

ESPM 1011: Issues in the Environment

MWF, 12:50-1:40 pm
335 Borlaug Hall

3 credits
Fall 2006

Instructors

Charlie Blinn
Dept. of Forest Resources
330B Green Hall
Phone: 612-624-3788
Email: cblinn@umn.edu
Office Hours: Tu, 9-11 am, and Th, 1-3 pm

Dan Philippon
Dept. of Rhetoric
78 Classroom Office Building
Phone: 612-624-4209
Email: danp@umn.edu
Office Hours: MWF, 10-11 am

Teaching Assistants

Michael Banker
Dept. of Rhetoric
85 Classroom Office Building
Phone: 612-624-6779
Email: bank0019@umn.edu
Office Hours: After class and by appointment

Kristin Hines
Dept. of Rhetoric
69 Classroom Office Building
Phone: 612-624-4933
Email: hine0066@umn.edu
Office Hours: After class and by appointment

Discussion Sections

1. BioSci 70, with Dan Philippon
2. Green Hall 19, with Charlie Blinn

3. Borlaug Hall 375, with Michael Banker
4. Borlaug Hall 306, with Kristin Hines

Course Description

This course is an introductory, interdisciplinary survey of environmental issues that explores the connections between environmental sciences, policy, and management and personal, professional, and civic responsibility. On Mondays and Wednesdays, the instructors and a variety of guest speakers will introduce students to topics of current environmental concern, and on Fridays students will discuss these issues in small groups. The course emphasizes the social, political, and economic factors involved in environmental decision-making. The overarching question it asks is: What should a sustainable society look like, and how should we attempt to achieve it? The specific topics it explores include: population and consumption; energy, climate change, and waste; land use (soils, forests, agriculture, water, and wetlands); and biodiversity (fisheries, wildlife, and endangered and invasive species). The course is intended for first-year students majoring in Environmental Sciences, Policy, and Management and for all students who are interested in the subject and wish to satisfy the University's liberal education requirements for "Environment Theme" and "Citizenship and Public Ethics Theme." The course has no prerequisites and is intended for students with little or no scientific background.

Course web site: <http://www.agricola.umn.edu/espm1011/fall06/>

Class time: 60% lecture, 40% discussion

Work load: 20 pages of reading per week, 15-20 pages of writing per semester, 1 exam, 4 papers, 3 quizzes

Grade: 15% final exam, 25% written reports or papers, 35% special projects, 15% quizzes, 10% class participation

Exam format: Varies

Objectives

By the end of this course, you should be able to:

- understand basic facts and concepts involved in the study and practice of environmental sciences, policy, and management
- connect the diverse areas of interest involved in environmental decision-making, including science, history, philosophy, economics, politics, religion, and education
- clarify your own position by evaluating competing theories, values, and attitudes regarding environmental change
- collaborate with others to find common ground in the search for solutions to controversial environmental issues
- communicate your ideas effectively in writing and in speaking to small and large groups

Texts

There is one required textbook for this course:

Allen, John L., ed. Environment 06/07. 25th ed. Dubuque, Iowa: McGraw-Hill/Dushkin, 2006.
ISBN: 0-07-351542-6. \$25.65.

Additional readings will be available online.

Grades

We will award grades in this course according to the University of Minnesota's Uniform Grading Policy:

A: achievement that is outstanding relative to the level necessary to meet course requirements

B: achievement that is significantly above the level necessary to meet course requirements

C: achievement that meets the course requirements in every respect

D: achievement that is worthy of credit even though it fails to meet fully the course requirements

F: represents failure and signifies that the work was either:

- completed but at a level of achievement that is not worthy of credit, or
- not completed and there was no agreement between the instructor and the student that the student would be awarded an "I" (Incomplete)

We will also award pluses and minuses, with the highest possible grade being an "A."

An "I" (Incomplete) is assigned at the discretion of the instructor when, due to extraordinary circumstances, such as hospitalization, a student is prevented from completing the work of the course on time. An Incomplete requires a written agreement between instructor and student.

Students taking this course using the S/N option must complete all requirements, which will be graded using the A-F system. Students must earn a "C-" or better to receive an "S" (Satisfactory). Students earning a "D+" or worse will receive an "N" (No Credit).

