GEOG 3363 Computer Cartography

Course Information

Instructor

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Course Description

This course is designed to introduce the students to cartography and computer. During the process you will learn the fundamentals of thematic mapping, including geodesy, projections, basemap compilation, data measurement and analysis, map design and construction, and other cartographic concepts. Topics that will be covered include (but not limited to):

- Get familiar with using ArcGIS in computer cartography
- Understand the basics of map projection
- Learn to create different choropleth maps using various classification schemes
- Learn to acquire and use external attribute data in mapmaking
- Learn to make dot density and proportional maps
- Gain experience creating a wide variety of map themes
- Understand cartographic conventions

Textbook (optional)

• Cartography: Thematic Map Design by Borden Dent, et al, McGraw-Hill

Software

The primary GIS software used in this course is ArcGIS. If you do not have access to a computer with ArcGIS installed, I can give you a free student version (including the extensions) with a one-year license that you may install on your own PC. Please download a copy of ArcGIS for Desktop at the following address:

http://www.esri.com/landing-pages/software/arcgis/arcgis-desktop-student-trial

After you download the software, please let me know so I can send you an activation code. The current version of ArcGIS is 10.3, but any early version of 10 should work as well.

Exams and Grading

This class will be lab-intensive. I tentatively plan to have eight lab exercises/assignments with each counting 50 points. There will also be a lab final (200 points) and a final project (200 points). Here is the breakdown of the grades:

Labs (50*8)-----400 (50%) Final Project----200 (25%) Lab Final-----200 (25%) Total-----800 (100%)

The grades will be assigned as follows: A (720-800), B (640-719), C (560-639), D (480-559), F (less than 480)

Late Work

Each assignment has a specific due day. Please submit your work on time. Any overdue submission will not be accepted.

There is no makeup for the lab final and final project. The lab final will be on the Last Class Day according to the Academic Calendar and the final project will also be due by the Last Class Day.

Final Project

Each student is required to conduct a research project using the technique learned in this class to solve a real-world problem. Choose a topic that you are interested in. I suggest you start to think about your final project as early as possible. The research project should result in one or more well-designed map work. The project report (in word document) should address at least the following things: What is the map about? Who would be your potential map users? How will your map be used? What are the advantages of your map comparing to others? What data did you use? Where did you collect them? How did you process your data - step by step procedures? Any major technique obstacles did you have in the process?

Academic Honesty

Students are encouraged to study in groups to prepare for the final. However, "group effort" is definitely not permitted when taking exam! This will result in an automatic zero and an F in the course.

For all the assignments, substantially presenting someone else's work as your own will also result in an F. Helping each other is encouraged, but don't let others copy your work.

STUDENTS WITH DISABILITIES POLICY:

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786, and e-mail <u>disability@shsu.edu</u>). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see:

http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf