HSCI 2423
SOCIAL & ETHICAL ISSUES IN SCIENCE, TECHNOLOGY, ENVIRONMENT & MEDICINE

In this class students will consider a range of social and ethical issues that arise in relation to the history of science, technology, the environment and medicine. Science and technology have had a significant, and increasing, impact upon every aspect of our lives. Our technology has seemingly freed us from the confines of nature, and science has long attempted to define and describe us, but do the latest developments in biotechnology and genetics have the potential to undermine what it means to be human?
Course Formalities and Expectations

Assessment:
1 seminar presentation: written introduction, 10%; oral presentation 5%.
2 essays each approximately 5 pages in length: Each 25% of the total.
1 Final research paper approximately 7 pages in length: 35%

Essays due on the following dates:
Midterm essays: March 23rd.

Late work:
Will be penalised by 3% for each day that passes beyond the due date. However, work more than 5 days late will receive a failing grade of 0%

Attendance and Participation:
Attendance in class is mandatory. If you have good cause to miss class, it is imperative that you discuss this with your instructor BEFOREHAND. **NOTE:** Attendance in this course is mandatory. If you miss more than three class sessions without a documented medical excuse you will be penalised by 3% for each subsequent missed class period.

OU policies on reasonable accommodation, and codes of behavior:
Reasonable Accommodation Policy
Any student in this course who has a disability that may prevent her or him from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

Codes and Policies of Behavior
Each student should acquaint her or his self with the University's codes, policies, and procedures involving academic misconduct, grievances, sexual and ethnic harassment, and discrimination based on physical handicap.

Academic Integrity and Plagiarism:
For a full statement on University of Oklahoma policy regarding plagiarism please visit the following website provided by the Office of the Senior Vice President and Provost:
[http://www.ou.edu/provost/pronew/content/integritymenu.html](http://www.ou.edu/provost/pronew/content/integritymenu.html)

Plagiarism is the unacknowledged appropriation of someone else’s words, ideas, or work which is then represented as your own. It will not be tolerated and carries significant and serious penalties. At a minimum you will receive 0% for the assignment, and your name put on record. It is possible that you might receive 0% for the course, and in extreme cases may be expelled from the college. You are therefore strongly recommended to educate yourself regarding what plagiarism is and how to avoid it. Your instructor and/or the staff at the writing centre will be happy to advise you on this matter if you are in any doubt.

**NB:** Be aware that ignorance of what constitutes plagiarism will not be accepted as an excuse for it. If at any time you are unsure of how to cite material, your instructor or writing centre staff will be happy to advise you.
CLASS SCHEDULE

Week One:
Tuesday January 19th:
Course introduction.

Thursday January 21st: *The discovery of scarcity*
Reading:

Week Two:
Tuesday January 26th: *The division of labour*
Reading:
Adam Smith: *The Wealth of Nations* [1776].

Thursday January 28th: *Alienation*
Reading:
Karl Marx, “Early Writings” from the *Paris Manuscripts*, 1844, on alienated labour.

Week Three: *Origins…*
Tuesday February 2nd:
Reading:

Thursday February 4th: *Origins...*
Reading:
Alfred Russel Wallace. “The Limits of Natural Selection as Applied to Man” [edit]
Charles Darwin. *The Descent of Man; and Selection in Relation to Sex*. 1871. [edit]

Week Four:
Tuesday February 9th: *Evolution and Ethics*
Reading:
Thomas Henry Huxley. “Prologomena” to “Evolution and Ethics” [1894]

Thursday February 11th: *Mutual Aid*
Reading:

Week Five:
Tuesday February 16th: *How might we live?*
Reading:

Thursday February 18th: *Breaching biological boundaries*
Reading:
Harry Laughlin, “Eugenical Sterilization in America” Eugenics Education Society, [1926]
Oliver Wendel Holmes, Jr. Buck v Bell., US Supreme Court Descision, 1927.
Week Six:
Tuesday February 23rd: *A history of voluntary informed consent*
Reading:

Thursday February 25th: *Caught between the state and the market*
Reading:

Week Seven:
Tuesday March 2nd: *Autonomy run wild?*
Reading:

Thursday March 4th: *A moral obligation to better ourselves?*
Reading:
John Harris. *Enhancing Evolution*. [extract].

Week Eight:
Tuesday March 9th: *Technology the Liberator*
Reading:

Thursday March 11th: No class today: work on your midterm essays.
Reading:
No set reading for today.

Week Nine:
March 14th – March 22nd
😊 Spring Break 😊

Week Ten:
Tuesday March 23rd: *Fordism and Taylorism*
Reading:
Thursday March 25th: *Living and working in a scientific society*
Reading:
Living in a scientific society.

