Geog363 (Spring 2013)
Introduction to Geographic Information Systems

M-W-F 11:15am - 12:05pm; Room: Callcott 005

Instructor: Caglar Koylu Office Hours: MW 10:00am – 11:00 am or by appt.

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Date			Tentative Lists of Topics	Reading
Jan	14	M	Overview of Course & What is GIS	Ch1, Blackboard
	16	W	History/Future of GIS	Ch1, Blackboard
	18	F	Data Display/Cartography	Ch9, Blackboard
	21	M	**No class: Martin Luther King Day**	
	23	W	Data Display/Cartography	Ch9, Blackboard
	25	F	Map Projections/Map Scales	Ch2, Blackboard
	28	M	Map Projections/Map Scales	Ch2, Blackboard
	30	W	Coordinate Systems	Ch2, Blackboard
Feb	1	F	**Lab 1**: Introduction to ArcGIS & Making a Map	Blackboard
	4	M	Lab 1: Extra Information for making maps using ArcGIS	Blackboard
	6	W	Spatial Data Models: Vector & Raster	Ch3, Ch4
	8	F	**Lab 2**: Projections and Coordinate Systems	Blackboard
	11	M	Spatial Data Models: Vector & Raster	Ch3, Ch4
	13	W	Data Formats/Structures	Blackboard
	15	F	GIS Data Acquisition	Ch5, Ch7
	18	M	**Lab 3**: Data Models & Creating GIS Data	Blackboard
	20	W	Georeferencing	Ch6, Blackboard
	22	F	Exam 1 Review	Blackboard
	25	M	**EXAM 1**	Blackboard
	27	W	Attribute Data Model	Ch8, Blackboard
Mar	1	F	**Lab 4**: Image Rectification	Blackboard
	4	M	**Lab 5**: Attribute Data	Blackboard
	6	W	Attribute Query & Spatial Query	Ch10, Blackboard
	8	F	Spatial Analysis	Ch11, Ch12, Ch14
	11	M	**No class: spring break**	
	13	W	**No class: spring break**	
	15	F	**No class: spring break**	
	18	M	**Lab 6**: Attribute Querying & Spatial Querying	Ch16, Blackboard
	20	W	Geocoding	Blackboard
	22	F	**Lab 7**: Spatial Analysis	Blackboard

	25	M	**Lab 8**: Geocoding	Blackboard
	27	W	Network Analysis	Ch17, Blackboard
	29	F	**Lab 9**: Network Analysis	Blackboard
Apr	1	M	**EXAM 2**	
	3	W	Terrain Mapping and Analysis	Ch13, Blackboard
	5	F	**Lab 10**: Terrain Mapping and Analysis	Blackboard
	8	M	Remote Sensing	Blackboard
	10	W	Web-based GIS - Volunteered Geographic Information (VGI)	Blackboard
	12	F	**Lab 11**: Web-based Mapping	Blackboard
	15	M	Census as a GIS Data Source	Blackboard
	17	W	Field Data Collection	Blackboard
	19	F	**Lab 12**: Labs Review	Blackboard
	22	M	Advanced Topics and Future of GIS	Ch18, Blackboard
	24	W	Advanced Topics and Future of GIS	Ch18, Blackboard
	26	F	**Comprehensive Lab Final**	Blackboard
	29	M	Course/Exam Review	Blackboard
May	4	SA	**FINAL EXAM (9:00am) in CSSC 005**	

Objectives:

The purpose of this course is to provide the students with an introduction to geographic information systems (GIS). The student will learn the principles behind a GIS and also gain hands-on experience using ArcGIS Desktop, the leading GIS software in the industry. By the end of the semester, students should be able to:

- Understand the concepts of a GIS and how it can be applied across disciplines
- Appropriately select coordinate systems, map projections and datums
- Create, edit, and transform geographic data into a GIS
- Understand, compute, and interpret fundamental spatial statistics
- Perform data exploration and spatial analysis on geographic data
- Understand fundamental network data models and analysis
- Communicate geographic data and distributions through statistical and map form

Required Text:

Chang 2012, Introduction to Geographic Information Systems, 6th Edition, McGraw-Hill

Course Presentation:

Material will be presented through lectures and laboratories. Lectures, labs and other information will be posted on *Blackboard* (http://blackboard.sc.edu). It is each student's responsibility to access class materials via Blackboard, its help desk can be reached at 777-1800.

Email:

Please update your email address at http://blackboard.sc.edu if you use your personal email account, following "log in"→ "Personal Information" → "Edit Personal Information" → enter your new email address → "Submit". It is your responsibility to set the email address correctly so that you can receive emails from the instructor or classmates.

Grading:

Deliverables	Grade
Pop quizzes	10%
Exam 1	15%
Exam 2	20%
Final Exam	25%
Labs	30%

Quizzes: there will be pop quizzes given periodically in class; each quiz will cover material from a previous class lecture.
Exams: there are three exams in the course; final exam is comprehensive covering all material in the course. No curve for exam scores – you control your own performance.
Labs: each lab assignment will use concepts discussed in the lecture, each lab is due at the beginning of the following lab. In most labs, students are expected to use additional time to complete the lab assignment. Late labs will be assessed with a **20% penalty** in credit per day. Labs overdue for more than 5 days will NOT be accepted.
Attendance: No makeup quizzes or exams will be given except for medical/family emergencies with written proof.

Final Grade: The final grade accessed in the class will be based on the scale: 90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, below a 60 will be an F. The instructor may choose to curve grades (a point or two), but that decision will not be made until after the final exam.

Tips for Success:

- Attend all classes and review materials after classes.
- Take notes and ask questions during lectures.
- Organize review sessions with friends.
- Finish and turn in each lab assignment on time.
- See the instructor if you have questions.

Academic Responsibility:

All graded work in this course must be the product of individual effort. Cheating, plagiarism, or other forms of academic dishonesty will not be tolerated. Students should pay special attention to the expectations of academic responsibility as discussed under "Academic Responsibility" in the *Carolina Community: USC Student Handbook and Policy Guide*. Any student violating the student code of academic honesty will automatically receive a grade of F for this course and be reported to the USC Office of Academic Integrity.