

**SPRING 2009**  
**ALS495E: Special Topics:**  
**Global Health and Environmental Stewardship:**  
**Environment, Sustainable Natural Resources, Food Systems and**  
**Medicinal Plants**  
(3 Credits)

Tuesday/Thursday Lecture: 8:30 – 9:45 a.m., Room 304 Fox  
On-line Lab: 8:30 – 9:45 a.m., Room 105 Scott Hall  
Occasional Tuesday videoconferences, note schedule: 8:30 – 10:00 a.m.  
Comm. Services Bldg.

**Instructors:**

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**CALS Case Study Leaders: TBA**

**I. COURSE OVERVIEW**

The critical issues of sustainability transcend national boundaries. Food security and its relationship to sustainable development have increasingly become issues of global concern. Therefore this course offers students around the world an opportunity to examine, discuss, and formulate positions to case studies on sustainability issues concerning population, the environment, natural resources and food systems. Each case study is analyzed from the following perspectives: a) Social/Cultural; b) Political; c) Economic; d) Technical; e) Health; f) Environmental; and g) Ethics/Philosophical. Students will focus on a variety of topics that demonstrate the dynamic interrelationships among population demographics, natural resources management, and food production.

Partner institutions in the Global Seminar are:

North Carolina State University, USA: Gerry Luginbuhl & Barbara Kirby  
Agricultural University, Sweden: Sri N. Sriskandarajah  
University BOKU, Austria: Rainer Haas

A case study approach to content, international students teams, Internet, video, satellite and telephone technologies are combined to meet the challenge of having a successful global classroom of students spread in five institutions around the world. Our learning approach aims to promote critical reflection and experiential learning through the use of case studies of real events and people. The case studies are presented through videos, readings, and other documentation, which give realism and credibility and complements background materials. The seminar relies heavily on the use of modern information and communication technologies to provide students the opportunity to interact with their global classmates and professors. The seminar includes six synchronous videoconferences, weekly desktop videoconferencing labs, and continuous asynchronous discussions throughout the semester using an online discussion board and email. All course materials and information are available on the course web site at:

<http://www.blackboard.cornell.edu/>

## II. TASKS OF NATIONAL AND INTERNATIONAL STUDENT TEAMS

### A. National Students Groups (i.e., NC State students)

Students at *each* university constitute a national group. Each national group will be expected to perform two main tasks:

1. Actively engage in discussions and analyses of each of the case studies from these perspectives: a) Social/Cultural; b) Political; c) Economic; d) Technical; e) Health; f) Environmental; and g) Ethics/Philosophical. Each group will prepare and present a position statement on the case study topic during the international videoconference.
2. *All* students will be expected to *participate fully* in the development and presentation of the national group.

### B. Learning Objectives

General Education Program Global Knowledge Perspectives:

Learning Outcomes: Students will be able to

1. Compare systematically the ideas, values, economic structures, technological developments and attitudes of people from different societies related to public health, sustainable food and water supplies, and herbal medicine.
2. Explain how a culture changes in response to internal and external pressures related to climate change and population growth.

Evaluation Instruments for assessing global knowledge learning outcomes:

1. Student essays on each case study: Example: Compare systematically the ideas, values, economic structures, technological developments and attitudes in Sweden and the U.S.A. regarding the protection and delivery of clean water resources to people, crops, domestic animals, and wildlife.
2. Essay: Explain culture changes that have occurred in response to the identification of medicinal plants and their potential for development by biopharmaceutical companies.

## III. STUDENT ASSESSMENT

This seminar is highly interactive and its success depends on *active* student participation—sharing experiences and perspectives. This course is graded S/U. In order to earn an S, students must complete all assignments and attend all classes.

**Students taking this course in place of ALS 398H** – CALS honors students must also prepare a poster on the case study that they present in the video conference. Students are expected to present their posters at the Undergraduate Teaching Symposium in April.

**Participation in Class, Documentation and Labs**-Students are expected to be active learners, participate in the group discussions, interact with speakers and chat with other international students in the chat room. It is expected that students will communicate on a regular basis with their international partner. **Attendance** is expected. All excused absences must be documented in writing preferably prior to the absence.

**Case Study Research and Preparation**—To enhance our discussions, students will read each case study, review associated materials and prepare a one-page summary from at least one perspective for the in-class discussion designed to identify the key issues of the specific case study. Each student is expected to lead a case study (pairs or groups may be used). All reading material will be available at no cost to the student via the class website.

**Reflective Essays**—Students will write four essays, of about two pages, reflecting their thoughts on each of the case study topics. These essays should be a synthesis of readings, and class and Internet discussions with fellow students and faculty. **Essays are due on Feb. 5, March 12, April 9 and April 23.**

**International Video Conferences**-Students will participate in all four International video conferences. A different group of students will be asked to lead each of the video conference discussions, so that each student in the class will have at least one opportunity to participate in presenting the NCSU position on a case.