**Week Eleven:**
Tuesday March 30th: *The McDonaldization of Society*
Reading:

Thursday April 1st: *Do Artefacts have Politics?*
Reading:

**Week Twelve:**
Tuesday April 6th: *Managing the environment*
Reading:

Thursday April 8th:
Reading:

**Week Thirteen:**
Tuesday April 13th:
Reading:

Thursday April 15th:
Reading:

**Week Fourteen:**
Tuesday April 20th:
Reading:

Thursday April 22nd:
Reading:
Week Fifteen:
Tuesday April 27th:
Reading:
Garrett Hardin. “Lifeboat Ethics”

Thursday April 29th:
Reading:

Week Sixteen:
Tuesday May 4th:
Reading:

Thursday April May 6th: Student-led Discussion of final papers.

Friday May 8th: Last classes of Spring semester.
Tips on Effective Essay Writing

Since writing an effective essay is not a straightforward task, and improving your essay technique is one of the most important skills you will learn during any class, here are some initial suggestions. First write some general notes on what you already know about the subject of your essay, outlining the most striking points. Think why these points are so important, and what they entail for the particular methodological or ethical approach with which you are concerned. Then turn to the notes taken during class and to the set readings themselves, as well as any further background readings you may have identified through bibliographic surveys. Continually re-examine your list of striking features and the organisational structure you have imposed upon them, and think how these materials might help you to articulate your analysis more clearly. When you are ready, sketch an outline of your argument, and then write your first draft. Make sure that to the best of your knowledge there are no logical gaps in your argument. If you can identify some, go back to the literature to see if you can close them. This second look at the literature (and your reading notes) is important. Once you have constructed a hypothesis, you will be able to test it against the arguments of the various authors, and to find those who support your case, and those who are your opponents. (note: having your own hypothesis is the point at which the essay truly becomes your own contribution to the debate). You are then ready to proceed to the second phase.

Writing multiple drafts is a good way to produce a good essay, especially if you can gain some distance from early drafts, for example, by having someone else read them. This is how professional academics work, and so you should try to do so too. You are encouraged to exchange your essays with one another and discuss your work with your colleagues as the course progresses. You should be aware that essays written the night before they are due invariably read like they were written the night before they were due, and as a result often appear ill-considered, disorganised, and incoherent. You should aim to manage your time to allow for at least two drafts and revisions. This will pay significant dividends in terms of the quality of your submitted work, and correspondingly, with the grade you can expect. Your tutor will be happy to discuss early drafts of your work, as will staff at the writing centre.

What makes a good essay

Introduction and argument: A good essay does not simply summarise the argument of the text(s) under examination. It also involves you constructing a coherent narrative about how those texts relate to a broader argument of your own. So, a good essay might start off with a short introduction to the particular element of the topic that you discuss. This might be followed with a similarly brief account of what you intend to say and how you intend to convince the reader of your argument, which brings us to the importance of clear organisation.

Argument and organisation: A good essay should not simply be a list of points about the subject under examination, all arranged in a haphazard manner. It should instead take the reader step by step through the argument so that they will end up seeing the logical progression of your
narrative, even if they might not agree with your conclusions. This means that after a good introduction, each subsequent paragraph should introduce one particular idea about the episode and finish with a statement that prepares the reader for the next paragraph and its particular idea. These paragraphs should be arranged in a logical sequence that takes the reader from the introduction to the conclusion, which means, of course, that the paragraphs should not contradict each other. A good organisation of these steps then depends critically on a very clear understanding of your essays’ aims and objectives. A clear understanding of your readers’ likely assumptions is equally important to avoid their misunderstanding any part of your argument. Think of it as a chess game, and so always try to put yourself in your readers’ shoes! Do not annoy them unnecessarily by forcing them to ask ‘where is this essay going?’

**Evidence:** A good essay should not only be a logical argument, but it should have the aim of convincing your reader of your point of view. To this end each point of the argument should be backed by evidence from the literature you have consulted, as is appropriate to the specific point being made. Importantly, direct quotes or paraphrases of the text or other literature should be carefully referenced, in footnotes and in a full bibliography of all works cited.

<table>
<thead>
<tr>
<th>Preferred reference style</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Article:</strong> First name(s) and last name(s), ‘Title’, <em>Journal Title</em>, Volume, (Year), Page-Page, on p. XXXX or pp. XXXX-XXXX (if you are quoting or referring to specific passages).</td>
</tr>
<tr>
<td><strong>Book:</strong> First name(s) and last name(s), <em>Title</em>, (Place of publication: Publisher, Year), Page (p. XXXX) or pages (pp. XXXX-XXXX).</td>
</tr>
<tr>
<td><strong>Essay in an edited collection:</strong> First name and last name, ‘Title’, in First name(s) and last name(s) (ed. or eds.), <em>Title</em>, (Place of publication: Publisher, Year), Page-Page, on p. XXXX or pp. XXXX-XXXX (if you are quoting or referring to specific passages).</td>
</tr>
<tr>
<td><strong>Web site:</strong> <a href="http://www">http://www</a>. (Full site address): First name(s) and last name(s), ‘Title’, Date accessed.</td>
</tr>
</tbody>
</table>

