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 will be posted on Blackboard or available on-line.

Books

Items on Blackboard

Item available on-line
http://www.sciencemag.org/site/feature/misc/webfeat/sotp/commons.xhtml (Get the pdf, rather than the plain text.)

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
Informal Group Presentation       10 pts
Attendance and participation       20 pts
First written assignment        30 pts
Midterm Exam          50 pts
Responses to In-Class Videos       10 pts
Interview and written report            30 pts
Formal group presentation       20 pts
Second written assignment       40 pts
Final Exam                   100 pts
Total                    310 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 choose their article and forward it to the instructors a week in advance of the presentation date. Groups 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 at least 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 with a time and date stamp. Essays will not be accepted later than one week after the due date. The instructors will provide written feedback on the first draft of the essay, and this first draft must be submitted to get credit for the assignment. Students then have two weeks to prepare a revision of the essay. The revision should address instructors’ comments and will be graded for a maximum of 30 points. Return the original paper (with instructors’ comments) with your revision.

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. The paper is to be approximately 1500 words, typed, double-spaced, in hard copy only. Each group turns in one paper, and everyone in the group receives the same point grade. Specifications for both the presentation and paper will be posted on Blackboard.

**Extra Credit Field Trip (10 points)**

We will take a trip outside of class time to tour Chaffin Orchards, an operation in Oroville that uses integrated farming methods. Date and time TBA. A two-page written response is required for credit.

**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.

<table>
<thead>
<tr>
<th>DATE</th>
<th>READING ASSIGNMENT</th>
<th>WRITTEN ASSIGNMENTS/OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 22</td>
<td>Introduction to Class</td>
<td></td>
</tr>
<tr>
<td>Jan 24</td>
<td><strong>Collapse</strong>: Prologue, pp. 1-19 (on electronic reserve)</td>
<td></td>
</tr>
<tr>
<td>Jan 27</td>
<td>Introduction to Mary Shelley and her world</td>
<td>Take-home writing due</td>
</tr>
<tr>
<td>Jan 29</td>
<td>Frankenstein, up to and including Ch. III, Vol. I</td>
<td></td>
</tr>
<tr>
<td>Jan 31</td>
<td>Frankenstein, finish Vol. I</td>
<td></td>
</tr>
<tr>
<td>Feb 3</td>
<td>Frankenstein, Vol. II, Ch. I – Ch. IV</td>
<td></td>
</tr>
<tr>
<td>Feb 7</td>
<td>Frankenstein, Vol. III, Ch. II – Ch. V</td>
<td></td>
</tr>
<tr>
<td>Feb 10</td>
<td>Frankenstein, finish novel</td>
<td>1st Assignment Topics distributed</td>
</tr>
<tr>
<td>Feb 12</td>
<td>Malthus, “Principle of Population,” Book I, Chapters I, II (in OS); Lyell, “Principles of Geology” (in OS)</td>
<td></td>
</tr>
<tr>
<td>Feb 14</td>
<td><strong>Origin of Species</strong> (OS): Introduction; Variation Under Domestication (Ch. I)</td>
<td></td>
</tr>
<tr>
<td>Feb 14</td>
<td><em>Last day to drop class without serious and compelling reason</em></td>
<td></td>
</tr>
<tr>
<td>Feb 17</td>
<td>In-class writing and writing workshop</td>
<td></td>
</tr>
<tr>
<td>Feb 19</td>
<td>View Darwin video</td>
<td></td>
</tr>
<tr>
<td>Feb 21</td>
<td><strong>OS</strong>: Variation Under Nature (II)</td>
<td></td>
</tr>
<tr>
<td>Feb 24</td>
<td><strong>OS</strong>: Struggle for Existence (III)</td>
<td>1st Written Assignment due</td>
</tr>
<tr>
<td>Feb 26</td>
<td><strong>OS</strong>: Natural Selection (IV)</td>
<td></td>
</tr>
</tbody>
</table>
Feb 28  **OS**: Natural Selection (IV)

Mar 3  Review for Midterm

Mar 5  **MIDTERM EXAM**

Mar 7  Sustainability Conference

Mar 10  “The Land Ethic” (on Blackboard)

Mar 12  Film viewing—**Green Fire**

Mar 14  “Tragedy of the Commons” (on-line)

**Mar 17-21**  SPRING BREAK

Mar 24  **Omnivore’s Dilemma (OD)**: Our National Eating Disorder (Introduction); The Plant (Ch. 1)…………… Response to **Green Fire** due

Mar 26  **OD**: The Farm (2)

Mar 28  **OD**: The Elevator (3); The Feedlot (4)

Mar 31  NO CLASS—CESAR CHAVEZ DAY

Apr 2  **OD**: The Processing Plant (5); The Consumer (6)……… Revision of 1st assignment due

Apr 4  **OD**: The Meal (7); All Flesh is Grass (8)

Apr 7  **OD**: Big Organic (9)

Apr 9  **OD**: Grass (10)

Apr 11  TBA

Apr 14  **OD**: The Animals (11); Slaughter (12)

Apr 16  **OD**: The Market (13)

Apr 18  **OD**: The Meal (14); The Forager (15)

Apr 21  **OD**: The Omnivore’s Dilemma (16)

Apr 23  **OD**: The Ethics of Eating Animals (17)……………… Written Report on interview due

Apr 25  Robert Jones guest lecture

Apr 28  Film Viewing: **How Cuba Survived Peak Oil**

Apr 30  International Perspective: Reading TBA

May 2  Formal group presentations 1-3

May 5  Formal group presentations 4-6………………………… Response to Cuba video due

May 7  Formal group presentations 7-9

May 9  Review for Final Exam…………………………………… 2nd assignment due

May 14  **FINAL EXAM** (Butte 327) 10-11:50