Fall 2014
Geography 211
Introduction to Geographic Information Systems
Butte Hall room 501

Steve Stewart & Cathy Benjamin- Instructors
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Email: Cbenjaming@csuchico.edu

Class Time:
Tuesday, Thursday 3:30 – 4:45

Office: Butte Hall 508
Office Hours: TTH 11:00 - 12:30

Course Description:
This class focuses on the use of Geographic Information Systems. Emphasis will be placed on Geographic Information Systems theory. Topics to be covered include history of GIS, projections, graphic portrayal of spatial information, digital data structures, data acquisition, software and hardware for GIS, spatial analysis functions, and an overview Geographic Information Systems (GIS).

Course Objectives:
1. Introduce students to the field of Geographic Information Systems
2. Review the history of Geographic Information Systems
3. Become familiar with projection systems
4. Become familiar with digital data types and models
5. Provide students with an overview Geographic Information System theory
6. Introduce students to spatial operations

Exams:
Two objective exams will be administered (100 pts. each)
   MIDTERMS #1 and #2
Two Quizzes will be administered (25 pts each)
Both Midterms have an applied component (25 pts)

Laboratory exercises:
Approximately 7 lab exercises will be given (Generally 10 pts. each)
Three applied lab projects:
   • The Grand Canyon Lab 25 pts.
   • Web Map Quiz 10 pts and Web Map Project 30 pts.
   • Story Map Project 60 pts.

Laboratory edict:
Please inform the lab manager or supervisor of any technical problems with the lab. This is the lab manager’s expertise and responsibility. I will, however, ensure that technical issues that impact students’ coursework in the lab are resolved as quickly as possible.
Required Materials:

Attendance Policy:
Regular attendance is required. Consistent non-attendance during the first 4 weeks of class will result in the student being withdrawn by the instructor. The responsibility of formally withdrawing from the class after the first 4 weeks is the student’s. Chronic non-attendance after the first four weeks may cause a reduction in the letter grade that was earned or a grade of “F” to be awarded.

Course Grade:
Your final grade for the course will be based on the number of points you accumulate during the semester. The course objectives and associated points are detailed elsewhere in this syllabus. Students who do not formally withdraw and do not complete minimum course requirements will earn a failing grade. Incompletes are at the instructor’s discretion and only granted due to extenuating circumstances.

Late Assignments:
No late work will be accepted. The instructor is aware that technical problems do arise for time to time; therefore, the lowest lab score will be dropped.

Make-ups:
Making up exams is solely at the discretion of the instructor with written documentation expected to substantiate the cause of an unexcused absence.

Cheating:
Collaboration with your fellow students is encouraged; however, you are expected to complete all of the labs individually. Students found cheating on exams or representing the work of others as their own will be given an “F” grade for the exam/assignment and for the course.

Incomplete:
A grade of “I” will be awarded when, due to unanticipated and extenuating personal circumstances, the student can not complete the class. An “I” grade will only be awarded at the written request of the student, given to the instructor prior to the beginning of the final exam week. The instructor has the final determination in awarding an “I” grade.
# Class Schedule

