

**Introduction to Maps and Geographical Information Systems
Spring 2015**

Instructor: Dr. Marcos Luna
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Class Time:
Class Room:
Office Hours:
Website: Canvas (<http://www.salemstate.edu/elearning/>)

Course Description:

This introductory course is designed to provide a working knowledge of maps as a medium of communication and a general overview of Geographic Information Systems (GIS). The cartographic component includes material on map components, history, and use. The GIS component includes historical background, field developments, current trends and future prospects in this rapidly expanding field. Basic methodologies and analytical functions of GIS will be introduced along with additional spatial and geographic concepts including the nature of spatial data, data capture and acquisition, data sources, spatial queries and spatial analysis. Three lecture hours per week. Not open to students who have received credit for GGR150.

Course Goals:

- Develop geographic information literacy
- Become familiar with the wide and expanding scope of geospatial technologies and their applications
- Understand fundamental geographic concepts and principles that underlie spatial thinking, cartography, and geospatial technologies
- Understand how geospatial technologies can be used for exploration, measurement, analysis and communication
- Approach maps and other geospatial representations critically*

Learning Objectives:

- Identify, interpret, and apply methods for determining real-world positions (e.g. coordinates, GPS)
- Describe, interpret and compare the ways in which social and physical phenomena are modeled as geospatial data in a digital environment
- Use geospatial software tools to retrieve, measure, record and interpret characteristics and relationships of spatial phenomena
- Identify and apply good cartographic (i.e. map-making) design principles
- Use cloud-based, geospatial data and technology to communicate effectively

Required Materials:

- Shellito, Bradley. 2014. *Introduction to Geospatial Technologies*. 2nd edition. W.H. Freeman and Company: New York. ISBN-10: 1-4641-3345-X (hardcopy or digital version)

* Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

Course Policies:

- Students are responsible for studying all material found in the posted readings, multimedia and lectures.
- All quizzes and assignments are due before the assigned due dates. Late assignments will not be accepted unless discussed with the professor at least 48 hours BEFORE the due date OR with a documented emergency.
- Students who have questions about readings, lectures, or assignments are strongly encouraged to use the appropriate class discussion forums, or to communicate with the instructor directly, whether by phone, email, or in-person during office hours.
- All students agree to abide by the course Honor Code: “My answers to homework, quizzes and exams will be my own work (except for assignments that explicitly permit collaboration). I will not make solutions to homework, quizzes or exams available to anyone else. This includes both solutions written by me, as well as any official solutions provided by the course staff. I will not engage in any other activities that will dishonestly improve my results or dishonestly improve/hurt the results of others.”
- Salem State University is committed to providing equal access to the educational experience for all students in compliance with Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act and to providing all academic accommodations, aids, and adjustments. Any student who has a documented disability requiring an accommodation, aid or adjustment should communicate with the instructor immediately. Students who have not done so should provide documentation to and schedule an appointment with the Office for Students with Disabilities and obtain appropriate services.
- **The instructor reserves the right to change the course content and syllabus at any time during the semester.**

- **Grading**

Reading Quizzes and Surveys	10%
Lab Applications or Assignments [†]	30%
Final Quizzes	40%
Final Project [‡]	20%
Total:	100%

NOTE: In the event of a university declared critical emergency, Salem State University reserves the right to alter this course plan. Students should refer to <http://www.salemstate.edu/> for further information and updates. The course attendance policy stays in effect until there is a university declared critical emergency.

In the event of an emergency, please refer to the alternative educational plans for this course located in Canvas. Students should review the plans and gather all required materials before an emergency is declared.

[†] Some lab applications or assignments will require peer reviews as well.

[‡] This project will require peer reviews after submission.

Some detail about the assignments:

Please see the detailed reading and assignment schedule below for due dates. If you have questions about any assignment or your grades, please send me an email or come see me.

Reading Quizzes and Surveys

Each week there will be a reading quiz based on the week's reading, videocast, or other delivered content. Unless indicated otherwise, you may take the reading quiz as many times as you like before the due date.

Periodic surveys in the course serve to gather information or feedback. You will receive credit for taking these surveys.

Lab Applications or Assignments

Each week there will be a lab application or assignment. Most lab applications follow the general format of their respective questions in the textbook. For lab applications organized like quizzes, you may submit answers up to five (5) times and receive credit for the highest score before the due date. Some lab assignments require the upload of a file, or open-ended answers. The latter require careful review and will only be graded once.

Final Quizzes

Most weeks will conclude with a graded quiz that assesses your understanding of the delivered content AND the skills you practice with different technologies for that module or week. These quizzes may require more time to work through. You may take these quizzes up to three (3) times and keep the highest score before the due date.

Final Project

In the latter part of the semester, you will work to produce an online, interactive map presentation. More information will be provided at a later date. This product will be shared with the class and each person will peer review the work of at least two to three classmates.

