DEPARTMENT OF GEOSCIENCES, UAF
GEOS 422: Geoscience Applications of Remote Sensing (Instructors: A Prakash; J Cristobal; TA: A Worden)
Class Schedule : Fall 2016 (CRN: 74320); Version dated August 24 2016
(Lectures: Monday & Wednesday 1.00 - 2.00 pm WRRB 004; Labs: Wednesday 2.15 - 5.15pm WRRB 004)

Week	Date	Day	Lecture/Lab	Topic	Reading	Assignments / Comments
1	Aug-29-16	Monday	Lectures 1	Introduction to RS		
	Aug-31-16	Wednesday	Lecture 2	The Electromagnetic Spectrum	Chapter 1: for lectures 2 -4	
	Sep-01-31	Wednesday	*Lab 1*	*Remote Sensing and Image Resources; Airphoto 1*		
2	Sep-05-16	Monday	No lecture	Labor Day		
	Sep-07-16	Wednesday	Lecture 3	Principles of Remote Sensing 1	Chapters 5/6: for lecture 5	
	Sep-07-16	Wednesday	*Lab 2*	*Introduction to ERDAS Imagine and projects; Airphoto 2*		
3	Sep-12-16	Monday	Lecture 4	Principles of Remote Sensing 2	Chapters 3/4: for lecture 6	
	Sep-14-16	Wednesday	Lecture 5	Sensors and Platforms	Chapter 7: for lectures 7-12	Homework 1 given
	Sep-14-16	Wednesday	*Lab 3*	*Data Search and Download; Airphoto 3*		
4	Sep-19-16	Monday	Lecture 7	Digital Image Processing 1		
	Sep-21-16	Wednesday	Lecture 8	Digital Image Processing 2		
	Sep-21-16	Wednesday	*Lab 4*	*Importing and Displaying Data*		
5	Sep-26-16	Monday	Lecture 9	Operations on Multiband Images		
	Sep-28-16	Wednesday	Quiz	Quiz 1 (closed book)	Content up to lecture 8	
	Sep-28-16	Wednesday	*Lab 5*	*Contrast Enhancement and Multiband Operations*		
6	Oct-03-16	Monday	Lecture 10	Image Rectification (geometric)		Homework 1 due
	Oct-05-16	Wednesday	Lecture 11	Image Rectification (radiometric)		
	Oct-05-16	Wednesday	*Lab 6*	*Project Planning and Work (Instructor Available)*		
7	Oct-10-16	Monday	Lecture 12	Image Enhancement		
	Oct-12-16	Wednesday	Lecture 13	Revision and Catch Up		
	Oct-12-16	Wednesday	*Lab 7*	*Image Rectification (radiometric and geometric)*		
8	Oct-17-16	Monday	Lecture 14	Image Classification		
	Oct-19-16	Wednesday	Lecture 15	Image Fusion	Chapter 8: for lectures 14-15	
	Oct-19-16	Wednesday	*Lab 8*	*Image Enhancement and Classification*		
9	Oct-24-16	Monday	Lecture 16	Hyperspectral RS (J Cristobal)		Homework 2 given
	Oct-26-16	Wednesday	Lecture 17	SAR: Principles and applications (Guest: R. Gens)	Chapter 5: for lecture 18	
	Oct-26-16	Wednesday	*Lab 9*	*SAR Data Processing (Guest: R. Gens)*		
10	Oct-31-16	Monday	Lecture 18	Thermal Infrared Remote Sensing		
	Nov-02-16	Wednesday	Lecture 19	Application: TIR studies of wild fires (C. Waigl)		
	Nov-02-16	Wednesday	*Lab 10*	*Thermal Data Processing*		
11	Nov-07-16	Monday		Project: Redefining and reporting		Homework 2 due
	Nov-09-16	Wednesday	*Lab 11*	*Industry visit*		ABR
	Nov-09-16	Wednesday				
12	Nov-14-16	Monday	Lecture 20	Application: Volcanology (Guest: P. Webley)		
	Nov-16-16	Wednesday	Lecture 21	Application: Geologic Remote Sensing		
	Nov-16-16	Wednesday	*Lab 12*	*Composing Final Maps and Integration with GIS*		
13	Nov-21-16	Monday	Lecture 23	Final Project: Report, Presentation		Past examples
	Nov-23-16	Wednesday	Lecture 23	Application: Planetary RS (Guest: R. Herrick)		
	Nov-23-16	Wednesday	*Lab 13*	*Project Work*		
14	Nov-28-16	Monday	Lecture 24	Application: Wetland mapping (J Cristobal)		depends on class
	Nov-30-16	Wednesday		Application or Project Work: Instructor available		
15	Dec-05-16	Monday		Project Work: Instructors available		
	Dec-07-16	Wednesday		Project Work: Instructors available		
16	Dec-12-16	Monday		Finals		
	Dec-14-16	Wednesday				

Basic Principles
Digital Image Processing
Applications
Exam

Text Book: Remote Sensing and Image Interpretation

by Lillesand, Kiefer and Chipman

(We use 7th Edition, but any edition after 5th will work)