Grades will be assigned in terms of a percentage of possible points according to the following standards:

A >= 93%	B+ >= 87%	C+ >= 77%	D+ >= 67%		
A- >= 90%	B >= 83%	C >= 73%	D >= 63%	F < 63%	
	B- >= 80%	C- >= 70%			

We may choose to grade more generously, but we will not raise our standards above these. If at any time you have concerns about your grade, please do not hesitate to contact us.

How to Calculate Your Grade

You can calculate your grade at any time by adding up all the points you received on your assignments to date and dividing that number by all the points you could have received on those assignments. (Grades for attendance and participation will not be calculated until the end of the semester.)

Credits and Workload Expectations

This three-credit course will require, for the average University of Minnesota undergraduate student, nine hours of academic work per week, averaged over the term, in order to complete the work of the course. Since the course meets for three hours a week, you should expect to spend an additional six hours a week on coursework outside the classroom. All grades are based on the quality of the work submitted, not on hours of effort.

A Word About Quizzes and Exams

We don't give quizzes and exams that ask you to "guess what the professors are thinking." Instead, we give quizzes and exams that attempt to evaluate the nature, progress, and quality of your learning. Yes, sometimes this will involve asking you to identify, name, or define important facts, concepts, and ideas, but these will always be things we have read about or discussed, and we do this because developing a full understanding of our subject requires building a firm base of knowledge. At other times, we will ask you more probing "why" and "how" questions, which will allow you to demonstrate your understanding more thoroughly, and we may also ask you to apply your understanding to particular situations, or to analyze, synthesize, and evaluate evidence and conclusions, all of which involve the kind of higher-order intellectual activities that this course attempts to help you develop.

University Policies

Sexual Harassment

Sexual harassment by or toward a member of the University community is prohibited by Board of Regents policy. Complaints about sexual harassment should be reported to the University's Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall.

Classroom Conduct

All students at the University have the right to a civil, productive, and stimulating learning environment. In turn, instructors have a responsibility to nurture and maintain such an environment. Lively, even heated, discussion is not disruptive behavior. Both instructors and students have a fundamental obligation to respect the rights of each other and an equally fundamental obligation to respect the instructional setting as a place for civil, courteous behavior. Students who disrupt the educational process because of discourteous, threatening, harassing, or other aggressive behavior will be removed from class.

Accommodations for Students with Disabilities

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. If you have a disability, please contact us and/or Disability Services (180 McNamara Alumni Center, [612] 626-1333 TTY/voice) to schedule an appointment with a Specialist. All requests will remain confidential. This syllabus is available in alternative formats upon request.

Student Academic Integrity and Scholastic Dishonesty

Academic integrity is essential to a positive teaching and learning environment. All students enrolled in University courses are expected to complete coursework responsibilities with fairness and honesty. Failure to do so by seeking unfair advantage over others or misrepresenting someone else's work as your own can result in disciplinary action. Any student found guilty of scholastic dishonesty in this course can be assigned a penalty up to and including an "F" or "N" for the course and be reported to the University's Office for Student Academic Integrity. If you have any questions regarding the expectations for a specific assignment or exam, please ask.

Course Requirements

In this course, we will ask you to engage in a variety of different activities that will help you achieve the course objectives. These activities are worth a total of 1,000 possible points. For more information on this point system, see the section on grades.

1. Attendance and Participation (100 points)

Learning is social; it occurs in community. As a result, you will need to participate actively in this course on several levels, so that all of us can learn as much as possible from one another.

Course Logistics: On Mondays and Wednesdays, we will meet in the lecture hall for lectures by the instructors, presentations by guest speakers, and videos. On Fridays, we will meet in smaller groups for discussions led by the instructors and the TAs. (You should attend the section for which you are registered.) Because our time in class is limited and therefore valuable, you should:

- arrive on time and stay the entire class period. Students who arrive late or leave early disrupt the flow of class and may miss important information. You should not expect to pass this course if you arrive late or leave early on a regular basis.
- turn off your cell phone, pager, and/or watch alarm before coming to class. It's very distracting when these go off during lectures and discussions.
- refrain from eating meals during class. You are welcome to bring a soda or light snack with you to class, but please be considerate of those around you.

In return, we will always begin and end class on time, will place any course materials online as soon as possible, and will make ourselves available to answer your questions and discuss your concerns during our office hours and at other times as needed.

Reading the Texts: You should always read the assigned texts before coming to class. Although the instructors and guest speakers may not always discuss the texts directly, the lectures and the texts will complement one another, and you will get more out of the class if you read the material in advance.

