Geographic Information Systems/ Remote Sensing Capstone Course  
(GEOG 5131/5161/6161)  
Spring 2014, Units: 3  
Prerequisites: Geog 3140, Geog 5140, Geog 5150

Lectures:  
Time: Wednesday, 4:35 pm – 7:35 pm  
Locations: OSH 215

Instructor:  
Name: Phoebe B. McNeally, Ph.D.  
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Office: 180C OSH  
Office Hours: Wednesday, 3:00 pm – 4:00 pm, additional times available on request  
Phone: 801-585-9133

Course description:  
The culmination of GIS/Remote Sensing classroom learning is the application to industry problems. This course provides students with the opportunity to apply their GIS/Remote Sensing skills and knowledge to real-world GIS/Remote Sensing projects in the community. Students, working in small teams, will be provided locally sponsored GIS/Remote Sensing projects which will take them through the GIS/Remote Sensing project life cycle from conception to completion.

Course learning outcomes:  
1. Provide an opportunity to synthesize previous GIS/Remote Sensing learning in a real-world project  
2. Provide practical hands-on experience solving and managing a GIS/Remote Sensing project  
3. Develop professional, portfolio quality GIS/Remote Sensing skills  
4. Develop skills in oral presentations and professional report writing  
5. Provide real-world professional GIS/Remote Sensing experience working with clients

Course overview:  
In this course students will have the opportunity to apply their GIS/Remote Sensing skills and knowledge acquired in previous GIS/Remote Sensing courses to real-world projects in the community. Students, working in small teams (Geog 6161 students will work individually), will be provided a locally sponsored GIS/Remote Sensing project which they will take through the GIS/Remote Sensing project life cycle from conception to completion. The students will be responsible for the development, management and delivery of the project culminating in a presentation (oral and written) to the community GIS/Remote Sensing “client” as well as a poster describing the project. Students will interface directly with a local area GIS/Remote Sensing professional throughout the project. Projects generally progress through the following phases:  
1. Project definition and background (Statement of Work)  
2. Data acquisition and preparation  
3. Data exploration  
4. Data analysis  
5. Project completion and recommendations

Each student project team is supervised by a faculty mentor.
During the course, the following events will occur:

a. In-class lectures and discussions.
b. Visits to the sponsoring GIS/Remote Sensing organization by the student team for client meeting, project information, data collection and other purposes.
c. Statement of Work descriptions consisting of an in-class team presentation and a written Statement of Work contract.
d. Progress meetings, reports, and team evaluations submitted to faculty mentor as well as oral presentations to the class.
e. A final report consisting of an in-class oral presentation and a written final report presented to the sponsoring organization after approval by the faculty mentor.
f. A final map/poster describing the project to be submitted to the Utah Geographic Information Council annual conference student competition.
g. Geog 6161 students will work individually on his/her project and will be graded separately from the Geog 5131/5161 students.

Grading:

Statement of Work written contract: 10%
Statement of Work presentation: 5%
Progress reports and presentations: 15%
Final report: 25%
Final presentation: 20%
Final map/Poster: 10%
Participation/Professionalism/Team evaluations: 15%

Grade Assignment:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>93 – 100%</td>
<td>A</td>
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<tr>
<td>90 – 92%</td>
<td>A-</td>
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<tr>
<td>87 – 89%</td>
<td>B+</td>
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<tr>
<td>83 – 86%</td>
<td>B</td>
</tr>
<tr>
<td>80 – 82%</td>
<td>B-</td>
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<tr>
<td>77 – 79 %</td>
<td>C+</td>
</tr>
<tr>
<td>73 – 76%</td>
<td>C</td>
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<tr>
<td>70 – 72%</td>
<td>C-</td>
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<tr>
<td>67 – 69%</td>
<td>D+</td>
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<tr>
<td>63 – 66%</td>
<td>D</td>
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<tr>
<td>60 – 62%</td>
<td>D-</td>
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Course policies and general information:

