdp/maps/GISX/training/module3/files/3_hotspot_analysis_module.PDF">http://www.cdc.gov/dhdsdp/maps/GISX/training/module3/files/3_hotspot_analysis_module.PDF</a>
13	Applications of GIS in social science Exploratory spatial statistics	Spatial regression and Autocorrelation Moran's I and Local Moran's I; Interpreting Results	SS: 8 <a href="http://www.arcgis.com/home/item.html?id=71a65d35688a4502b123cbdfc99afdee">http://www.arcgis.com/home/item.html?id=71a65d35688a4502b123cbdfc99afdee</a>
14	Mapmaking basics	Map making lab	P: 5
15-16	Final project presentations	Final project presentation	

**SUCCESS AND STUDY TIPS:**

Read all assigned materials before the class. Reach out to the instructor for further advice whenever you feel that you need help. Challenge yourself by advancing your critical thinking, re-searching more concurrent news, and being aware of the trends/needs/wants of the industries, communities, and destinations through spatial and trend analyses.

### Group Project Contract

Instructions: Please create a Google Doc drive for your group project. Please upload a copy of this form and as a group answer the following questions that involve making decisions about your group project. When you have all come to an agreement and have signed this contract, please upload it in Canvas by Due date for semester.....

Group Name: \_\_\_\_\_

Date: \_\_\_\_\_

#### GOALS:

- What are our team goals for this project?
- What do we want to accomplish?
- What skills do we want to develop or refine?

#### EXPECTATIONS:

- What do we expect of one another about attendance at meetings?
- How will we measure our participation?

- How frequently should we meet? When and How?

- What do we feel is quality work?

**POLICIES & PROCEDURES:**

- What rules can we agree on to help us meet our goals and expectations?

**CONSEQUENCES:**

- How will we address non-performance in regards to these goals, expectations, policies and procedures?

We share these goals and expectations, and agree to these policies, procedures, and consequences. We are fully aware that breaking this contract may significantly impact my group and/or individual grades.

Team member name/Signature



Team member name/Signature

Team member name/Signature

Team member name/Signature

## HMG 6448–GIS and Spatial Analysis for Tourism and Social Data

### COURSE INFORMATION

Credits 3  
Meeting location FLG 2XX  
Meeting times xxxx

### INSTRUCTOR INFORMATION

Andrei P. Kirilenko  
Associate Professor  
Department of Tourism, Hospitality and Event Management  
College of Health and Human Performance  
University of Florida  
240B Florida Gym; 352.2941648; [andrei.kirilenko@ufl.edu](mailto:andrei.kirilenko@ufl.edu)  
Office: 240 Florida Gym  
Office hours: Tuesday, 9:30 – 11:00; Thursday, 10:30 – 12:00, or by appointment.  
TA: TBD

**Department Chair:** Rachel Fu, Ph.D., CHE  
Room FLG 240D; Email: [racheljuichifu@ufl.edu](mailto:racheljuichifu@ufl.edu)

### COURSE DESCRIPTION:

#### 50 words for the catalog

Utilizes the opportunities provided by dynamically developing methods of geographical information systems (GIS) for visualization and geographic analysis of the data. Students will learn basic skills in working with the industry-standard ESRI ArcGIS software and apply their newly acquired knowledge in solving model problems in tourism research, planning, and development.

### COURSE DESCRIPTION:

The course focuses on building spatial data analysis skills using tourism, destination management, and natural resources data. Combining lecture and lab instruction, the course teaches how to utilize the opportunities provided by dynamically developing methods of geographical information systems (GIS) for visualization and geographic analysis of the data. The students will learn basic skills in working with the industry-standard ESRI ArcGIS software and apply their newly acquired knowledge in solving model problems in tourism research, planning, and development. Sample problems include:

- Acquiring digital spatial data from the Internet;
- Mapping data;
- Spatial data analysis;
- Results interpretation.

**PREREQUISITES:**

HLP 6515 Evaluation Procedures in Health and Human Performance or consent of the instructor based on taking similar courses on introductory statistics and/or data analysis.

**COURSE MATERIALS:**

The course materials and datasets are distributed through Canvas.

**Required textbooks**

- S.L. Steinberg and Steinberg, S.J., 2015. GIS Research Methods: Incorporating Spatial Perspectives, Esri Press, Redlands, CA (e-book available from the UF library).
- M. Price, Mastering ArcGIS, 6<sup>th</sup> Ed, McGraw Hill (other editions are acceptable).

**Lab assignments**

- Michael Law and Amy Collins, Getting to Know ArcGIS, 4<sup>th</sup> Ed. ESRI Press, 2015 (do not use previous editions since the labs have changed).

