

Class Schedule - Spring 2012 (Version Feb 10, 2012)

GEOS 458/658: Geoscience Applications of GPS and GIS

Department of Geology and Geophysics, University of Alaska Fairbanks

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(Lectures: Wed and Fri 1:00-2:00PM in WRRB -004; Labs Wed 2:15-5:15PM in WRRB 004)

Friday	20-Jan	Lecture 1: Class Logistics
Wednesday	25-Jan	Lecture 2: Introduction to GIS
Wednesday	25-Jan	Lab 1: Lab Logistics and Online GIS Resources
Friday	27-Jan	Lecture 3: Data Types
Wednesday	1-Feb	Lecture 4: Data Formats
Wednesday	1-Feb	Lab 2: Microsoft Excel and Beyond
Friday	3-Feb	Lecture 5: Satellite Remote Sensing
Wednesday	8-Feb	Lecture 6: Introduction to ArcGIS
Wednesday	8-Feb	Lab 3: Introduction to ArcGIS
Friday	10-Feb	Lecture 7: Coordinate Systems and Map Projection
Wednesday	15-Feb	Lecture 8: Data and Databases
Wednesday	15-Feb	Lab 4: Text --> MS Access --> ArcGIS
Wednesday	15-Feb	Homework 1 issued
Friday	17-Feb	Lecture 9: GIS Concepts: Attribute Data
Wednesday	22-Feb	Lecture 10: GIS Analysis
Wednesday	22-Feb	Lab 5: ArcGIS Spatial Analysis
Friday	24-Feb	Lecture 11: GPS 1
Wednesday	29-Feb	Lecture 12: GPS 2
Wednesday	29-Feb	Lab 6: GPS with Garmins
Wednesday	29-Feb	Homework 1 due
Friday	2-Mar	Lecture 13: Project Discussion
Wednesday	7-Mar	Lecture 14: GPS Accuracy and Differential GPS
Wednesday	7-Mar	Lab 7: Georeferencing and Projecting Data
Wednesday	7-Mar	Homework 2 issued
Friday	9-Mar	Lecture 15: DEMs, Slope, Aspect, Drainage
Wednesday	14-Mar	Spring Break (no class)
Wednesday	14-Mar	Spring Break (no class)
Friday	16-Mar	Spring Break (no class)
Wednesday	21-Mar	Lecture 16: Interpolation; Krigging; IDW (including how to demo)

Wednesday	21-Mar	Lab 8: 3D Drape and Fly-through with ArcScene
Wednesday	21-Mar	Homework 2 due
Friday	23-Mar	Lecture 17: Google Earth and KML
Wednesday	28-Mar	Lecture 18: Scripting with Python (Guest: Santosh Panda)
Wednesday	28-Mar	Lab 9: Making Workflows in Python (Guest: Santosh Panda)
Wednesday	28-Mar	Homework 3 issued
Friday	30-Mar	Lecture 19: GPS, LIDAR and GIS application in a mass movement prone area (G)
Wednesday	4-Apr	Lecture 20 Cartographic Principles
Wednesday	4-Apr	Lab 10: Map Composition and Labeling
Friday	6-Apr	Lecture 21: GIS Application case study
Wednesday	11-Apr	Lecture 22 Mobile Mapping: Field data collection
Wednesday	11-Apr	Lab 11: Differential GPS corrections with Junos
Friday	13-Apr	Lecture 23 Effective Map Presentation; Report writing
Wednesday	18-Apr	Lecture 24 GIS application in glaciology (Guest: Anthony Arendt)
Wednesday	18-Apr	Lab 12: Arc GIS for mass balance studies (Guest: Anthony Arendt)
Wednesday	18-Apr	Homework 3 due
Friday	20-Apr	Lecture 25 Project work
Wednesday	25-Apr	Lecture 26 Field trip
Wednesday	25-Apr	Lab 13: Field trip
Friday	27-Apr	SpringFest (no class)
Wednesday	2-May	Lecture 27 Project work
Wednesday	2-May	Lab 14: Project work
Friday	4-May	Final Presentations (possibly)
Wednesday	9-May	Final Presentations
Wednesday	9-May	Final Presentations

uest: Matthew Balazs)