

SEMESTER AT SEA COURSE SYLLABUS  
University of Virginia, Academic Sponsor

<b>Voyage:</b>	Spring 2016
<b>Discipline:</b>	Science, Technology & Society
<b>STS 2500-101:</b>	Societies and the Sea
<b>Division:</b>	Lower
<b>Credit Hours:</b>	3; Contact Hours: 38
<b>Faculty Name:</b>	Stephanie Green
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<b>Date/Time/Location:</b>	A Days; 1100-1220; Lili Marleen (Deck 6)

**Pre-requisites:** None.

### **COURSE DESCRIPTION**

This course investigates how oceans have shaped human cultures, societies, and economies, and the ways human activities are affecting ocean ecosystems. We will draw on information from a range of disciplines—including biology, oceanography, anthropology, archeology, and economics—to study the reciprocal relationships between people and marine environments through a human ecology lens. In particular, we will look at why coastal areas are hotspots for human settlement, how different knowledge systems are employed by people to understand ocean environments, the role of maritime travel in connecting and expanding societies, the importance of marine organisms as food and medicine, and the future of energy production in the ocean. Locations visited during the semester will serve as case studies. Using these topics as our backdrop, we will consider how rapid human population growth and technological development are leading to the degradation of marine environments and resources. Finally, we will consider options for restoring and conserving marine species (including our own).

### **COURSE OBJECTIVES**

1. Review biological and oceanographic concepts to understand marine ecosystems as habitat for Earth's biodiversity, including humans.
2. Apply basic concepts and methods from the discipline 'human ecology' to studying human-environment interactions; understand the links between these disciplines and the fields of biology, anthropology, archaeology, history, and economics.
4. Explore the different knowledge systems employed by people to understand ocean environments, including traditional knowledge and scientific knowledge.
5. Compare and contrast modes of marine transport, ocean resource extraction, and resource use across our global voyage.
6. Examine the effects of resource use and urban development on ocean environments and biodiversity over time and across locations.

## REQUIRED TEXTBOOKS

AUTHOR: Gerald G. Marten  
TITLE: Human Ecology: Basic Concepts for Sustainable Development  
PUBLISHER: Earthscan Publishers Ltd.  
ISBN # 185383-714-8  
EDITION: 2001 (1<sup>st</sup>)

AUTHOR: Timothy Beatley  
TITLE: Blue Urbanism: Exploring Connections between Cities and Oceans  
PUBLISHER: Springer  
ISBN # 978-1-61091-564-9  
EDITION: 2014 (1<sup>st</sup>)

Additional required readings and multimedia files to be viewed ahead of each class are listed in the outline below. These sources will be made available to you through the ship's intranet.

## TOPICAL OUTLINE OF COURSE

Date	Topic/Activity	Reading/Videos
January 5:	Depart Ensanada	
A1- January 7:	Course syllabus review & introductions Our ocean life support system <i>In-class writing assignment: course interests and goals</i>	Rogers (2009) Planet Ocean
A2- January 9:	Basics of life in the sea: climate, current, depth	Blue Planet: Part 1. Ocean World
A3- January 11:	Ocean food webs & biodiversity	Marine Cons. Ecol. (Ch2&3) Human Ecology (Ch5)
January 12:	Honolulu	
A4- January 14:	Concepts and tools for human ecology <i>Check-in: Group projects</i>	Human Ecology (Ch1&2)
A5- January 17:	Human knowledge systems <i>In class: Kula Ring (Hunters of the South Seas)</i>	Drew (2005) Ayala (2009) Human Ecology (Ch9)

January 19:	Study day	
A6- January 20:	<i>Quiz #1</i> Coastlines and human settlements I: historical patterns	Human Ecology (Ch3) Bailey (2004)
A7- January 22:	Coastlines and human settlements II: current trends and future challenges	Download GapMinder Blue Urbanism: xi-xviii; Ch1 p.2-5; Ch2; p. 32-42; Ch5)
January 24-25:	Yokohama	Field Lab (January 25)
January 26:	In-Transit	
January 27-28:	Kobe	
A8- January 29:	Coastlines and human settlements III: technology, trade & global ocean highways	Fabinyi (2011)
January 31-Feb 1:	Shanghai	
February 2-3:	In-Transit	
February 4-5:	Hong Kong	
A9- February 6:	Marine ecosystem services <i>In class: Coastal Protection in Vietnam</i>	Human Ecology (Ch8)
February 8-12:	Ho Chi Minh City	
A10- February 13:	Co-adapting ecosystems and societies <i>In class: Coastal Voices</i>	Human Ecology (Ch4&6)
February 15:	Study day	
A11- February 16:	Feeding from the ocean: fishing and harvest I <i>Writing assignment #1 due</i>	Human Ecology (Ch7&10) Pauly (1995) Ono and Intoh (2011)
Feb 18-22:	Yangon	
A12- February 23:	Feeding from the ocean: fishing and harvest II	Smith et al. (2010) Blue Urbanism (Ch3)

