

Geography 207

Basics of Map and Air Photo Interpretation

Course Description

This course provides an introduction to the interpretation of a variety of maps, air photos and satellite images. Students actively learn how to gain information from maps and air photos. The emphasis is put on reading and understanding maps and their symbols. Practical exercises and assignments include the use and interpretation of Canadian topographic maps (NTS maps). Lectures also address the theory of mapping processes (map composition and compilation) and characteristics of map projections to provide an understanding of how maps are made. The class also includes basic theory of aerial photo acquisition and photogrammetry. One in-class exercise includes 3D interpretation of air photos.

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Office Hours Monday, Wednesday 11:00 am–12:00 noon or by appointment

Textbook Kimerling, A. Jon, Aileen R. Buckley, Philip C. Muehrcke, Juliana O. Muehrcke (2009): *Map Use. Reading and Analysis*. 6th or 7th edition. ESRI Press Academic, Redlands
Available at the University Bookstore

URCourses Selected course materials will be made available on URCourses. Check also on URCourses for up-dated class information.

E-mail communication If you choose to use a personal e-mail account for communication, please forward your U of R e-mails to this account. Please specify meaningful subjects for all e-mails.

Lecture Time Tuesday, Thursday 11:30 am–12:45 pm: CL 317

Prerequisites Any 100-level geography course or permission of department head

Attendance policy Attendance at all times is recommended.

Evaluation	Geocaching assignment (required)	5%
	2 Assignments (required, each 15%)	30%
	2 Mid-term Exams (required, each 15%, Oct 29 and Oct 31, 2019)	30%
	Final Exam (required, Dec 17, 2019)	<u>35%</u>
		100%

Late assignments and missed examinations

Due dates for assignments will be specified (see tentative schedule). **Late assignments/exercises** will be penalized **10% per day** (including weekends, starting with the due date). **Assignments more than 3 days late** are not accepted and **result in a NP for the course**. Extensions can only be granted for serious reasons. If **extensions** are required, you need to inform me at least two days **in advance**. A missed exam or exercise can normally not be written at a later time. **All exercises, assignments and exams are required for this course. A missed exercise, assignment or exam will result in a NP for this course.**

(See also section Accommodations)

Accommodations

Any student with a disability who may need accommodations should discuss these with the course instructor after contacting the Coordinator of the Disability Resource Office at 585-4631.

If you are **unable to complete an assignment, midterm examination or components of the final project** for compassionate or health reasons, contact the instructor **as soon as possible**. A medical certificate from an attending physician must accompany the request if the reason is medical. For other reasons, such evidence as is appropriate should be provided.

Recording of lectures

Students must be aware of two issues regarding audio, image or video recording of lectures. First, a lecture/lab is considered the intellectual property of the instructor, and copyright guidelines and regulations apply to the recording of lectures. Second, there is a need to protect the privacy of students in the class from being recorded without their knowledge and permission. As such, **students in this course may not create recordings of any kind in this class**. Any student creating unauthorized recordings will be subject to disciplinary action under §5.13 of the Undergraduate Calendar.

Students requiring recordings as an accommodation for a disability, and who have documentation from the Centre for Student Accessibility, are exempted from this restriction. Students in this position must speak to the instructor prior to recording lectures, and any such recordings are solely authorized for the purposes of individual study. Permission to allow this type of recording is not a transfer of any copyrights in the recording, and the recording may not be reproduced or uploaded to publicly accessible web environments.

Lecture - Tentative Schedule*

<i>Week</i>	<i>Date</i>	<i>Lecture topic</i>	<i>Chapter (p)</i>
1	Sept 5	Introduction to the course and course policies	-
2	Sept 10	The earth and earth coordinates	xv-xxviii, 1 (5-20)
	Sept 12	Map elements, map scale	2 (23-33)
3	Sept 17	Map projections 1	3 (35-47)
	Sept 19	Map projections 2	3 (48-60)
4	Sept 24	Reference systems	4 (63-80), 5 (83-99)
	Sept 26	GPS, geocaching; Geocaching assignment will be handed out*	14 (311-314)
5	Oct 01	<i>No class</i> – work on geocaching assignment	--
	Oct 03	National Topographic System	Additional reading
6	Oct 08	Map interpretation 1; Geocaching assignment due*	6 (101-125), 11 (231-246)
	Oct 10	Map interpretation 2; Assignment 1 will be handed out*	15 (323-336)
7	Oct 15	Map accuracy and uncertainty	10 (205-227)
	Oct 17	Profiles	--
8	Oct 22	Thematic maps 1; Assignment 1 due*	7 (127-144)
	Oct 24	Thematic maps 2	8 (147-182)
9	Oct 29	Mid-term Exam – Theory	--
	Oct 31	Mid-term Exam – Hands-on	--
10	Nov 05	Introduction to air photos and photogrammetry	9 (185-193)
	Nov 07	<i>Reading Week</i>	--
11	Nov 12	Basics of remote sensing; Assignment 2 will be handed out*	9 (194-203)
	Nov 14	<i>No class</i> – work on assignment 2	--
12	Nov 19	Stereoscopic interpretation	--
	Nov 21	Collection of remotely sensed data – UAVs (tbc)	--
13	Nov 26	Electronic maps; Assignment 2 due*	--
	Nov 28	Geographic information systems (GIS) and maps	--
14	Dec 03	How to lie with maps	Additional reading
	Dec 05	Summary of the course, Q & A	--

* subject to change, check URCourses calendar for up-dates