

SSCI 483 – SPATIAL SCIENCES PRACTICUM

Course: SSCI 483 – Spatial Sciences Practicum

Section: 35718R

Lecture-Lab: Thursday 3-6:50pm

Location: AHF (Allan Hancock Foundation) B57A

Website: www.blackboard.usc.edu

Instructor: Dr. Darren Ruddell

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Website: <http://spatial.usc.edu>

Skype: darren.ruddell

Twitter: @SSI_Prof

Office Hours: Tuesday and Thursday 11:30am-12:30pm and by appointment. I am happy to meet in person or asynchronously via email. I am also available via Skype or Adobe Connect most days provided we schedule the meeting in advance. Please take advantage of office hours – it is a great resource.

1. Introduction

The spatial sciences, which focus on the various ways in which geography can be used to acquire, represent, organize, analyze, model and visualize information, have emerged as one of the most important and fastest growing fields in the academy during the past decade. Spatial thinking and the accompanying technologies (GIS, GPS, remote sensing, etc.) are now routinely deployed by scholars across a range of disciplines to study physical and social phenomena as disparate as natural disasters, groundwater flows, health epidemics, migration patterns, and urban poverty. This particular course serves as the capstone for the Spatial Studies Minor and aims to provide students from a variety of backgrounds (i.e. anthropology, architecture, geography, geology, international relations, planning, political science, and sociology) the opportunity to learn how to deploy the aforementioned geospatial technologies to tackle a problem of their choice.

2. Course Objectives

Students who excel in SSCI 483 will be able to:

- Demonstrate advanced facility with one or more of the core geospatial technologies (GIS, GPS, remote sensing, etc.)
- Demonstrate an ability to work in teams and to apply geospatial technology and spatial reasoning skills to an independent project of their choice.

3. Course Deliverables and Grading Scheme

This course serves as a capstone class for students studying spatial studies at USC where students work in groups on a large geospatial project of their choice throughout the entire semester. The students are taught a variety of skills to do with project management, geospatial data handling, presentation, research and writing, and complete a series of assignments that are designed to evaluate their proficiency with the use of these various skills to build a series of geospatial project deliverables.

The first three assignments involve the preparation of an initial scope of work, a Gantt Chart indicating who will do what when, and a revised statement of work that incorporates the various comments and suggestions that were returned to students following the review of their initial scope of work drafts. These three assignments will be completed during the first five weeks and will provide the basic framework for the group projects that follow.

The fourth assignment is a large-format scientific poster (48 by 60 inch maximum dimensions) that describes your project goals, data and analytical methods and results and conclusions at hand. The due date for this assignment will be aligned with the Los Angeles Geospatial Summit so that students can present their posters at this meeting and network with geospatial professionals from across the region. This summit is usually convened in early April and the feedback received may help students as they work to finish up the final pair project deliverables.

The groups will also need to prepare and deliver oral presentations during the final three weeks of the semester. The overall goal of the presentation will be for the individual groups to explain what they set out to accomplish, the methods and geospatial data that was used, what worked and what did not work, the results that were generated, and what they learned while completing this project. Each member of the group must take part of the presentation and the entire presentation can take no longer than 20 minutes. An additional 10 minutes will be provided for the group members to answer questions from the audience and the overall grade awarded for this assignment will be based on the quality of their presentations and their answers to questions from the audience.

The final assignment is the final project report that covers much of the same material as the posters and presentations but using a different format. The timing is such that the students will be able to use the feedback received from the two prior presentations to help shape the project aims, methods and data sources, results, discussion and conclusions included in the final project reports. These reports are limited to 12 pages (with 12 point font, 1 inch margins, single-spacing for text) and will include one or more maps, tables, and other diagrams as well as a list of references that were consulted to complete their projects.