Guest Speakers: The class will include a number of presentations by guest speakers, as indicated on the class schedule. Guest speakers are professionals from the community or faculty who have agreed to offer their perspective on relevant issues. They can be an excellent resource for you, and we encourage you to ask them questions and engage them in a mutually respectful discussion.

Taking Notes: We encourage you to take your own lecture notes, because writing something down greatly improves your chances of remembering it. Don't try to record every minute detail, however, because we won't be testing you on trivia. Instead, just try to capture the main ideas, which is what will appear on the exams.

Attendance: Although we will not be taking attendance in lecture, you will find it difficult to pass this course without attending class on these days. The quizzes and the final exam will be based in large part on the information presented in lecture, and only a portion of this material will be made available on the course web site. Attendance will be taken every day in the discussion sections, however, and more than one unexcused absence in these sections will seriously affect your grade in this portion of the course (a pattern of unexcused absences is cause for a grade of "F" in the entire course). If you know in advance that you are going to be absent for a particular discussion section, please let your discussion leader know. You are responsible for documenting the legitimacy of any absence from your discussion section. Legitimate reasons for absence include:

- illnesses certified by Boynton Health Service or your family physician
- emergencies caused by a death or serious illness in your immediate family
- participation in intercollegiate athletic events or other group activities sponsored by the University
- subpoenas, jury duty, military service, and religious observances

If you have a legitimate absence, we will allow you to make up missed assignments or quizzes, and we will also try to accommodate other rare scheduling conflicts you might have, provided that you notify us of these in advance. We will work with you to develop a process and timeline for completing make-up work after an absence has been excused.

Leaving Class Early: If you need to leave class early for any reason—whether it be during a lecture by the instructors, a guest lecture, or a discussion—please notify us before class begins. Otherwise, your action will seem as rude and disrespectful as it would if the person leading class simply left in the middle of class without explanation. We respect your skills and expertise as students, so please respect ours and those of our guest speakers.

Participation: We seek a wide variety of views and styles of interaction in class, and people from all backgrounds, orientations, and perspectives are encouraged to participate. We will evaluate your participation according to the following criteria:

- A: frequent and courteous participation, with mature and thoughtful insights
- B: above average participation and insight
- C: moderate participation and reasonable insight
- D: below average participation with little understanding of issues
- F: little or no participation

Although it is more common to be shy and rarely speak, it is sometimes possible to talk too much, so you should try to participate frequently without dominating the discussion.

Field Trip: This course will include one required field trip, which will provide you with hands-on exposure to the subjects addressed in this course. The trip will occur on Wednesday, 10/25, from 1 to 5 pm, and round-trip transportation from the St. Paul campus will be provided. Please contact your discussion section leader if you are unable to attend the field trip. Students must sign and return a Release of Liability form before they will be allowed to participate in the field trip. Additional details will be provided approximately one week prior to the date of the trip.

To receive the full 100 points for attendance and participation, therefore, you should read the assigned texts carefully, attend the class meetings conscientiously, and participate actively in class discussions, small-group work, and other in-class assignments.

2. Jigsaws (200 points)

For four of our discussion sections, we will be conducting “Jigsaws,” which are activities designed to promote collaborative learning and the sharing of multiple perspectives. At least two types of Jigsaws will be used—article-based and issue-based—and materials for each of these will either be handed out in class or be posted on the course web site.

What you will do during a Jigsaw:

1. For the article-based Jigsaws, we will assign you an article to read, which only a portion of the rest of the class will have read. During class, you will first meet with an “expert” group, consisting of other students who have read the same article, where you will discuss that article’s main points. Then you will meet with an “exchange” group, consisting of students from all of the other expert groups, where you will exchange key information from all the assigned articles.
2. For the issue-based Jigsaws, we will assign you a role to play in a controversy. Prior to class, you must build a defense of your assigned perspective, even though it may conflict with your personal beliefs. During class, you will first discuss your position with others who share the same role. Then you will meet with students playing conflicting roles to negotiate a resolution to the controversy.

What you must submit for a Jigsaw:

1. On the day of each Jigsaw, you must submit a half- to full-page typed, double-spaced paper containing your summary of either:
 - a. the key points from the article, or
 - b. the arguments you will bring to the role you will play
2. On the Monday following each Jigsaw, you must submit another half- to full-page typed paper containing:
 - a. your summary of the discussion
 - b. your thoughts, comments, or questions about the discussion
 - c. your response to an assigned reflection question

Each jigsaw is worth 50 points: 15 points for your summary on the day of the Jigsaw, and 35 points for your response to the discussion submitted on the following Monday.

