GIS 56 Course Outline as of Summer 2010

CATALOG INFORMATION

Dept and Nbr: GIS 56 Title: GIS LAND PLAN
Full Title: GIS Applications in Land Planning
Last Reviewed: 3/14/2016

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade Only
Repeatability:	33 - 3 Enrollments Total
Also Listed As:	
Formerly:	

Catalog Description:
This course uses the GIS (Geographic Information Systems) analysis process to explore the strategies of managing land planning projects. Introduction to and analysis of issues related to urbanization.

Prerequisites/Corequisites:
Course completion of GIS 51 or APTECH 54B.

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: This course uses the GIS (Geographic Information Systems) analysis process to explore the strategies of managing land planning projects. Introduction to and analysis of issues related to urbanization. (Grade Only)
Prerequisites/Corequisites: Course completion of GIS 51 or APTECH 54B.
Recommended:
Limits on Enrollment:

Transfer Credit: CSU;
Repeatability: 3 Enrollments Total

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Spring 2010	Inactive:	Fall 2021
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Outcomes and Objectives:
Upon completion of this course, the student will be able to:
1. Explain the conceptual process of performing a GIS analysis project.
2. Demonstrate comprehensive knowledge of the functionality and applications of GIS technology.
3. Demonstrate high level skills in spatial problem solving and spatial analysis.
4. Perform data research and manipulation.
5. Design, document and present a land planning project using GIS.
6. Describe how GIS applications assist Sonoma County communities improve quality of life through application of GIS principles.
7. Repeating students will utilize new release(s) of GIS software to enhance their skills.

Topics and Scope:

1. Urbanization issues
 a. Relationship of urbanization in GIS analysis
 b. Harmony with the earth.
 c. Managing urbanization with GIS
 d. Visual images, and data graphics

2. Introduction to raster GIS
 a. Multivariate data graphics
 b. Using raster GIS to resolve conflicts between the natural and built environments
 c. Visualizing relationships with multivariate data graphics

3. Creating map layouts
 a. Spatial equity and regional integration
 b. Symbolizing map features
c. Communicating with graphics

4. GIS in regional planning
 a. Review of a model regional plan (eg. Portland, Oregon)
 b. Analysis of case studies

5. Presentation of GIS data.

6. With repeat: Updated versions of software - methodologies and tools.

Assignment:

1. Read approximately one chapter of the textbook per week
2. Bi-weekly lab assignments using GIS technology
3. Bi-weekly report writing assignments
4. Semester GIS project including problem solving and oral and written report(s)
5. Midterm exam
6. Final exam
7. Repeating students will accomplish assignments utilizing new release(s) of GIS software to enhance their skills.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Reports including research data	Writing 15 - 20%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Semester project	Problem solving 15 - 25%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Demonstration of technology use, biweekly lab assignments, final oral presentation	Skill Demonstrations 40 - 50%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, completion, true-false, short answer, mid-term and final	Exams 20 - 30%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
Exploring the Dynamic Earth: GIS Investigations for the Earth Sciences, Hall, Michelle K.; Walker, C. Scott; Huth, Anne K.; Butler, Robert F.; Kendall, Larry P.; and Jenness, Jeff S. ArcGIS Edition, Thomson Brooks/Cole, Belmont, California: 2007

Various readings from Internet sites, including, the United States Geological Survey, University of California Berkeley Seismic Lab, and California Institute of Technology (CalTech).