**Computers and software**

Students will gain the access to the software through any of the listed three approaches. The course uses ESRI ArcGIS Desktop 10.x software (Base and Spatial Analyst), which is available:

- Locally – get the ArcGIS Desktop 10.x license from the UF GeoPlan Center at [http://www.geoplan.ufl.edu/licensed\\_software.shtml](http://www.geoplan.ufl.edu/licensed_software.shtml). The software is free.
- At a UF computer labs (<https://labs.at.ufl.edu>). Note that the computer labs may be reserved for classes – plan ahead!
- Remotely from the UFApps (<http://info.apps.ufl.edu>). The software is free but you need fast Internet connection. Install Citrix Receiver prior to using this service.

**Useful Florida GIS Websites**

- <http://www.fgdl.org/metadataexplorer/explorer.jsp>
- [http://www.geoplan.ufl.edu/fgdl\\_source\\_links.htm](http://www.geoplan.ufl.edu/fgdl_source_links.htm)
- <http://www.cityofgainesville.org/PlanningDepartment/MappingandGIS/DataDownloads.aspx>

**COURSE FORMAT:**

The instruction combines lectures, method discussions, student-led presentations, and practical work with data. The course will result in a final project demonstrating students' abilities to work with spatially distributed data.

**COURSE LEARNING OBJECTIVES:****Upon completion of this course the student will:**

- Summarize core concepts and analytical options of GIS available to social scientists;
- Apply GIS in quantitative research using sociodemographic data, surveys, and social networks;
- Use GIS as a tool in spatial analyses on tourism-related issues;
- Generate GIS data.;
- Apply spatial data analysis skills;
- Demonstrate spatial data visualization and presentation skills.

## COURSE AND UNIVERSITY POLICIES:

**PERSONAL CONDUCT POLICY:** Students are expected to exhibit behaviors that reflect highly upon themselves and our University. 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 behaviors that are in violation of this code and the possible sanctions.

Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the instructor or teaching Assistant in this class.

**MAKE-UP POLICY FOR MISSING ASSIGNMENTS:** A student experiencing an illness should visit the UF Student Health Care Center or their preferred healthcare provider to seek medical advice and obtain documentation. If you have an illness, family emergency or death, please contact the Dean of Students Office ([www.dso.ufl.edu](http://www.dso.ufl.edu)) and follow the DSO Care Team procedures for documentation and submission of a request for make-up assignment (<https://care.dso.ufl.edu/instructor-notifications/>). The DSO will contact the instructor. Do not provide any documentation to the instructor regarding illness or family emergency. This is your personal and protected information. The DSO is qualified to receive and verify the documents you provide. The instructor will follow the recommendations from the DSO. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

**ACCOMMODATING STUDENTS WITH DISABILITIES:** Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting their Get Started page at <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs as early as possible in the semester.

**COURSE EVALUATIONS:** 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.ua.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.bluer.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.ua.ufl.edu/public-results/>.

### COVID-RELATED INFORMATION:

- We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms ([Click here for guidance from the CDC on symptoms of coronavirus](#)), please use the UF Health screening system and follow the instructions on whether you are able to attend class. [Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms](#).
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. [Find more information in the university attendance policies](#).

**PRIVACY:** For online portion of this course with recorded materials:

Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

## GETTING HELP:

### Health and Wellness

- U Matter, We Care: If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) or 352 392-1575
- Counseling and Wellness Center: <https://counseling.ufl.edu/>, 352-392-1575
- Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161
- University Police Department, 392-1111 (or 9-1-1 for emergencies) <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](mailto:Learning-support@ufl.edu). <https://lss.at.ufl.edu/help.shtml>
- Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling. <https://career.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. <http://teachingcenter.ufl.edu/>
- Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>
- Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/> On-Line Students Complaints: <http://distance.ufl.edu/student-complaint-process/>

## GRADING:

### Assignments and evaluation

The emphasis is on development of practical skills, not on theoretical framework, hence the class has many assignments. Allocate the appropriate amount of time to this course. You may find it beneficial to study material with a fellow student to get a better grasp of concepts. However, the final version of the assignment that you submit should be your own work. Do not directly copy the work of another student! Homework is preparation for quizzes; therefore, it is counterproductive to let someone else do your thinking. The final grade will be based upon your scores in quizzes, assignments, and project presentation. The total grade G (0-100%) will be a weighted mean of the grades in the following categories:

1. Lab assignments (30%)
2. Quizzes (20%)
3. Term Project: Written Research Report (25%) and Oral Presentation (25%)

**TOTAL 100%**

### GRADING SCALE AND GPA POINTS:

The final percentage points are translated into the letter grades using the following scheme:

Percentage	Letter Grade, GPA pts	Percentage	Letter Grade, GPA pts
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80.00 – 86.99	B (3.0)	60.00 – 66.99	D (1.0)
77.00 – 79.99	C+ (2.33)	Below 60	E = Failing Grade

For example, a student receiving 90% for Homeworks, 80% for Quizzes, 95% for the Project, and 98% for Project presentation will have the final grade of  $90 \times 0.3 + 80 \times 0.2 + 95 \times 0.25 + 98 \times 0.25 = 91.25\%$  with the letter grade of A.

