

Date Prepared: April 19, 2004

New Revised
(Check One)

Effective Date: Fall 2004

COURSE OUTLINE

1. COURSE PREFIX and NUMBER: **GIS 200** CREDIT HOURS: 4
2. COURSE TITLE: **Geographical Information Systems I**
3. PREREQUISITES: ITE 115 or instructor approval.
4. COURSE DESCRIPTION: Provides hands-on introduction to a dynamic desktop GIS (Geographic Information System). Introduces the components of a desktop GIS and their functionality. Emphasizes manipulation of data for the purpose of analysis, presentation, and decision-making. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.
5. CONTENT: (Major Headings)
- a. GIS definitions and basic concepts.
 - b. Spatial data structures, vector and raster.
 - c. Geographic coordinates, datums and map projections.
 - d. Geocoding and address matching.
 - e. Cartography - map elements and design.
 - f. Thematic maps.
 - g. Spatial statistics and graphing.
 - h. On-screen digitizing.
 - i. Scale, error and precision
 - j. Global positioning system (GPS) for spatial data capture.
 - k. Spatial analysis
 - l. Image analysis
 - m. The future of GIS and GIS software

6. GENERAL COURSE OBJECTIVES:

Upon successful completion of the course, the student will be able to:

- a. Explain basic GIS concepts.
- b. Display and query spatial and tabular data
- c. Produce maps, reports, and graphs
- d. Perform special analysis
- e. Convert data from other formats
- f. Build and edit topologic features