

Alverno

C o l l e g e

3400 South 43rd Street, P O Box 343922, Milwaukee, WI 53234-3922

INSTRUCTIONAL SYLLABUS

TITLE: Introduction to GIS (Geographic Information Systems)
COURSE NUMBER: CL 341 **CREDITS:** 1 **SECTION:** 1
INSTRUCTOR: [Contact is Jeana Abromeit, Chair of Social Science Department,
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DEPT/DIV: Social Science Department/Behavioral Sciences Division and Environmental Science Program/Natural Sciences, Mathematics and Technology Division

REQUIRED TEXTS and MATERIALS:

- *Getting to Know ArcGIS Desktop: Basics of ArcView, ArcEditor, and ArcInfo.* 2004. 2nd ed. Updated for ArcGis 9. ESRI Press: Redlands, CA. ISBN: 1-58948-083-X
- Additional handouts/articles, which will be made available throughout the semester

0106

SPRING SESSION -- WEEKDAY COLLEGE

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CL 341: Introduction to GIS (1 Credit)

Alverno College, Milwaukee, WI

SPRING 2006

Instructor: [Contact is Jeana Abromeit, Chair of Social Science Department]

DESCRIPTION OF THE COURSE

This 1-credit course is open to any students who have an interest in learning how to use GIS (Geographic Information Systems) as an analytic tool. GIS is a specialized computer database program designed for the collection, storage, manipulation, retrieval, and analysis of spatial data.

This is a hands-on course in which students are given beginning-level opportunities to process, analyze, and visualize spatial data and information using commercially-available GIS software. In the process, they are introduced to the principles of GIS and its usefulness as an analytical tool and as an effective communication technique in addressing global, environmental, and social science questions. The course also explores ethical issues pertaining to confidentiality and privacy when gathering and using GIS data.

Prior to offering this course, GIS was not taught in any other courses at Alverno College. Yet, GIS analysis is used in public and private sectors in areas as wide-ranging as policy making, public health, community/regional/state planning, environmental science, sociology, crime analysis, terrorism, agriculture, engineering, business, and marketing. GIS is an analytic tool that many of our majors should learn how to use. The GIS course is a small step in the right direction. One of the primary purposes of the course is to generate enthusiasm and interest in using GIS to make environmental assessments and to analyze social, political, geographic, and economic issues.

PREREQUISITES:

SSC 101 and SC 118/120 must be completed prior to taking CL 341.

LEARNING OUTCOMES: By the end of this course, students should be able to...

1. Develop spatial questions related to their own interests.
2. Accurately explain the differences between the vector and raster data models and choose the appropriate model to address their spatial questions.
3. At a beginning level, define and conceptualize goals for a GIS project, including the spatial extent of the study area, the data needed, accessibility of data, and the approaches to analysis.
4. Evaluate the accuracy of spatial data and locate sources of error.
5. Visualize and present the results of spatial analysis using GIS.
6. Describe important ethical issues in spatial analysis.

ABILITIES BEING ASSESSED:

The course offers opportunities to demonstrate Levels 2 & 3 in the Problem Solving Ability (i.e., 3-2 & 3-3).

CL 341 AS AN ELECTIVE COURSE:

The course can serve as an elective in the following majors/supports: Communication, Management & Technology (CMT); Community Leadership; Sociology; Social Science; Computer Science; Environmental Science; Global Studies; Marketing Management; Arts, Community & Technology; and Political Science.

A course calendar and more information about readings and assessments will be made available in the first class session.