3. Reading Responses (150 points)

At the end of each of the first three parts of the class, we will ask you to submit a short, 1-2 page (300-500 words), double-spaced response to any one of the assigned articles you read for that part of the class.

Each response is worth 50 points and should contain four sections:

1. brief heading including a full citation of the reading (author, title, and the original date and place of publication) and a summary of the author’s affiliation and/or credentials (who is this person, and why is he or she qualified to write about this subject?)
2. first paragraph summarizing the main points of the reading
3. second paragraph describing the major strengths and weaknesses of the reading and offering your own opinion about it
4. final paragraph explaining why this reading is (or is not) important to environmental sciences, policy, and/or management

4. Ecological Footprint Audit and Analysis (150 points)

To encourage you to consider how your individual actions can contribute both to environmental problems and to their solutions, we will ask you to conduct an Ecological Footprint Audit and Analysis, which will take place in two stages:

1. Audit (50 points): Begin by calculating your ecological footprint <<http://www.myfootprint.org/>>. Next, keep track of (a) all the food you eat, (b) all the products you buy, and (c) all the waste you generate over a one-week period. This record of your consumption and waste generation is due on October 23.
2. Analysis (100 points): Write a 2-3 page, double-spaced paper discussing the implications of your result. Are you concerned about your use of the Earth’s sources and sinks? What steps can you take now and in the future to minimize your impact on the environment? What are the implications of your consumption and waste generation on social equity? Your analysis is due on November 10, and a portion of the discussion that day will be set aside for you to share your findings with other students.

5. Final Paper (100 points)

In the last part of the class, we will ask you to submit a 3-4 page, double-spaced paper (approx. 1,000 words) on any of the following subjects:

- your environmental ethic: Define and describe your own environmental ethic. Connect your ethic to the issues we discussed in class, and discuss any growth or change in your attitudes that has occurred over the course of the semester. What environmental issues do you think will be especially important to you in the future, and what do you propose to do about them?
- an environmental organization: Find an environmental organization you believe would be a worthy recipient of a \$50 donation. Describe the organization's mission and activities, and explain why you believe their work is important. Do not simply cut-and-paste information from this group's web site into your paper, but evaluate the information they provide and connect it to your own values and ethics.
- an environmental issue: Describe a current environmental issue that matters to you, and identify its implications for environmental sciences, policy, and management. Explain its scientific components, the laws and regulations regarding it, and the agencies and interest groups participating in the debate about its management. Determine who must do what to resolve it, and explain how such concerns as history, values and ethics, economics, religion, and education factor into the controversy.

6. Quizzes (150 points)

At the end of each of the first three parts of the class, we will give a quiz that will provide you with an opportunity to demonstrate your knowledge of the topics covered in the readings, lectures, and discussions. The quizzes will likely include a combination of multiple choice, true/false, matching, short answer questions. Each quiz will be worth 50 points.

7. Final Exam (150 points)

We will also offer a 150-point cumulative final exam, to be given at the assigned time for our final exam. The format will likely include a combination of multiple choice, true/false, matching, short answer, and essay questions. The exam will be closed-book, but we will distribute a study guide to help you focus your review of the material. You must attend the last discussion section to receive the study guide. Attendance at the exam is also REQUIRED. We will NOT make exceptions for anyone who wishes to leave town early, whether it be for vacations, family reunions, weddings, jobs, rides home, or any other reason. The only exception we will make, per University policy, is for students with final examination conflicts, or with three (or more) final examinations in one calendar day. These students, however, must make the appropriate rescheduling arrangements with us by the end of the second week of the term.

How to Format, Submit, and Get Help with Your Assignments

Format

Unless otherwise noted, all papers and other written assignments must be typed, proofread, and spellchecked. The text should be double-spaced with one-inch margins and formatted in a standard-size font. Your pages numbered in the upper right-hand corner, and stapled in the upper left-hand corner. Your name, the course number, your instructor's name, and the date should appear at the top left of the first page, and any title should be centered on the next line. Do not include a separate title page. Assignments that are not typed will not be accepted.

