SYLLABUS

How much are biologists obliged to consider the moral rights and wrongs in our areas of expertise? Are we fulfilling those obligations, and are our priorities right? If not, how can we do better? In this student-led seminar we will address current and emerging issues in bioethics.

Course Aims
1) You will ponder on the ethical obligations of biologists to society.
2) You will hone your critical thinking and communication skills.

To fulfill these objectives, you will:
- Discuss and review various case studies from a moral perspective.
- Debate fellow students on key bioethical issues.
- Evaluate in writing a debate in which you did not participate.

Recommended Reading:

Description of graded assignments and projects

1- Participation in discussions (40%)
Due: throughout course
Participation in each activity will be graded on a satisfactory/unsatisfactory basis. I will grade based on contribution to the discussion and evidence of critical thought about the papers. It will not be sufficient to merely read the papers without thinking about them, nor will it be sufficient to come to class thoroughly prepared without becoming involved in the discussion. Participation includes providing questions for discussion as outlined below. Discussion attendance is mandatory and constitutes an important component of the class.

2- Debates on a key bioethical issue (35%)
Due: Nov 2-16
You will participate in two debates during the course: an individual one, in which you will debate another classmate, and a team one, in which you will partner with a classmate to debate a pair of classmates.

In a debate, you are not expressing your opinion; rather, you are assigned an affirmative or negative position on the question. Your task is to find the pertinent data and assemble it into a set of logical arguments that will support or refute the statement, depending on the side to which you have been assigned.

3- Evaluation of individual debate (25%)
Due: Nov 9-16
You will turn in your evaluation of the individual debate in which you did not participate. You will be evaluated on the thoroughness of your judging (but not on your decision about who won). Your assessment should depend only on how persuasive the arguments presented were. Based on the evidence,
which side best supported or refuted the thesis? **Your opinion on the thesis is not a relevant part of the decision.** Tips:

- Take notes as the debate proceeds. List the points that the affirmative debater makes, and then keep track of whether the rebuttal addresses each point or not.
- Notice the sources of evidence used. Are you more convinced by evidence from *Science* or *Nature* than by an article in the *National Inquirer*?
- Is a point supported by evidence from more than one source?
- Write your decision, and explain why you made that choice, citing arguments that persuaded you, and what the other side could have presented that might have changed your mind.
- The affirmative debaters will be judged on the clarity and presentation of their plan.
- The negative debaters will be judged on the logic of their rebuttal, and the clarity of their presentation.
- Comment both on what the debaters did well, and make constructive suggestions for improvement.
- These assessments will be passed on to the debaters by me, but they will be anonymous. You should email me your judging by the due date at the latest: one week after the debate.

You will need to at least 80% of the points (the equivalent of a B-) to get a grade of satisfactory.

### CLASS SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>Friday</th>
<th>Topic</th>
<th>DUE</th>
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<tr>
<td>1</td>
<td>Sep 28</td>
<td>What is Ethics?</td>
<td>Sign-up topic list available</td>
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<tr>
<td>2</td>
<td>Oct 5</td>
<td>Moral Decision-Making</td>
<td>Topic selection</td>
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<tr>
<td>3</td>
<td>Oct 12</td>
<td>RESPONSIBLE CONDUCT IN RESEARCH</td>
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<td></td>
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<td>Discussion: The Selection of Data <em>(NAS pp 5)</em></td>
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<td>4</td>
<td>Oct 19</td>
<td>Discussion: The Use of Data <em>(Jessica Banks Case)</em></td>
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<td></td>
<td></td>
<td>Discussion: The Fabrication of Data <em>(NAS pp 19)</em></td>
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<tr>
<td>5</td>
<td>Oct 26</td>
<td>NO CLASS!</td>
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<td>6</td>
<td>Nov 2</td>
<td>Individual Debate 1: Mentor vs Student <em>(Ch 2 pp 45 Case 4)</em></td>
<td>Discussion questions for Nov 16 and 30</td>
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<td>7</td>
<td>Nov 9</td>
<td>Individual Debate 2: Share vs No-share <em>(Ch 3 pp 66 Case 7)</em></td>
<td>Evaluation Debate 1</td>
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<td>8</td>
<td>Nov 16</td>
<td>BIOETHICS: BIOLOGISTS’ RESPONSIBILITIES</td>
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<td>Discussion: Use of Animals in Research <em>(Wilson &amp; McMahon 06)</em></td>
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<td>Discussion: The Scientist in Society <em>(Ch 12 pp 291, Case 2)</em></td>
<td>Evaluation Debate 2</td>
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<tr>
<td>9</td>
<td>Nov 23</td>
<td>HOLIDAY!!</td>
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<td>10</td>
<td>Nov 30</td>
<td>Discussion: Scientists’ Priorities <em>(Ehrlich 2003)</em></td>
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<td>Discussion: Scientists’ Responsibility <em>(Kitcher 2004)</em></td>
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<td>11</td>
<td>Dec 7</td>
<td>Team Debate: The Makah Whale Hunt</td>
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<td>Wrap-up</td>
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Changes might be made to the syllabus along the course. These changes will be announced in advance.
THE INDIVIDUAL DEBATE STRUCTURE

- Each person will debate either as an affirmative or as a negative debater. **You will know this until the day the debate is held, so you should be prepared with arguments for either position.**
- Each debate will be judged by the others in the group, so both the debaters and the audience will need to be actively engaged in the process.

- The affirmative debater speaks first for ≤15 min.
  - S/he must present a set of points that support its position. This is the chance to set up both the logic and the data that support the position.
  - All points should be supported, and the source should be identified when applicable.
  - Establish affirmatives advocacy of resolution:
    - There is a conflict that could be solved.
    - The status quo isn't going to solve this problem without change.
    - Here is my specific proposal of what should be done and why.
    - My position will solve the problem/harm.

