Course Name: Social Impacts of Science
Course Number: Hort 217
Terms Offered: Fall, Spring, Session 4 of Summer Quarter
Credits: 3
Asynchronous (you choose the time and place for learning to meet weekly assignment deadlines)

Instructor name: Louisa A. Hooven
Instructor email: Louisa.Hooven@oregonstate.edu.
Instructor phone: 541-737-3695 / 541-737-5827
Link to instructor bio or website: http://horticulture.oregonstate.edu/content/louisa-ada-hooven

Course Description
Contemporary societies, including the United States, train scientists, and fund scientific research around the world. Increasingly, there is an interest in connecting research results with broader impacts on existing and emerging societal problems. Considering all sectors of society is essential in evaluating the positive and negative impacts of science. In parallel, when not all social groups are participating equally in science, research priorities may not reflect all of society’s interests.

PREREQS: None.

Communication
Please post all course-related questions in the General Discussion Forum so that the whole class may benefit from our conversation. Please email your instructor for matters of a personal nature. The instructor will reply to course-related questions and email within 24-48 hours.
Contacting the instructor: Students are welcome to make an appointment for in-person office hours. Students may also make arrangements over email for a phone or Skype appointment.

Technical Assistance
If you experience computer difficulties, need help downloading a browser or plug-in, assistance logging into the course, or if you experience any errors or problems while in your online course, contact the OSU Help Desk for assistance. You can call (541) 737-3474, email osuhelpdesk@oregonstate.edu or visit the OSU Computer Helpdesk online.

Learning Resources
No textbook is required for this course. Learning material will be provided in weekly units in the Course Documents section of the course Canvas site. In addition to assigned reading and viewing, most assignments will require students to perform internet research using publicly available materials. The study guide for this course will direct student to effectively locate relevant resources such as:

- Media reports (Newspapers, magazines, TV, radio, web news)
- Primary scientific literature (scientific journal articles and reviews)
- Websites and publications of non-governmental organizations
- Government websites and documents
Industry and industry group websites

Canvas
This course will be delivered via Canvas where you will interact with your classmates and with your instructor. Within the course Canvas site you will access the learning materials, such as the syllabus, class discussions, assignments, projects, and quizzes. To preview how an online course works, visit the Ecampus Course Demo. For technical assistance, please visit Ecampus Technical Help.

Expected Work / Time Commitment: Generally speaking, for a three-credit class such as this one, you are expected to engage with instructional materials for at least three hours each week, and perform a minimum of six hours of out-of-class work, for a total of nine hours each week. Three hours should provide sufficient time to review and comprehend class materials which include articles, videos, lectures, and other materials. The work for this class includes quizzes, and further reading and research that may be used in composing weekly discussion posts and written projects.

HORT 217 Social Impacts of Science fulfills the Social Processes and Institutions requirement in the Baccalaureate Core. Science requires time and money, and social structures, systems, and institutions have been developed to train scientists and provide access to these resources. The results of science can affect individuals, society, and the future of human civilization. There is an increasing need to evaluate whether investment in science results in positive measurable impacts to society.

As the class examines interactions between scientific institutions, individuals, and society, students will learn how participation in science can be seen as power and privilege. Scientific training in the United States is a passport into a greater community of influential international scientists. Students will investigate the structures, systems, and ideologies that impede equal entry to and participation in this community. Students will also examine how the outcomes of science and technology differentially impact various societal groups.

Additional measurable student learning outcomes, specific to the course are listed below these synthesis outcomes:

Measurable Student learning outcomes specific to Social Processes and Institutions
1. Use theoretical frameworks to interpret the role of the individual within social process and institutions.
2. Analyze current social issues and place them in historical context(s).
3. Critique the nature, value, and limitations of the basic methods of the social sciences.

Class-specific Measurable Student Learning Outcomes
1. Survey the factors that drove scientific innovation prior to the contemporary era of public research funding.
2. Evaluate the role of public, private, and corporate funding in R&D
3. Identify inequities in participation and beneficiaries of the scientific process.
4. Contrast pressing social issues with current research priorities.
5. Analyze positive and negative social consequences of new technology.
6. Critique current approaches for measuring social impacts of science.

Evaluation of Student Performance

This course is offered through Oregon State University Extended Campus. For more information, contact: Web: ecampus.oregonstate.edu Email: ecampus@oregonstate.edu Tel: 800-667-1465
• **Weekly Discussion Posts.** Participation in online activities and discussions will be an important component of assessment. Students will demonstrate their mastery of material by supporting their assertions and arguments with effective citation of informational resources.

• **Quizzes.** Weekly quizzes will provide students and the instructor with an assessment of the success of learning activities. Material from these questions will be taken from lectures, reading, and activity and discussion topics. Quizzes are open resource and open to take (and retake as needed) during the entire week in which they are assigned.

• **Formative Assessments.** Weekly activities will be assigned to encourage students to further research and think critically about the material.