**Academic Integrity**- Students are bound by the academic integrity policy as stated in the code of student conduct. Students are required to uphold the university pledge of honor and exercise honesty in completing assignments and examinations. See the following website for the complete description:

[http://www.ncsu.edu/policies/student\\_services/student\\_discipline/POL11.35.1.php](http://www.ncsu.edu/policies/student_services/student_discipline/POL11.35.1.php)

Students are reminded that academic dishonesty such as plagiarism and cheating will not be tolerated at North Carolina State University. The NC State University Code on Student Conduct defines academic dishonesty and outline procedures for judging alleged violators. If a student is in doubt regarding any matter relating to the standards of academic integrity in any class or assignment, the student should consult the instructor before handing in the work.

**Students with Special Needs**- Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with Disability Services for Students at 1900 Student Health Center, Campus Box 7509, 515-7653. For more information on NC State's policy on working with students with disabilities, please see the [Academic Accommodations for Students with Disabilities Regulation \(REG02.20.1\)](#). This information can be located using the website link listed below:

[http://www.ncsu.edu/policies/academic\\_affairs/courses\\_undergrad/REG02.21.1.php](http://www.ncsu.edu/policies/academic_affairs/courses_undergrad/REG02.21.1.php)

#### IV. COURSE OUTLINE & WEEKLY CLASS SCHEDULE

This schedule is subject to change. Check the online course calendar for latest update and for assignment due dates.

TH 1/8	In-class course orientation; NCState presentation planning	304 Fox
T 1/13	Grounding the case studies: Overview of course topics Practical Experience on Case Study Analysis: Introduction of <i>The Tree</i> Case Study Analysis of Complex Issues: Critical Evaluation of Information Cost-Benefit/Risk Analyses Problem and Solution Analyses Techniques and Tools Decision-making Techniques and Tools	304 Fox
TH 1/15	Course website development for video presentation	105 Scott computer lab
T 1/20	<b>Introductory Video Conference</b> (8:15 a.m., 8:30 a.m. start)	Communication Services Building
TH 1/22	Introduction and discussion on <b><i>Biodiversity: Indigenous People and Medicinal Plants: Ethical Development of New Medicines</i></b>	304 Fox
T 1/27	Lab: Online discussion on Biodiversity case study	105 Scott Hall
TH 1/29	Discussion on <b><i>Biodiversity</i></b> ; <i>Draft position statements</i>	304 Fox
T 2/3	<b>Video Conference #2: Biodiversity Case study hosted by NC State University</b>	Comm. Services/Butler
TH 2/5	Reflection on video conference #2: lessons learned from international participants; comparison of chat and video conference for exchange of ideas. Introduction of <b><i>Organic Farming</i></b> case study. <b>Essay #1 due.</b>	304 Fox
T 2/10	Introduction of <b><i>Golden Rice: Genetically Modified Foods</i></b> Discussion of case studies	304 Fox
TH 2/12	<b><i>Golden Rice: Genetically Modified Foods and Organic Farming</i></b> Guest speakers	304 Fox
T 2/17	Lab: Online discussion of case study: <b><i>Organic Farming</i></b>	105 Scott Hall
TH 2/19	<b><i>Organic Farming</i></b> : Develop position statement and presentation	304 Fox
T 2/24	<b>Videoconference # 3: Case study on <i>Organic Farming</i></b> Hosted by NC State	Comm. Services/Butler
TH 2/26	<b><i>Golden Rice: Genetically Modified Foods</i></b> Finalize position statements and presentation	304 Fox
3/2 –3/6	<b>NCSTATE SPRING BREAK</b>	
T 3/10	<b>Videoconference #4: Case study on <i>Genetically Modified Foods</i></b> Hosted by BOKU	Comm. Services/Butler
TH 3/12	Reflection on Organic Farming and Genetically Modified Foods case studies. <b>Essay #2 due on one of last two case studies.</b>	304 Fox

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T 3/17	Introduction and discussion of <b>Water Quality</b> case study	304 Fox
TH 3/19	Water Quality: guest speakers	304 Fox
T 3/24	Climate change: effects on water resources	304 Fox
TH 3/26	New examples of water quality issues affecting human and animal health	304 Fox
T 3/31	Lab: Online discussion on <b>Water Quality</b> case study	105 Scott Hall
TH 4/2	Finalize position statement	304 Fox
T 4/7	<b>Videoconference #5:</b> Case study on <b>Water Quality</b> case study. Hosted by Agriculture University of Sweden	Comm. Services/Butler
TH 4/9	Reflection on <b>Water Quality</b> case study. <b>Essay #3 due.</b>	
T 4/14	Discussion of <b>Global Responsibility</b>	
TH 4/16	Discussion of <b>Global Responsibility</b> final position statement	304 Fox
T 4/21	<b>Videoconference #6: Global Responsibility</b>	Comm. Services/Butler
TH 4/23	<b>Reflection and evaluation. Essay #4 due.</b>	304 Fox