Texas A&M University - Corpus Christi
College of Science and Technology
Department of Computing Sciences
Geographic Information Science Program

Spring 2015 Course Syllabus

COURSE NAME: GISC 3421: Visualization for GIS – Lecture and Laboratory (4 Credits)

INSTRUCTOR: Ms. Seneca Holland
Office: CBI 108, Phone: (361) 825-3712
Email: Seneca.holland@tamucc.edu

CONSULTATION: 8:30 AM – 9:30 AM M/W/F 11:00-12:30PM M/W or by appointment.

LECTURE TIMES: Tuesday/Thursday 9:30AM – 10:45AM

LECTURE LOCATION: CI 229

LAB TIMES: 2:30AM – 5:20PM Thursday

LECTURE LOCATION: CI 229

LAB/COURSE TA: TBD

TA CONSULTATION: TBD

COURSE WEBSITE: The Island Online (IOL) at: http://iol.tamucc.edu

COURSE DESCRIPTION:
Basic elements of thematic cartography, cartographic theory, and cartographic projections. Integration of cartographic principles with GIS visualization. Principles of map design with GIS data.

LEARNING OBJECTIVES:
- Describe and explain map types, cartographic design process, map projections, and spatial data collection and processing.
- Describe and explain cartographic theories of perception and design.
- Recognize and choose appropriate map projections for different map types and purposes.
- Apply principles of GIS visualization by producing maps.
- Critique peer-designed maps and recommend design changes to improve the maps' cartographic quality.

REQUIRED TEXTS:
ISBN-10: 0072943823
COURSE REQUIREMENTS:

- Attendance at lecture and participation in class discussion
- Completion of assignments by scheduled due dates
- Completion of exams by scheduled due dates
- Completion of labs by scheduled due dates

REQUIRED SOFTWARE & HARDWARE:

- Windows Operating System (XP/Vista/7).
- ArcGIS 10.2 with 3D Analyst and Spatial Analyst extensions. This is provided in lab on campus. If attending online, software will be provided as a download.
- Adobe PDF viewer. (e.g. Adobe Acrobat Reader).
- Video player able to play MPEG-4 video (Quicktime, VLC, Windows Media Player).
- Web browser with Java Virtual Machine installed.
- Speakers or headphones connected to computer is required for online students.
- Microphone or headset connected to computer.
- High-speed internet access required.
- Web camera is required for online students for online testing through Examity.

EVALUATION:

- Exam 1: 15%
- Exam 2: 15%
- Exam 3/Final Exam: 15%
- Laboratory assignments: 40%
- Semester Project: 15%
- TOTAL: 100%

GRADE COMPUTATION:

