

School of Arts & Science ENVIRONMENTAL TECHNOLOGY ENVR 220

MAP & AIR PHOTO INTERPRETATION

Winter/2013

COURSE OUTLINE

The course description is online @ http://camosun.ca/learn/calendar/current/web/anth.html

Ω Please note: the College electronically stores this outline for five (5) years only. It is strongly recommended you keep a copy of this outline with your academic records. You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

1. Instructor Information

| (a) | Instructor: | Dr. Vic Levson | |
|-----|---------------|--|--|
| (b) | Office Hours: | 1:00-2:30 PM Tuesday (or by appointment) | |
| (c) | Location: | Fisher 344D | |
| (d) | Phone: | 250-370-3506 | |
| (e) | Email: | vlevson@telus.net | |
| (f) | Website: | www.mhhe.com/earthsci/geography/campbell4e | |

2. Intended Learning Outcomes

Upon completion of this course the student will be able to:

- 1. Discuss the theories and methods of geo-location, the historical context of mapping, and the application of digital technologies in present-day cartography and aerial photography.
- 2. Apply the principles behind map navigation, ground surveying, and air photo interpretation in practical simulations.
- 3. Handle a wide variety of navigational and survey tools with enough proficiency to produce valuable data results

3. Required Materials

TEXTBOOK: Map Use and Analysis by John Campbell, McGraw Hill Publishing - 4th Edition, 2001.

*The purchase of this textbook is <u>REQUIRED</u> for this course. To reduce the cost, the relevant chapters from the text have been selected and McGraw-Hill has prepared a digital abbreviated version of the textbook for your use. Go to www.mcgrawhillcreate.com and scroll to the bottom of the screen. From there, click on McGraw Hill Bookstore and change the country to Canada. Find Camosun Lansdowne on the list and then find the book.

4. Course Content and Schedule

COURSE DESCRIPTION:

This course is designed to introduce students to the practical skills of map use and aerial photography interpretation. The theory of map construction and the conventions of map design will be discussed in class; the principles of map symbol interpretation will be introduced and practiced in a laboratory setting. Overhead and oblique aerial photographs will be viewed, stereoscopically where appropriate, and students will learn basic feature identification using these visual images. The mechanics and constraints of this data collection technique will be briefly explored and the conventions of presentation will also be discussed.

<u>Lectures</u>: There will be two hours of lecture a week, on Mondays from 10:30-12:20. The blackboard will be heavily utilized and overheads and images will augment the traditional lecture style.

<u>Labs</u>: There are thirteen labs in the course. Each lab contains exercises to familiarize students with the tools and techniques of map and air photo interpretation. A variety of different map types will be used and a full range of natural and social features will be profiled in the laboratory assignments.

TENTATIVE COURSE SCHEDULE

schedule is subject to change

| Week | Monday Topic | Textbook Reading | Wednesday Lab |
|--------|--------------------------------|---|---|
| of: | | | |
| Jan 7 | Course Introduction | Chapter 1 – Intro | Lab 1 – Mental maps |
| Jan 14 | Map Types and Elements | Chapter 2 – Basic Mapping | Lab 2 – Map Elements and Types |
| Jan 21 | Map Projections | Chapter 3 – Map Projections | Lab 3 – Topographic Maps: Scale, Distance, Latitude & Longitude |
| Jan 28 | Mapping Conventions 1 | Chapter 4 – Locational and Land Partitioning Systems | Lab 4 – UTM and Locational Systems |
| Feb 4 | Mapping Conventions 2 | Chapter 5 – Map scales | Lab 5 – Compass and Pace |
| Feb 11 | Family Day – no class | Chapter 7 (pages 109-111) - GPS | Lab 6 – GPS |
| Feb 18 | Mid Term | Chapter 6 – Measuring from maps | Lab 7 – Geocaching |
| Feb 25 | Ground Surveying | Chapter 7 – Route Selection and Navigation | Lab 8 – Traverse - Horizontal |
| Mar 4 | Vertical Surveying and Mapping | Chapter 8 – Terrain Representation | Lab 9 – Traverse - Vertical |
| Mar 11 | Air Photo Interpretation | Chapter 9 – Contour Interpretation | Lab 10 - Traverse - Mapping |
| Mar 18 | Photogrammetry | Chapter 16 – Remote Sensing from Airborne Platforms | Lab 11 – Air Photo #1 |
| Mar 25 | Satellite Data | Chapter 17 - Remote Sensing from Space | Lab 12 – Air Photo #2 |
| Apr 1 | Easter Monday – no class | Review readings | Lab 13 – Air Photo #3 |
| Apr 8 | Review Class | Review readings | |

5. Basis of Student Assessment (Weighting)

- (a) Lab Assignments (50%). There are thirteen labs in the course worth 2-5% each, depending on difficulty. Attendance during lab periods is mandatory. In the case of illness, the instructor must be contacted prior to the class time and an alternate arrangement must be made; otherwise, a mark of zero will be assigned. Assignment due dates will be determined in class and late labs will not be accepted
- (b) **Midterm Exam (20%)** the midterm exam will be held in class on **Monday February 18th** and will be worth 20% of the course total. The exam will offer a selection of short-answer, multiple-choice, and skill-based questions.

(c) Final Exam (30%) – The final exam will cover all of the course material and will be worth 30% of the course total. The final will follow the same format as the midterm.

6. Grading System

Standard Grading System (GPA)

| Percentage | Grade | Description | Grade Point Equivalency |
|------------|-------|---|----------------------------|
| 90-100 | A+ | | 9 |
| 85-89 | Α | | 8 |
| 80-84 | A- | | 7 |
| 77-79 | B+ | | 6 |
| 73-76 | В | | 5 |
| 70-72 | B- | | 4 |
| 65-69 | C+ | | 3 |
| 60-64 | С | | 2 |
| 50-59 | D | Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite. | 1 |
| 0-49 | F | Minimum level has not been achieved. | 0 |

Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at **camosun.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

| Temporary Grade | Description | |
|--------------------|---|--|
| 1 | Incomplete: A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family. | |
| IP | In progress: A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. (For these courses a final grade will be assigned to either the 3 rd course attempt or at the point of course completion.) | |
| cw | Compulsory Withdrawal: A temporary grade assigned by a Dean when an instruction after documenting the prescriptive strategies applied and consulting with peers | |

7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services, or the College web site at camosun.ca.

STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services, and the College web site in the Policy Section.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED