

Fall 2016 Introduction To Geographic Information Systems

You can solve spatial problems!

<http://dverbyla.net/nrm338/>

3 credits: 2 lectures, 1 computer lab per week

Lectures: Tuesday/Thursday, 9:45-11:15am Reichart Building Room 202

Lab: Tuesday 2-5PM O'Neill 359

or Weds 11:15AM-2:15PM O'Neill 359

Instructor: Dave Verbyla, Professor, O'Neill Building, Room 368

Course Objectives:

- 1) To learn how to solve spatial problems using GIS.
- 2) To understand basic concepts independent of any particular software.
- 3) To learn ArcMap GIS through hands-on computerlab exercises.
- 4) To learn how to download and used Alaskan geospatial data.

Grades Based on total points as follows:

12 blackboard-based quizzes 20 points each = 240 points

- o Quiz 1 Due Tuesday 13-Sept-2016 9am

of 60 Quiz 1 Due Tuesday 13-Sept-2016 9am 20 points 0% Quiz 2 Due Tuesday 20-Sept-2016 9am 20 points 0% Quiz 3 Due Tuesday 27-Sept-2016 9am 20 points 0% Quiz 4 Due Tuesday 4-Oct-2016 9am 20 points 0% Quiz 5 Due Tuesday 11-Oct-2016 9am 20 points 0% Quiz 6 Due Tuesday 18-Oct-2016 9am 20 points 0% Quiz 7 Due Tuesday 25-Oct-2016 9am 20 points 0% Quiz 8 Due Tuesday 1-Nov-2016 9am 20 points 0% Quiz 9 Due Tuesday 8-Nov-2016 9am 20 points 0% Quiz 10 Due Tuesday 15-Nov-2016 9am 20 points 0% Quiz 11 Due Tuesday 22-Nov-2016 9am 20 points 0% Quiz 12 Due Tuesday 29-Nov-2016 9am 20 points 0%

> 485 total points = A

445 to 485 total points = B

400 to 444 points = C

350 to 399 total points = D

< 350 total points = F

Disability Services: We will work with the Office of Disabilities Services (203 WHIT, 474-7043) to provide reasonable accommodation to any student with a disability.

Please inform us the first week of class if you have a disability that we should be aware of.

Textbook: None---weekly web site readings

Fall 2016 Schedule			
Date	Lectures	Thursday's Spatial Problems	Lab
Aug 30 - Sept 1	Course Overview Course Learning Map Demo lab1	Week1 Spatial Problems Key: Week1 Spatial Problems	Lab1: Introduction to ArcGIS
Sept. 6-8	Five Dimensions of GIS: <ul style="list-style-type: none"> • Location • Distance • Measures • Depth • Time 	Week2 Spatial Problems KEY Week2 Spatial Problems	Lab2: Five Dimensions of GIS
Sept. 13-15	GIS Coordinates and Projections Youtube lectures: 1) Geographic Coordinate Systems 2) Horizontal Datums	Week3 Spatial Problems KEY:Week3 Spatial Problems	Lab 3: GIS Coordinate Systems and Projections

	<p>3) Alaska Albers NAD83Coordinates</p> <p>4) UTM NAD83 Coordinates</p> <p>5) Alaska State Plane NAD83 Coordinates</p>		
<p>Sept. 20- 22 No Class or Lab this Week!</p>			
<p>Sept. 27- 29</p>	<p>GIS features data::</p> <p>Youtube video sessions:</p> <ol style="list-style-type: none"> 1. Point Feature Classes in ArcGIS 2. Polyline Feature Classes in ArcGIS 3. Polygon Feature Classes in ArcGIS 	<p>Week4 Spatial Problems</p>	<p>Lab 4: GIS Feature Data Formats</p>
<p>Oct. 4-6</p>	<p>GIS attribute tables</p> <p>Youtube session:</p> <ol style="list-style-type: none"> 1. Stand-alone tables in ArcGIS 	<p>Week5 Spatial Problems</p>	<p>Lab 5: Tabular Analysis</p>
<p>Oct. 11-13</p>	<p>Editing shapefile points, lines, polygons</p> <p>Youtube video sessions:</p> <p>Arcmap hyperlinks</p> <p>Editing points, lines, polygons</p>	<p>Week6 Spatial Problems</p>	<p>Lab 6: Editing Shapefiles</p>
<p>Oct. 20-22</p>	<p>Geodatabases</p> <p>Youtube video sessions:</p> <ol style="list-style-type: none"> 1. GeodatabaseContainerin ArcGIS 2. Range and Coded Domains 3. Feature Dataset Topology 	<p>Week7 Spatial Problems</p>	<p>Lab 7: Geodatabases</p>
	<p>Example mid-semester exams</p>		

Oct. 27 - 29		More Spatial Problems	Mid-Semester Exam during lab
Nov. 1-3	Elevation Rasters Youtube lectures: 1) Processing Digital Elevation Models 2) Elevation Geoprocessing Analysis	Elevation Raster Problems	Lab 8: Elevation Rasters
Nov. 8-10	GeoreferencingRasters Youtube video sessions: 1. GeoreferencingModel 2.		

[Practice Final 4: Churchill River KM By Province](#)

Class evaluations

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