TEXAS A&M UNIVERSITY - CORPUS CHRISTI
DEPARTMENT OF COMPUTING SCIENCES
GEOGRAPHIC INFORMATION SCIENCE PROGRAM
Masters in Geospatial Engineering

GSEN 5384 Generalization of Topographic Maps      3 graduate credits      FALL  2011

Prerequisites: Graduate standing; GIS background and written permission of instructor

Lecture times and location: via Blackboard , Internet and/or e-mail
Instructor: Prof. Joseph C. Loon
Office: CBI 106   Phone: 361-825-5854   Home: 361-808-9565
e-mail: joseph.loon@tamucc.edu

COURSE DESCRIPTION
This course will cover principles of advanced cartographic generalization including cartometric evaluation and spatial and attribute transformations. Topics include an overview of vector based and raster based generalization and the mathematical foundations of topographic map design and generalization and the effects of generalization on maps used for GIS.

COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES
1. Understand the theory and use of Cartographic Generalization
2. Understand the theory and use of generalizations methods
3. Understand the use of the above applied to topographic maps
4. Understand the basic concepts of computer-assisted generalization
5. Understand the causes and consequences of generalization

REQUIRED TEXTS
“Generalization in Digital Cartography” by Robert B. McMaster and K. Stuart Shea. Published by The Association of American Geographers. 1992
“GIS and Genaralization” by Muller, Lagrange and Weibel. Taylor and Francis. 1995
Plus handouts and references to other material

COURSE REQUIREMENTS, ETC.
See below “General Course Instructions”

GRADE
The final grade for this course will be made up from the graded marks as follows:
1. Assignments and Labs, etc 65% of grade
2. Final Comprehensive Exam 35% of grade
Exam will be open book, take home and return.

CHANGES MAY BE MADE WITH PRIOR NOTICE
SYLLABUS

1. Introduction basic ideas a la Robinson et al
2. The Swiss School – manual generalization
3. The need for generalization
4. Computer-assisted and automated generalization
5. Conceptual models
6. Vector based generalization
7. Raster based generalization
8. Knowledge acquisition
9. Data quality
10. Selected case studies

The assignments and the labs that are given are directly related to the above syllabus and the previously stated student learning outcomes.

Assignments/Labs/Exam will generally be due at noon on Mondays during the semester. Only the attachments will be printed, therefore each attachment must be fully annotated.

Changes can be made to this syllabus with prior notification to students

>Date

Notice to Students with Disabilities: Texas A&M University-Corpus Christi complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. If you suspect that you may have a disability (physical impairment, learning disability, psychiatric disability, etc.), please contact the Services for Students with Disabilities Office, located in Driftwood 101, at 825-5816. If you need disability accommodations in this class, please see me as soon as possible.

ACADEMIC ADVISING: The College of Science and Technology requires that students meet with an Academic Advisor (Ms. Ida Olivarez. Office: FC 168. Phone: 825-5797. Zip+4: 5806. URL: http://www.sci.tamucc.edu/camsadvising/. Email: ida.olivarez@tamucc.edu) 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.

Grade Appeal Process. As stated in University Rule 13.02.99.C2, Student Grade Appeals, 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 Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.
GENERAL GUIDELINES FOR COURSES AND LABS
IN THE GSEN PROGRAM
CULTURE, REGULATIONS, MODES OF OPERATION AND PROCEDURES

Instructor: Prof. Joseph C. Loon

These guidelines are designed to inform scholars of their responsibilities and of the course requirements in order to make this course a positive experience. The instructor is always available for consultation and discussion with students on any aspect of a course and of these general guidelines. This course will be conducted mainly via the internet and/or e-mail. So the definition of “meetings” given below refers to the first set of meetings during the first week of the semester AND any other time that you spend studying and working on labs/projects etc.

CLASS CULTURE

1. Consider yourself as a scholar rather than a student. The term “student” may imply some passivity, whereas the term “scholar” implies active participation, understanding and searching. We will use these terms interchangeably with the meaning of “scholar” implied. Osmosis does not work in a learning environment!
2. Further, define yourself as a “thinking explorer”. You are responsible for your education; an instructor can only be a guide and a facilitator. An instructor cannot learn for you. If you come across something that really interests you, explore it further.
3. Your experience at this University should not consist of passing a series of courses to earn a degree. Your experience should rather be a series of activities that will give you an education.
4. Concentrate on “learning to learn”. You will have to be a life-long learner to survive in your chosen career.
5. There is no such thing as a stupid question; there is such a thing as a stupid answer. So ask questions, the instructor is taking all the risks! Ask questions of your instructor and of your fellow scholars. Many times questions are more important than answers.
6. The Internet is a tremendous resource and also a great danger. When you find information on the Internet, you have no idea if it is correct. View such information with caution. But, use the Internet to explore topics that interest you. Do not only prepare for the exam in a course – learn as much as you can on the topics introduced to you by the course material. You are responsible for the extent of your education! READ MINDFULLY !!!!
7. In addition to details of the syllabus given in class, the syllabus for the course includes all the chapters of the required textbook/s unless indicated otherwise by the instructor.

PROCEDURES & REGULATIONS

8. The final letter grade for the class will be based on the raw composite numerical score obtained from the weighted average of the tests, quizzes, exams, labs, etc. as indicated by the instructor. The raw composite numerical score may be adjusted (curved) based on the highest score, the statistical profile of the scores and other academic standards or other considerations. Generally the letter grade of A is 90% and over of the adjusted score, a B is between 80% and 89% (inclusive) of the adjusted score, a C is between 70% and 79% (inclusive) of the adjusted score, a D is below 70% of the adjusted score and an F is below 60% of the adjusted score. An incomplete (I) will only be given in very unusual circumstances. The University regulations on incomplete grades state: “An incomplete notation may be given to a student who is passing but has not completed a term paper, examination,
or other required work for reasons beyond the student’s control other than the lack of time”. Students are expected to take ALL tests, quizzes, exams, etc., and to complete and hand in all labs and other assignments. There is no provision for “extra credit”. No final grades will be given via the telephone, e-mail, etc.

9. All University rules, regulations and expected student conduct apply to this course. Students are held responsible for the information given in the current Catalog and Student Handbook.

10. All labs, assignments, etc. must be handed in on the assigned due date. Scholars having problems must notify the instructor well before the due date. Marks will be deducted for poor and sloppily presented work.

11. Labs, etc. handed in after the due date may be subject to a penalty of loss of marks. Labs, etc. handed in after the graded labs, etc. have been returned to students will get zero marks but must be handed in to the instructor.

12. Scholars are asked to take special note of the penalties, which the University attaches to Academic Dishonesty. Consult the Student Handbook.

13. All work handed in to the instructor must be the student's own work. Extracts, excerpts, etc. from the work of others must be suitably noted, acknowledged and properly referenced. Any Group Work will be judged in the same way. That is, it is the work of the group and the extracts, excerpts, etc. of others must be acknowledged.

14. All written and graphical work handed in must be presented neatly printed. Student’s written work will be judged on written communication skills, critical thinking and problem solving ability.

15. There are NO provisions for making up missed exams except in cases where prior arrangements have been made and agreed to by the instructor.

16. Students must keep their given university e-mail address. This will be the means of the instructor communicating with students.

17. All work submitted to the instructor (via e-mail or other means) must be clearly marked with the student’s name and the name and number of the course – this is especially important when work is submitted as an attachment to an e-mail.

18. The instructor reserves the right to make changes to the above with due notice to the students. These changes will be announced to the class (see 16 above) and each student is responsible for keeping herself/himself informed of such changes.