

COURSE OUTLINE**Business Administration 185
Geographic Information Systems (GIS) for Business****I. Catalog Statement**

Business Administration 185 teaches the fundamentals of GIS industry-standard software and its application to business. Emphasis is placed on applied lessons to create and modify maps, conduct geospatial research, and solve business related geospatial problems.

Units - 3.0

Lecture Hours - 3.0

Recommended Preparation: CABOT 270 or equivalent.

II. Course Entry Expectations

Skills Level Ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 3.

III. Course Exit Standards

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

1. use GIS to produce various styles of maps;
2. gather and manipulate data from various sources;
3. import and export data;
4. use data collected from GPS and remote-sensing sources for inclusion in a map;
5. use GIS to research and perform geospatial analysis in order to make business decisions.

IV. Course Content

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| A. | Introduction to Course | 1 hour |
| | 1. Course expectations | |
| | 2. Grading | |
| | 3. Overview of tutorials and projects | |
| B. | Software User Interfaces | 10 hours |
| | 1. Introduction to the Software | |
| | 2. Menus & Toolbars | |
| | 3. Viewports | |
| | 4. Navigating viewports | |
| | 5. Viewport customization | |
| | 6. Application settings | |
| C. | Collecting and analyzing data | 6 hours |
| | 1. Mining data | |
| | 2. Analyzing data by attribute and location | |
| | 3. Using geodatabases | |

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| D. | Digitizing & Geocoding | 10 hours |
| | 1. Creating shapefiles | |
| | 2. Exporting shapefiles to a computer-aided design system | |
| | 3. Using aerial photo and remote-sensed geographic imagery | |
| | 4. Geocoding data by zip code or address | |
| | 5. Performing spatial analysis tasks | |
| E. | Map Design | 8 hours |
| | 1. Review of map projections | |
| | 2. Map components | |
| | 3. Choosing the appropriate map layout | |
| | 4. Adding graphics and picture files to maps | |
| | 5. Producing print layouts | |
| | 6. Output | |
| | a. Printing | |
| | b. Digital (PDF) | |
| F. | Global Positioning System (GPS) | 10 hours |
| | 1. Review of technology | |
| | 2. Introduction to GPS equipment | |
| | 3. Introduction to GPS software | |
| | 4. Field exercises | |
| G. | Presentation of final project | 3 hours |
| | 1. Portfolio review and critique | |
| | 2. Verbal and written final presentation | |

V. Methods of Presentation

The following instructional methodologies may be used in the course:

1. lecture;
2. multimedia;
3. guest speakers;
4. individual and group projects;
5. online.

VI. Assignments and Methods of Evaluation

1. Midterm examinations.
2. Final individual project (e.g. using GIS for market research for types of businesses or a study of the property market in certain areas).
3. Final examination.

VII. Textbook

Gorr, W., GIS Tutorial: Workbook for ArcView 9.

Redlands: ESRI Press, 2005

10th Grade Textbook Reading Level. ISBN: 1-58948-127-5.