Course Description
The title of our course, Science and Human Values, shows that our class will be a comparative one. In looking at how the human practice of science (from the Latin scientia, or knowledge) supports or conflicts with the values that each society defines for itself, we hope to achieve a greater understanding of both scientific and ethical inquiry. Within this broad theme, our class will focus more specifically on the ethics of food production and consumption. Humans, in their 10,000 years as cultivators of the land, have developed various modes of harnessing the natural world, but the last 50 years, with the advent of industrial farming and genetically-engineered food crops, have sparked a growing debate over the consequences for the human body and for the planet itself of this revolution in food technology. To understand the present, however, we must confront the past: to that end, we will look back at civilizations preceding the industrial revolution, the beginnings of the industrial revolution itself and explore how the scientific and imaginative writing of the 19th century framed the questions that we currently debate. And in this looking back we hope to make clearer the choices and crises that confront us in the 21st century.

Course materials
All books are or will be available for purchase at the AS Bookstore. Additional materials are or will be made available as electronic reserve items at Meriam Library or available on-line. Access to electronic reserve items will require a password provided by the instructors.

Books

Items on Blackboard

Item available on-line
http://www.sciencemag.org/site/feature/misc/webfeat/sotp/commons.xhtml (Get the pdf)
Student learning objectives
This course is intended to:

- foster a firm understanding of the scientific method, using examples grounded in the biological sciences.
- encourage investigation of scientific and ethical topics using a variety of approaches.
- develop a sound approach towards the application of ethical modes of inquiry.
- encourage effective skills in written and oral communication, both individually and as part of a group.
- integrate significant humanities content, particularly in the areas of the history of ideas and scientific inquiry.

Assignments and grading

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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<tr>
<td>Informal Group Presentation</td>
<td>10 pts</td>
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<tr>
<td>Attendance and participation</td>
<td>20 pts</td>
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<tr>
<td>First written assignment</td>
<td>30 pts</td>
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<tr>
<td>Midterm Exam</td>
<td>50 pts</td>
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<tr>
<td>Interview and written report</td>
<td>30 pts</td>
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<tr>
<td>Formal group presentation</td>
<td>20 pts</td>
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<tr>
<td>Second written assignment</td>
<td>40 pts</td>
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<tr>
<td>Final Exam</td>
<td>100 pts</td>
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**Total** 300 pts

Students are expected to attend regularly, complete the assigned reading prior to the class meeting, and participate actively in discussion.

Informal group presentations on current topics
Students will sign up in groups of two and search current media for articles on topics related to our course. Each group must meet in advance of the presentation date, choose an article, and then prepare a brief (10 minute) presentation, including questions to engage the class in discussion of the topic. Following the presentation and discussion, each group should provide a brief summary—the “take-home message.”

First written assignment
This essay should be approximately 1200 words, typed, double-spaced, in hard copy only. Topics will be assigned two weeks prior to the due date. The essay must be handed in directly to one of the instructors or to their department office; late essays will be penalized 5 points per (work) day past the deadline and must be submitted to the department office to be date- and time-stamped.

Plagiarism will not be tolerated. Students who submit essays that include plagiarized material will be assigned an F in the course and reported to Student Judicial Affairs.

Exams
Exam questions will cover material from lectures, assigned readings, and guest lectures; the final exam will be comprehensive.
Interview of Local Food Producer
As much of our class will investigate the ethical dimensions of food production, students will apply their growing understanding of these ethical questions in reaching out to the larger Chico community. This can be done by visiting the Chico Saturday morning Farmers’ Market and finding one of the local growers to interview. This interview (fifteen minutes should suffice) should reflect both ethical and practical questions for these small-scale farmers. A written version of the interview, with a brief introduction, must be submitted to fulfill this assignment.

Formal group presentation
Students will form groups of three and research and prepare a formal presentation on the topic chosen by the group. Suggested topics will be provided for the groups to choose from, but groups have the option of formulating their own topic, upon instructors’ approval. Presentations should be rehearsed, with each group member participating equally, and visual supporting materials are required. Presentations should be approximately 15 minutes, with time after each presentation allowed for questions from the class.

