

***Illinois IDEA HS
Course Outline
Fall, 2008***

College/Division: Northern Illinois University, Department of Geography

Course Title: Maps & Mapping

Course Number: Geography 256

Credit Hours: 3

Instructor Name/Originator: Paul Sill/Andrew Krmeneč

Catalog Description: Introduction to maps as models of our earth, tools of visualization, and forms of graphic communication. Use of satellite and aerial imagery, land surveying, and geographic information systems in map production. Thematic maps and how they are used. Map design for informational and persuasive purposes. Two hours of lecture, two hours of laboratory.

Pre-requisites: None

Restrictions/Suggestions: None

Rationale: Though maps have been used by civilizations for well over 5,000 years, practically all aspects of mapping today involve computers—from the collection of real-world data by GPS or satellites to drafting and printing. Rather than study the history of maps and mapping, this course examines maps as tools of modern communication and visualization. Through this course, students will:

1. Understand maps as depictions of geographic space
2. Develop an understanding of how maps are constructed
3. Learn how maps are used and how their intended use dictates map design
4. Learn how to read and use various types of maps
5. Be introduced to geographic information systems and computer mapping
6. Have fun with maps and geospatial technologies

Intended Audience: Students at any level (freshman and above) with an interest in maps, GIS, and related mapping technologies.

Student Learning Outcomes:

By the end of this course, students will:

- know how to use map and geography reference materials
- understand geographic coordinate systems and their relationship to earth geometry, datum, and projections

- understand the basic types and proper uses of map projections
- have experienced how geographic information systems (GIS) are used for mapping and practical problem solving
- understand how new maps are constructed from old maps and what considerations are involved
- understand how remote sensing, aerial imagery, and land surveying are used in the construction of maps
- know how to use map legends and read standard cartographic symbols
- recognize when a map is designed to educate vs. when it is intended to impart a specific message
- appreciate the beauty, sophistication, and complexity of maps and the map making process

Text: *Map Use and Analysis*, by John Campbell, Dubuque, IA: WCB/McGraw-Hill, 2001; 4th Edition Software: ArcExplorer (Free Shareware), Adobe Acrobat Reader, Macromedia Flash Player 6.0 or higher. Both are downloadable from Blackboard. They can also be obtained online at www.esri.com // www.adobe.com // www.macromedia.com

Topical/subject matter outline/Course Content:

Lessons	Topic(s)	Chapter(s)	Exercise	Points
	PRE-TEST: Mandatory			0
1	Maps Basics: Introductions to Maps	1		
2	Map Measurement and Symbology. Map Classification Systems, Thematic Map Intro.	11	1	50
3	Classifying Maps	11	2	10
4	Geographic Information Systems. Intro to ArcExplorer.	21	3	30
5	Earth Geometry	2		
	EXAM 1: Must be completed by September 28th 11:55PM			86
6	Map Projections	3		
7	Map Projections (cont.) Expanding on the uses and interpretations.	3	4	20
8	Locational Coordinate Systems	4	5	40
9	Land Partitioning Systems	4	6	50
10	Understanding Map Scale	5		
	EXAM 2: Must be completed by October 19th 11:55PM			101
11	The History of the Cartographic Production Process	NOTES		
12	Cartographic Production Techniques	NOTES		
13	Small Scale Maps Explored in More Detail	20		
14	Remote Sensing	17,18	7	25
15	Aerial Imagery	17	8	25
	EXAM 3: Must be completed by: November 9th 11:55PM			113
16	Large Scale Maps & Coordinate Systems	4,19	9	40
17	Plane Surveying and Intro to GPS	NOTES		
18	Map Design and Communication	14,15	10	40

19	Distorting the Message: Map Propaganda	16		
20	The Business of Maps. Using GIS and Geography in Business	NOTES		
	EXAM 4: Must be completed by: December 12th 11:55PM			129
			Total Points	759

Course Activities: Complete on-line assignments

Evaluation/Assessment:

1. Interactive Assignments (Exercises): There are 10 lab exercises that each student will complete and submit into the Digital Dropbox in Blackboard for grading in a WORD, EXCEL, TEXT, or PDF format ONLY. Assignments are worth 30% of the course grade. Scheduled exercises must be completed and submitted to the Dropbox prior to taking each exam.

2. Exams: There will be four 60-70 minute exams worth a combined 70% of the course grade. They will be multiple choice and short answer and will be administered in Blackboard. All 4 exams and 10 exercises must be completed to pass this course.

YOU WILL ONLY HAVE A 4 DAY WINDOWS (3 FOR SUMMER SESSION STUDENTS) IN WHICH TO COMPLETE ALL EXAMS. THERE ARE NO RE-TAKES OR EXTENDED TIME WINDOWS FOR EXAMS FOR ANY REASON.

Final grading: The final course grade will be determined based on the Total Weighted Points achieved by students.

Bibliography/References: