



**GEOGRAPHY 333
H(3-3) Area III**

Instructor: Geoffrey J. Hay
Email: gjhay@ucalgary.ca*

Room: ES304 **Tel: 220-4768**
Office Hours: by appointment (email)

Course: Tu & Thr 9:30-10:45, MS 211

Labs: M 9:00 - 11:45 ES 407 (B01)
W 13:00 - 15:45 ES 407 (B02)

TA: Mustafizur Rahman
Email: mmrahm@ucalgary.ca

Room: TBA
Office Hours: TBA

*Please use email for administrative concerns only. Substantive issues should be addressed in person, either in class, during office house, or by appointment.

NOTE: This syllabus is subject to revision. All changes will be announced on Blackboard.
Last Updated: 9/21/09

Official Course Description:

Basic instruction in the use and interpretation of remote sensing imagery. Identification, interpretation and mapping of both physical and cultural landscape features will be covered.

Prerequisite:

Geography 231 or consent of the Department

Text(s)/Readings:

Required Texts:

Jensen, J. R., 2005: Introductory Digital Image Processing: A Remote Sensing Perspective. Prentice Hall.

Recommended Text:

Campbell, J. B. 2007: Introduction to Remote Sensing. The Guilford Press

Northey, M. and D. B. Knight, 2007: Making Sense, A Student's Guide to Research and Writing in Geography and Environmental Sciences, Third Edition. Oxford University Press.

Note: Readings from other sources may be assigned. Notifications of these will be posted on Blackboard.

NOTE: it is not essential to pass all elements/components to pass the course as a whole.

Tentative Schedule – subject to change, depending on class needs & guest lectures.

Wk	Date T/TR	CONTENT	LABS	
1	Sept 08	T1: Course Introduction		
	Sept 10	T2: Foundations of Remote Sensing		
2	Sept 15	T3: Review – Colour Theory, Multiband Images, Contrast Enhancement	Lab 1: Multiband Images, Colour Compositing, and Contrast Enhancement	
	Sept 17	T4: Radiation Principles		
3	Sept 22	“ “		
	Sept 24	T5: Radiometric Correction		
4	Sept 29	T6: Geometric Correction		Lab 2: Image Rectification and Data Integration
	Oct 01	“ “		
5	Oct 06	T7: Sensor Systems		
	Oct 08	“ “		
6	Oct 13	T8: Remote Sensing Vegetation	Lab 3: Image Transformations and Interpretation	
	Oct 15	GUEST LECTURE: TBA		
7	Oct 20	T9: Image Transformations		
	Oct 22	T10: Spatial Filtering and Texture Analysis		
8	Oct 27	T11: Image Classification	Lab 4: Remote Sensing Image Classification	
	Oct 29	T12: Accuracy Assessment		
9	Nov 03	“ “		
	Nov 05	- MIDTERM 25% (in class – 75 mins)		
10	Nov 10	T13: Change Detection	Lab 5: Change Detection	
	Nov 12	- READING DAY (NO CLASS) Nov 11-15		
11	Nov 17	T14: Microwave Basics		
	Nov 19	T15: Thermal Imagery		
12	Nov 24	T16: GEOBIA – Geographic Object Based Image Analysis	Lab 6: GEOBIA + Thermal Imagery	
	Nov 26	“ “		
13	Dec 02	GUEST LECTURE: TBA		
	Dec 04	T17: Course Review		
14	Dec 08	- Final Exam 10% (in class – 75 mins)		
End Fall Session (Tues Dec 08), Final Exam (in Class Dec 08)				

Grading (Weighting):

Item	Weighting
Lab 1	10%
Lab 2	10%
Lab 3	10%
Lab 4	10%
Lab 5	10%
Lab 6 (teams of 2)	15%
Midterm Exam	25%
Final Exam	10%
Total	100%

Note: The final exam will be scheduled by the registrar. It is not necessary to pass each course component in order to pass the course.

The only acceptable reasons for missing an examination or assignment in this class, as listed in the Deferral of Final Examinations section of the University of Calgary Calendar (http://www.ucalgary.ca/pubs/calendar/2007/how/How_HF.htm), are illness, domestic affliction, or religious conviction. If you miss an assignment or examination, and you provide me with the appropriate documentation, you will have one opportunity to make arrangements for the missed work. Without appropriate documentation, you will receive a zero for that portion of your grade.

Grading System:

96-100	A+	77-80	B	59-61	C-
90-95	A	71-76	B-	55-58	D+
86-89	A-	65-70	C+	50-54	D
81-85	B+	62-64	C	0-49	F

For additional detailed course information posted by the Instructor, please see Blackboard at: <http://blackboard.ucalgary.ca/>

Additional Information:

Plagiarism: Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. As a result, cheating or plagiarism on any assignment or examination is regarded as a serious academic offense. Students are advised to consult the 2007-2008 University of Calgary Calendar, which presents a Statement of Intellectual Honesty and definitions and penalties associated with plagiarism, cheating, and other academic misconduct. (http://www.ucalgary.ca/pubs/calendar/2007/how/How_LB.htm)

FOIP: The Freedom of Information and Protection of Privacy (FOIP) legislation disallows the practice of having students retrieve assignments from a public place, e.g., outside instructor's office, the department office, etc. Term assignments must be returned to students individually, during class or during the instructor's office hours; if students are unable to pick up their assignments from the instructor, they provide the instructor with a stamped, self-addressed envelope to be used for the return of the assignment.

Academic Accommodation: Students with a disability, who require academic accommodation, need to register with the Disability Resource Centre (MC 295, telephone 220-8237). Academic accommodation letters need to be provided to course instructors no later than 14 days after the first day of class. It is the student's responsibility to register with the Disability Resource Centre and to request academic accommodation, if required.

Safewalk: The University of Calgary provides a safewalk service to any location on Campus, including the LRT, parking lots, bus zones, and campus housing. For Campus Security/Safewalk call 220-5333. Campus Security can also be contacted from any of the "Help" phones located around Campus.

Contact Information for Student and Faculty Representation: SU VP Academic Phone: 220-3911 and e-mail: suypaca@ucalgary.ca. SU Faculty Rep. Phone: 220-3913 and e-mail: socialscirep@su.ucalgary.ca.