

Syllabus - GEOL2002

Applied Computing for Geosciences
Spring 2009

Instructor:

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Office Hours: Mondays & Wednesdays 10:00-10:50AM, and by appointment.

CLASS MEETINGS: This is a 2-unit lecture/lab course, with hands-on exercises to be performed during class hours:
MWF 11:00-11:50AM, Callaway Annex Room 242

CATALOG DESCRIPTION: This course is an introduction to computer hardware and software which may be used to describe, analyze, and present data specific to the geosciences, including geospatial relationships. Applications from geology and geography will be explored in some depth, and software such as spreadsheets, geospatial packages, image processing packages and general productivity, graphics and presentation tools will be used to solve problems and describe results from those applications.

OVERVIEW: The tools used in computer analysis in the geosciences are quite varied. This course, by necessity, is broadly focused and provides a survey of hardware and software components that allow the efficient collection and analysis of data, and the presentation of research results in the many sub-disciplines of both geology and geography.

LEARNING OUTCOMES: By the end of this course, you will have made significant gains in several learning outcomes considered critical to geoscientists (see department-level learning goals):

Basic computer use: Students should be able to use a computer to produce documents, communicate by e-mail, and perform other basic tasks.

Spreadsheet: Students should be able to use a spreadsheet to manage complex data sets, perform repetitive calculations, and produce graphs.

Presentation software: Students should be able to effectively utilize presentation software to prepare oral and web-based presentations.

Web searching/critical assessment of material: Students should be able to locate data on the Web and evaluate the content for utility and accuracy.

Graphics software: Students should be able to use graphic software packages to generate drawings, maps, or render photographic images.

Remote imagery: Students should be able to download, manipulate, and present images acquired by remote sensing technology.

GIS: Students should be able to effectively enter and manipulate data in a Geographic Information System, and should be able to generate and interpret results.

Web design: Students should be able to create a web page.

PREREQUISITES: No specific course prerequisites are necessary to take this class. However, you must be a declared major in one of the Geosciences Department degree programs in order to receive appropriate credit.

TEXTBOOK: There is no assigned textbook for this course. Readings from web-based information sources will be assigned regularly. These readings require you to have internet access; if you do not have access to the internet in your residence, you will need to budget time in any of the on-campus computer labs available to you. In general, the GIS labs (Callaway Annex Rooms 242 & 156) will be available during normal business hours during the week, except when regularly-scheduled classes are being taught in the labs.

EVALUATION: Your grade will be based on your performance on a number of laboratory assignments, two in-class exams, and a final exam.

Grades will be calculated as follows:

- Exam 1 10%
- Exam 2 10%
- Final exam 15%
- Laboratory assignments 65%

Laboratory assignments turned in late will not be accepted.

COURSE SCHEDULE:

Week 1	Intro/hardware	Week 7	Spreadsheets	Week 13	CAD Graphics
Week 2	Hardware	Week 8	Databases	Week 14	GIS
Week 3	Data storage	Week 9	Presentation graphics	Week 15	GIS
Week 4	Word processors	Week 10	Raster & Vector Graphics	Week 16	Remote Sensing & Web Design
Week 5	Spreadsheets	Week 11	Spring break	Week 17	Summary
Week 6	Spreadsheets & OS	Week 12	CAD Graphics	May 1	Final exam 11AM-1PM
Feb 16	Exam 1	Mar 30	Exam 2		

ACADEMIC INTEGRITY: Below is a copy of the University's Honor Code. It is expected that students in this course have read this document and understand it. There is a certain amount of latitude granted to instructors with respect to handling students who violate the Honor Code. It is my policy that any student who violates this Honor Code will be expelled from the course and will receive a grade of "F."

University of West Georgia

HONOR CODE

Introduction

An honor code is essential to the University of West Georgia as an agreement between students and the University to promote commitment to academic integrity. Academic and personal integrity is based upon values such as honesty, trust, fairness, respect and responsibility. In an environment that recognizes and honors these values, standards of academic excellence must be maintained. An atmosphere of academic integrity enhances ethical and moral development among college students. It is the responsibility of the community of West Georgia, including all students, faculty and staff, to uphold the inherent values of the Honor Code.

Each student is given a copy of the Honor Code upon enrollment in the University. By signing the pledge, a student is making a commitment to honor the principles of academic and personal integrity, refuse to condone violation of the honor code by other students, and support imposition of penalties against those who commit violations.

The Honor Code

At the University of West Georgia we believe that academic and personal integrity are based upon honesty, trust, fairness, respect and responsibility.

Students at West Georgia assume responsibility for upholding the honor code. West Georgia students pledge to refrain from engaging in acts that do not maintain academic and personal integrity. These include, but are not limited to, plagiarism*, cheating*, fabrication*, aid of academic dishonesty, lying, bribery or threats, and stealing.

Definitions

Cheating: "using or attempting to use unauthorized materials, information or study aids"

Fabrication: "falsification or unauthorized invention of any information or citation"

Plagiarism: "representing the words or ideas of another as one's own. Direct quotations must be indicated and ideas of another must be appropriately acknowledged"

Further details regarding Student Conduct can be found in Appendix A of the *UWG Connection and Student Handbook*.

Penalties for Breach of Academic Integrity

Each incidence of academic dishonesty is subject to review and consideration by the instructor, and is subject to a range of penalties including but not limited to failing the assignment, failing the course, and referral to Office of the Vice President for Academic Affairs.

Responsibility for Reporting Violations of Academic Integrity

Students

Students who are concerned that they may have violated the honor code are expected to report their behavior to the instructor or academic advisor. Self-reporting does not signify admission of guilt, but does provide the opportunity for dialogue to clear up misunderstandings and miscommunication. A student who observes potential violation of the honor code by another student is expected to confront that student with their behavior and engage in discussion to determine if an actual violation has occurred.

If it is determined that a violation has occurred, the student observed is expected to self-report the incident to the instructor or academic adviser. The instructor or academic adviser will review the situation. If it is then determined by the instructor or adviser that a violation has taken place, appropriate referral will be made.

Faculty or Adviser

The instructor or adviser should meet with the student who has self-reported potential violation of academic integrity. During this meeting, the instructor/adviser should inform the student of the penalty s/he intends to institute (failing the individual assignment, failing the class, sending the case forward for further sanctions from the University).

After meeting with the student, the instructor should send a brief report of the case, including the breach of academic integrity and supporting documentation to the office of the Vice President for Academic Affairs (VPAA) requesting that this case become a permanent part of the student's record at West Georgia. THIS REPORT SHOULD BE FORWARDED EVEN IF THE INSTRUCTOR DOES NOT WANT THE UNIVERSITY TO SANCTION THE STUDENT. It is important to create a record of students' infringement of academic integrity to create a mechanism for identifying patterns of dishonesty. This will enable the University to take appropriate actions to suspend or expel the students with repeated incidents.

University of West Georgia**Academic Integrity and Honor Code Pledge****Pledge**

Having read the Honor Code for UWG, I understand and accept my responsibility to uphold the values and beliefs described and to conduct myself in a manner that will reflect the values of the institution in such a way as to respect the rights of all UWG community members. As a West Georgia student, I will represent myself truthfully and complete all academic assignments honestly. I understand that if I violate this code, I will accept the penalties imposed, should I be found guilty of violations through processes due me as a university community member. These penalties may include expulsion from the University. I also recognize that my responsibility includes willingness to confront members of the University community if I feel there has been a violation of the Honor Code.