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Course Syllabus

Geography 482/572 (Geodatabase Design) Course Syllabus

Instructor Contact Information	TA Contact Information
Dr. Michael N. DeMers Office: Breland 118 Phone: (575) 496-5231 Skype: akadrgadget Gmail: demers01@gmail.com (mailto:demers01@gmail.com) Second Life Name: Gadget Loon Office Hours: 10:30-11:30 MWF; 1:30-3:30 M	David Silcock Office: Breland 140 Phone: (575) 646-4608 Skype: TBA e-mail: davidsil@nmsu.edu (mailto:davidsil@nmsu.edu) Office Hours: MW 12:30 - 2:30

Course Introduction and Overview

Geography 482 is an **ADVANCED** introduction to ESRI's ArcGIS geodatabase model. The geodatabase model is rapidly becoming the standard for working with ArcGIS data and is complex enough that it warrants a closer look, particularly because it has the capability of much more closely mimicking real-world geographic phenomena than any of the previous GIS data models.

This course covers the following aspects of geodatabases:

1. Geodatabase overview

2. Geodatabase architecture

3. Design of a geodatabase

4. Building a geodatabase

5. Data management, workflows, transactions and versioning

Course Experiences:

Through a focused set of lectures, in-class exercises, and laboratory exercises you will be given opportunities to learn about what geodatabases are, their types, what they do that's different than other database types, how they are organized, and what they store. You will also have an opportunity to work hands-on with the personal geodatabase – designing it, building it, and learning how to manage the data. You will learn about how the geodatabase assists with workflows, transactions, and versioning and how this helps you manage both large and small GIS operations.

Your Instructor

I have a BSEd (Earth Science / Biology - University of North Dakota 1974), MS (Geography - University of North Dakota 1980), MPhil (Geography - University of Kansas 1983), PhD (Geography - University of Kansas 1985), and a Graduate Certificate of Online Teaching and Learning (New Mexico State University 2007). I've taught junior high school (Milbank, South Dakota), high school (Cavalier, North Dakota), and university (Mankato State, North Texas State, Ohio State, NMSU). I write textbooks (as you might know if you look at your course text), and other educational materials (e.g. GIS for Dummies). My research interests include GIS applications, GIS design, and GIS education.

Beyond my professional activities I do have a life. Well, ok, not much of a life but some. I love to go for long walks that help me think, enjoy visiting natural settings like Dripping Springs, City of Rocks, and White Sands National Monument (all within easy driving distance). I have always loved working with my hands and still enjoy the occasional few hours working on scale models. My particular interest in model-building include historic ship models (both sail era and WWII) and, more recently, riverboats. I love to read, especially horror novels from Stephen King and Dean Koontz. My favorite pastime is watching DVD movies, especially comedies, and older films from the 1960s. I often use these movies to develop ideas that I use in my teaching. My personal life is pretty simple. I'm married now 27 years to Dolores, who is an awesome real estate agent with RE/MAX Classic (had to put in the plug). I love my home and spend as much time as I can there. I listen to rock and roll and classical and enjoy other forms a bit as well. In general I'm pretty easy going, fair, demanding (of myself as well as of my students), and have a passion for learning. I hope that rubs off on you.

Course Objectives

As the course proceeds, you will be provided with specific course learning objectives and behavioral outcomes and associated rubrics. These will be developed to ensure you gain the following.

1. Deep understanding of the personal geodatabase

2. Ability to design a geodatabase
3. Ability to implement the design and build a geodatabase
4. Ability to use the power of the geodatabase

Required and Recommended Reading

Texbooks

The following text is required for the course:

Arctutor, David, and Michael Zeiler, (2008). Designing Geodatbases: Case Studies in GIS Data Modeling, Redlands, CA, ESRI Press.

Allen, D.A. and Coffee, M.C., 2010. GIS Tutorial Workbook 3, Advanced Workbook, Redlands, ESRI Press.

Prerequisites:

Geography 481 or Graduate Standing and evidence of ArcGIS experience (e.g. ESRI certificate, previous coursework, job experience).

Topical Coverage (approximate timing) (http://training.esri.com/gateway/index.cfm)

Weeks	Topic (Text Chapters) (http://training.esri.com/gateway/index.cfm)	Laboratories (http://training.esri.com/gateway/index.cfm)
1	Introduction / Lecture 1	Softchalk 1
2	Lecture 2	Softchalk 2
3	Lecture 3	Softchalk 3
4	Lecture 4	Softchalk 4
5	Lecture 5	Softchalk 5
6	Exam 1	
7	Lecture 6	Softchalk 6
8	Lecture 7	Softchalk 7
9	Spring Break	
10	Lecture 8	Softchalk 8
11	Lecture 9	Softchalk 9
12	Lecture 10	Softchalk 10
13	Exam	
14	Projects	
15	Projects	
Finals Week	Presentations	

(http://training.esri.com/gateway/index.cfm)

Laboratory Schedule

Week	Assignment	Points	Description	Assigned Data	Due Date
1: 1/17/13 – 1/18/13	Assignment 1	100	*Getting Started with the Geodatabase (ESRI)	1/18/13	2/1/13
2: 1/21/13 – 1/25/13			*Getting Started with the Geodatabase (ESRI)		
3: 1/28/13 – 2/1/13	Assignment 2	100	*Working with geodatabase Domains and Subtypes (ESRI)	2/1/13	2/15/13
4: 2/4/13 – 2/8/13			*Working with geodatabase Domains and Subtypes (ESRI)		
5: 2/11/13 – 2/15/13	Assignment 3	100	1.1 Creating a geodatabase- building a logical model 1.2 Creating a geodatabase -expanding the logical model	2/15/13	2/22/13
6: 2/18/13 – 2/22/13	Assignment 4	100	2.1 Building a geodatabase 2.2 Adding complex geodatabase components	2/22/13	3/1/13
7: 2/25/15 – 3/1/13	Assignment 5	100	3.1 Loading data into a geodatabase 3.2 Populating geodatabase subtypes	3/1/13	3/8/13
8: 3/4/13 – 3/8/13	Assignment 6	100	*Getting Started with Geodatabase Topology (ESRI)	3/8/13	3/22/13
9: 3/11/13 –			*Getting Started with Geodatabase Topology (ESRI)		