Second written assignment
This group-written assignment will summarize the research and findings from the formal group presentation, with a conclusion exploring the unanswered questions and larger implications of the topic. Like the first written assignment, it is to be approximately 1200 words, typed, double-spaced, in hard copy only.

Extra Credit Field Trip
We will take a trip outside of class time to tour Chaffin Farms, an operation in Oroville that uses integrated farming methods. Date and time TBA.

ALL REQUIRED ASSIGNMENTS MUST BE COMPLETED TO RECEIVE A PASSING GRADE IN THE COURSE.

The following schedule of readings and assignments is subject to modification based on instructors’ discretion and the pace of the class. Guest lecturers TBA.

<table>
<thead>
<tr>
<th>DATE</th>
<th>READING ASSIGNMENT</th>
<th>WRITTEN ASSIGNMENTS/OTHER</th>
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<tbody>
<tr>
<td>Aug 27</td>
<td>Introduction to Class</td>
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<tr>
<td>Aug 29</td>
<td>Collapse: Prologue, pp. 1-19 (on electronic reserve)</td>
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<tr>
<td>Aug 31</td>
<td>Malthus, “Principle of Population,” Book I, Chapters I, II (in OS); Lyell, “Principles of Geology” (in OS)</td>
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<td>Sep 3</td>
<td>NO CLASS—LABOR DAY</td>
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<tr>
<td>Sep 5</td>
<td>Reading TBA</td>
<td>Take-home writing due</td>
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<tr>
<td>Sep 7</td>
<td>Introduction to Mary Shelley and her world</td>
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<tr>
<td>Sep 10</td>
<td>Frankenstein, up to and including Ch. III, Vol. I</td>
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<td>Sep 12</td>
<td>Frankenstein, finish Vol. I</td>
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<tr>
<td>Sep 14</td>
<td>Frankenstein, Vol. II, Ch. I – Ch. IV</td>
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Sep 19  Frankenstein, Vol. III, Ch. II – Ch. V
Sep 21  Frankenstein, finish novel
      Sep 21  Last day to drop class without serious and compelling reason

Sep 24  Origin of Species (OS): Introduction; Ch. I
Sep 26  View Darwin video
        1st assignment due
Sep 28  OS: Ch. II

Oct 1    OS: Ch. III
Oct 3    OS: Ch. IV
Oct 5    OS: Ch. II

Oct 8    Review for Midterm
Oct 10   MIDTERM EXAM
Oct 12   MIDTERM EXAM

Oct 15  “The Land Ethic” (on electronic reserve)
Oct 17  Film viewing—Green Fire
Oct 19  “Tragedy of the Commons” (on-line)

Oct 22  Omnivore’s Dilemma (OD): Introduction; Ch. 1
Oct 24  OD: Ch. 2
Oct 26   Revision of 1st assignment due

Oct 29  OD: Chs. 3, 4
Oct 31  OD: Chs. 5, 6
Nov 2   OD: Chs. 7, 8

Nov 5   OD: Ch. 9
Nov 7   OD: Ch. 10
Nov 9   Film Viewing: How Cuba Survived Peak Oil

Nov 12  NO CLASS—VETERANS’ DAY
Nov 14  OD: Chs. 11, 12
Nov 16  OD: Ch. 13
Nov 19-23 THANKSGIVING HOLIDAY—NOV 19-23
Nov 26  OD: Chs. 14, 15
Nov 28  OD: Ch. 16
Nov 30  OD: Ch. 17

Dec 3   OD: Chs. 18, 19
Dec 5   OD: Ch. 20
Dec 7   Formal group presentations 1-3

Dec 10  Formal group presentations 4-6
Dec 12  Formal group presentations 7-8
Dec 14  Review for Final Exam
        2nd assignment due

Dec 19  FINAL EXAM (Butte 327) 10-11:50