

GEOGRAPHY 206 LITHOSPHERE AND HYDROSPHERE

Course Outline - Winter, 2003

Instructor: Hilary Sandford

Office: Ewing 304

Phone: 370-3372

Email: sandford@camosun.bc.ca
angusdog@island.net

COURSE DESCRIPTION

This course is intended to acquaint students with some of the fundamental components and processes that operate within the lithosphere and hydrosphere. The first portion of the term will be spent investigating the Earth's crust and internal structure; specifically, the different types of rocks and minerals, the principles of plate tectonics and the controls on volcanism and seismicity. The second portion of the term will focus on the hydrosphere and the role that water plays in shaping Earth's surface. Geomorphic processes, landforms and associated hazards will be discussed with local, national and global examples. Specific discussions of British Columbia's landforms and waterways will provide the opportunity to practice the practical skills of a geographer.

LEARNING OPPORTUNITIES

Lectures: There will be three hours of lecture a week; one-and-a-half hours at the start of each Tuesday and Friday class block. The blackboard will be heavily utilized and overheads and slides will augment the traditional lecture style.

Labs: There are twenty labs in the course. Each lab contains exercises to reinforce the concepts that were introduced by the preceding lecture. A variety of different lab exercises will allow students to become familiar with maps, stereoscopes and the questioning style of the instructor. Attendance during lab periods is required to obtain a mark for the specific assignment. In the case of illness or emergency, 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. Due dates for each exercise will be announced at each lab period and late assignments will not be accepted.

Tests: Three tests will be given during the term. They will be held during the regular class time on Tuesday, **February 4th**, Friday, **March 7th**, and Friday, **April 11th**. These quizzes will include a selection of short-answer, multiple-choice, and skill-based questions on the material covered in lectures, labs and text readings.

NOTE: Please consult page 40 of the College Calendar, which outlines the College policies, regarding exams and tests. Note that students are expected to write tests and exams at the scheduled time and place unless a verifiable emergency existed to prevent attendance.

TEXTBOOK

Robert W. Christopherson. Geosystems (4th or 5th Edition). Macmillan Publishing, Toronto. This text is available at the Camosun College bookstore and is also used for Geography 204.

LAB MANUAL

A lab manual to accompany this course is available for purchase in the Camosun College bookstore. This manual is required for the course and contains lab exercises, practice quizzes and handout material.

EVALUATION

There will be no scheduled final exam for this course.

Quiz #1	15%
Quiz #2	20%
Quiz #3	25%
Lab Exercises	<u>40%</u>
	100%

GRADING

The standard grading scale of the School of Arts and Science will be used in this course.

A+	95-100%
A	90-95%
A-	85-90%
B+	80-85%
B	75-80%
B-	70-75%
C+	65-70%
C	60-65%
D	50-60%
F	0-50%

COURSE OUTLINE

<u>Class Date</u>	<u>Lecture & Lab Topics</u>	<u>Text Reading 2nd, 4th, 5th Eds</u>
Jan 7	Introduction to Physical Geography	pg. 2-11; 2-15; 1-15
Jan 10	The Structure of Planets	pg. 38-47; 40-45; 44-48
Jan 14	Earth's Internal Structure	pg. 312-319; 309-313; 313-322
Jan 17	Geologic Cycle	pg. 319-331; 313-322; 330-340
Jan 21	Plate Tectonics	pg. 331-343; 322-333; 340-352
Jan 28	Earthquakes	pg. 348-370; 338-362; 358-382
Jan 31	Volcanism	pg. 370-379; 362-370; 383-394
Feb 4	Quiz 1	
Feb 7	Weathering	pg. 386-403; 376-387; 400-411
Feb 11	Landslides & Avalanches	pg. 403-409; 387-398; 411-423
Feb 14	<i>Reading Break</i>	
Feb 18	River Systems	pg. 414-421; 404-410; 430-437
Feb 21	Streamflow Characteristics	pg. 421-430; 410-419; 437-446
Feb 25	Fluvial Landscapes	pg. 430-441; 419-429; 446-458
Feb 28	Eolian Processes	pg. 450-461; 436-446; 464-474
Mar 4	Desert Landscapes	pg. 461-472; 446-457; 474-485
Mar 7	Quiz 2	
Mar 11	Coastal Systems	pg. 478-487; 462-472; 490-501
Mar 14	Coastal Processes	pg. 487-502; 475-484; 501-513
Mar 18	Glacial Processes	pg. 508-517; 490-498; 520-528
Mar 21	Glacial Landscapes	pg. 517-524; 498-504; 528-534
Mar 25	<i>*Glacial Field Trip*</i>	pg. 530-538; 509-518; 541-548

<u>Class Date</u>	<u>Lecture Topics</u>	<u>Text Reading</u>
Apr 1	Periglacial Processes	pg. 524-530; 504-509; 534-541
Apr 4	Remote Sensing of Landforms	Handout
Apr 8	Review Class	
Apr 11	Quiz 3	

LIST OF LAB EXERCISES

<u>Class Date</u>	<u>Lab Topics</u>
Jan 7	Lab 1 – Topo Maps #1
Jan 10	Lab 2 – Topo Maps #2
Jan 14	Lab 3 – Tools of the Trade
Jan 17	Lab 4 – Traverse Plotting
Jan 21	Lab 5 – Plate Tectonics
Jan 28	Lab 6 – Earthquakes
Jan 31	Lab 7 – Isopach Mapping
Feb 7	<i>Video</i>
Feb 11	Lab 8 – Hope Slide
Feb 14	<i>Reading Break</i>
Feb 18	Lab 9 – Isohyets & Polygons
Feb 21	Lab 10 – Discharge Calculations
Feb 25	Lab 11 – River Features
Feb 28	Lab 12 – Desert Features
Mar 4	Lab 13 – Dunes
Mar 11	Lab 14 – Coastal Processes
Mar 14	Lab 15 – Coastal Landforms
Mar 18	Lab 16 – Continental Glaciation
Mar 21	Lab 17 – Glacial Landforms
Mar 25	Lab 18 – <i>Glacial Field Trip</i>
Apr 1	Lab 19 – Periglacial Landforms
Apr 4	Lab 20 – Remote Sensing - Antarctica
Apr 8	<i>Review</i>