GEOGRAPHIC INFORMATION SYSTEMS METHODS– Fall 2013

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PURPOSE --

Geographical data is increasingly important in understanding our society and our environment. This course will focus on teaching students the geographic principles and operation of GIS software through lectures, computer-based laboratory exercises and student projects.

TEXTS --

- GIS Fundamentals: A first text on Geographic Information Systems, 4th Edition. Paul Bolstad. ISBN: 978-0-9717647-3-6
- GIS Tutorial 1: Updated for ArcGIS 10.1 Wilpen Gorr & Kristin Kurland. ISBN: 978-1-58948-335-9

COURSE REQUIREMENTS AND GRADING --

Grading will be based on:

- Mid-Term Exam (25%)
- Final Exam (25%)
- Participation (5%)
- Laboratory
  - Exercises (10%)
  - Lab Exam (10%)
  - Project (25%)

This course is taught at both the undergraduate and graduate levels. Graduate students will be expected to do an individual project, rather than a group project, and to prepare a short project paper, as well as a presentation for the class.

HONOR CODE, PASSWORDS, IN-CLASS COMMUNICATION --

Because much can be learned from each other and group practice, students should seek understanding from any relevant source. Instructors will provide advice on how to proceed with practice and may provide similar advice on project preparation.

The Honor Code will cover the final preparation of each individual or group exercise. Although students may work together to learn the procedures, each student's or student group's project must be substantially different from any other student. All sources used must be documented.

Passwords providing access to servers, software and other components of the University's computing system are for the exclusive use of students in this course. Providing

passwords to others and misuse of computing privileges will be grounds for immediate dismissal from this course.

Students should refrain from the use of electronic mail, pagers and cellular phones during class lectures and discussions. Cellular phones and pagers should be turned off to avoid disruptions.

COMMUNICATION—

The class will make extensive use of the UVA "Collab" system. Students can access the system at: http://collab.itc.virginia.edu

LAB ATTENDANCE –

Students are expected to attend the weekly lab lecture during the scheduled laboratory period. However, laboratory exercises can be completed outside of laboratory times.

Activities Schedule

Dates	**(Book Chapter) Lecture**
Aug. 27 & 29	Class information / Introduction /(1) Intro to GIS Software
Sep. 3 & 5	(2) GIS Data Models/(4) Mapping
Sep. 10 & 12	Mapping II/(4) Data Entry
Sep. 17 & 19	(3) Projections I / (3) Projections II
Sep. 24 & 26	(5) GPS and Satellite Navigation / (8) Databases
Oct. 1 & 3	(7) Digital Data Sources /(12) Geospatial Metadata
Oct. 8 & 10	DIY Aerial Photography / MIDTERM EXAM
Oct. 15	READING DAYS
Oct. 17	(15) Internet Mapping
Oct. 22 & 24	(6) Remote Sensing I /(6) Remote Sensing II/
Oct. 29 & 31	(9) Spatial Analysis I / (9) Spatial Analysis II
Nov. 5 & 7	(13) GIS Modeling I / (13) GIS Modeling II
Nov. 12 & 14	(10) Raster Analysis I / (10) Raster Analysis II
Nov. 19 & 21	(11) Hydrologic Analyses & Terrain Analysis / (12) Spatial Estimation I
Nov. 26	(12) Spatial Estimation II
Dec. 3 & 5	(14) Data Standards / (15) GIS Future
Dec. 10 2 -5 pm	FINAL EXAM