NRM338 Introduction To Geographic Information Systems

Instructors:

Dave Verbyla, Associate Professor
Office Hours: Anytime I am in my office or by email appointment.
My Schedule

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Email: fjilf@uaf.edu.

Lectures: Tuesday/Thursday, Elvey Auditorium, Geophysical Institute
Lab: Tuesday 2-5PM or Tuesday 6-9PM or Wednesday 2-5PM or Wednesday 6-9PM

Grading:

Based on total points from the following:

Four Homeworks Assignments: 80 points
Two On-line Exams: 200 points
Five Reading Assignments: 120 points
Thirteen Lab Assignments: 260 points

Total possible points sum to 660 points. Final grades will be curved based on total points earned in the course.

Course Objectives:

1) To learn how technologies such as Global Positioning Systems (GPS), Geographic Information Systems (GIS), and satellite imagery can be used in natural resources management.

2) To understand basic concepts independent of any particular software. All exams are open-book because memorization is not important. Memorization is short-term learning. We emphasize long-term understanding.

3) To learn basic GIS tools in ARC/INFO and ArcView. These are the most popular GISs used by natural resource management agencies such as the Alaska Department of Natural Resources, USDA Forest Services, U. S. Bureau of Land Management, U. S. Park Service, U. S. Fish and Wildlife Service, Alaska Fish and Game, Ducks Unlimited, Tanana Cheifs, Sea Alaska, North Slope Borough, Fairbanks North Star Bourough, etc.
Reading Assignments

On reserve at the Rasmuson and Bioscience libraries:

*Introduction to Global Positioning Systems (GPS)*
*GPS Differential Corrections*
*GPS Applications*
*Arc Model*
*Map Projections*

Homework Assignments

*Web Browsing Assignment*
*Map Coordinates*
*Affine Transformation Models*
*Practice Exam Questions*

Download Data For ArcView Labs

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Fall 1998 Schedule

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<tr>
<th>Date</th>
<th>Lectures</th>
<th>Lab</th>
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<tr>
<td>Sept. 2</td>
<td>Introduction</td>
<td>Lab 1: Windows/Help</td>
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<tr>
<td>Sept. 7-9</td>
<td>GPS/GIS</td>
<td>Lab 2: Field GPS</td>
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<td>Sept. 14-16</td>
<td>Coordinate Systems</td>
<td>Lab 3: Documentation/GPS to GIS</td>
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<td>Sept. 21-23</td>
<td>Vector GIS Model</td>
<td>Lab 4: Image Rectification</td>
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<td>Sept. 28-Sept 30</td>
<td>Images</td>
<td>Lab 5: Arcedit Digitizing</td>
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<tr>
<td>Oct. 5-7</td>
<td>Tile Systems</td>
<td>Lab 6: Edgema[ching Stream Coverages](should be corrected to Edgema[ching Stream Coverages])</td>
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<tr>
<td>Oct. 12-14</td>
<td>Rubbersheeting</td>
<td>Lab 7: Edgema[ching Scanned Maps](should be corrected to Edgema[ching Scanned Maps])</td>
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<tr>
<td>Oct. 19-21</td>
<td>Scanning</td>
<td>Lab 8: Heads-Up Digitizing/Adding Attributes</td>
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<td>Oct. 26-28</td>
<td>Attribute Data</td>
<td>Lab 9: Autotracing Scans</td>
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<tr>
<td>Nov. 2-4</td>
<td>GridEdit Tools</td>
<td>Lab 10: Image Classification</td>
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<tr>
<td>Nov. 9-11</td>
<td>Image Classification</td>
<td>Lab 11: ArcView:Error Checking</td>
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<td>Nov. 16-18</td>
<td>ArcView Views, Themes, Legends</td>
<td>Lab 12: ArcView:Tabular Analysis</td>
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<td>Nov. 23</td>
<td>ArcView Tables</td>
<td>Lab 13: ArcView: Map Production</td>
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<td>Nov. 30-Dec. 2</td>
<td>Layout and Charts</td>
<td>On-Line Exam</td>
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<td>Dec. 7-9</td>
<td>Review</td>
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Solution to 1997 On-Line Final
Mid-Semester Exam 1996
Last Year's On-Line Final

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