

Remote Sensing and GIS
Environmental Studies 255
Fall, 2003

Prof. Charles Umbanhowar
Science Center 258, x3397, ceumb
Office Hours: T 11:45-1:15, W 8:00-10:00
or by appointment

Tentative Syllabus

<u>Date</u>	<u>Topic(s)</u>	<u>Chapter</u>
Sept. 4	Introduction to GIS and Remote Sensing, Skills	1
Sept. 9	Maps, GIS, and Models of the World	2:20-32
	Lab: Introduction to ArcGIS 8.3 and Models of the World	6:216-223, 7:242-262
Sept. 11	Models of the World	2:33-48
Sept. 16	GPS --Background and Theory	2:48-54
	Lab: Garmin and Trimble GPS	6:313-314, handout
Sept. 18	GPS / Digital Representation of Geographic Data	2:54-60, 3:64-74
Sept. 23	Vector Models for Geographic Data	3:84-86, 6:185-201
	Lab: Shapefiles and Other Vector Representations	6, handout
Sept. 25	Vector Models and Data Checking	4 (skim)
Sept. 30	Raster Models for Geographic Data	3:81-84, 5:136-152
	Lab: ArcGIS and Raster Representations, Data Conversion	handouts
Oct. 2	Remote Sensing Overview and Introduction	8:266-287
Oct. 7	Remote Sensing Imagery and Classification	8:287-297
	Lab: Remote Sensing Imagery and Classification	handouts
Oct. 9	Remote Sensing and Digital Terrain Models	9:306-312
Oct. 14	Remote Sensing Odds and Ends, DQM	9:306-312
	Lab: Digital Terrain Models and Other Visualizations	9:306-312, handout
Oct. 16	Midterm Examination One	
Oct. 21	Fall Break	
	Lab: Downloading Files, File Conversions, Scripts	handout
Oct. 23	Project	
Oct. 28	Project	
	Project (Note that this lab may include a field trip to U of M which will mean we get back ~5 PM)	
Oct. 30	Project	
Nov. 4	Project	
	Project	
Nov. 6	GIS Data,Managing Projections and Datums	2:46-54
Nov. 11	Spatial Statistics-Overlay Analysis and Buffering	5:152-175, 6:206-223
Nov. 12	Lab: Arcview Overlays and Buffering	handouts
Nov. 16	Spatial Statistics Spatial Arrangement	5:152-174, 10:350-358
Nov. 18	Spatial Statistics -- Interpolation and Modelling	9:324-327
Nov. 19	Lab: ArcGIS and Spatial Modelling	9:324-327, 10:365-373, handout

Dec. 3 **Lab: Projects**

Dec. 4 Projects

Dec. 9 Projects

Lab: Projects

Dec. 17 **Final Examination 2:30-4:30 -- Project Presentations**