

## GEOG 333 H (3-3) AREA III

### MAPPING AND REMOTE SENSING

<b>Timetable</b>	<b>?</b>	<b>TR</b>	<b>08:00-09:15</b>	<b>SA104</b>	<b>Catalogue #</b>	<b>2055</b>
	Lab 01	M	11:00	ES307		
	Lab 02	W	10:00	ES307		
	Lab 03	R	14:00	ES307		

**Instructor:****Dr. Darren Sjogren**

ES338

Office hours: MWF – By appointment only

Phone: 220-2575

Contact through Blackboard

**TA:****Kasia Rozalska**

ES456

Office hours: TR 10:00-11:00

Phone: 220-4891

Contact through Blackboard

**CA:****Robin Poitras**

ES424

Office hours: TBA

Phone: 220-6023

Contact through Blackboard

**Course Content:**

This course is an introduction to the use of aerial photographs and digital imagery for creating maps. Lectures will deal with basic mapping concepts, physics of light, image interpretation, and digital image acquisition and manipulation. While lectures will focus on the theory of mapping and remote sensing, the labs will apply these concepts using digital data.

**Lecture Topics:**

Mapping: generalization, abstraction, and map projections

Location: image georeferencing and rectification; Digital Elevation Models

Aerial Photographs: acquisition, geometry, and interpretation

Electromagnetic Spectrum: atmospheric windows, scattering, emission, surface interactions

Colour Theory: colour perception, additive and subtractive mixing, and colour models

Digital Images: sensors, geometry, spatial and spectral resolutions

Image Enhancements: histograms, filters, and indices

Image Classification: supervised and unsupervised techniques

Introduction to Remote Sensing applications

**Blackboard:**

All course material is handled through Blackboard: <http://blackboard.ucalgary.ca/>. Students are automatically registered

**Required Texts** Lillesand, T. M., R. W. Kieffer and J. W. Chipman. 2003: *Remote Sensing and Image Interpretation*, Fifth Ed., Wiley. ISBN: 0-471-15227-7.

**Readings/Manual:** All material will be posted on Blackboard.

**Grading (Weighting):**

Lab Assignments	50%
Exam #1	20%
Exam #2	20%
Exam #3	10%

**Note: It is not necessary to pass each course component in order to pass the course. There is no final examination.**

**Prerequisite:** Geography 201 or 203, or Geology 201 or 203 or 209, or consent of the Department.

**Grading System**

A+ > 93	C+ 69 – 72.99
A 89 – 92.99	C 65 – 68.99
A- 85 – 88.99	C- 61 – 64.99
B+ 81 – 84.99	D+ 57 – 60.99
B 77 – 80.99	D 50 – 56.99
B- 73 – 76.99	F < 50

**Plagiarism**

Academic dishonesty is not an acceptable activity at the University of Calgary and students are **strongly advised** to read the Student Misconduct section in the University Calendar. Quite often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are 1) presenting another student's work as your own 2) presenting an author's work or ideas as your own without proper referencing and 3) using work completed for another course. This activity will not be tolerated in this course and students conducting themselves in this manner will be dealt with according to the procedures outlined in the calendar.

**Posting Grades and Picking up Assignments**

- Assignments are all submitted online and returned online using Blackboard.
- Tests will be handed back in class on days announced on Blackboard.
- All of their own grades will be available to students on their Blackboard gradebook, which is accessible only by password. Summary class statistics are available on the same site.
- Grades will **not** be available at Geography's main office nor from the instructor or TA.

**Contact Information for Student and Faculty Representation**

- SU VP Academic Phone: 220-3911 and e-mail: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca)
- SU Faculty Rep. Phone: 220-3913 and e-mail: [socialscirep@su.ucalgary.ca](mailto:socialscirep@su.ucalgary.ca)

**Campus Safewalk**

Campus Security, in partnership with the Students' Union, provides the Safewalk service, 24 hours a day, to any location on Campus including the LRT, parking lots, bus zones and University residences. Contact Campus Security at 220-5333 or use a help phone, and Safewalkers or a Campus Security officer will accompany you to your Campus destination.