

GIS I
GEOG 405/605
Syllabus (1:00-3:45 Mondays) MS321

Instructor: Dr. Scott D. Bassett

Office: Mackey Science 223

Phone: 784-1434

E-mail: sbassett@unr.edu

Office Hours: By Appointment

Teaching Assistants:

Monday 4:00-6:30pm:

Quinn Korbolic (qkorbolic@unr.edu), Office hour: Thursday 3:00-4:00 (MS 224)

Wednesday 1:00-3:30pm:

Luke Ingvaldstad (lucaskirbying@gmail.com), Office hour: Wednesday 12:00-1:00

Course Description: This course is an undergraduate-graduate level course directed at understanding current Geographic Information Systems technology. The class will introduce all students to the latest in ESRI GIS software (ArcGIS 10). GIS layer formats, elementary spatial analysis techniques, and the manipulation of spatially explicit information will be discussed within the classroom. Lab activities will familiarize students with GIS tools to the degree where students completing the course should be able to conduct their own analysis using GIS. Course activities will culminate in a final project to be prepared by each student on their own with the help of the instructor and teaching assistants.

Course Goal:

Goal 1. Provide a general understanding of what can be done using GIS.

Goal 2. Familiarize students with GIS software and the analytical techniques that transcend software packages

Goal 3. Prepare students for taking more advanced GIS courses.

Text:

Longley, P. A., M. F. Goodchild, D. J. Maguire and D. W. Rhind. 2011. Geographic Information Systems & Science (3rd Edition). John Wiley & Sons. 539 pp.

Note: Only portions of the book will be used in the class lectures with other material being used to augment lectures. Test questions will be taken directly from the lectures.

Assignments/Exams:

Three quizzes will be given during the semester. A single project must be prepared by each individual student and approximately one-third of the labs will be dedicated to the completion of the term project. The project must be approved by the instructor. Subsequently, each student will be required to submit a single paragraph description of their topic with an associated title by March 7th and the topic will be reformulated and submitted again on April 4th. Each student will prepare a poster and present their poster on either May 2nd (last day of class) or May 9th (Our scheduled time for the final). Those students with a Monday lab will present their posters May 2nd. Those students with a Wednesday lab will present their posters May 9th. Graduate students

will be required to prepare a 10 minute presentation describing how they intend on using GIS either in their research or within their discipline. These presentations will begin on April 11th and continue in parallel to lecture material.

Exam/Assignments	Undergrad (%)	Graduate (%)
Quizzes (3 quizzes 50 points each)	150 (43%)	150 (40%)
Assignments (2 assignments 10 points each)	20 (06%)	20 (05%)
Labs (8 labs 10 points each)	80 (23%)	80 (21%)
Poster (1 poster 100 points)	100 (29%)	100 (27%)
Graduate Presentation (1 presentation 25 points)		25 (07%)
Total	350 (100%)	375 (100%)

Grades:

93-100% (4.0)	= A	90-92.9% (3.7)	= A-
87-89.9 (3.3)	= B+	83-86.9 (3.0)	= B
80-82.9 (2.7)	= B-	77-79.9 (2.3)	= C+
73-76.9 (2.0)	= C	70-73.9 (1.7)	= C-
67-69.9 (1.3)	= D+	63-66.9 (1.0)	= D
60-63.9 (0.7)	= D-	Below 60 (0.0)	= F

Lecture Attendance Policy: All students must attend class. The instructor and teaching assistants are not responsible for describing unfamiliar classroom material to students who selectively do not attend class.

Lab Assignments: Lab Assignments are due at the start of your lab time during the week noted in the schedule below. Late lab assignments will be marked down at a rate of 10% of the grade per day.

Tardiness: Please be on time. Coming late or leaving early is a sign of disrespect, and it disturbs everybody in the classroom. If you intend on leaving class early please let me know at the start of class so I expect it.

Digital Devices: No digital devices are admitted in class. Therefore, during lecture time you cannot (1) use a cell phone-if you must have your phone on to wait for a call and it comes in, please quietly pick up your stuff and leave the room to answer, (2) tap on your laptop, and (3) listen to music-remove those earpieces before entering the class.

Cheating (i.e. direct copying of work): Cheating is unacceptable and if done will result in the student receiving an F for the course. Collaboration among students is encouraged, however, all written work must be in the students own words.

Disability: If you have a disability and will be requiring assistance, please contact the instructor or the Disability Resource Center (Thompson Building Suite 101) as soon as possible to arrange for appropriate accommodations.

GIS I (GEOG 405/605)

Week 1 January 24 Lab 1	Lecture: Introduction, Overview of GIS, History of GIS, Example Applications Reading: Chapters 1 & 2
Week 2 January 31 Lab 2	Lecture: Types of Data, Data input, Topology Reading: Chapters 3 & 4
Week 3 February 7 Lab 3	Lecture: Spatial Reference/Projections, Cartography Reading: Chapters 5, 6 & 12
Week 4 February 14 Lab 4	Lecture: Types of GIS software, Data Capture, Databases Reading: Chapters 7, 9 & 10
Week 5 February 21	Lecture: President's Day—No Class Reading: None
Week 6 February 28 Lab 5	Lecture: Spatial Data Analysis/ Quiz Reading: Chapter 14
Week 7 March 7 Lab 6	Lecture: Spatial Analysis and Inference Reading: Chapter 15 <i>Poster Topic Due</i>
Week 8 March 14 Spring Break	Lecture: Spring Break—No Class Reading:
Week 9 March 21 Lab 7	Lecture: Spatial Modeling Reading: Chapter 16
Week 10 March 28 Lab 8	Lecture: GIS as part of a team, GIS Law/ Quiz Reading: Chapters 17 & 18
Week 11 April 4 Self Lab	Lecture: GIS Partners Reading: Chapters 19 & 20 <i>Poster Topic Reformulation Due</i>
Week 12 April 11 Self Lab	Lecture: Use of GIS in Anthropology (Graduate Students) Reading: Assigned as needed
Week 13 April 18 Self Lab	Lecture: Use of GIS in Natural Resources (Graduate Students) Reading: Assigned as needed
Week 14 April 25 Self Lab	Lecture: Use of GIS in Planning (Graduate Students)/ Quiz Reading: Assigned as needed
Week 15 May 2	Lecture: Poster Presentations—No Labs Reading: None <i>Final Monday May 9 from noon-2pm: Poster Presentations</i>