

## SEMESTER AT SEA COURSE SYLLABUS

### Colorado State University, Academic Partner

**Voyage:** Spring 2018  
**Discipline:** Natural Resources  
**Course Number and Title:** NR 120 Environmental Conservation  
**Division:** Lower  
**Faculty Name:** Deborah Beal  
**Semester Credit Hours:** 3

**Prerequisites:** None

### COURSE DESCRIPTION

Environmental Conservation is an interdisciplinary investigation of the complex factors which allow our earth to maintain self-regulation. In addition to studying the fundamental concepts of natural resource conservation and management, we will consider the impacts of global warming, energy and pollution on these systems and other life. The trade in illegal wildlife and their body parts, loss of habitat, impact of overfishing, the consequences of fish and shrimp farming, and the impact of genetically modified food will be investigated as they relate to endangered species around the world. The influence of culture and the wants, needs, and desires of human beings will also be considered. As we move into the next century knowing we have already depleted many of our resources, its important to understand our impact now. Semester at Sea provides the unique opportunity to view environmental conservation issues first hand and to compare the impact of humans across various cultures. Students will observe different ethical, religious and cultural attitudes towards the environment. Information from the text will be supplemented by case studies and exploration into specific conservation issues in different parts of the world. It is hoped students will be able to form their own world view realize how humans contribute to environmental conservation problems and how they can help solve environmental problems.

### LEARNING OBJECTIVES:

Students will learn and understand:

- a) the scientific method, how scientists learn and work and how the scientific method applies to studying the environment.
- b) cultural, religious and ethical factors contributing to environmental issues.
- c) the underlying regulating mechanisms applying to systems ecology and sustainability.
- d) concepts of natural selection and evolution as they apply to environmental science and animal conservation.
- e) concepts of human and animal population growth and their impact on ecological systems.
- f) the impact of agriculture and providing food for the world's population and the impact of agriculture on ecological systems.

- g) how diseases emerge and spread via disruption or interaction with the environment.
- h) causes, consequences and potential solutions to various types of air pollution (including smog, particulates, primary pollutants, acid rain and global warming).
- i) causes, consequences and potential solutions to various types of water problems (point source vs non point source pollution, oil spills, acid ponds, access to potable water, etc).
- j) the role of geologic resources in our lives and the impact of extracting those resources on the environment.

#### LEARNING OBJECTIVES CON'T

- k) types of energy resources and the impact on the environment.
- l) types of waste management and recycling for the future.

### REQUIRED TEXTBOOKS

AUTHOR: William P. Cunningham and Mary Ann Cunningham  
 TITLE: Environmental Science: Inquiry and Applications  
 PUBLISHER: McGraw-Hill  
 ISBN: 978-0073532516  
 DATE/EDITION: 7th edition, 2013

### TOPICAL OUTLINE OF COURSE

Depart Ensenada, Mexico — January 5 A1—January 7: Introduction and syllabus. Assign student groups to various ports for post port reviews.

A2—January 9: Environmental issues and sustainability. (Chapter 1)

A3—January 11: Nutrient cycles: (Chapter 2) Preparation for Hawaii. Honolulu, Hawaii — January 12

A4—January 14: Debriefing Hawaii. Evolution and Natural Selection (Chapter 3)

January 16—International Date Line crossing (Lost Day)

A5—January 17: Human Population Growth and its implications (Chapter 4)

No Class — January 19

A6—January 20: Review for exam 1

A7—January 22: Exam 1 (10%). Preparation for Japan Kobe,

Japan — January 24-28

A8—January 29: Debriefing Japan. Conservation and Biodiversity (Chapter 5-6)

Shanghai, China — January 31 - February 1 In-Transit — February 2-3

Hong Kong, SAR — February 4-5

A9—February 6: Debriefing China. Agriculture (Chapter 7)

Ho Chi Minh City, Vietnam — February 8-13

A10—February 14: Debriefing Vietnam. Environmental Health (Chapter 8)

No Class —February 16

A11—February 17: Air pollution (Chapter 9). Preparation for Myanmar.

Yangon, Myanmar — February 19-23

A12—February 24: Debriefing Myanmar. Water Pollution (Chapter 10)

A13— February 26: Preparation for India Cochin,

India — February 28 - March 5

A14—March 6: Debriefing India. Review Exam 2

No Class - March 7

A15—March 9: Exam 2: Preparation for Mauritius

Port Louis, Mauritius — March 11

A16—March 12: Debriefing Mauritius. Geological resources (Chapter 12)

A17—March 14: Energy (Chapter 13)

A18—March 16: Preparation for South Africa Energy (Chapter 13)

Cape Town, South Africa — March 18-23

A19—March 24: Debriefing South Africa

A20—March 26: Exam 2 (10%)

A21—March 28: Preparation for Ghana Tema, Solid Waste management (Chapter 14)

Ghana — March 30 - April 1

Takoradi, Ghana — April 2-3

A22—April 4: Debriefing Ghana. Student presentations.

