

EARTH SYSTEMS AND GLOBAL CHANGE IN ENVIRONMENTAL MANAGEMENT (5)

Class Number: 9296 Delivery Method: In Person

COURSE TIMES + LOCATION:

We 8:30 AM – 10:20 AM
SECB 1014, Burnaby

Fr 12:30 PM – 2:20 PM
SECB 1011, Burnaby

INSTRUCTOR:

Steve Conrad

Description

CALENDAR DESCRIPTION:

Reviews how human and natural processes across earth systems and over a range of scales interact to affect the hydrological cycle, climate, and land surface processes that are relevant to resource management. Equivalent Courses: MRM631

COURSE DETAILS:

This course reviews how human and natural processes, across earth systems (e.g., atmosphere, oceans, and freshwater systems) and over a range of scales, interact to affect climate, the hydrological cycle and land surface processes. The course aims to engage you to think in a more integrated and in- depth manner about the science behind these processes and to develop your understanding of uncertainties and predictability in earth systems. A special focus is given to help you to appreciate the importance of placing your understanding within the context of ecology, policy, economics, and culture to better address resource management issues on regional to global scales. Introductory lectures on key topics are interspersed with guest lecturers from applied experts to provide you with examples of how earth system issues are managed in the real world. The course includes several facilitated discussions and activities, which aim to increase your participation as active learners.

COURSE-LEVEL EDUCATIONAL GOALS:

1. To become familiar with terminology, concepts, and current issues of disciplines relating to physical, global change processes at different spatial and temporal scales, at such a level to be able to access and critically assess the earth sciences literature.
2. To develop an integrative, “earth systems” perspective on global and regional environmental change.
3. To strengthen your understanding of the linkages between physical processes in the environment and problems in ecology, policy, economics, and culture.
4. To improve your ability to access relevant science literature and effectively synthesize and communicate the content with respect to an earth system challenge.

Grading

Literature Review	30%
Briefing Note	35%
Class Participation	20%

NOTES:

This course is a series of twice-weekly, two-hour classroom sessions in a lecture/discussion format. Most lectures will have assigned readings, which should be completed prior to the lecture. I would like to stress that it is very important for you to come to class prepared to discuss the topic of the day. A substantial portion of your mark will be based on class participation (see evaluation section).

Materials

REQUIRED READING:

This course has no required textbook.

RECOMMENDED READING:

Skinner, B.J., S.C. Porter, and D.B. Botkin (2011). *The Blue Planet: An Introduction to Earth System Science*. 3rd Edition, John Wiley & Sons, New York, NY.

Kump, L.R., J.F. Kasting, and R.G. Crane (2004). *The Earth System*. 2nd Edition, Prentice Hall, Upper Saddle River, NJ.

Dictionary of environmental science or earth sciences

GRADUATE STUDIES NOTES:

Important dates and deadlines for graduate students are found here: http://www.sfu.ca/dean-gradstudies/current/important_dates/guidelines.html. The deadline to drop a course with a 100% refund is the end of week 2. The deadline to drop with no notation on your transcript is the end of week 3.

REGISTRAR NOTES:

SFU's Academic Integrity web site <http://students.sfu.ca/academicintegrity.html> is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. <http://www.sfu.ca/policies/gazette/student/s10-01.html>

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