4. Course Assessment

Social Media Interactions	10%
Scope of Work, Initial Draft (Group)	10%
Gantt Chart (Group)	10%
Scope of Work, Revised Draft (Group)	10%
Poster (Group)	15%
Final Presentation (Group)	20%
Final Project Report (Group)	25%

5. Social Media – Twitter

The social media site Twitter has been gaining tremendous currency in the academic world as an instrument for sharing information, commenting on issues related to higher education, as well as addressing challenges in a given field, such as geospatial technologies. As such, it has achieved acclaim for its use as a pedagogical tool to extend the work of the classroom. We are going to use Twitter in this course to complement assignments and activities, in addition to augmenting the analytical work of the class. Beyond its relevance to the coursework, though, you are encouraged to explore the site as to its possibilities for professional networking for yourselves. Make sure to follow me (@SSI_Prof), other members of the class, in addition to following leaders in your field.

Although we will sometimes use Twitter in the classroom, the bulk of your Twitter activity will take place outside of class. You will be required to tweet a minimum of 3 times per week (at least three tweets each week for weeks 1-15 of this course). There are a few simple guidelines for tweeting: 1) they must be relevant to the class (i.e., a response to a reading, a link to a related article, a map or image, a question, etc.); 2) they must be substantive; and 3) they must be respectful. In addition to reading your tweets on a regular basis, I will be using an online archiving tool to keep track of Twitter activity.

You must use the hashtag #SSCI483 to ensure that your tweets are incorporated into the class discussion. Any tweets that do not contain this hashtag will not be counted because the website will not record their activity.

Twitter activity for the course will be graded on a pass/fail basis. If you tweet the requisite number of times (a minimum of three tweets per week – or $3 \times 15 = 45$ total tweets), you will receive an A for this assignment. If not, then you will receive an F.

6. Academic Accommodations

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP and it should be delivered to me early in the semester. DSP is located in STU 301 and is open from 8:30 a.m. to 5:00 p.m., Monday through Friday (213-740-0776; study@usc.edu).

7. Academic Integrity

Academic integrity is a foundational principle of our community and ensuring the highest standards of academic integrity is the collective responsibility of faculty, students, and administrators. There is a process in place to deal with such incidents as cheating, unauthorized collaboration and plagiarism. The Trojan Integrity Guide can be found at <http://www.usc.edu/student-affairs/SJACS/forms/tio.pdf> and the Undergraduate Guide for Avoiding Plagiarism can be found at <http://www.usc.edu/student-affairs/SJACS/forms/tig.pdf>.

8. Important Dates

- 1/13: Spring semester classes begin.
- 1/20: Martin Luther King's Birthday, university holiday
- 1/31: Last day to register & add classes, change enrollment option to Pass/No Pass or Audit, purchase or waive tuition refund insurance or drop a class without a mark of "W," except for Monday-only classes and receive a 100% refund
- 2/4: Last day to drop a class without a grade of "W"
- 2/17: Presidents' Day, university holiday
- 3/17: Spring Recess
- 4/11: Last day to drop a class with a grade of "W"
- 5/2: Classes End
- 5/16: Commencement

9. Course Outline

The course will be organized around the following seven modules and the accompanying lecture and laboratory topics.

Module 1: Introduction

- 1/16: Introduction to Course and Group Formation Discussion

Module 2: Project Formulation

- 1/23: Project Management; and Topic Choice and Group Assignments
Due: Scope of Work Document
- 1/30: Software Architecture; and Group Briefings
Due: Group Gantt Charts
- 2/6: Decision Support Systems; and Group Work Session
- 2/13: Fundamental Geographical Concepts; and Review Statements of Work
Due: Revised Statement of Work
- 2/20: Internet and GIS History; and Groups Report in Plenary
- 2/21: Optional: attend the Los Angeles Geospatial Summit
- 2/27: Poster Design and Planning

Module 3: Group Work Sessions

- 3/6: Group Work Session
- 3/13: Group Work Session
- 3/20: Spring Recess

3/27: Group Work Session

4/3: Group work Session

4/10: Poster Review and Display

Module 4: Presentations

4/17: Presentations

4/24: Presentations

5/2: Course Review

Due: Final Project Report