

Course 398F – GIS in the Sciences

Spring 2002

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Textbooks: Clarke, Keith. 2000. Getting Started with Geographic Information Systems. Prentice Hall, Third Edition, 352 pp.

Hohl, Pat and Brad Mayo. 1997. ArcView Exercise Book. OnWord Press, Second Edition, 432 pp.

Class Schedule:

January	14	What is a GIS?	Clarke, Chapter 1
	16	History of GIS	
	21	Martin Luther King Day	Clarke, Ch. 2,7
	23	Maps & Cartographic Design	
	28	Map Projections & Coordinate Systems	Clarke, Chapter 3
	30	GIS Data Formats	
February	4	Global Positioning Systems (GPS)	Clarke, Chapter 4
	6	EXAM # 1 / Class GIS Projects	
	11	Data Issues: Accuracy vs. Precision	
	13	Data Topology	
	18	Attribute Data: Joins vs. Links	Clarke, Chapter 5
	20	Spatial & Attribute Queries	
	25	Data Management	
	27	EXAM #2 / Class GIS Projects	
March	4	Relational Database Design (Part 1)	
	6	Relational Database Design (Part 2)	
	11	Spring Break	
	13	Spring Break	
	18	Spatial Analysis Concepts	Clarke, Chapter 6
	20	Advanced Spatial Analysis	
	25	Site Suitability Models	
	27	Predictive Modeling	
April	1	GIS Class Projects	Clarke, Chapter 8
	3	EXAM #3 / Class GIS Projects	

8	GIS Software & Operating Systems	
10	GIS Data Standards	Clarke, Chapter 9
15	GIS Case Studies	
17	GIS Class Projects	
22	GeoSpatial Databases & the Web	Clarke, Chap. 10
24	The Future of GIS	
29	FINAL EXAM	

Class Objective: This class is designed to introduce students to the basic concepts of cartography, Geographic Information Systems (GIS), spatial analysis and relational database design. It is my desire that students will acquire an understanding about GIS and how to apply it as a decision-making tool in their particular course of study.

Learning or Physical Disabilities: If you have a learning or physical disability that might affect your performance in this class, please inform your instructor and Ms. Kay Benitez, Disability Services Coordinator (x3626). Ms. Benitez will verify your status and provide you with the appropriate assistance.

Writing Skills: Good writing is a valued skill in this course, as it is in most disciplines. Written work that you produce for this class may be included in your junior writing portfolio. For further information on the portfolio requirement, please consult your USCA Undergraduate and Graduate Bulletin or visit Dr. Lynne Rhodes, Director of Writing Assessment or Mr. Karl Fornes, Director of the Writing Room.

Grading: There will be three 30-minute exams and one final exam for this course. No exams will be made up, rescheduled or dropped. In addition to exams, there will a GIS project developed by each student over the course of the semester, which will periodically be turned in and graded. Homework assignments will be given and turned in on a weekly basis. **Several opportunities for extra credit will also be given.

Homework Assignments	200 points
Class GIS Project	300 points
EXAM#1	100 points
EXAM#2	100 points
EXAM#3	100 points
FINAL EXAM	<u>200 points</u>
	1,000 points (Total Possible)
A	=> 900 points
B	800-899 points
C	700-799 points
D	600-699 points
F	< 600

Attendance: Absence from more than two (2) classes will be grounds for removal from the class role.