The class schedule and assignments are subject to change at the discretion of the instructor.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Section 01</th>
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</thead>
<tbody>
<tr>
<td>Week One</td>
<td>Introduction&lt;br&gt;History of GIS&lt;br&gt;What is a GIS&lt;br&gt;<em>In class Raster Lab</em>&lt;br&gt;<em>Read Demers Chapter one</em>&lt;br&gt;<em>Photo Flashcard – Due Thursday</em></td>
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<td>Week Two</td>
<td>GIS Data Models – Raster Vs. Vector&lt;br&gt;<em>Read Demers Chapter Four</em>&lt;br&gt;<em>Read ArcGIS Chapters One – Four</em>&lt;br&gt;<em>Lab Three – ArcGIS Exercises 3a – 3c and 4a – 4c</em>&lt;br&gt;<em>Lab 1 - Raster Lab Due Tuesday</em>&lt;br&gt;<em>Lab 2 - Due Thursday</em></td>
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<td>Week Three</td>
<td>GIS Data Models – Vector Vs. Raster&lt;br&gt;<em>Chico Labs</em>&lt;br&gt;<em>Read Demers Chapter Five</em>&lt;br&gt;<em>Read Demers Chapter two</em></td>
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<td>Week Four</td>
<td>GIS Data Models – Vector Vs. Raster&lt;br&gt;<em>Read Demers Chapter Three</em>&lt;br&gt;<em>Lab 3 – Chico Labs Ex #1 Due Tuesday</em>&lt;br&gt;<em>Quiz #1 - Thursday</em></td>
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<td>Week Five</td>
<td>Earth as a Sphere&lt;br&gt;Ellipsoid Models and Datums&lt;br&gt;Projections&lt;br&gt;<em>Chapter 13 ArcGIS Exercises – Projections</em>&lt;br&gt;<em>Read Demers Chapter Six &amp; Seven</em>&lt;br&gt;<em>Lab 4 – Chico Labs Ex #2 Due Tuesday</em></td>
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<td>Week Six</td>
<td>Cartographic Basics&lt;br&gt;<em>Read Demers Chapter Sixteen</em>&lt;br&gt;<em>Lab 5 – Projections and Labels Due Thursday</em>&lt;br&gt;<em>Midterm Review</em></td>
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<td>Week Seven</td>
<td><em>Midterm #1 Tuesday</em>&lt;br&gt;<em>Applied Midterm #1 Thursday</em></td>
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<td>Week Eight</td>
<td>GIS Analysis Functions&lt;br&gt;<em>Lab 6 – SQL Queries</em>&lt;br&gt;<em>Read Demers Chapters Eight &amp; Nine</em>&lt;br&gt;<em>Lab 6 – SQL Queries – Due Thursday</em></td>
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<td>Week Nine</td>
<td>GIS Analysis Functions: Integrated Analysis of Spatial and Attribute Data&lt;br&gt;<em>Read Demers Chapters Ten &amp; Eleven</em>&lt;br&gt;<em>Chapter Ten – ArcGIS exercises – Spatial Selection</em>&lt;br&gt;<em>Lab 7 – Selecting by Location – Due Thursday</em></td>
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<td>Week Ten</td>
<td>GIS Analysis Functions: Integrated Analysis of Spatial and Attribute Data&lt;br&gt;<em>Read Demers Chapter Twelve &amp; Thirteen</em>&lt;br&gt;<em>Applied Lab Project – The Grand Canyon</em></td>
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<td>Week Eleven</td>
<td>GIS Analysis Functions: Integrated Analysis of Spatial and Attribute Data&lt;br&gt;<em>Read Demers Chapter Fourteen</em>&lt;br&gt;<em>Applied Lab Project - Due Tuesday</em>&lt;br&gt;<em>Applied Midterm Tuesday</em>&lt;br&gt;<em>Midterm #2 Thursday</em></td>
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| Week Twelve | Cathy Benjamin  
| Veterans Day Tuesday | Web GIS – Acquiring and Presenting Data |
| Week Thirteen | Cathy Benjamin  
| | ArcGIS Online – Posting GIS data in the cloud  
| | *Applied Project: Web Map*  
| | *Web Map Quiz: Thursday* |
| Week Fourteen | **Thanksgiving Break** |
| Week Fifteen | Cathy Benjamin  
| | Telling a Story with Digital Maps  
| | *Applied Project: Story Map*  
| | *Web Map Project Due Tuesday* |
| Week Sixteen | Cathy Benjamin  
| | *ArcGIS Online – Story Map*  
| | *Story Map Project Due Thursday* |
| Week Seventeen Finals Week | **Final – Tuesday 10:00 – 11:50** |