A13- February 25:	<i>Quiz #2</i> Marine species in traditional and science-based medicine	Pandey (2009)
Feb 27-March 3:	Cochin	
A14- March 4:	What lies beneath: deep sea mining and resource extraction	Upadhyay (2014) Chansoria (2015) Mutch (2012)
March 6:	Study day	
A15- March 7:	Out of sight, out of mind? Waste management, sanitation, and the ocean <i>In class: Thilafushi Gon-dudhoh</i>	Eriksen et al. (2014)
March 9:	Port Louis	
A16- March 10:	Catching nemo: origins and future of the marine aquarium trade	Rhyne et al. (2012)
March 12:	Study Day	
A17- March 13:	South Africa's Blue Economy <i>Writing assignment #2 due</i>	Human Ecology (Ch11) Dudman (2015)
March 15-20:	Cape Town	
A18- March 21:	Sustainability & the tragedy of the ocean commons	Human Ecology (Ch 12; p. 196-214)
A19- March 23:	The footprint of our modern lives	Blue Urbanism (Ch6)
A20- March 25:	The footprint of our modern lives	Walker (2002)
March 27-28 March 29-31	Takoradi Tema	

A21- April 1: Urban living, wellness, and the ocean Blue Urbanism (Ch7)

A22- April 3: *Quiz #3*  
*Check in: Group projects*

April 5: Study Day

A23- April 6: Ocean sustainability: simple solutions or technology frontiers? Degnbol et al. (2006)  
*In class: Sylvia Earle: My Wish*

April 8-12: Casablanca

A24- April 13: *Final project presentations*

April 16: Disembarkation Day

## **FIELD WORK**

Experiential course work on Semester at Sea is comprised of the required field lab led by your instructor and additional field assignments that span multiple ports.

### **Field Labs**

Field lab 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 lab.

Field Lab Location: Yokohama, Japan

Field Lab Date: January 25

The relatively recent transformation of Yokohama from a small fishing village into an international port provides an excellent opportunity to explore how interactions between Japanese society and the ocean have changed over the past century, and how rapid development and resource extraction has in turn affected the ocean environment. This field trip will start with a visit to the Tsukiji Market, the largest wholesale fish and seafood market in the world, to observe the diversity of marine organisms traded there and the livelihoods supported by the seafood industry. Following lunch, we tour the Port of Yokohama where we'll learn about the past and present of maritime trade in Japan. We will end the day with a boat trip through the waterways feeding into Tokyo Bay with local experts to discuss challenges the region faces in balancing urban growth with the restoration and conservation of marine life, and innovative urban solutions underway.

## **METHODS OF EVALUATION**

### **Field Lab Assignment (20%)**

Through the locations visited on the field trip and discussion with local experts, you will investigate the changing relationship between Japanese society and ocean environments. In particular, pay attention for clues about the economic, social and environmental challenges and opportunities a change in lifestyle from small-scale fishing village to globalized trade center has created.

Make sure to record your observations and discussion from throughout the day through descriptive notes in their field notebooks, and make sure to take plenty of pictures! You will be evaluated based on:

- 1) Your participation in the field trip, including discussion with local people and experts encountered at our various stops.
- 2) You will be evaluated based on a journal or blog entry (*3-4 pages double spaced*) that synthesizes your observations about the economic, social, and environmental connections between people and the ocean in Japan, how these connections have changed from past to present, and the current challenges and opportunities created by ocean resource use and coastal development.

### **Writing Assignments (25%)**

***In-class writing assignment (First day of class):*** At the end of our first meeting, you will write a brief essay on what piqued your interest in the subject ‘Societies and the sea’, and what your goals for the course are.

***Writing assignment #1 (Due February 16<sup>th</sup>):*** You will write an essay describing the ways in which you and your community are connected to the ocean (*4-6 pages, double spaced*). You may wish interview family or friends, in addition to background research (internet and library). Thought-provoking questions will be provided in class to help direct your writing.

