Geography 4330: Geographical Information Systems
Meets with Anth 4360-002, Crij 4360, Crij 5310, Econ 4350, Padm 5380, Soci 4360
T 6:00-8:45
HPR 275

Fall 2014

Instructor: Dr. E. Cory Sills
Office: Business Bldg. 235
MWF 11:00 am to 12:00 pm
Or by appointment
E-mail: esills@uttyler.edu ph:903-566-7442

Communications: I encourage you to come see me during office hours or directly after class. This is a good opportunity for you to look over your homework, exams, ask questions, or seek clarification. If you cannot attend my office hours you may set-up an alternative time to meet. I will try to respond promptly to your emails. In your email, include your first and last name and that you are enrolled in the GIS class.

Required texts:

Required materials: A flash drive

Catalogue description: Geographic Information Systems Fundamentals of geographic information systems, including data capture, storage, processing, and output. Applications to various problems in the natural and social sciences.

Course objective: This course is a comprehensive introduction to the principles, techniques, and applications of Geographic Information Systems (GIS). The course is designed to combine lectures with practical application of the ArcGIS software. Upon successful completion of this course, you will be able to (1) understand basic concepts and principles of GIS, (2) gain hands-on experience in the use of GIS techniques and software, (3) learn how to analyze information spatially.

Course format: The class will be a combination of lecture and practical application. The first half of class time will be lecture followed by a short break. The remaining class time will consist of practical application (i.e. labs using the software program ArcGIS 10.2) from the textbook. Prior to class time, review the schedule for the class and read the assigned chapter or article. You will have enough time in class to complete most of your lab assignments. If you need more time, the computer lab in the Business Building has ArcGIS software on the computers. The readings for the course allow completion of the labs. The lectures will introduce you to the basic fundamental principles of GIS and will not necessarily cover the same ground as the textbook. Indeed, they are intended to supplement each other rather than to completely overlap. I strongly recommend that you attend every class and complete all of the labs. I encourage relevant questions and comments during class time. A question you have other students might also have, and thoughtful remarks will make the course more interesting for everyone, including myself.

Class Etiquette: I expect everyone in the classroom to be respectful of each other and treat everyone with dignity. I expect comments to be positive and objective and not judgmental and rude. Please refrain from using the computers during class lectures. There will be plenty of time after the lectures to work with the software.

Exams and grading: There will be two exams a mid-term and final. The mid-term will cover the lecture material only. The final exam will cover the lecture material from the second half of the course. Exams could include multiple choice, short answer, essay, or fill in the blank questions. The format of the exam will be discussed in class prior to the exam. Exams are closed book and closed notes. Any communication via an electronic device during an exam will be considered potential cheating. The lab assignments are due on blackboard by 6:00 pm the week after they are assigned (see schedule for due dates).

Make-up tests will be given with a legitimate reason and in rare circumstances. Students should contact the instructor prior to the exam and not after if they will miss the exam. Make-up exams will not be given except when there are
exceptional circumstances (be prepared to provide documentation of your circumstance, such as a doctor’s note, police report, University-excused absence, *et cetera*). Five points will deducted each day for late map exercises.

- **Grading scale:**
  - A 90-100%
  - B 80-89.99%
  - C 70-79.99%
  - D 60-69.99%
  - F 0-59.99%

Mid-term: 20%
Final Exam: 20%
Lab Exercises: 60%
**Total: 100%**

**Graduate Student Required Paper**
The paper is due at the beginning of class 2 December 2014. Each student will write a research paper about the history of GIS in their field or a thesis chapter using GIS. The manuscript should be 12-15 pages, double-spaced (excluding maps and other illustrations and references). Use 12 pt. font, Times New Roman type, with one inch margins. Use the referencing style in your field for citations in your paper and for the bibliography/references cited. Use quotes sparingly.

Mid-term: 15%
Final Exam: 20%
Lab Exercises: 50%
Research Paper: 15%
**Total: 100%**

**Cell Phones/Lap tops:** Turn off your ringer and do not use your cell phone during class – this includes text messaging. If you are expecting an important call please put your phone on vibrate and sit close to the door. This action will help minimize any disturbance to the class. Lap tops are allowed for note-taking, but I reserve the right to ask you to shut your computer down (or to change my class policy) if you are using your computer for uses other than note-taking and disrupting those around you. Please turn off your wifi on lap tops and cell phones before coming to class. Any video, photographic or audio recordings of the class must be approved by me.

**Students Rights and Responsibilities**
To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: [http://www.uttyler.edu/wellness/rightsresponsibilities.php](http://www.uttyler.edu/wellness/rightsresponsibilities.php)

**Grade Replacement/Forgiveness and Census Date Policies**
Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at [http://www.uttyler.edu/registrar](http://www.uttyler.edu/registrar). Each semester’s Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar. Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date is the deadline for many forms and enrollment actions that students need to be aware of. These include:
- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- Schedule adjustments (section changes, adding a new class, dropping without a “W” grade)
- Being reinstated or reenrolled in classes after being dropped for nonpayment
- Completing the process for tuition exemptions or waivers through Financial Aid

**State Mandated Course Drop Policy**
Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2 year or 4 year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date). Exceptions to the 6 drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Disability Services
In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychiatric disabilities. If you have a disability, including nonvisible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to cstaples@uttyler.edu

Student Absence due to Religious Observance
Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University Sponsored Events and Activities
If you intend to be absent for a university sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make up assignments will be completed.

