GISC 2438.001/2438.201/2438.W01/2438.W11
Department of Computing Sciences
Fall 2015

A. COURSE INFORMATION

Course number/section:  GISC 2438.001/2438.201/2438.W01/2438.W11
Class meeting time:  TR 12:30-1:45 PM    Lab T 2:00-4:50 PM
Class location:  CS 103   Lab CI 229
Course Website:  https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor:  TBA
Office location:
Office hours:
Telephone:
e-mail:
Appointments:

C. COURSE DESCRIPTION

This course offers an introduction to the design and development of web GIS software to solve spatial problems. Topics covered include programming basics, web GIS architecture and components, JavaScript programming, and design and implementation common tasks in web-based GIS applications.

D. PREREQUISITES AND COREQUISITES

GISC 1470 and C’OSC 1435
Corequisites
None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)

Other References
- W3Schools online web tutorial, http://www.w3schools.com/
Google Maps JavaScript API V3:  
http://code.google.com/apis/maps/documentation/javascript/


Supplies

Required Software & Hardware for Online Students

• Windows Operating System (XP/Vista/7).
• Adobe PDF viewer. (e.g. Adobe Acrobat Reader).
• Web browser with Java Virtual Machine installed.

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:

1). Understand Web GIS basic architecture and components.
2). Understand HTML and CSS concepts necessary for web page development.
3). Design and build JavaScript programs for web applications.
4). Develop basic google maps applications for geospatial application.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

In class and online lectures.

Note to Online Students

Lectures will be posted on Class BlackBoard immediately after the in-class meeting. It is your responsibility to read the lectures in a timely fashion so you stay up with the course. Laboratory assignments will also be posted on BlackBoard and will be completed on your home computer and must be submitted digitally to the BlackBoard Online on time. You are responsible for installing the required software in a timely fashion and keeping your home computer in working order.
H. MAJOR COURSE REQUIREMENTS AND GRADING

[delete and insert a statement of how the student learning outcomes described in Section F will be measured, i.e., what assessment tools will be used. Criteria for success (often called rubrics) should be developed so that students understand what is expected of them, and so that they can use feedback to see where they need to strengthen their performance. Please refer to the attached references for guidance in creating rubrics.]

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>15%</td>
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<td>Exam 2</td>
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<td>Exam 3</td>
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<tr>
<td>Digital Course Portfolio</td>
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<tr>
<td>Lab Reports</td>
<td>30%</td>
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<tr>
<td>Project</td>
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</table>

I. COURSE CONTENT/SCHEDULE

[Delete and insert a list of topics (by day or week) including dates, reading assignments, homework problems, or other activities. Indicate exam dates, holidays, and any other important dates for students such as the last day to drop the class.]

<table>
<thead>
<tr>
<th>DATE (BY DAY OR WEEK)</th>
<th>TOPIC</th>
<th>CHAPTER(S)</th>
<th>ASSIGNMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course introduction</td>
<td></td>
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<tr>
<td>2</td>
<td>The Web and GIS</td>
<td>Handouts</td>
<td>Lab 1: Create your website</td>
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<tr>
<td>3</td>
<td>HTML/XHTML CSS</td>
<td>Handouts</td>
<td>Lab 2: Design and Create Your E-Portfolio</td>
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<tr>
<td>4</td>
<td>Introduction to JavaScript</td>
<td>[DG] Ch 1</td>
<td>Lab 3: Basics of Javascript</td>
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<tr>
<td></td>
<td>Working with functions</td>
<td>[DG] Ch 2</td>
<td></td>
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<tr>
<td>5</td>
<td>Data types and operators</td>
<td>[DG] Ch 2</td>
<td>Lab 4: Javascript: functions, data types and operators</td>
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<tr>
<td></td>
<td>Exam 1</td>
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<tr>
<td></td>
<td>Building arrays and control structures</td>
<td>[DG] Ch 3</td>
<td>Lab 5: Javascript: arrays and control structures</td>
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<tr>
<td>7</td>
<td>Validating form data with JavaScript</td>
<td>[DG] Ch 5</td>
<td>Lab 6: Javascript: Browser Object Model, Forms</td>
</tr>
<tr>
<td>8</td>
<td>Manipulating data in strings and arrays Introduction to the Document Object Model (DOM)</td>
<td>[DG] Ch 7</td>
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<td></td>
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<td>[DG] Ch 10</td>
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<table>
<thead>
<tr>
<th></th>
<th>Google Maps Application &amp; Development</th>
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<tbody>
<tr>
<td>9</td>
<td>Introduction to the Google Maps API Creating your first map Exam Review Session</td>
</tr>
<tr>
<td>10</td>
<td>Markers and Icons</td>
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**Exam 2**

