

GEO 448-GIS Applications (5cr)
MW 5:35-8pm

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Office Hours: 4-515 MW
11-12 T

Course Objective: The primary objective of this course is to survey a variety of private and public sector GIS applications. As a result, this course will introduce the student to a collection of specialized data sources relevant to specific applications. Likewise, the course will emphasize the analysis capabilities of GIS within the context of how they would be applied in the real world. Additionally, the student will be introduced to ESRI's commercial software package ArcInfo. Finally, students will design and implement their own GIS project (given the time constraints of the course ArcView will be used). This project will require students to define a problem, identify the role of GIS, collect/input/analyze data in a GIS.

NOTE: Because of the self-paced and open nature of this course, your personal commitment to the course is important for you to gain as much experience and knowledge as you possibly can. Additionally, you must have taken GEO 447/647 (as a pre-requisite).

Required Text:

Chou, Y. 1997. *Exploring Spatial Analysis in GIS*. Santa Fe: OnWord Press.
Data Disk From GEO 447/647 (CD-ROM from text)

Related Resources:

<http://www.ncgia.ucsb.edu/giscc/> NCGIA Core Curriculum: On-Line
University of South Carolina. *ArcView Reference Materials* (see Lab Library)
ESRI. *Introduction to ArcView GIS* (see Lab Library)
Dr. Gatrell's Personal Arc/INFO & ArcView Notes from Grad School (see Lab Library)

Organization of Course:

The course is organized into several equal parts: 1. Lecture, Discussion, Guests, 2. Mock Applications, & 3. Project (Abstract, Presentation, & Report)

Course Requirements:

1. Students will be evaluated based on class participation, attendance at guest lectures/trips. Attendance will be taken six times during the semester. You will not be penalized for 1 absence. If you are absent more than once, you must have an extreme, legitimate, and documented excuse. Your success in any GIS course requires your attendance. **(50 points).**
2. Project Abstract. 200 Words or less **(10 Points).**
3. Project. The project includes a 3-4 page executive summary of problem, methods, & analysis. Additionally, a student presentation is required. The project can be complete individually or in groups of 2 or 3. Reports must be completed individually **(50 points)**
4. Presentation. Students are required to prepare a separate in-class PowerPoint presentation **(10 pts).**
5. NT sessions. 2 sessions will be completed for a total of **(10 pts)**. The out put for each session will comprised of maps detailing various AI 8.0 operations vis-à-vis the creation of new coverages.
6. The grading scale is as follows:

| | |
|---|---------|
| A | 90-100% |
| B | 80-89% |
| C | 70-79% |
| D | 60-69% |

Note: All averages will be rounded up, for example: 78.2=79, 58.1=59

4. Students are responsible for maintaining academic integrity

WSU is committed to the ideals and principles of social justice. I agree with that commitment and expect to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. WSU does not discriminate on the basis of race, sex, age, disability, veteran status, sexual orientation, color, or national origin. Any suggestions as to how to further a positive learning environment within the WSU community in this class will be greatly appreciated and given the utmost consideration. Additionally, if you have any special needs please do not hesitate to bring those needs to my attention.

NOTE: Course Outline Subject to Change

| <i>Course Outline</i> | | | | |
|-----------------------|---|--------------------------------------|-------------|--|
| Week | Topics | LAB/DUE | Read | |
| March 27 | Syllabus Discuss Project General Applications Discussion -Types | | | |
| April 3 | Guest Speakers Ms. Gwen Buchanan, DCOP Ms. Karen Kimber, WSU Libraries <i>You are to Begin Field Work and Write Project Abstract</i> | | CH 1 & 2 | |
| April 10 | Key Operations -Split -Buffer -Union NT Demonstration (Upstairs) | Abstract | CH 3 & 4 | |
| April 17 | Guest Speaker Mr. Scott Spiker, LIS <i>(Wed No Formal Lab)</i> | Begin Project | CH 7 & 8 | |
| April 24 | Resource Mgt. & Planning Applications | Play with NT | CH 9 | |
| May 1 | AM/FM Demographics | Play w/ NT | CH 5 & 6 | |
| May 8 | SDM -Location-Allocation -Network SDSS | | CH 10 & 11 | |
| May 15 | Pilot Projects Implementation | | | |
| May 22 | <i>Working Sessions on Projects</i> | | | |
| May 29 | Memorial Day Off | <i>Student Presentations on Wed.</i> | | |

EXAM WEEK MONDAY SESSION—TURN IN FINAL PROJECTS