GISC4590. W01 Selected Topics: Web GIS
Department of Computing Sciences
Summer 1 2019

A. COURSE INFORMATION

Course number/section: GISC4590/W01
Class meeting time: Fully Online
Class location: Fully Online
Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Dr. Yuxia (Lucy) Huang
Office location: CBI 109
Office hours: TR 9:30 AM – 12:00 PM
Telephone: 361-425-2646
e-mail: Lucy.Huang@tamucc.edu
Appointments: by emails

C. COURSE DESCRIPTION

Catalog Course Description

Web GIS is a promising field with great applicability to e-government, e-business, e-science, and daily life. This course will focus on how to publish and share GIS data, maps, and tools online and build Web GIS apps easily and quickly to make them accessible to everyone. The topics ranging from the fundamental concepts to cutting-edge technologies in Web GIS are covered in this course. In addition, hands-on tutorials in these topics are provided.

D. PREREQUISITES AND COREQUISITES

Prerequisites
None

Corequisites
None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)

Optional Textbook(s) or Other References
None
Supplies

None

Required Software & Hardware
- ESRI’s ArcGIS Pro (2.1 +)
- 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 and Microphone connected to computer.
- High-speed internet access required.

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. Create a hosted feature layer and how to create a web app using story maps
2. Create and share web apps
3. Create Mobile GIS Applications
4. Publish and share map services, feature services, and image services
5. Customize Web GIS applications with ArcGIS API for JavaScript

G. INSTRUCTIONAL METHODS AND ACTIVITIES

This is a fully online course. The course will be conducted online through BlackBoard and emails. You are responsible for:

1. Checking BlackBoard and emails (your islander account) daily for announcements, lecture slides, assignments, and etc. Course content such as lecture slides and assignments will be delivered on BlackBoard. It is your responsibility to check BlackBoard in a timely fashion so you stay up with the course.
2. Installing the required software in a timely fashion and keeping your home computer and internet access in working order.
3. Submitting assignments digitally to the BlackBoard online by the due date. Assignments will be completed on your home computer.
H. MAJOR COURSE REQUIREMENTS AND GRADING

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Assignments/labs</td>
<td>80%</td>
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<tr>
<td>Term Project and Presentation</td>
<td>20%</td>
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The following grading scale applies:

- A >90
- B 80 and <90
- C 70 and <80
- D 60 and <70
- F <60

Assignments/labs
There are tentatively four (4) assignments/labs. Each assignment is a lab and requires ArcGIS Online and a web browser to complete the lab. Some labs also require ArcGIS Pro (2.1+). The assignments will be posted on BlackBoard every Monday.

Term Project
Each student is required to develop a project by the end of the semester. The project will allow students to develop a Web GIS application based on what they have learned from this course. Each student must: 1) submit a half a page double spaced project proposal; 2) Design and implement the Web GIS application; 3) present and demo the application. Your web app URL and a youtube link of your presentation are required to submit; and 4) Complete a project report. The length of the report is 3-5 pages, 12 pt Times New Roman font, double-spaced, 1” margins, and 8.5” by 11” paper space.
I. **COURSE CONTENT/SCHEDULE**

<table>
<thead>
<tr>
<th>Week</th>
<th>TOPIC</th>
<th>CHAPTER(S)</th>
<th>ASSIGNMENTS</th>
</tr>
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</table>
| 1 (June 3 – 7) | Web GIS Introduction  
                       Hosted feature layers  
                       Esri Story Maps  
                       Web AppBuilder for ArcGIS | Chapters 1-3  | Lab 1        |
| 2 (June 10-14) | Mobile GIS  
                       Tile layers, map image layers | Chapters 4-5  | Lab 2        |
| 3 (June 17-21) | Spatial temporal data and real-time GIS  
                       3D Web scenes | Chapters 6-7  | Lab 3, Project proposal due |
| 4 (June 24-28) | Spatial analysis and geoprocessing  
                       Image Service and Online raster analysis | Chapters 8-9  | Lab 4        |
| 5 (July 1-3) | Web GIS programming with ArcGIS  
                       API for JavaScript | Chapter 10   | Project      |
| July 5 (Final Exam) | Project Presentation |             | Project report and presentation due on July 5th |

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**

**Late Work and Make-up Exams**
All assignments have a specific due date and it must be completed on time. Check the Section “Course Outline” for the due date for each assignment. Any assignment that is turned in after the due date is considered late. Submission of a late assignment is accepted, but with a penalty of 10% of the grade per day (including weekends). *Late assignments 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!*

**Extra Credit**
There is no provision for “extra credit”. No final grades will be given via the telephone, e-mail, etc.

**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 labs/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 lab/assignment to be submitted until you have received a reply confirming that I have received the paper/assignment.

Others
• Unless explicitly noted otherwise, the work in this course is to be done independently.
• Grades can be appealed up to two weeks after they have been posted; no appeals will be considered after that time.

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)
  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 your academic advisor, the Financial Aid Office, and me, before you decide to
drop this course. 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. 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.