- A ≥90
- B ≥80 and <90
- C ≥70 and <80
- D ≥65 and <70
- F <65

DUE DATES:
All assignments must be completed on time. Submission of an assignment after the due date is accepted, but with a penalty of 30% of the grade for the first 24 hours late, and 10% each additional 24 hours.
COURSE OUTLINE:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Readings</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Overview and Introduction</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>2</td>
<td>Introduction to Maps and Mapmaking</td>
<td>Chapters 1</td>
<td>None</td>
</tr>
<tr>
<td>2</td>
<td>Introduction to Thematic Maps</td>
<td>Chapter 1</td>
<td>Making Your First Map</td>
</tr>
<tr>
<td>3</td>
<td>Revisiting Geodesy and Coordinate Systems &amp; Map Critique</td>
<td>Chapter 2</td>
<td>None</td>
</tr>
<tr>
<td>3</td>
<td>Revisiting Coordinate Systems and Scale</td>
<td>Chapter 2</td>
<td>Map Projections</td>
</tr>
<tr>
<td>4</td>
<td>Map Projections &amp; Map Critique</td>
<td>Chapter 3</td>
<td>None</td>
</tr>
<tr>
<td>4</td>
<td>Nature of Data and Selection of Symbols</td>
<td>Chapter 4</td>
<td>Working with Thematic Maps</td>
</tr>
<tr>
<td>5</td>
<td>Descriptive Statistics &amp; Map Critique</td>
<td>Chapter 5</td>
<td>None</td>
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<tr>
<td>5</td>
<td>Data Classification</td>
<td>Chapter 5</td>
<td>Data Classification</td>
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<tr>
<td>6</td>
<td>Exam Review &amp; Map Critique</td>
<td>None</td>
<td>None</td>
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<tr>
<td>6</td>
<td>Map Design &amp; Map Critique</td>
<td>None</td>
<td>Using Color Effectively</td>
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<tr>
<td>7</td>
<td>Map Design &amp; Map Critique</td>
<td>Chapter 12</td>
<td>None</td>
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<tr>
<td>7</td>
<td>Exam 1</td>
<td>Chapter 12</td>
<td>Layouts and Figure Ground Relationships</td>
</tr>
<tr>
<td>8</td>
<td>No Class - Spring Break</td>
<td>None</td>
<td>None</td>
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<tr>
<td>8</td>
<td>No Class - Spring Break</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>9</td>
<td>Map Design &amp; Map Critique</td>
<td>Chapter 14 &amp; 15</td>
<td>Semester Project Prospectus</td>
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<tr>
<td>9</td>
<td>Map Design &amp; Color Principles</td>
<td>Chapter 14 &amp; 15</td>
<td>Make Your Best Map Yet</td>
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<tr>
<td>10</td>
<td>Color Principles &amp; Map Critique</td>
<td>Chapter 14 &amp; 15</td>
<td>None</td>
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<tr>
<td>10</td>
<td>Use of Type</td>
<td>Chapter 13</td>
<td>Annotation in Arc Map</td>
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<tr>
<td>11</td>
<td>Use of Type and Map Critique</td>
<td>Chapter 13</td>
<td>None</td>
</tr>
<tr>
<td>11</td>
<td>The Choropleth Map</td>
<td>Chapter 6</td>
<td>Thematic Mapping: The Choropleth Map</td>
</tr>
<tr>
<td>12</td>
<td>The Choropleth Map &amp; Map Critique &amp; Exam Review</td>
<td>Chapter 6</td>
<td>None</td>
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<tr>
<td>12</td>
<td>Exam 2</td>
<td>None</td>
<td>Thematic Mapping: The Dot Density Map</td>
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<td>13</td>
<td>The Proportional Symbol Map</td>
<td>Chapter 7</td>
<td>Thematic Mapping: The Proportional Symbol Map</td>
</tr>
<tr>
<td>13</td>
<td>The Dot Density Map &amp; Map Critique</td>
<td>Chapter 9</td>
<td>Thematic Mapping: The Flow Map</td>
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<tr>
<td>14</td>
<td>Flow Maps</td>
<td>Chapter 11</td>
<td>Work on Final Project</td>
</tr>
<tr>
<td>14</td>
<td>Isarithmic and 3D Maps &amp; Map Critique</td>
<td>Chapter 12</td>
<td>Work on Final Project</td>
</tr>
<tr>
<td>15</td>
<td>Special Topics &amp; Map Critique</td>
<td>TBD</td>
<td>Work on Final Project</td>
</tr>
</tbody>
</table>
15 | No Class – Work on Final Projects | None | Work on Final Project
16 | Exam Review and Jeopardy | None | Final Project Due

Exam 3/Final Exam | None | None

Note: This course outline is a general plan for the course; deviations announced to the class by the Instructor may be necessary. The assignments that are given are related to Student Learning Outcomes stated above.

ADDITIONAL POLICIES AND INFORMATION:

Technological Excuses: Hard drive crashes and other computer woes will not be accepted as excuses for late submission. Students should, given the complexity of the tasks they will pursue, be sure that they maintain adequate backup copies of all aspects of their work. Additionally, plan ahead so that you will have time to use the on-campus computers and printers if necessary. You may NOT submit papers/assignments by e-mail. If for some reason you feel you have to do this, you must ask for, and receive, permission ahead of time; furthermore, you may not consider an e-mailed paper/assignment to be submitted until you have received a reply confirming that I have received the paper/assignment.

Examity: This course will require the use of exam-proctoring involving third party charges. Exam-proctoring charges may range from $1 - $50.00 per exam. Students will be required to schedule exams at least 24 hours in advance or incur late scheduling charges. All costs for exams are the responsibility of the student. Students will be responsible for providing webcams to be used in test proctoring.

Communication about Life Events: It is your (student’s) responsibility to keep up with the course instruction, assignments, and examinations. Should a life event interrupt your ability to meet these responsibilities, you must inform the instructor about this as soon as possible and within a reasonable amount of time so that a course of action can be determined. Communicating with the instructor about these life events in an unreasonable time frame is not acceptable and will not change the outcome of missed work nor will it be a valid reason to receive an ‘Incomplete’ designation for the course.

Academic Integrity/Plagiarism: University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will include, but not be limited to a grade of zero for the assignment, and referral to the office of academic affairs.

Dropping a Class: I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping
the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Refer to the University’s official academic calendar (http://www.tamucc.edu/academics/calendar/) to determine the last day to drop a class with an automatic grade of “W” this term.

**Classroom/professional behavior:** Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

**Grade Appeals (College of Science and Engineering Version):** As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage (http://sci.tamucc.edu/students/GradeAppeal.html). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

**Disabilities Accommodations:** The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

**Statement of Academic Continuity:** In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the
syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.