Peer Review

For some labs or assignments, you will be required to peer review the work of your classmates after making your own submission. After uploading your own submission for a given lab or assignment, you will be assigned to peer review the work of your classmates. You will be provided with a clear rubric that enables you to assess and comment on your classmates' work. Peer reviews will be due a week after the due date of the original lab or assignment. **You will only receive credit for your own assignment after you have completed the assigned peer reviews by the given due date.**

Week	Date	Readings	Assignments
Week 1: Course Orientation			
1	Tue. 1/20		ACQUIRE TEXTBOOK – 2 ND EDITION
Week 2: Introduction to Geospatial Technology			
2	Mon. 1/26	1. Ch1 “It’s a Geospatial World Out There” 2. Watch Episode 1 of “Geospatial Revolution” 3. Review the Study Guide	DUE by noon: Chapter 1 Reading Quiz
	Tue. 1/27		
Week 3: Spatial Reference and Systems of Location			
3	Sun. 2/1		DUE by midnight: Geospatial Lab 1.1 DUE by midnight: Chapter 1 Final Quiz
	Mon. 2/2	1. Ch 2 “Where in the Geospatial World Are You?” 2. Watch the LECTURE VIDEO 3. Review the Study Guide	DUE by noon: Ch2 Reading Quiz
	Tue. 2/3		
Week 4: Spatial Reference and Systems of Location			
4	Sun. 2/8		DUE by midnight: Geospatial Lab 2.1 DUE by midnight: Ch2 Final Quiz
	Mon. 2/9	1. Read Ch3 “Getting Your Data to Match the Map” 2. Watch the LECTURE VIDEO 3. Review the Study Guide	DUE by noon: Ch3 Reading Quiz
	Tue. 2/10		
5	Sun. 2/15		DUE by midnight: Georeferencing the SSU Campus Map
	Mon. 2/16	1. Read Ch4 “Finding Your Location with the Global Positioning System” 2. Watch the LECTURE VIDEO 3. Review the Study Guide	DUE: Ch4 Reading Quiz
	Tue. 2/17		
Week 6: Geographic Information Systems			
6	Sun. 2/22		DUE by midnight: Peer Review of Georeferencing the SSU Campus Map DUE by midnight: Ch4 Final Quiz
	Mon. 2/23	1. Read Ch5 “Working with Digital Spatial Data and GIS” 2. Watch the LECTURE VIDEO 3. Review the Study Guide	DUE by noon: Ch5 Reading Quiz

Week	Date	Readings	Assignments
	Tue. 2/24		DUE by midnight: Geospatial Lab Application 4.5
Week 7: Geographic Information Systems			
7	Sun. 3/1		DUE: Geospatial Lab Application 5.2 ArcGIS Version DUE: Ch5 Final Quiz
	Mon. 3/2	1. Read Ch6 "Using GIS for Spatial Analysis" 2. Watch the LECTURE VIDEO 3. Review the Study Guide	DUE by noon: Ch6 Reading Quiz
	Tue. 3/3		
Week 8: Geographic Information Systems			
8	Sun. 3/8		DUE by midnight: Geospatial Lab Application 6.2 ArcGIS Version DUE by midnight: Ch6 Final Quiz
	Mon. 3/9	1. Read Ch7 "Using GIS to Make a Map" 2. Watch the LECTURE VIDEO 3. Review the Study Guide	DUE: Ch7 Reading Quiz
	Tue. 3/10		
Week 9: SPRING BREAK			
9	Tue. 3/17		SPRING BREAK – NO CLASS
Week 10: Geographic Information Systems			
10	Sun. 3/22		DUE: Geospatial Lab Application 7.2 Map DUE: Ch 7 Final Quiz
	Mon. 3/23	1. Ch13 "Digital Landscaping" 2. Watch the LECTURE VIDEO 3. Review the Study Guide	DUE: Ch13 Reading Quiz
	Tue. 3/24		
Week 11: The Geospatial Cloud			
	Sun. 3/29		DUE by midnight: Geospatial Lab Application 13.1 DUE by midnight: Ch13 Final Quiz
11	Mon. 3/30	Ch15 "Life in the Geospatial Cloud and Other Current Developments"	
	Tue. 3/31		DUE by midnight: Peer Review of Geospatial Lab Application 7.2 Map Final Project Topic Due – MUST BE APPROVED
Week 12: The Geospatial Cloud			

Week	Date	Readings	Assignments
	Tue. 4/7		
Week 13: The Geospatial Cloud			
	Tue. 4/14		Online Map Draft #1 Due
	Fri. 4/17	LAST DAY TO WITHDRAW	
Week 14: The Geospatial Cloud			
14	Tue. 4/21		Online Map Peer Reviews Due
Week 15: The Geospatial Cloud			
15	Tue. 4/28	LAST DAY OF CLASS	
16	Tue. 5/5		Revised Online Maps Due by midnight