Course Title & Units: Introduction to Geographic Information Systems (4)
Course Number & Quarter: ABT-PLS 180 I

Course Goals: To provide an introduction to the application of spatial data analysis and cartographic modeling. To teach the basic use of geographic information system software.

LAB TEXT: Getting to Know ArcGIS. ESRI. 2006

Web Site: http://smartsite.ucdavis.edu

Entry Level: MAT 16A, ASE 21 or equivalent computer skills, introductory statistics class such as STA 13 or AMR 120.

Grading: Midterm exam: 25%
In-lab worksheets 20%
Weekly homework: 20%
Final exam: 35%

Topics: Introduction to GIS (Ch. 1)
Map projections and scale (Ch. 2)
Global positioning systems (Ch 2.9.3)
Data structures (Ch. 3)
Raster GIS operations (Ch. 5)
Vector GIS operations (Ch. 6)
Visualization and display (Ch. 7)
Remote Sensing (Ch. 8)
Digital terrain analysis (Ch. 9)
Geostatistics (Ch. 9)
Data analysis and modeling (Ch. 10)
Data quality (Ch. 4)
Network analysis (Ch. 6)
Example Applications
Other topics in GIS (if time permits)

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References


