

Introduction to GIS
Course (CIV, ENV, GIS) K146
Meeting Day/Time: Wednesday, 1:00 – 4:40 pm, Room E116
Course Instructor: Meredith Metcalf (Office: Room C202)
Email: meredithmetcalf@yahoo.com (prefer) or mmetcalf@trcc.commnet.edu
Office Hours: Tuesday and Thursday 1:00 pm – 2:00 pm or by appointment

Required Text:

Ornsby, Napoleon, Burke, Groessl, and Bowden. 2010. Getting to Know ArcGIS Desktop (for ArcGIS 10). ESRI Press; Redlands, California.

You will need the required text for each class in order to complete the assignments.

****A USB flash drive is STRONGLY recommended for this course.**

Learning Objectives:

- Become comfortable with reading and interpreting maps
- Create detailed, meaningful maps
- Create and understand a geodatabase
- Understand the core functionality of ArcGIS

Course Structure:

This course is broken into two sections (lecture and lab). However, I have structured this course such that each class involves an introduction to a topic that will be followed by an assignment or exercise that complements or demonstrates the topic.

The first half of the semester provides an introduction to ArcMap and ArcCatalog and basic map making. The second half considers more specific tools that can be performed in ArcMap and ArcCatalog that will allow you to manipulate and analyze the data of interest.

Most classes include a short assignment to be turned in at the end of the session. **Each student is expected to turn in his/her own work for each assignment.**

Grading

10% - Quiz – There will be one quiz within the semester and it will include all that you have been taught at that point in the course.

20% - Final Project Presentation and Final Write-Up – This project is chosen by the student and allows the student to explore something of interest to them and present their findings to the class. More information will follow.

70% - Class Assignments – Assignments will be exercises from the above text and/or additional supplements that I have provided. These assignments will be performed in class. If the assignment is not completed in class, it is necessary that the assignment be completed on your own. All assignments must be emailed to me in electronic form, preferably a word document. In other words, I would like the final maps for each assignment exported from ArcMap as a PDF and imported (copy and paste) into a word document and emailed to me at meredithmetcalf@yahoo.com. Assignments should be saved as your first initial and last name_assignmentXX_date (example: mmetcalf_assignment1_060810). If there are any issues for handing in assignments, please let me know as soon as possible.

Grade Scale: There will be no grading on the normal distribution curve.

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|----|----------------|
| A | 100.00 – 93.50 |
| A- | 93.49 – 90.00 |
| B+ | 89.99 – 87.50 |
| B | 87.49 – 84.50 |
| B- | 84.49 – 79.50 |
| C+ | 79.49 – 77.50 |
| C | 77.49 – 73.50 |
| C- | 72.49 – 69.50 |
| D+ | 69.49 – 63.50 |
| D | 63.49 – 59.50 |
| F | 59.49 – 00.00 |

Tentative Schedule

The meaning of “tentative”, as used here, means that the schedule outlined below is under terms that are uncertain or not final. In other words, required reading, essays, quizzes/exams, and dates **may** change. However, all changes and variations of the schedule will be discussed in class; thus, class attendance is essential for students and excuses for missed assignments or quizzes/exams will not be accepted.

| Date | Topic |
|---------------------------|--|
| January 26 th | Define GIS, introduce ArcGIS, demonstrate how applicable GIS is in all disciplines, explore basics of ArcMap (Chapters 1, 2, and 3) Assignment 1 |
| February 2 nd | Explore basics of ArcCatalog and Symbolizing Features and Rasters (Chapters 4 and 5) Assignment 2 |
| February 9 th | Classifying features and rasters, labeling features, and querying data (Chapters 6, 7, and 8) Assignment 3 |
| February 16 th | Joining and relating tables and selecting features by location (Chapters 9 and 10) Assignment 4 |
| February 23 rd | Preparing data for analysis and analyzing spatial data (Chapters 11 and 12) Assignment 5 |
| March 2 nd | Projecting data in ArcMap, building a geodatabase, and creating features (Chapters 13, 14, and 15) Assignment 6 |
| March 9 th | Editing features and attributes and georeferencing in ArcMap (Chapter 16 and supplemental assignment) Assignment 7 Summary of Final Project Idea DUE |
| March 16 th | **NO CLASS - SPRING BREAK** |
| March 23 rd | Making maps from templates and making maps for presentation (Chapters 18 and 19) Assignment 8 |
| March 30 th | Tracking analyst and animation in ArcMap (Supplemental assignments) Assignment 9 |
| April 6 th | Geostatistical analyst (interpolation methods) and spatial analyst (hillshade, slope, aspect, contours, etc.) in ArcMap (Supplemental assignments) Assignment 10 |
| April 13 th | Model Builder (Chapters 20) Assignment 11 |
| April 20 th | Geoprocessing in ArcGIS with the use of Model Builder (supplemental assignments) Assignment 12 |
| April 27 th | Project Example – Analyze population in California cities that are at risk for earthquakes (supplemental assignment) Assignment 13 (Quiz ???) |
| May 4 th | Independent Work on Final Projects |
| May 11 th | Presentations of Final Projects |

Course Policies

Electronic Devices (cell phones, MP3 players, etc.): These devices must be turned off when entering the room to maintain a respectful class atmosphere. You will be asked to leave if you disregard this requirement.

Late/Missed Work: All assignments are due the following week after it has been assigned unless otherwise specified. After this time the assignment will not be accepted and the student will receive a zero.

Attendance: Missing a day of lecture/lab without prior arrangements will not result in a zero for an assignment. However, the student will be solely responsible for learning any missed material and handing in missed assignments. My contact information is provided at the top of this syllabus. If you inform me well in advance of an absence, I will be happy to make appropriate accommodations.

Make-ups: I need adequate notice to schedule make-ups: at least two weeks for normal life situations and at least one day for sudden emergencies. In case of a dire emergency, contact me as soon as you can through email. I reserve the right to ask for documentation of an emergency-related absence, and to deny a make-up in the absence of a clear life-or-death situation.

Add/Drop: The last day to add/drop and obtain partial tuition refund for this course is February 2nd, 2011.

Withdrawal: The last day to withdrawal from this course is May 9th, 2011.

Incomplete: An incomplete must be finished within 60 days of the last day of the Spring 2011 Semester.

Academic Conduct: It is expected that each student will turn in only his or her own work. Violations of the Student Code are taken seriously. This includes copying or sharing answers on tests or individual assignments, plagiarism, or having someone other than yourself do your work. Depending on the act, a student could receive an F grade on the test/assignment, an F grade for the course, or could be suspended or expelled.

Special Needs

Please inform me as soon as possible if you require any accommodations in addition to those provided here.