# OILS 515 - Introductions and Course Outline

### Introductions

- Who am I?
- Who are you?
- What brought you here?

*We will be working on answering these questions during the first class collaboratory from 5:00-6:15 on Wednesday*

## Syllabus

### Outline

- Instructor
- Description & Objectives
- Class format
- Class Readings
- Evaluation & Grading
- Topics
- Communication

### Instructor

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### Description & Objectives

### Class Format

- Online Lecture & online collaboratory in each class week
- Focus on hands-on experience with standards, technologies, and capabilities
- Exploratory and problem-based
- Cumulative

### Class Readings

- The class readings are a combination of conceptual outlines and reference materials

Nikos Mamoulis (2012), Spatial Data Management. Synthesis Lectures on Data Management #21. Morgan & Claypool Publishers. DOI10.2200/S00394ED1V01Y201111DTM021. http://libproxy.unm.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat00503a&AN=unm.b7199537&site=eds-live&scope=site[SDM]

Michael J. Hernandez (2003). Database Design for Mere Mortals: a Hands-on Guide to Relational Database Design. 2nd ed. Addison-Wesley. http://libproxy.unm.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat00503a&AN=unm.b3649820&site=eds-live&scope=site[DBD]

Additional online readings will also be assigned over the course of the semester.

### Evaluation and Grading

Course grades will be based on a combination of participation in live and online discussions and peer-review, the smaller assignments (listed under the "Assignment" column in the class calendar), and the semester-long class project. The grade for the class will be weighted according to the following breakdown:

- Class Participation: 20%
- Small Assignments: 40%
- Class Project: 40%

### Class Topics

Over the course of the semester we will address the following topics:

- The interaction between the *research* and *data* lifecycles
- Types of spatial data - *vector*, *raster* and *geodatabase* data models
- Database design concepts, including aspects of database design specifically related to geospatially enabled databases
- Data format considerations for long-term archival access and use
- Documenting your data products - metadata content and standards
- Data management planning, both in support of your research and also to meet funding agency requirements
- Ethical, legal and privacy issues as they relate to the data you both generate and use

### Tools

- Recent Windows, Mac or Linux Operating System
- GIS - Quantum GIS http://www.qgis.org/
- Spatial Database - SpatiaLite
  - http://www.kyngchaos.com/software/frameworks[Mac OS X]
  - http://www.gaia-gis.it/gaia-sins/[Windows & Source (Linux)]

**Communication**

This is the first iteration of this class, so the most productive communication model will evolve over the semester, but I commit to the following:

- I will respond to email questions within ~24 hours
- I will share responses to common questions with the rest of the class through the online discussion board

I also *strongly* encourage that questions be submitted through the discussion board so that other students can both *learn from* and *contribute to* the answers provided.