3/15/13					
10: 3/18/13 – 3/22/13	Assignment 7	150	5.1 Setting up map topology 5.2 Creating Geometric networks 5.3 setting up geodatabase topology	3/22/13	4/5/13
			Spring Break		
11: 4/1/13 - 4/5/13	Assignment 8	100	8.1 Labeling with mapplex 8.2 Adding geodatabase annotation	4/5/13	4/12/13
12: 4/8/13 – 4/12/13	Assignment 9	150	Project	4/12/13	5/3/13
13: 4/15/13 – 4/19/13			Project		
14: 4/22/13 – 4/26/13			Project		
15: 4/29/13 – 5/3/13			Project		
16: 5/6/13 – 5/10/13			Finals Week		

Assessment (http://training.esri.com/gateway/index.cfm)

This course has two (4) forms of assignment. (**1**). 2 200 point multiple choice / true-false / matching / short answer questions based on the lecture material, and (**2**) 9 labs (100 - 150 points, including project), (3) Project Presentation (100 points), and (4) for graduate students only... Geodatabase Description

I try to provide feedback and grades for assignments ten days from the time they are provided. There are occasional extenuating circumstances where this goal cannot be met, I will put forth every effort to maintain that schedule.

Assignment	Points	Number	Total Points
Lecture Exams	200	2	400
Labs	100 - 150 (includes project)	9	1000
Geodatabase Project Presentation	100	1	100
Geodatabase Description (graduate students only)	100	1	100
			1500 - 1600

A – 92.5%

B – 85%

C – 77.5%

D – 70%

Late assignments: *(http://training.esri.com/gateway/index.cfm)*

In general, assignments will be assessed a 10% grade reduction if not turned in on time. No assignments will be accepted beyond one week after the due date. NOTE: If you have an illness or extraordinary circumstances that affect your ability to turn in assignments on time you are advised to contact your instructor (or laboratory TA) to ask for dispensation from these rules.

Ex (http://training.esri.com/gateway/index.cfm) ceptions to this policy are at the discretion of the instructor and may be made for certain circumstances (e.g. bereavement, illness, university sponsored events, etc.), but you must contact the instructors to make arrangements before the assignment is late. We will make exceptions to the prior arrangements requirement in the event of tragic events such as car accidents, a major family emergency, etc. Again, this is at the instructor's discretion. (http://training.esri.com/gateway/index.cfm)

Rules of Conduct (http://training.esri.com/gateway/index.cfm)

Plagiarism and cheating on exams, quizzes, etc. are serious breaches of trust and come with often devastating circumstance. Please refer to the discussion of

plagiarism in the student handbook for more information

Http://www.nmsu.edu/~vpsa/SCOC/misconduct.html (Http://www.nmsu.edu/~vpsa/SCOC/misconduct.html)

Students with Disabilities (http://www.nmsu.edu/%7Evpsa/SCOC/misconduct.html)

If you have or believe you have a learning disability, you are free to self-identify. You can do so by providing documentation to the Office for Services for Students with Disabilities , located at Garcia Annex (telephone: 646-6840). Appropriate accommodations can then be provide for you. If you have a condition which may affect your ability to exit safely from the premises (e.g. Breland 192) in an emergency or which may cause an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or the director of Disabled Student Programs. If you have general questions about the Americans with Disabilities Act (ADA) call 646-3333. (http://www.nmsu.edu/%7Evpsa/SCOC/misconduct.html)

Date	Details	
Fri Feb 1, 2013	Laboratory 1 (https://nmsu.instructure.com/courses/775025/assignments/2230361)	due by 11:57pm
Fri Feb 15, 2013	Laboratory 2 (https://nmsu.instructure.com/courses/775025/assignments/2230362)	due by 11:59pm
Mon Feb 18, 2013	Pop Quiz 1 (https://nmsu.instructure.com/courses/775025/assignments/2236624)	due by 11am
Fri Feb 22, 2013	Laboratory 3 (https://nmsu.instructure.com/courses/775025/assignments/2233355)	due by 11:57pm
Sat Mar 2, 2013	Laboratory 4 (https://nmsu.instructure.com/courses/775025/assignments/2242748)	due by 11:59pm
Fri Mar 8, 2013	Laboratory 5 (https://nmsu.instructure.com/courses/775025/assignments/2247592)	due by 11:57pm
Mon Mar 18, 2013	Exam 1 (https://nmsu.instructure.com/courses/775025/assignments/2258694)	due by 11:59pm
Fri Mar 22, 2013	Lab 6 (https://nmsu.instructure.com/courses/775025/assignments/2262623)	due by 11:59pm
Fri Apr 12, 2013	Lab 7 (https://nmsu.instructure.com/courses/775025/assignments/2273539)	due by 11:57pm
Fri Apr 26, 2013	Lab 8 (https://nmsu.instructure.com/courses/775025/assignments/2288054)	due by 11:59pm
Mon May 6, 2013	Exam 2 (https://nmsu.instructure.com/courses/775025/assignments/2302786)	due by 8am
Wed May 8, 2013	Project (https://nmsu.instructure.com/courses/775025/assignments/2281670)	due by 11:59pm