A23—April 6: Study Day — April 8

A24— April 9: Preparation for Morocco. Student presentations. Review for the Final

Casablanca, Morocco — April 11-14

A25—April 15: Final Exam (20%) Arrive Bremerhaven, Germany — April 19

## **FIELD WORK**

Semester at Sea field experiences allow for an unparalleled opportunity to compare, contrast, and synthesize the different cultures and countries encountered over the course of the voyage. In addition to the one field class, students will complete independent field assignments that span multiple countries.

**Field Class attendance is mandatory for all students enrolled in this course. Do not book individual travel plans or a Semester at Sea sponsored trip on the day of your field class.** Field Classes constitute at least 20% of the contact hours for each course.

### **Field Class and Assignment**

The Field Class for this course will take place on **Friday, February 12, in Honolulu, Hawaii.**

**[Field Class details to be determined]**

## **INDEPENDENT FIELD ASSIGNMENTS**

On ship experiments: Students will work in groups and conduct independent study into the use of solar energy for desalinization of saltwater and solar cooking. Students will follow the scientific method and write a lab report about their results. (4-5 pages)

Ports-of-call reports: Students in groups will be assigned two ports-of-calls countries. In the port and in the country, students should note anything they find relevant to our course, which could for example include coastal erosion; manmade structures to prevent erosion; seafood consumption and seafood offered in stores and markets; aquaculture; fishing practices etc. Each group will prepare a 5-10 minute power point presentation for the two different ports, and turn in an essay (1-2 pages of text).

Plastics Photo log: Students will maintain a photo log with date, weather conditions and location of plastics spotted both in port and at sea. Students will summarize photo log and evaluate changes in plastics contamination throughout our journey.

## **METHODS OF EVALUATION / GRADING SCALE GRADING SCALE**

The following Grading Scale is utilized for student evaluation. Pass/Fail is not an option for Semester at Sea coursework. Note that C-, D+ and D- grades are also not assigned on Semester at Sea in accordance with the grading system at Colorado State University (the SAS partner institution).

<u>Excellent</u>	<u>Good</u>	<u>Satisfactory/Poor</u>	<u>Failing</u>
97-100%: A+	87-89%: B+	77-79%: C+	Less than 60%:
93-96%: A	83-86%: B	70-76%: C	
90-92%: A-	80-82%: B-	60-69%: D	

2 exams: 20%

Solar Lab report: 10%

Photographic record: 10%

Group presentations & papers: 20%

Final Exam: 20%

Field Class: 20%

## **ATTENDANCE/ENGAGEMENT IN THE ACADEMIC PROGRAM**

Attendance in all Semester at Sea classes, including the Field Class, is mandatory. Students must inform their instructors prior to any unanticipated absence and take the initiative to make up missed work in a timely fashion. Instructors must make reasonable efforts to enable students to make up work which must be accomplished under the instructor's supervision (e.g., examinations, laboratories). In the event of a conflict in regard to this policy, individuals may appeal using established CSU procedures.

## **LEARNING ACCOMMODATIONS**

Semester at Sea provides academic accommodations for students with diagnosed learning disabilities, in accordance with ADA guidelines. Students who will need accommodations in a class, should contact ISE to discuss their individual needs. Any accommodation must be discussed in a timely manner prior to implementation. A letter from the student's home institution verifying the accommodations received on their home campus (dated within the last three years) is required before any accommodation is provided on the ship. Students must submit this verification of accommodations to [academic@isevoyages.org](mailto:academic@isevoyages.org) as soon as possible, but no later than two months prior to the voyage.

**STUDENT CONDUCT CODE** The foundation of a university is truth and knowledge, each of which relies in a fundamental manner upon academic integrity and is diminished significantly by academic misconduct. Academic integrity is conceptualized as doing and taking credit for one's own work. A pervasive attitude promoting academic integrity enhances the sense of community and adds value to the educational process. All within the University are affected by the cooperative commitment to academic integrity. All Semester at Sea courses adhere to this Academic Integrity Policy and Student Conduct Code. Depending on the nature of the assignment or exam, the faculty member may require a written declaration of the following honor pledge: "I have not given, received, or used any unauthorized assistance on this exam/assignment."

**RESERVE BOOKS FOR THE LIBRARY:** None

**FILM REQUEST:** None

**ELECTRONIC COURSE MATERIALS:** None

**ADDITIONAL RESOURCES:** None