It will take one week to 10 days to get grades posted for each assignment. Please contact your instructor in one week after your grade is posted when you feel there is an error in grading. **Your grade will not be rounded.** More detailed information regarding current UF grading policies can be found here: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>." Any requests for additional extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly.

### **Quizzes**

A short quiz will usually cover the material from the themes after the previous quiz, but expect occasional questions related to the earlier topics. The quizzes will be closed book.

There may be quantitative questions, please bring the calculators or use your smartphones. When a question requires computations, remember (1) to use the units properly; (2) to use the international system of units (SI) when appropriate; and (3) to report the units with your answer. Use a reasonable rounding. For example, if you are asked to calculate the mean distance to a point of interest, the answers “10” or “7 miles” or “9.55684964734 km” will not be awarded full credit. The answer “9.6 km” would be acceptable. **For full credit make sure the instructor is able to read through your handwriting.** 100% grade will require full answer to all questions, a returned blank paper will be scored as 0%, and a reasonable progress towards answering the questions will be evaluated somewhere in between.

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The main content of a class will be completing exercises. Uncompleted exercise will become a home assignment. Return the completed assignments in a form of a short report before the time of the next class. Always send your report through Canvas; do not return a paper copy.

### **Term Group Project**

During the course, students will work in groups on a problem of their interest (subject to the approval by the instructor). The goal of the project is to collect spatially distributed data (primary or secondary), build a map which would describe these data, and interpret it within the context of the chosen topic. Project results should be presented in a form of an oral presentation in class (approx. 25 minutes) and a written research report (due **prior** to the last date of the class). The following list gives examples of appropriate project topics:

- Exploring destination preferences by putting Flickr travel photographs on the map;
- Tracking visitors' trips between the 2014 Winter Olympics venues by mapping Twitter communications;
- Mapping preferred physical exercise locations on the UF campus;
- Mapping the distances to Florida state parks from the local communities.

### **Project presentation**

Students will be asked to orally present in class their research project using Power Point. Their presentation will include all sections of the research report.

### **GRADING EXPECTATIONS FOR WRITTEN RESEARCH REPORT:**

Follow a general convention on report writing, that is, include literature review, data collection, data analysis, discussion, and a list of used literature. Expect 100% grade for using multiple sources of information for preparation of your report, professional data analysis, and in-detail presentation of the topic. Assignment weight is 25%: will be graded on 100% scale).

- **90-100: Excellent.** Excellent, scholarly, and advanced college-level work that exceeds requirements. Original, insightful ideas, in-depth discussion. Well organized and structured. Very good grammar, careful formatting.

- **80-89.99: Good.** Good college-level work that meets requirements. Original, well organized. Good understanding of the topic is demonstrated. Acceptable grammar. Some areas are noticeably weaker than others.
- **70-79.99: Satisfactory.** Average work. Assignment is not thought through and/or presentation is not cohesive. Improvement is needed on depth, originality of thought, structure, and presentation.
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- **0-59.99: Failure.** Assignment does not meet the requirements/criteria, is not submitted, or incomplete.

### GRADING EXPECTATIONS FOR ORAL PRESENTATION

Assignment weight is 25%: will be graded on 100% scale). The following scoring rubric will be used for the oral presentation grading with 0-20 percentage points in each category:

- **Report content (20%):** Appropriate introduction, data, analysis, and outcomes sections in the report. Well defined technical terms. Good summary of the work at the end;
- **Data visualization (20%):** Appropriate use of tables, maps, and scientific graphics for information delivery;
- **Professional delivery (20%):** clear, audible voice, appropriate gestures and eye contact that engage the audience, seamless switching between presenters, no between-reports pause for missing presentation, not playing video or similar issues;
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<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>. Always contact the instructor through Canvas if are going to miss a class or unable to return an assignment in time.

#### ***Late assignment submission or skipping a quiz***

Closely follow the course logistics with respect to submission of your work. All assignments (quizzes, problems from the textbook, and labs) are due prior at 9 am on the date of the next class. Late submissions are penalized: Up to 48 hours later -20%. No make-up assignments or quizzes will be allowed except as required by the University Policies. An example of allowed missed assignment is a student athlete's game travel, as requested by his/her trainer's email. **Requirements for class attendance and make-up quizzes, assignments, and other work in this course are consistent with university policies that can be found at:**

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.