[You may use any recognised style of referencing – as long as you are consistent]

Accurate referencing is not simply a matter of avoiding any accusation of plagiarism, but also of leaving open the possibility for your readers to explore the point you make in greater detail than is appropriate to the argument of your essay. It is perhaps needless to say, but you must always take care that your quotations or references support your point, and this may sometimes mean that you will have to explain how this is the case.
**Style:** A good essay should also be written well, attentive to syntax, grammar and spelling. This is not because your reader is pedantic, but because good syntax and grammar helps clarify your argument. For example, if you compare the passive statement ‘it was said that…’ with the active statement ‘so-and-so said that…’, in the second statement you are providing the reader with much more, possibly important information about ‘so-and-so’, and you will not beg questions about who exactly ‘said that…’. Also, when you write in one sentence that ‘so-and-so said’, and ‘so-and-so says’ in the next, your readers might wonder about chronology and the order of causes and effects. Wanting good spelling may seem even more pedantic, but why risk aggravating your reader when you can use the spell-checker? Lastly, always have a good dictionary at hand, because different words for the same concept often convey different meanings, some of which may not fit well with the point you are making. (You should be aware however, that common dictionary definitions of terms may lack the nuances of how we might interpret these terms from a historical or analytical perspective (for instance a dictionary is unlikely to give adequate definitions of “science” or “technology” for example). You might also consult subject specific dictionaries (A Dictionary of Biology, for example). If you are in doubt about how an author is using a word, you should feel free to ask.

You are encouraged to review each other’s work in progress, and to provide comments to the author on the effectiveness of their argument. You should be aware that this is an important part of learning how to write, (and to be a generous member of an academic community) and remember that a thorough review of someone else’s essay probably benefits you more than the author, as you discover how others go about their task and thus what might be the limitations of your own compositions.

The writing and the peer review of your essays in such a painstaking fashion will enable you to further develop your research skills. You will improve the effectiveness of your handling of primary and of secondary materials and thus your understanding of the historical significance of the development of environmental thought. Moreover, you should find that the exercise helps you advance your ability to analyse material and express an argument in a persuasive and informed manner.
**GRADING PRACTICES AND STANDARDS**

<table>
<thead>
<tr>
<th>Percent</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A exceptional</td>
</tr>
<tr>
<td>87-89</td>
<td>B+ competent</td>
</tr>
<tr>
<td>84-86</td>
<td>B competent</td>
</tr>
<tr>
<td>80-83</td>
<td>B- competent</td>
</tr>
<tr>
<td>77-79</td>
<td>C+ adequate</td>
</tr>
<tr>
<td>74-76</td>
<td>C adequate</td>
</tr>
<tr>
<td>70-73</td>
<td>C- borderline</td>
</tr>
<tr>
<td>67-69</td>
<td>D+ inadequate</td>
</tr>
<tr>
<td>64-66</td>
<td>D inadequate</td>
</tr>
<tr>
<td>60-63</td>
<td>D- inadequate</td>
</tr>
<tr>
<td>00-59</td>
<td>F unacceptable</td>
</tr>
</tbody>
</table>

**90% to 100% (A)**

“A” grade work is *exceptional*, showing strong evidence of original thinking and good organisation. The student will have shown a capacity to analyse and synthesize information, as well as a superior grasp of the subject matter in hand and an ability to make sound critical evaluations based upon an extensive knowledge base. Work of this standard should be well argued, well documented, and well written.

**80% to 89% (B- to B+)**

Work of this grade is *competent*, showing evidence of a reasonable-to-solid grasp of the subject matter. It should also show evidence of critical and analytical thinking. The work should also indicate a familiarity with the literature. It should be clearly written, accurate and coherent, including major points from the course material and an appreciation of their importance.

**70% to 79% (C- to C+)**

Work of this grade is of *adequate* performance, showing a fair understanding of the subject matter and an ability to develop solutions to simple problems in the material. It may include some errors and slight misconceptions, but should be indicative of a reasonable engagement with the course material. An acceptable although uninspired piece of work, it should not contain serious errors, but may lack style and vigour in its articulation.

**60% to 69% (D- to D+)**

Work of this grade is *adequate, but poor*. Poorly articulated and lacking in a coherent argument it may also lack sufficient documentation. Although it may provide some relevant information, it omits many important points and contains a number of substantial errors or misconceptions.

**00% to 59% (F) Inadequate.**

Work of this standard is *inadequate*, showing little or no understanding of the subject matter. Exhibiting little evidence of critical and analytic skills, this work contains only a limited or irrelevant use of the literature. Poorly articulated it is likely to lack coherence and be difficult to comprehend. Work of this grade is not of degree standard.