GEOGRAPHY 2211 - MAP AND AIR PHOTO INTERPRETATION Winter 2018

Instructor:	Dr. Bradley A. Wils	son
Office:	RC - 2006A	
Email:	bwilson@lakeheadu.ca	
Office Hours:	Tuesdays: 10an	n - 2pm
	Wednesdays: noon	n - 2pm
	Thurdays: 10an	n - noon
	Fridays: noon	n - 2pm,
	other	rwise, please make an appointment
TEXTBOOKS:	Suggested:	How to Lie with Maps, Monmonier Interpretation of Aerial Photographs, Avery & Berlin Goodes World Atlas
CLASS SCHEDULE:	Lectures: Labs: Lab Instructor:	WF 2:3O – 3:20pm, ATAC - 2006 Mondays, 10:30-2:20 (either RC-2003 or ATAC-3009) Jason Freeburn, RC – 2004
GRADING:	*Midterm Exam:	20% (Wednesday, Feb. 7)
	*Map Exam:	7% (Monday, January 29)
	*Final Exam:	35% (TBA)
	**Lab exercises:	38% (11 labs, % varies)

Exams and labs will not only test your knowledge about this subject, but will test your writing and communications skills. Most labs require a <u>typed lab</u> report to be submitted for grading. Your ability to write clearly and concisely will in large part determine your overall mark in this class.

*Absences from illness, compassionate reasons or representing the university off-campus, supported by written documentation, will be accepted as sufficient evidence to allow a rewrite of a missed test or an extension on an assignment. **Missed tests for any other reason, including undocumented illness, may be made up at a date and place to be determined. This test will consist of full-length essay questions and will be tougher than the original**. Extensions will not be allowed for assignments, other than for legitimate reasons supported by written documentation. All other late assignments will lose 10% of the available mark for each day late.

****Please read the rules on plagiarism**, these are online...go to the LU Calendar, then University Regulations, and then to Academic Dishonesty.

COURSE DESCRIPTION:

This techniques course focuses on map reading and interpretation techniques related to air photo acquisition and photogrammetry techniques. Digital cameras, and stereoscopic viewing systems are explored through lectures and practical lab exercises. See next page for lecture topics and (*lab schedules*).

WEEKLY OUTLINE:

<u>Week# Lecture Topic</u>

Assigned Reading:

- 1 Map appreciation Coordinate Systems (no lab)
- 2 Map Interpretation (*Lab 1 Map Interpretation – 3%*)
- 3 Map Interpretation Colour Theory (*Lab 2 Map Interpretation – 4%*)
- 4 Digital Camera Systems Stereo Vision
 MAP EXAM – 7% (Jan. 29) (Lab 3 Four Air Photos – 3%)
- 5 **MIDTERM EXAM (Feb. 7)** Air Photo Acquisition (*Lab 4 RGB Checker Board – 3%*)

Course Website: How to Lie with Maps, (chapter 3), Monmonier, 1996

 6. Photogrammetry – Camera Geometry Photogrammetry – Horizontal & Vertical (*Lab 5 Air Photo Mission Planning – 3%*)
 Course Website: Photogrammetry, (chapter 4), Lillisand and Kiefer, 1994

Reading Week – Feb 19-23 (Feb. 19 is Family Day – University closed)

- Photogrammetry Parallax
 (Lab 6 Photogrammetry 1 4%)
- API Elements
 (Lab 7 Photogrammetry 2 4%)
- 9. Applications in API (*Lab 8 Stereo Photogrammetry – 3%*)
- 10. Applications in API (*Lab 9 API Rural Landscapes – 4%*)
- Drone-based Imagery and Flight Regulations
 (Lab 10 API Urban Landscapes 4%)
- 3D Modelling using Blender
 VR Lab Tour
 (Lab 11 Processing Drone Imagery 3%)

www.blender.org