Note that a minor sickness or a short travel will not be considered an excuse for not returning the homework. The reason for point deduction is that you always will be given enough time to complete and return an assignment few days before the due date; **please plan ahead for possible emergency situations.**

### ***Presentations***

If you are unable to deliver a presentation due to a confirmed medical reason or family emergency, it will be re-scheduled for a later date if possible; otherwise 0% credit or an “incomplete” grade will be assigned.

### ***Food***

Water in bottles and spill-proof cups is allowed by the class policies, but may be prohibited in a specific room; food is not allowed. Remember: soft drink spills kill computer equipment.

### ***Special accommodations***

Students requesting special classroom accommodations must first register with the Dean of Students Office. Also, please let the instructor know your needs ASAP.

### ***Miscellanea***

Please switch off the sound on your phones and refrain from using the Internet, playing games, reading the books and other activity unless it is directly related to the course.

Unless an urgent business requires my attention, I will be available for questions **after** the lecture hours. For more complex questions that require substantial time please secure an appointment by sending in an email.

## **WEEKLY COURSE SCHEDULE:**

**Course schedule. Reading includes Steinberg, Steinberg (SS); Law, Collins (LC); and Price (P) books**

<b>W</b>	<b>Lecture</b>	<b>Lab and Assignment</b>	<b>Reading</b>
<b>1</b>	Syllabus	Basics of working with ArcGIS. Navigating a map. Using basic tools.	SS: 1, 2; LC: 1, 2, 3; P: 1
<b>2</b>	Mapping GIS data	Data models. Adding data, working with map layers, creating a map	SS: 2; LC: 4; P: 1, 2
<b>3</b>	Data collection. Online data resources	Explore online GIS databases. Build Gainesville zoning map.	SS: 6; LC: 5; P: 2
<b>4</b>	1 GIS in socio-spatial research. 2 Map projections	Defining map projection. Georeferencing rasters.	SS: 3; LC: 6; P: 3
<b>5</b>	1 Measurements: type of data 2 Mapping GIS data	Creating symbology. Data Labeling.	SS: 7; LC: 7 (8, 9 if needed); P: 4
<b>6</b>	1 Socio-spatial research design. GIS data use ethics. 2 Querying GIS	Building attribute and location queries.	SS: 4; LC: 15b, 17; P: 8a
<b>7</b>	1 Qualitative research methods and GIS.	Joins. Spatial joins.	SS: 5; LC: 16; P: 9

	2 Joining and relating data		
<b>8</b>	1 Data sampling and Measurement 2 Elementary data analysis: overlay, clipping, dissolving	Proximity analysis	LC: 18a-d, 19a, b; P:10
<b>9</b>	Project consultations	Project consultations	Project consultations
<b>10</b>	Raster data analysis	Explore rasters; learn raster conversion; learn spatial analyst	SS: 7; LC: 20; P: 11
<b>11</b>	1 Overview of basic analysis techniques 2 Introduction to Interpolation	Use interpolation to map the quality of the US DMO web sites	SS: 9 <a href="http://www.esri.com/news/arcuser/0704/files/interpolating.pdf">http://www.esri.com/news/arcuser/0704/files/interpolating.pdf</a>
<b>12</b>	Data documentation and model developments	Introduction to density analysis. Hotspot analysis.	SS: 10 <a href="http://www.cdc.gov/dhdsdp/maps/GISX/training/module3/files/3_hotspot_analysis_module.PDF">http://www.cdc.gov/dhdsdp/maps/GISX/training/module3/files/3_hotspot_analysis_module.PDF</a>
<b>13</b>	Applications of GIS in social science Exploratory spatial statistics	Spatial regression and Autocorrelation Moran's I and Local Moran's I; Interpreting Results	SS: 8 <a href="http://www.arcgis.com/home/item.html?id=71a65d35688a4502b123cbdfc99afdee">http://www.arcgis.com/home/item.html?id=71a65d35688a4502b123cbdfc99afdee</a>
<b>14</b>	Mapmaking basics	Map making lab	P: 5
<b>15-16</b>	Final project presentations	Final project presentation	

### SUCCESS AND STUDY TIPS:

Read all assigned materials before the class. Reach out to the instructor for further advice whenever you feel that you need help. Challenge yourself by advancing your critical thinking, re-searching more concurrent news, and being aware of the trends/needs/wants of the industries, communities, and destinations through spatial and trend analyses.