Citations

If you quote from or refer to one or more of our course texts, lectures, or other outside readings in a paper, please cite them appropriately, both within the body of your paper and in a bibliography:

Within the body of your paper: Please indicate (a) the name of the author you are citing, (b) the name of the article or book the citation appears in, and (c) the page number on which it can be found. If you quote from or refer to a lecture from this course, simply place the word "lecture" in parentheses, followed by the date of the lecture, like so: (lecture, 9/25/06).

In a bibliography: Please list any sources you cite in a bibliography, using the citation style with which you are most familiar (MLA, APA, or Chicago). Please do not mix styles or create your own citation method. To cite a web page in your bibliography, simply give enough information that we can (a) locate it, and (b) evaluate its quality. If you are citing a single web page, give its author and/or title (if available), the web address, and the date you accessed it. If you are citing

an article that is part of a database, and the address is quite long, you need only provide the short form of the address (for example, <<http://www.cnn.com/>>).

Submissions

Unless otherwise noted, papers and other written assignments may not be submitted by email. You must bring a hard copy of the assignment to class with you. We do, however, encourage you to print your papers on the reverse sides of previously used, recycled paper. Please keep a copy of each assignment you submit in case your original is somehow lost or destroyed.

Due dates and late submissions

Assignments are due at the beginning of class. Assignments submitted after the beginning of class will have their grades reduced by 10 percent for every class day they are late. Note that we cannot accept “computer problems” as an excuse for late papers. Please back-up your files and avoid waiting until the last minute to print your papers.

Grading criteria

Papers and other written assignments will be graded according to the following criteria, as appropriate:

1. Content: Did you follow the assignment instructions? Have you read and understood the course material? Is your analysis insightful?
2. Coherence and clarity: Is your paper focused and well organized? Do you clearly state your purpose, explain how you will fulfill that purpose, and devote your paper to doing so? Do you support your claims with evidence and address opposing arguments?
3. Format, proof-reading, and documentation: Did you follow the formatting guidelines? Is your paper free of errors in grammar, punctuation, and spelling? Do you credit the source of borrowed ideas and statements appropriately?

Help with assignments

If you are having a difficult time writing one or more of the assignments for this class, please contact your discussion section leader, who may be able to accept drafts and/or revisions, depending on the nature of the problem and his or her schedule. In addition, the following University resources may be of help to you:

Center for Writing <<http://writing.umn.edu/home/writinglinks.htm>> provides information about facilities at the University that can help you with your writing.

Student Academic Success Services <<http://www.ucs.umn.edu/lasc/>> provides learning support services, including classes, workshops, individual consultation and counseling, and study skills resources to help you be successful at the University.

How to Contact Us

We will make time during and directly after class for questions on course material. We encourage you to initiate discussion and/or ask questions at any time. Further, we strongly encourage you to meet with us during office hours or by appointment. If you encounter difficulty with the course material or format, please ask questions, talk to us, or contact us via e-mail. Our contact information appears at the top of this syllabus.

Course Schedule

Part One: Environmental Choices

Week One

- W 9/6 Welcome
 F 9/8 Discussion

Week Two: Environmental History, Values, and Sustainability

- M 9/11 Growth and Its Limits (Dan Philippon)
 • READ: The Economist, "How Many Planets?" (Article 1)
 W 9/13 Science, Values, and Sustainability (Dan Philippon)
 F 9/15 Discussion
 • READ: Snyder, "Five Meta-Trends Changing the World," and Kwong, "Globalization's Effect on the Environment" (Articles 2 & 3)

Week Three: Ecosystems and Economics

- M 9/18 Conservation Economics (Steve Polasky, Applied Economics)
 • READ: Morrison, "How Much is Clean Water Worth?" (Article 19)
 W 9/20 Ecosystem Principles (Charlie Blinn)
 • READ: Brown, "Rescuing a Planet Under Stress" (Article 4)
 F 9/22 Discussion/JIGSAW #1
 • DUE: Jigsaw #1 (part one)

Week Four: Population and Consumption

- M 9/25 Population Growth and Resource Consumption (Dan Philippon)
 • READ: Kates, "Population and Consumption" (Article 5)
 • DUE: Jigsaw #1 (part two)
 W 9/27 Video: "World in the Balance: Part One: The People Paradox"
 • READ: Foster, "A New Security Paradigm" (Article 6)
 F 9/29 Discussion