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<thead>
<tr>
<th></th>
<th>InfoWindow Tips and Tricks (Project proposal due) Creating polylines and polygons</th>
<th>[GS] Ch 7</th>
<th>Lab 10: Google Maps Applications – Events</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dealing with massive numbers of markers Location,location,location</td>
<td>[GS] Ch 8</td>
<td></td>
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<tr>
<td>12</td>
<td></td>
<td>[GS] Ch 9</td>
<td>Lab 11: Google Maps Applications – polygons, numbers of markers</td>
</tr>
<tr>
<td></td>
<td>Direction Fusion Table</td>
<td>Handouts</td>
<td>Lab 12: Google Maps Applications – Geocoding and Direction</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Review</td>
<td>Handouts</td>
<td>Work on the project</td>
</tr>
<tr>
<td>15</td>
<td>Project presentations</td>
<td></td>
<td>Project report due</td>
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Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

**J. COURSE POLICIES**

**Attendance/Tardiness**

[delete and list specific policy for this course if used]
Late Work and Make-up Exams
Each of the labs will have a due date clearly written under the title of the lab. All labs must be completed on time. Any lab that is turned in after the due date is considered late. Submission of a late lab is accepted, but with a penalty of 10% of the grade per day (including weekends). Late lab will only be accepted up to ONE WEEK after they are due. Exceptions are possible only with prior permission and for exceptional cause (with written documentation). Please work well ahead of the deadlines!

Others
Each student must: 1) submit a one-page project proposal by the 10th week. 2) present and demonstrate the project during a scheduled project presentation time, and 3) submit a final project report, including PowerPoint slides and your code by the end of the semester.

The project proposal must include the objective of the project, GIS data and main functions.

Each student will have 10 minutes for presentation and 5 minutes for questions to demonstrate your application. In addition to the essential information described in your GIS application, a live demonstration of your application must accompany the presentation.

It’s a good idea to browse online sources to see what JavaScript have been developed for Google Maps Applications. This will give you a sense of the scope and complexity of the program. However, you must acknowledge the sources of any codes that you borrow in your application. You will fail this class if you commit plagiarism.

Digital Course Portfolio
Purpose - Being prepared to produce professional presentation of work conducted in order to meet the needs of industry

Requirement - Each student is required to prepare a professional digital course portfolio online, including at least labs and projects.

K. COLLEGE AND UNIVERSITY POLICIES
- Academic Integrity (University)
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 result in a failing grade.
• 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.

• Statement of Civility
Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

• Deadline for Dropping a Course with a Grade of W (University)
The grade of W will be assigned to any student officially dropping a course. Please consult with the instructor before you decide to drop to be sure it is the best thing to do. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Should dropping the course be the best course of action, visit the Office of the University Registrar for the Course Drop Form that must submitted. No student is eligible to receive a W without completing the official drop process by this deadline. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

• Grade Appeals (College of Science and Engineering)
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 at 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.

- **Disability Services**
  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 (361) 825-5816 or visit Disability Services 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.

http://disabilityservices.tamucc.edu/

- **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.

L. **OTHER INFORMATION**

- **Academic Advising**
  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.