• **Final Discussion.** The final discussion board will provide students with an opportunity to share and defend their observations and conclusions from weekly discussions, explore global trends, and perhaps reach consensus in identifying social issues that should be addressed by science.

• **Rubrics.** Rubrics will provide students with the criteria used to evaluate their work.

**Point Distribution will be as follows:**

- Weekly Discussion: 400 points
- Final Discussion: 50 points
- Weekly Quizzes – 225 points
- Formative Assessments/Activities – 325 points
- **Total – 1000 points**

No midterm or final.

**Grading Distribution:**

Grades will be assigned according to the following scale:

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tr>
<td>A</td>
<td>93 – 100 %</td>
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<tr>
<td>A-</td>
<td>90 – 92 %</td>
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<tr>
<td>B+</td>
<td>87 – 89 %</td>
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<tr>
<td>B</td>
<td>83 – 86 %</td>
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<tr>
<td>B-</td>
<td>80 – 82 %</td>
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<tr>
<td>C+</td>
<td>77 – 79 %</td>
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<td>C</td>
<td>73 – 76 %</td>
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<tr>
<td>C-</td>
<td>70 – 72 %</td>
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<td>D+</td>
<td>67 – 69 %</td>
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<tr>
<td>D</td>
<td>63 – 66 %</td>
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<td>D-</td>
<td>60 – 62 %</td>
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<tr>
<td>F</td>
<td>59% &amp; below</td>
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**Course Content**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Sample Reading/Viewing</th>
<th>Learning Activities</th>
<th>Due Dates</th>
</tr>
</thead>
</table>
| 1    | Everything’s Amazing, and Nobody’s Happy | Top 10 Social Problems: created or solved by scientific research?  
Lecture: Measuring impacts of science  
Scientists change the world and so can you: [http://ed.ted.com/lessons/how-simple-ideas-lead-to-scientific-discoveries](http://ed.ted.com/lessons/how-simple-ideas-lead-to-scientific-discoveries)  
Science is embarrassingly white [http://fusion.net/story/244971/white-science-problem/](http://fusion.net/story/244971/white-science-problem/) | Activity: Rank social problems by your own priorities, then role play to rank them by someone else’s priorities  
Discussion topic: What is society’s most pressing issue that could be addressed by scientific research? Does it vary by geography or who you are?  
Quiz 1: Social Problems and Impacts of Science | Introduce yourself by Wednesday.  
Complete Activity by Thursday.  
First discussion posts by Thursday.  
Respond to at least one post by Sunday night.  
Quiz 1 due Monday of week 2 |
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Reading</th>
<th>Activity</th>
<th>Discussion</th>
<th>Quiz</th>
<th>Due Date</th>
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<tr>
<td>Week</td>
<td>Topic</td>
<td>Lecture</td>
<td>Reading</td>
<td>Discussion Topics</td>
<td>Activity</td>
<td>Complete Activity by</td>
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<td></td>
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<td>The Growing Problem</td>
<td><a href="http://www.nature.com/news/2010/100728/pdf/466546a.pdf">http://www.nature.com/news/2010/100728/pdf/466546a.pdf</a></td>
<td>Discussion topics: Where should we focus research dollars now to prepare for 2050?</td>
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<td>The Science of Overpopulation</td>
<td><a href="https://www.youtube.com/watch?v=dDyN2G5BY0">https://www.youtube.com/watch?v=dDyN2G5BY0</a></td>
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<td>The Agricultural Revolution: Crash Course World History #1</td>
<td><a href="https://www.youtube.com/watch?v=Yocja_N5s1I">https://www.youtube.com/watch?v=Yocja_N5s1I</a></td>
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<td>BUZZKILL: Are we leaving enough space for where the wild things are?</td>
<td>Is conservation a luxury?</td>
<td>Lecture: The value of biodiversity</td>
<td>Activity: Ecosystem Services.</td>
<td>Quiz 7: Pollinator habitat and land use</td>
<td>Wednesday.</td>
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<td>Seeing a sustainable future - Alex Steffen</td>
<td><a href="http://ed.ted.com/lessons/alex-steffen-sees-a-sustainable-future">http://ed.ted.com/lessons/alex-steffen-sees-a-sustainable-future</a></td>
<td>Discussion topics: Is research needed to determine how much wild space we need to conserve to support our planet?</td>
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<td>Environmental Justice Atlas</td>
<td><a href="http://ejatlas.org/">http://ejatlas.org/</a></td>
<td>Discussion topics: Can the risks of technology be calculated and anticipated?</td>
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<td>7</td>
<td>THE POWER OF KNOWLEDGE: Is there an app for that?</td>
<td>Connectedness: Communication and Transportation</td>
<td>The Shape Shifting Future of the Mobile Phone</td>
<td>Activity: Propose a science-based app to address a social issue or problem.</td>
<td>Quiz 9: Connectedness</td>
<td>Wednesday.</td>
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<td><a href="http://ed.ted.com/lessons/the-shape-shifting-future-of-the-mobile-phone-fabian-hemmert">http://ed.ted.com/lessons/the-shape-shifting-future-of-the-mobile-phone-fabian-hemmert</a></td>
<td>Discussion topic: How does science at our fingertips shape our lives?</td>
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<td>Quiz 9</td>
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</table>
No quiz. |

### Course Policies

**Discussion Participation**

Students are expected to participate in all graded discussions. While there is great flexibility in online courses, this is not a self-paced course. There will be at least one discussion thread each week, and minimum participation standards will be described for each topic. Typically, you must participate in our discussions on at least two different days each week, with your first post generally due no later than Wednesday evening. Although discussion is open through Monday, it is preferable that you submit your second and third posts by the end of each week.

