

NRM 435 GIS Analysis Spring 2018

Lectures: Tuesdays 9:45-11:15 ONEILL 359

GIS QUIZ Thursdays 9:45-11:15 ONEILL 359 (GIS Quiz Day!)

Lab: Tuesday 2-5PM or Wednesday 2:15-5:15PM ONEILL 359

Objectives:

- **To teach you GIS analysis concepts independent of GIS software .**
 - **To apply conceptual tools using ArcGIS software.**
 - **To maximize hands-on experience in using GIS to solve spatial problems.**
 - **To be paper-free..all readings and quizzes will be by email .**
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Instructors:

**Dave Verbyla, Professor,
Dept. of Natural Resources Management, ONeill Bldg 368
Email: dverbyla@alaska.edu**

Office Hours: Tues,Weds 1-2pm or by Email appointment

Teaching Assistant: Jason Clark

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

Grading will be based on 500 total possible points from

- **Fifteen GIS quizzes (every Thursday) (@ 20 pts each) = 300 points**
- **Ten blackboard assignments (@20 pts each) = 200 points (<https://classes.alaska.edu>)**
 1. **Tables Analysis Quiz due 5pm Tuesday 23-Jan-2018**
 2. **Points Analysis Quiz due 5pm Tuesday 30-Jan-2018**
 1. **Lines Analysis Quiz due 5pm Tuesday 6-Feb-2018**
 2. **Linear Referencing Quiz due 5pm Tuesday 13-Feb-2018**
 3. **Network Analysis Quiz due 5pm Tuesday 20-Feb-2018**
 4. **Polygons Analysis Quiz due 5pm Tuesday 27-Feb-2018**
 5. **Temporal Analysis Quiz due 5pm Tuesday 20-March-2018**
 6. **Raster Analysis Quiz due 5pm Tuesday 3-April-2018**
 7. **Elevation Analysis Quiz due 5pm Tuesday 10-April-2018**
 8. **3D Analysis Quiz due 5pm Tuesday 24-April-2018**

Late assignments will not be accepted.

Final Grade: Total Points:

A+: >474 A: 450-474 A-: 440-449

B+: 435-439 B: 425-434

C+: 400-419 C: 375-399 C-: 365-374

D 350- 364

F <350

Tuesday Lecture	Thursday Lecture/Quiz	Tues or Weds. Weekly Lab
16-Jan-2018: <u>Course Preview</u> <u>Customizing ArcMap Windows</u> <u>Working With Tables</u> <u>Point Analysis Tools</u>	<u>2017 Points Quiz:</u> <u>Quiz Solution</u> <u>2018 Points Quiz</u>	<u>Point Analysis Lab</u>
23-Jan-2018 More Point Analysis Tools: <u>Uniform and Random Sample Locations</u> <u>Computing Point Density</u> <u>Interpolating Point Quantities</u>	<u>2017 Random Points Quiz</u> <u>Quiz Solution</u> <u>2018 Points Density Quiz</u>	<u>Point Analysis2 Lab</u>
30-Jan-2018: Geoprocessing Lines: <u>Line Direction and Intersection</u> <u>Converting Lines to Points, Points to Lines</u> <u>Splitting Lines</u>	<u>2017 Arctic Coast To Sea Ice Quiz</u> <u>Quiz Solution</u>	<u>Line Analysis Lab</u>

<p><u>Generating Points Along Lines</u></p>		
<p>6-Feb-2018: Linear Referencing</p>	<p>2017 Linear Referencing Quiz : <u>Stream Culverts</u> <u>Stream Culverts Solution</u> OR <u>Small Mammal Trap Lines</u> <u>Small Mammal Trap Events Solution</u></p>	<p>Measured Lines Lab</p>
<p>13-Feb-2018: Network Analysis</p>	<p>2017 Network Analysis Quiz: <u>Grad School Road Trip</u> <u>Road Trip Solution</u> OR <u>Transfer Stations to Landfill Miles</u> <u>Transfer Stations Solution</u></p>	<p>Network Analysis Lab</p>
<p>20-Feb-2018 Polygon Analysis</p>	<p>2017 Polygon Quiz : <u>Road Mileage to Wildfire Polygons</u> <u>Road Mileage Solution</u> OR <u>Fires Completely Within 100KM of Road</u> <u>Fires Inside 100KM Solution</u></p>	<p>Polygon Analysis Lab</p>
<p>27-Feb-2018</p>	<p>2017 Adjacent Polygons Quiz:</p>	<p>Adjacency and Overlap Analysis Lab</p>

Adjacency and Overlap Analysis	<u>Adjacent Old Growth/Seedling Polygons Accessible By Boat</u> <u>Solution Old Growth Borders</u> OR <u>Adjacent Parcels Next to Harding Lake</u> <u>Solution Adjacent Lake Parcels</u>	
6-March-2018: Temporal Data in ArcGIS	<u>Temporal Quiz 2016: Wildfire Perimeters By Week of Year</u> NO CLASS THURSDAY--HAVE A GOOD SPRING BREAK!	Animal Movement Lab
Spring Break	Spring Break	Spring Break
20-March-2018: Raster Analysis	<u>Temporal Quiz 2017</u> <u>Solution Temporal Quiz</u> OR <u>Raster Analysis Quiz 2017</u> <u>Solution Raster Quiz</u>	Raster Analysis Lab
27-March-2018: Optimal Paths Cost Rasters	<u>Optimal Path Quiz 2017</u> <u>Solution Optimal Path Quiz</u>	Cost Path Lab
3-April-2018: Elevation Analysis	<u>2017 LIDAR Elevation Quiz</u> <u>Solution Lidar Quiz</u>	LIDAR Elevation Lab
10-April-2018: Watershed Delineation	<u>2017 Watershed Quiz</u> <u>Solution Watershed Quiz</u>	Watershed Delineation Lab
17-April-2018: 3-D Analysis	<u>2017 3D Quiz</u> <u>Solution 3D Quiz</u>	3-DAnalysis Lab
24-April-2018: GIS Data Quality Assessment	<u>2017 Quiz 14: Point/Polygon Analysis</u> <u>2017 Quiz 15: Raster Analysis</u>	GIS Quality Assessment Lab

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