Week Five: Tools for Change: Education, Religion, Technology, and Politics

- M 10/2 Education and Religion (Dan Philippon)
 • DUE: Reading Summary #1
 W 10/4 Technology and Politics (Charlie Blinn)
 F 10/6 Discussion/QUIZ #1

Part Two: Energy, Climate Change, and Waste

Week Six: Energy

- M 10/9 Energy and the Environment (Dan Philippon)
 • READ: Kloor, "Powder Keg," and Millett, "Personalized Energy" (Articles 11 & 12)
- W 10/11 Energy Policy (Senator Ellen Anderson)
 • READ: Pasqualetti, "Wind Power," and Keenan, "Hydrogen" (Articles 13 & 14)
- F 10/13 Discussion/JIGSAW #2
 • DUE: Jigsaw #2 (part one)

Week Seven: Climate Change

- M 10/16 Global Climate Change (Dan Philippon)
 • READ: Halweil, "The Irony of Climate" (Article 9), and Ruddiman, "How Did Humans First Alter Global Climate?" (Article 24)
 • DUE: Jigsaw #2 (part two)
- W 10/18 Climate Science, Policy, and Management (J. Drake Hamilton, Fresh Energy)
 • READ: Socolow, "Can We Bury Global Warming?" (Article 25)
- F 10/20 Discussion

Week Eight: Waste

- M 10/23 Your Ecological Footprint (Charlie Blinn)
 • DUE: Ecological Footprint Audit
- W 10/25 Field Trip
- F 10/27 Discussion/QUIZ #2

Part Three: Land Use

Week Nine: Forests

- M 10/30 Forestry Science, Policy, and Management (Charlie Blinn)
 • DUE: Reading Summary #2
- W 11/1 Science, Policy, and Management of Tribal Lands (Doug McArthur, White Earth Reservation)
- F 11/3 Discussion/JIGSAW #3
 • DUE: Jigsaw #3 (part one)

Week Ten: Agriculture and Soils

- M 11/6 The Green Revolution and Silent Spring (Dan Philippon)
 • READ: Pimentel and Wilson, "World Population, Agriculture, and Malnutrition" (Article 10), and Karlsson, "Agricultural Pesticides in Developing Countries" (Article 21)
 • DUE: Jigsaw #3 (part two)
- W 11/8 Soil Science, Policy, and Management (Charlie Blinn)
- F 11/10 Discussion
 • DUE: Ecological Footprint Analysis

Week Eleven: Water

- M 11/13 Water Science, Policy, and Management (Barb Liukkonen, Water Resources Center)
 • READ: Orlins and Wehrly, "The Quest for Clean Water" (Article 22)
- W 11/15 Science, Policy, and Management of Water in Minnesota (speaker TBA)
 • READ: Barcott, "What's a River For?" and Hinrichsen, "A Human Thirst" (Articles 18 & 20)
- F 11/17 Discussion/QUIZ #3

Part Four: Biodiversity**Week Twelve: Fisheries**

- M 11/20 Fisheries Science, Policy, and Management (Ray Newman, Fisheries, Wildlife, and Cons. Bio.)
 • DUE: Reading Summary #3
- W 11/22 Video: "Empty Oceans, Empty Nets"
- F 11/24 Thanksgiving (no class)

Week Thirteen: Wildlife and Endangered Species

- M 11/27 Species Extinction and Biodiversity Loss (Dan Philippon)
 • READ: Jenkins, Scherr, and Inbar, "Markets for Biodiversity Services" (Article 16)
- W 11/29 Wildlife Science, Policy, and Management (Mike Houser, Potlatch Corporation)
 • DUE: Final Paper
- F 12/1 Discussion/JIGSAW #4
 • DUE: Jigsaw #4 (part one)

Week Fourteen: Invasive Species and Ecological Restoration

- M 12/4 Invasive Species (Dan Philippon)
 • READ: McNeely, "Strangers in Our Midst" (Article 15)
 • DUE: Jigsaw #4 (part two)
- W 12/6 Restoration Science, Policy, and Management (Tom Landwehr, Minn. Nature Conservancy)
- F 12/8 Discussion/Course Evaluations

Week Fifteen: Conclusion

- M 12/11 Tools for Change Revisited
- W 12/13 Last Class

Exam Week

- 12/16 Final Exam, 1:30 - 3:30 pm, 335 Borlaug Hall
 (Note that our exam falls on a Saturday.)