Social Security and FERPA Statement:
It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via email) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation:
Everyone is required to exit the building when a fire alarm goes off. Follow your instructor’s directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not reenter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Scholastic Dishonesty: Academic misconduct includes, but is not limited to, cheating, plagiarism, collusion, falsifying academic records, and any act designed to give an unfair academic advantage to the student (such as, but not limited to, providing false or misleading information in an effort to receive a postponement or an extension on a test), or the attempt to commit such an act. The university’s policy regarding academic misconduct and examples of misconduct can be found here [http://www.uttyler.edu/judicialaffairs/schalisticdishonesty.php](http://www.uttyler.edu/judicialaffairs/schalisticdishonesty.php). Other examples of academic misconduct include:

- Copying from another student's test paper or assignment
- Allowing another student to copy from a test paper or assignment
- Possession during a test of materials which are not authorized by the person giving the test, such as class notes or specifically designed "crib notes." The presence of textbooks constitutes a violation only if they have been specifically prohibited by the person administering the test.

What we cover in the lecture on a day-to-day basis may differ from the attached schedule. I will inform the class via email if topics change.
## Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Day</th>
<th>Date</th>
<th>Tentative Lecture Topic</th>
<th>Lab Assignment</th>
<th>Tentative Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>T</td>
<td>8/26</td>
<td>Mapping the Course/What is GIS?</td>
<td>Lab 1 (Due 9/2)</td>
<td>Syllabus/Introduction of Mastering GIS</td>
</tr>
<tr>
<td>2</td>
<td>T</td>
<td>9/2</td>
<td>Cartography/Map Design</td>
<td>Lab 2 (Due 9/9)</td>
<td>Chapter 1 and 2</td>
</tr>
<tr>
<td>3</td>
<td>T</td>
<td>9/9</td>
<td>GPS</td>
<td>Lab 3 (Due 9/16 for Group 2)</td>
<td>Lab 3 (Due 9/23 for Group 1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Begin Group 1 GPS Project (wear comfortable shoes)</td>
<td>Begin Group 2 GPS Project (wear comfortable shoes)</td>
</tr>
<tr>
<td>4</td>
<td>T</td>
<td>9/16</td>
<td>GIS Data Vector vs. Raster</td>
<td>Lab 4 (Due 9/30)</td>
<td>Chapter 5</td>
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<tr>
<td>5</td>
<td>T</td>
<td>9/23</td>
<td>Attributes and Queries</td>
<td>Lab 5 (Due 10/14)</td>
<td>Mid-Term Exam/Geodesy and Map Projections Part 1</td>
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<tr>
<td>6</td>
<td>T</td>
<td>9/30</td>
<td>Queries SQL/Review for Mid-term exam</td>
<td>Lab 6 (Due 10/21)</td>
<td>Geodesy and Map Projections Part 2</td>
</tr>
<tr>
<td>7</td>
<td>T</td>
<td>10/7</td>
<td></td>
<td>Lab 7 (Due 10/28)</td>
<td>Chapter 11</td>
</tr>
<tr>
<td>8</td>
<td>T</td>
<td>10/14</td>
<td>Spatial Analysis</td>
<td>Lab 8 (Due 11/4 for Group 2)</td>
<td>Qualitative GIS</td>
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<tr>
<td>9</td>
<td>T</td>
<td>10/21</td>
<td></td>
<td>Lab 2 (Group 1 Qualitative GIS)</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>10</td>
<td>T</td>
<td>10/28</td>
<td>Qualitative GIS</td>
<td>Lab 8 (Due 11/11 for Group 1)</td>
<td>Spatial Analysis/Group 2 wear</td>
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<tr>
<td>11</td>
<td>T</td>
<td>11/4</td>
<td></td>
<td>Lab 2 (Group 2 Qualitative GIS)</td>
<td>comfortable shoes</td>
</tr>
<tr>
<td>12</td>
<td>T</td>
<td>11/11</td>
<td>Geocoding</td>
<td>Lab 9 (Due 11/18)</td>
<td>Geocoding</td>
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<tr>
<td>13</td>
<td>T</td>
<td>11/18</td>
<td>Add Qualitative Data to the GIS of street lights</td>
<td>Lab 10 (Due 12/2)</td>
<td>Geocoding</td>
</tr>
<tr>
<td>14</td>
<td>T</td>
<td>11/25</td>
<td>NO CLASS HOLIDAY!</td>
<td>Lab 10 (Due 12/2)</td>
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<tr>
<td>15</td>
<td>T</td>
<td>12/2</td>
<td>3D Methods/Review for Final</td>
<td>No Lab</td>
<td></td>
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<tr>
<td>16</td>
<td>T</td>
<td>12/9</td>
<td>FINAL EXAM 6:30-8:30 pm</td>
<td>No Lab</td>
<td></td>
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</tbody>
</table>

All lab assignments due on blackboard by 6:00 pm on Tuesdays