

## UNIVERSITY CORE CURRICULUM

### SECTION III. INTEGRATIVE STUDIES - INTERDISCIPLINARY

1. COURSE NUMBER: **GEOG 310i** SEMESTER HOURS: **3**  
  
COURSE TITLE: **Digital Earth: Geospatial Techniques**  
Start Date: Summer 2008  
Retroactive: To Fall 1996
2. COURSE FORMAT: Lecture and Computer Lab. Average lecture size 46; maximum lab size 18.
3. STUDENT LEARNING OBJECTIVES: Students will be able to: (a) understand geospatial methods and their application to multiple disciplines; (b) understand the concept of spatial thinking in relation to where things are located and the implications of location and human activities; (c) use geospatial data sets to solve real world problems in their field of study and interest; (d) determine if data that are suitable for a given task exist, and know how to acquire the data if available; (e) understand modeling in geospatial environment; (f) use industry standard software for geospatial applications; and (g) use the World Wide Web as a medium for both research and communication.
4. DETAILED COURSE DESCRIPTION: This course provides the skills and knowledge to make use of geospatial technologies such as geographic information systems (GIS), global positioning systems (GPS), and remote sensing. This course will also focus on building skills with the various technologies and applying them to diverse fields, such as environmental science, city planning, ecology, geology, geography, engineering, business, sociology, anthropology, crime studies, and many others. The multidisciplinary nature of this course will provide students the needed skills and knowledge for resolving questions related to both natural processes and social issues through geospatial technologies. Course includes lectures, discussions, interactive and hands-on computer exercises and a final project that results in a professional research paper.
5. REQUIRED READING: Clarke, *Getting Started with Geographic Information Systems*, 4<sup>th</sup> edition, Prentice Hall; Lang, *Managing Natural Resources with GIS*, 4<sup>th</sup> edition, ESRI Press; additional readings will be available on the course website.
6. COURSE REQUIREMENTS AND GRADING:
  - Three assignments (15%)
  - Exam 1 (25%)
  - Exam 2 (20%)
  - Class Participation (10%)
  - Final Exam (30%)
7. ADVANCED UCC COURSE(S): None

11/1/06