

Analytical and Computer Cartography

GEPL 4520-5520

4 Hour Class

17347-001

T-R 2:00 3:40

UH 4380 (Computer Lab) Tentative

Instructor

James Coss

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Office University Hall 5300

419-530-5120 office

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Office Hours

Tuesday 1:00-2:00 PM

or by Appointment

IM glec@mac.com

Teaching Assistant

None

Class Web Page:

www.utview.utoledo.edu/education

Class Times

Tuesday - Thursday 2:00 - 3:40 PM

Lab is 4380

The second half of the Thursday class will focus on lab assignments. As time and need dictates more or less class time will involve the projects

Course Description

This course is designed to introduce the student to cartography and the computer. If you have already taken the Basic GIS class you should remember that cartography is only a small function in terms of GIS usage. This class will focus then on that aspect, the creation of maps. The class is broken into three sections.

- The Map
- The cARTography
- The Computer

This class has a prerequisite of Beginning GIS (GEPL 4510/5510) however waivers may be granted. Cartography and the map are key components in research and education, for the Geographer this is especially the case. Computer technology and software bring the tools of cartography out of the obscure and into a larger more causal user base, the result of which can be the proliferation of poorly designed incomprehensible maps, charts and documents.

The demands made on the cartographer to create good usable maps have meant that generally the art and science involved in creating maps have required the most advanced tools available be utilized. Printing, projecting, storing, reproducing and managing data require often novel methods to be employed for the efficient execution of good cartography. The goal is introduce to both basic and advanced material, technology, and techniques to the student.

The Map section will introduce you to the history of mapping, to basic geodesy, to projections, ideological and procedural influences, and categories of maps. The cARTography section will focus on the techniques of mapping, data handling, and display. The computer section will then focus on the use of the computer as a tool for cartography.

Computer based design and drafting tools are highly evolved, and are in my experience under utilized. It is the focus of this final section to acquaint the student with computer aided design, cartography, drafting tools. Finally the internet will be explored as both a supply of data and as a way to publish your maps.

Basic GIS is a pre-requisite for this class, I will sign waivers under the condition that the student has a working knowledge of computers.

The GEPL Computer lab will be open for your use; you will be expected to complete your assignment by the due dates set.

There are 3 exams for this class. These exams will follow each of the sections of this course. There are 5 projects. The projects will focus on cartographic projects utilizing specific software, though some of the projects will involve work off of the computer. It is the goal of this course that the student will have a portfolio started with the maps resulting from this class. Also, the student will create a website with the maps made from the maps

from the exercises.

Note I have included my AOL Instant Messenger address. You may use this feature to communicate with me when I am online and not in office hours. This service is a convenient way to directly communicate with me while you are on the computer. It also remains a viable communication method given the current email shortcomings. You are not required to use IM however, if you are familiar with this software then by all means use it.

GRADES

Projects Exercises	40%
Exams	30%
Internet Map	15%
Portfolio	15%

Required Text

Elements of Cartography, 6th Edition

Arthur H. Robinson, Joel L. Morrison, Phillip C. Muehrcke, A. Jon Kimerling, Stephen C. Guptill
ISBN: 0-471-55579-7

Internet

The internet is a wonderful and often dubious resource. As sites become relevant to the class they will be introduced on the class web site (shown above).

Suggested Readings:

Keith C. Clarke. *Analytical and computer cartography* Englewood Cliffs, N.J. : Prentice Hall, c1990

Longley, Paul A., M. F. Goodchild, D. J. Maguire, and D. W. Rhind. 2001. *Geographic Information Systems and Science*. New York: John Wiley & Sons. ISBN 0-471-89275-0

Class Schedule, Topics, and Assignments (subject to change)

Issues concerning plagiarism can be addressed in the student handbook.