***Writing assignment #2 (Due March 13<sup>th</sup>):*** You will find a current news article (i.e. within the last 6 months; and not one used in the course syllabus) on an ocean issue, and write an essay that provides a more in-depth analysis of the topic (*4-6 pages double spaced*). You should augment the content in your article with some additional research (internet and library) to provide sufficient context for the issue. Note: Please look for an article from sources based in the countries we are visiting during the semester.

### **Final Group Project (25%)**

In groups of 3-4, you will choose a topic covered in our course and conduct an in-depth investigation for a selection of the locations we are visiting on our voyage. Using a combination of interviews with local people, observations of the urban and marine environment, and background research, you will describe the coupled human-environment relationships for your topic in one of two formats: 1) longitudinally (i.e. comparing the relationships over time) for two locations, or 2) in cross-section (i.e. between locations in the present time) for four or more locations.

Each group will produce:

- 1) *A report (4-6 pages, double spaced)* summarizing your group's findings, and
- 2) *An oral presentation* in which you will share your results to the rest of the class at the end of the semester.

Your report and presentation should use visual aids, such as images and maps, to support your findings. I will work with you to select topics and identify opportunities for gathering information at ports-of-call in the first two weeks of class.

### **Quizzes (25%)**

Quizzes (January 20<sup>th</sup>, February 25<sup>th</sup>, April 5<sup>th</sup>) will cover material from class and in the assigned readings prior to the quiz date.

### **Class participation (10%)**

Participation includes active listening and contributions to class discussions and activities. Please note attendance and participation is required on Semester at Sea. Absences are only excused when accompanied by a note from the clinic.

### **GRADING RUBRIC**

<b>Grading:</b>	Class participation	10%
	Field lab assignment	20%
	Quizzes (3)	25%
	Writing assignments (3)	25%
	Final project	25%

**Grading scheme:** Based the cumulative percentage earned, your grade will be assigned as follows:

A+	90+
A	85-89
A-	80-84
B+	76-79
B	72-75
B-	68-71
C+	64-69
C	60-63
C-	55-59
D	50-54
F	0-49

### **Assignment submission and late work policy:**

Assignments must be submitted electronically through the Moodle system unless otherwise specified. All assignments are due by the beginning of class on the due date in the syllabus (*in blue* in the “Topical Course Outline” section). If you miss a deadline due to illness, please obtain a note from the clinic. All other late work is accepted with a grading penalty of -25% for each 24 hrs past the deadline.

### **RESERVE BOOKS AND FILMS FOR THE LIBRARY**

AUTHOR: Paul Robbins, John Hintz, Sarah A. Moore  
TITLE: Environment and Society: A Critical Introduction  
PUBLISHER: John Wiley & Sons, Ltd.  
ISBN 978-1-118-45156-4  
EDITION: 2013

AUTHOR: Callum Roberts  
TITLE: The Unnatural History of the Sea  
PUBLISHER: Island Press  
ISBN # 978-15-972-6161-6  
EDITION: 2007

AUTHOR: Helaine Selin (Ed.)  
TITLE: Nature Across Cultures  
PUBLISHER: Springer  
ISBN # 978-94-017-0149-5  
EDITION: 2003

AUTHOR: John Roff and Mark Zacharias  
TITLE: Marine Conservation Ecology  
PUBLISHER: Routledge  
ISBN # 978-18-440-7884-4  
EDITION: 2011

AUTHOR: John N. Kittinger, Loren McClenachan, Keryn B. Gedan, Louise K. Blight  
TITLE: Historical Marine Ecology in Conservation: Applying the Past to Manage the Future  
PUBLISHER: UC Press  
ISBN # 978-05-202-7694-9  
EDITION: 2014



## **ELECTRONIC COURSE MATERIALS**

Readings and videos listed in the ‘Topical Outline of Course’ section are found on the ship’s intranet.

## **ADDITIONAL RESOURCES**

Additional resources are also found on the ship’s intranet.

## **HONOR CODE**

Semester at Sea students enroll in an academic program administered by the University of Virginia, and thus bind themselves to the University’s honor code. The code prohibits all acts of lying, cheating, and stealing. Please consult the Voyager’s Handbook for further explanation of what constitutes an honor offense.

Each written assignment for this course must be pledged by the student as follows: “On my honor as a student, I pledge that I have neither given nor received aid on this assignment.” The pledge must be signed, or, in the case of an electronic file, signed “[signed].”