Master Syllabus Department of Geography

GEOG 444: Advanced Cartography

Course Description

Advanced study exploring contemporary research in cartographic design, techniques and production. The increasingly important role of digital cartography in cyberspace and the integration of GIS data management and correct cartographic conventions are stressed. Techniques are introduced for the creation of map products merging GIS and *Illustrator* that facilitate the transformation of raw geospatial data into meaningful geographic knowledge. Projects are selected within the student's area of interest. (3 credit hours).

Prerequisite: GEOG 341.

Course Objectives

The objectives of the course are to develop student knowledge concerning research in contemporary cartography and the evolving technologies for cartographic design and production. Special attention will be given to: (1) analyzing the perceptional basis for cartographic design; and (2) developing conventionally correct cartographic products first created with *ArcView*.

Course Rationale

This course will advance students' knowledge of contemporary cartographic techniques in general and of specific design problems associated with the rapidly emerging technology. It will be especially helpful for students producing either tangible or non-tangible (i.e. virtual) map products in which a GIS was initially used for data acquisition and processing.

Geography 444 partially fulfills requirements for Option III, GIScience, and the advanced cartography required for those seeking qualification as "GIS Specialists" the title awarded to those completing the GIS certificate program sanctioned by the University Consortium for Geographic Information Science.

Course Content and Format

Students will read academic and professional journals, monographs, and books on some or all of the following topics: visualization and map communications models, color perception in map design, technological innovations in computer assisted cartography, and advances in GIS mapping. Reading assignments will be compiled from contemporary academic cartographic journals and an assortment of articles from trade cartographic and computer journals and magazines describing the most recent technological advances in map production. Students will produce a major cartographic product in which a previously devised GIS project is rendered with correct cartographic conventions using Illustrator.

Methods for Evaluating Student Performance:

Students will be required to evaluate several articles or book chapters every week and to write a précis of each article or book chapter. They will be required to produce a substantial cartographic product that illustrates cartographic competence at an advanced level.

Evaluation of the Course

Student evaluation of the course using university (and departmental) course evaluation forms.