- The negative debater then cross-examines for ≤5 min.
  - This is a chance to clarify questions on the points made by the affirmative debater.
    - Ask questions to help you understand their arguments. GET INFORMATION.
    - Ask questions to set up your arguments to come. USE ANSWERS AGAINST THEM LATER.
    - BE A POLITE, FRIENDLY PERSON.

- The negative debater then presents its rebuttal to the points made by the affirmative debater. The negative debater will have ≤10 min to present the case (including ≤3 min to collect thoughts).
  - An effective rebuttal addresses each point made by the affirmative debater.
  - When applicable, data and the source of the information cited.
  - You could...
    - Attack affirmative and begin laying out additional issues in the negative.
    - Make arguments against the specifics of the affirmative case. CASE ARGUMENTS.
    - Argue that if the plan is adopted, bad things will happen. DISADVANTAGES.
    - Argue that the fundamental assumptions of the affirmative are flawed/incorrect. CRITIQUE.
    - Argue that the plan is not a representation of the topic.
    - Argue that there would be a better alternative to the plan. PRESENT ALTERNATIVES.

- The affirmative debater then can cross-examine for ≤5 min.

- The affirmative debater responds to the rebuttal for ≤10 min (including ≤3 min to collect thoughts).
  - No new points can be raised here. This is the place to provide additional sources and information to support the plan that was outlined at the outset.

- The negative debater responds for ≤10 min (including ≤3 min to collect thoughts).
  - No new points can be raised here. This is the place to provide additional sources and information to support the plan that was outlined at the outset.

- Each debater can collect its thoughts for ≤3 min, and then the affirmative and subsequently the negative debaters present their closing arguments for ≤5 min each.
  - No new points here, either. This is your chance to summarize, emphasize your strongest points and convince the audience that your arguments have carried the day.
THE TEAM DEBATE STRUCTURE

- Each debate will have two teams, with two individuals on each team. This format will encourage collaboration and the discussion that will be required to form your strategy will sharpen your logic.
- Each team will debate either as an affirmative or as a negative team. You will know this until the day the debate is held, so you should be prepared with arguments for either position.

- The affirmative team selects a member to speak for ≤15 min. This will be known as the first member.
  - S/he must present a set of points that support its position. This is the chance to set up both the logic and the data that support the position.
  - All points should be supported, and the source should be identified when applicable.
  - Establish affirmatives advocacy of resolution:
    - There is a conflict that could be solved.
    - The status quo isn't going to solve this problem without change.
    - Here is my specific proposal of what should be done and why.
    - My position will solve the problem/harm.
- Both members of the negative team cross-examine for ≤5 min.
  - This is a chance to clarify questions on the points made by the affirmative team.
    - Ask questions to help you understand their arguments. GET INFORMATION.
    - Ask questions to set up your arguments to come. USE ANSWERS AGAINST THEM LATER.
    - BE A POLITE, FRIENDLY PERSON.
- The affirmative team will have ≤3 min to confer with one another. The team then selects a member to present its rebuttal to the points made by the affirmative team for ≤7 min.
  - An effective rebuttal addresses each point made by the affirmative team.
  - When applicable, data and the source of the information cited.
  - You could...
    - Attack affirmative and begin laying out additional issues in the negative.
    - Make arguments against the specifics of the affirmative case. CASE ARGUMENTS.
    - Argue that if the plan is adopted, bad things will happen. DISADVANTAGES.
    - Argue that the fundamental assumptions of the affirmative are flawed/incorrect. CRITIQUE.
    - Argue that the plan is not a representation of the topic.
    - Argue that there would be a better alternative to the plan. PRESENT ALTERNATIVES.
- Both members of the affirmative team then can cross-examine for ≤5 min.
- The affirmative team will have ≤3 min to confer with one another. The second member of the affirmative team responds to the rebuttal for ≤7 min.
  - No new points can be raised here. This is the place to provide additional sources and information to support the plan that was outlined at the outset.
- The negative team will have ≤3 min to confer with one another. The second member of the negative team responds for ≤7 min.
  - No new points can be raised here. This is the place to provide additional sources and information.
- Each team can then confer for ≤5 min, and then one member of the affirmative team and subsequently one member of the negative team present their closing arguments for ≤5 min each.
  - No new points here, either. This is your chance to summarize, emphasize your strongest points and convince the audience that your arguments have carried the day.
QUESTIONS FOR DISCUSSION
By November 2\textsuperscript{nd} you should provide me with questions for reviewing three ethical issues based on the following papers: Wilson and McMahon (2006), Ehlrich (2003) and Kitcher (2004). I will select the most common question(s) or the most amenable to ethical discussion.

After reading and discussing case studies you will gain experience as to what kind of questions are most helpful to elucidate good research practices.

STARTER SOURCES OF INFORMATION
The following sources will help you prepare for the discussions and in the case of the debates (marked in italics) will help you get started in finding information.

\textbf{October 19\textsuperscript{th}}
Chapters 2 and 3 of Shamoo and Resnik (2003).

\textbf{November 2\textsuperscript{nd}}
Chapter 2 of Shamoo and Resnik (2003).

\textbf{November 9\textsuperscript{th}}
Chapter 3 of Shamoo and Resnik (2003).

\textbf{November 16\textsuperscript{th}}
Chapter 12 of Shamoo and Resnik (2003).

\textbf{November 30\textsuperscript{th}}

\textbf{December 7\textsuperscript{th}}
Seattle Times Archive: \url{http://archives.seattletimes.nwsource.com/cgi-bin/texis.cgi/web/vortex/search?searchType=date&period=archive&maxReturn=20&skip=0&source=search&sectionID=spg=hi&query=Makah+whale+hunt}