1. Canvas will be used and it is the student’s responsibility to check Canvas regularly.
2. All assignments need to be typed and turned in at the beginning of the class. In the case of electronic submittals, assignments must be received prior to the stated deadline (date and time). Late assignments will not be accepted.
3. The University of Utah’s Writing Center (http://writingcenter.utah.edu/) is a good free resource on campus to assist with improving writing skills.
4. Class attendance is required and students need to participate in discussions and project presentations. If you are unable to attend class please notify the instructor by email or phone prior to class.
5. Mobile phones of any type are not to be used in any manner during class or meetings with clients.
6. Students should refrain from using laptops when watching oral presentations.
7. Due to the nature of this course, students are expected to work a minimum of 9 hours a week outside of class.
8. Students will not be allowed to add the class after January 15th, 2014.
9. An “incomplete” will be given only in extreme cases when conditions beyond the student’s control required an extended period of absence.
10. Individual extra credit will NOT be assigned.
11. The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services (CDS), 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.
12. Academic misconduct will not be tolerated. Penalties may include failure of an assignment, the entire course, and/or the filing of formal charges with appropriate university authorities. Academic misconduct includes, but is not limited to, cheating, misrepresenting one's work, inappropriately collaborating, plagiarism, and fabrication or falsification of information, as defined further below. It also includes facilitating academic misconduct by intentionally helping or attempting to help another to commit an act of academic misconduct.
   • “Cheating” involves the unauthorized possession or use of information, materials, notes, study aids, or other devices in any academic exercise, or the unauthorized communication with another person during such an exercise. Common examples of cheating include, but are not limited to, copying from another student's examination, submitting work for an in-class exam that has been prepared in advance, violating rules governing the administration of exams, having another person take an exam, altering one's work after the work has been returned and before resubmitting it, or violating any rules relating to academic conduct of a course or program.
   • Misrepresenting one's work includes, but is not limited to, representing material prepared by another as one's own work, or submitting the same work in more than one course without prior permission of both faculty members.
   • “Plagiarism” means the intentional unacknowledged use or incorporation of any other person's work in, or as a basis for, one's own work offered for academic consideration or credit or for public presentation. Plagiarism includes, but is not limited to, representing as one's own, without attribution, any other individual’s words, phrasing, ideas, sequence of ideas, information or any other mode or content of expression.
   • “Fabrication” or “falsification” includes reporting experiments or measurements or statistical analyses never performed; manipulating or altering data or other manifestations of research to achieve a desired result; falsifying or misrepresenting background information, credentials or other academically relevant information; or selective reporting, including the deliberate suppression of conflicting or unwanted data. It does not include honest error or honest differences in interpretations or judgments of data and/or results.
   • For more details refer to the University of Utah’s Code of Student rights and Responsibilities (“Student Code”) at http://www.regulations.utah.edu/academics/6-400.html
## Course outline (changes may occur during the semester):

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan. 8</td>
<td>Course information and overview, statement of work descriptions</td>
</tr>
<tr>
<td>2</td>
<td>Jan. 15</td>
<td>Project presentations by GIS/Remote Sensing “clients”</td>
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<tr>
<td>3</td>
<td>Jan. 22</td>
<td>No class - project selection and team formation via Canvas</td>
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<tr>
<td>4</td>
<td>Jan. 29</td>
<td>University of Utah Career Services presentation</td>
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<tr>
<td>5</td>
<td>Feb. 5</td>
<td>Statement of work presentations</td>
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<td>6</td>
<td>Feb. 12</td>
<td>No class – project work</td>
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<tr>
<td>7</td>
<td>Feb. 19</td>
<td>Progress meetings – sign up for scheduled times</td>
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<tr>
<td>8</td>
<td>Feb. 26</td>
<td>Progress presentations in class</td>
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<tr>
<td>9</td>
<td>Mar. 5</td>
<td>No class – project work</td>
</tr>
<tr>
<td>10</td>
<td>Mar. 12</td>
<td>Spring Break – No class</td>
</tr>
<tr>
<td>11</td>
<td>Mar. 19</td>
<td>No class – project work</td>
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<tr>
<td>12</td>
<td>Mar. 26</td>
<td>Progress meeting – sign up for scheduled times</td>
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<tr>
<td>13</td>
<td>Apr. 2</td>
<td>Progress presentations in class, Final report/poster Q &amp; A session following reports</td>
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<tr>
<td>14</td>
<td>Apr. 9</td>
<td>No class – project work</td>
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<tr>
<td>15</td>
<td>Apr. 16</td>
<td>Progress meetings – sign up for scheduled times</td>
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<tr>
<td>16</td>
<td>Apr. 23</td>
<td>Final class, wrap-up, feedback, progress meetings, oral &amp; poster presentation run through</td>
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<tr>
<td>17</td>
<td>TBD</td>
<td>Final oral presentations and posters with clients</td>
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## Due Dates (changes may occur during the semester):

- **Project selection form**: January 21st by 12:00 pm
- **Statement of Work written contract**: Feb. 5th
- **Statement of Work class presentations**: Feb 5th
- **Progress reports**: Feb. 19th, March 26th, April 16th
- **Progress class presentations**: Feb. 26th, April 2nd
- **Team evaluations**: Feb. 5th, Feb. 26th, March 26th, April 16th, TBD
- **Final report draft**: April 23rd
- **Final poster draft**: April 23rd
- **Practice final oral presentations**: April 23rd
- **Final oral presentations**: TBD, April 28th – April 30th
- **Final report revisions**: TBD, April 28th – April 30th
- **Final poster revisions**: TBD, April 28th – April 30th

## Other Important Dates:

- **Classes begin**: January 6th
- **Last day to drop classes**: January 15th
- **Last day to add, elect CD/NC, or audit class**: Jan. 21st (Geog 5131/5161/6161 cannot be added after 1/16)
- **Salt Lake User Group Meeting**: Feb. 12th
- **Utah Geographic Information Council conference scholarship applications due**: Feb. 28th
- **Last day to withdraw from classes**: February 28th
- **Utah Geographic Information Council Conference in Richfield**: May 5th - 9th
- **Classes end**: April 23rd
- **Final exams**: April 24th – 30th
- **Graduation**: May 2nd