*Online threaded discussions* are public messages, and all writings in this area will be viewable by the entire class or assigned group members. Participate actively in the discussions, having completed the readings and thought about the issues. Reread your comments before you post them.
**Makeup Exams/Assignments**
Makeup work will be given only for missed exams or assignments excused in advance by the instructor. Excused absences will not be given for airline reservations, routine illness (colds, flu, stomach aches), or other common ailments. Excused absences will not be given after the absence has occurred, except under very unusual circumstances.

**Exam Time Limits**
Exams in this class are not timed and are open book/open resource. Once open, you will have several days to work on them until they are due. This allows you to look at the questions, turn them over in your mind, and seek out additional resources if needed. Thoughtful answers are expected, which cannot be achieved if you wait until the last hour to look at the test.

**Incompletes**
Incomplete (I) grades will be granted only in emergency cases (usually only for a death in the family, major illness or injury, or birth of your child), and if the student has turned in 50% of the points possible. Discussion is a major source of credit in this class, and it is impossible to earn discussion points after the class is completed. If you are having any difficulty that might prevent you completing the coursework, please don't wait until the end of the term; let me know right away.

**Statement Regarding Students with Disabilities**
Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at http://ds.oregonstate.edu. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

**Diversity Statement**
Oregon State University strives to create an affirming climate for all students including underrepresented and marginalized individuals and groups. Diversity encompasses differences in age, color, ethnicity, national origin, gender, physical or mental ability, religion, socioeconomic background, veteran status, sexual orientation, and marginalized groups. We believe diversity is the synergy, connection, acceptance, and mutual learning fostered by the interaction of different human characteristics.

**Religious Holiday Statement**
Oregon State University strives to respect all religious practices. If you have religious holidays that are in conflict with any of the requirements of this class, please contact me immediately so that we can make alternative arrangements.

**Expectations for Student Conduct**
Student conduct is governed by the university's policies, as explained in the Office of Student Conduct: Information and Regulations.

**Academic Integrity**
Students are expected to comply with all regulations pertaining to academic honesty. For further information, visit Student Conduct and Community Standards, or contact the office of Student Conduct and Mediation at 541-737-3656.
OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:

a) Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.

b) It includes:
(i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.

(ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.

(iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).

(iv) TAMPERING - altering or interfering with evaluation instruments or documents.

(v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.

c) Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Conduct in the Online Classroom
The most interesting topics often entail some controversy. Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the university's regulations regarding civility.

Posting of personal contact information is highly discouraged (e.g. telephone numbers, address, personal website address).

Online conversation requires give and take. Pay close attention to what your classmates write in their online comments. Ask clarifying questions, when appropriate. This class is meant to inspire critical thinking. Students should freely share their ideas, and be prepared for their courteous and constructive critique. Comments that minimize or devalue the contributions of others will not be tolerated.

Observation of "Netiquette": All your online communications need to be composed with fairness, honesty and tact. Spelling and grammar are very important in an online course. What you put into an online course reflects on your level of professionalism. Here are a couple of references that discuss writing online: http://goto.intwg.com/netiquette:

Student Assistance
Please check the Announcements area and the course syllabus before you ask general course "housekeeping" questions (i.e. how do I submit assignment 3?). If you don't see your answer there, then please contact me.

Contacting the instructor: I will post office hours at the beginning of the quarter, which students are encouraged to utilize. Students are welcome to make an appointment if they have a conflict with these posted hours. Students may also make arrangements over email for a phone or Skype appointment.
Tutoring

NetTutor is a leading provider of online tutoring and learner support services fully staffed by experienced, trained and monitored tutors. Students connect to live tutors from any computer that has Internet access. NetTutor provides a virtual whiteboard that allows tutors and students to work on problems in a real time environment. They also have an online writing lab where tutors critique and return essays within 24 to 48 hours. Access NetTutor from within your Canvas class by clicking on the Tools button in your course menu.

OSU Student Evaluation of Teaching

Course evaluation results are extremely important and are used to help me improve this course and the learning experience of future students. Results from the 19 multiple choice questions are tabulated anonymously and go directly to instructors and department heads. Student comments on the open-ended questions are compiled and confidentially forwarded to each instructor, per OSU procedures. The online Student Evaluation of Teaching form will be available toward the end of each term, and you will be sent instructions via ONID by the Office of Academic Programs, Assessment, and Accreditation. You will log in to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted.