

Louisiana Tech University

Geographic Information Systems Center



Data Integration in GIS

GIS Certificate of Completion Program

Syllabus

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Course Objective:

To gain a basic understanding of the common GIS data types, how to find this data on the internet, and how to incorporate it into a GIS.

By completing this course, students will:

- Gain a basic understanding of the various GIS data types
- Be introduced to the wide range of internet GIS data resources
- Learn how to transfer data from internet sites to a pc
- Understand what metadata is and be able to keep accurate records for the GIS
- Georeference data and images
- Create data sets that fulfill specific needs
- Produce maps intended for brainstorming (visualizing the data)

Prerequisites:

Introduction to Geographic Information Systems (GIS)

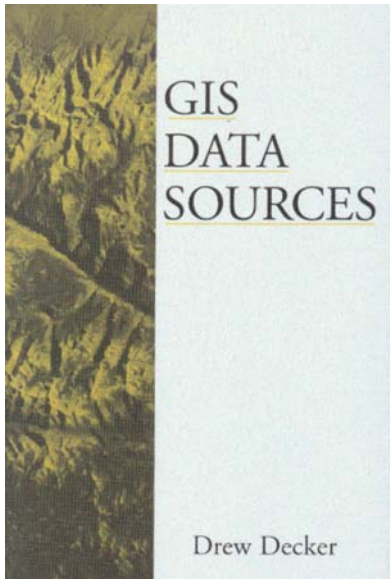
Basic understanding of ArcGIS

Knowledge of surfing the internet

Course Format:

This is a distance learning course. There are no lectures. Weekly reading and lab assignments will be posted on the University BlackBoard system. Students are responsible for their own computers and ArcGIS software.

Text:



GIS Data Sources by Drew Decker
John Wiley & Sons, Inc 2001

Software & Computer Requirements:

System requirements for ArcGIS are:

Platform:	PC-Intel
Operating System:	Windows NT 4.0 with Service Pack 6a or Windows 2000 or Windows XP (Home Edition and Professionals)
Memory:	128 MB RAM
Processor:	450 MHz

Class Schedule:

Week 1. Introduction to Web Resources

Read Decker Ch. 1 to Ch. 4
Lab: Web Resources for GIS Data Worksheet
Turn in for evaluation: worksheet

Week 2. Working with Data Warehouses

Read Decker Ch. 5, 6
Lab: Appalachian Trail Worksheet
Turn in for evaluation: Finished Map

Week 3. Working with MetaData

Read Decker Ch. 7, 8
Lab: MetaData Worksheet
Start work on Project Proposal
Turn in for evaluation: worksheet

Week 4. Some Data Integrating Problems:

Read Decker Ch. 9, 10
Lab: US Transportation Worksheet
Turn in for evaluation: Finished Map

Week 5. Investigating Data Sites and Mid Term, open book

Lab: More GIS Data Sites Worksheet
Turn in for evaluation: worksheet
Mid Term Test

Week 6. Georeferencing Data

Read: Posted Readings
Lab: Waterloo Worksheet
Turn in for evaluation: Map
Project Proposal

Week 7. More Sites, More Georeferencing, Different Data Types

Read: Posted Readings
Lab: Chicago Worksheet
Turn in for evaluation: Map

Week 8. Data Types Review

Lab: Data Types Worksheet
Work on Term Project
Turn in for evaluation: worksheet

Week 9. Project Work

Lab: Work on Term Project
Turn in for evaluation: None

Week 10. Final

Turn in for evaluation: Term Project, Final Exam

Grading:

Lab Exercises	80 Points
Mid Term Exam	30 Points
Final Project	40 Points
<u>Final Exam</u>	<u>30 Points</u>
Total	180 Points

%85 is passing

Assignments can be handed in by email, fax, or the University Black Board System.. **In accordance with the Academic Honor Code, students pledge the following: “Being a student of higher standards, I pledge to embody the principles of academic integrity.”** You are expected to do your own work and not copy the work of someone else.

Instructor:

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Office Hours:

I will check the email and Black Board System daily and reply as soon as possible to all requests for help.