In this introductory course you will learn how to think like an historian as we consider various aspects of the relationship between science, technology and medicine and the society we live in today.

This course will also introduce you to the various skills, methods and resources you will need to succeed as a student: careful reading, effective note-taking, locating sources, good research, the use of academic conventions including accurate and adequate citations. You will also learn a lot about academic writing, and hopefully get some insight into what it means to think (and write) like an historian.

Location: Adams Hall, Rm. 104.
Mondays & Wednesdays
1:30-2:45
Assessment

This course gets you General Education credit, as thus you will do a fair amount of reading and writing in this class.

Assessment is as follows:

4 short written pieces of work – (each between 250-300 words) each is worth up to 15% of the course total.

(there are six on the syllabus – your best four will count.

2 longer essays – (each between 750 and 1000 words) each is worth up to 20% of the course total.

READ THIS!!

Deadlines:

Deadlines are real. Unless you have significant and documented welfare concerns or are representing OU in competition (not practice), late assignments will be graded 0%.

Course Formalities and Expectations

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 behaviour:

Reasonable Accommodation Policy

Any student in this course who has a documented disability that may prevent him or her 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 Behaviour

Each student should acquaint his or her 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:

Plagiarism is the unacknowledged appropriation of someone else’s words, ideas, or work, which is then represented as your own. Plagiarism 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 suspended or even expelled from the University. You are therefore strongly recommended to educate yourself regarding what plagiarism is and how to avoid it. Your instructor and/or teaching assistants will be happy to advise you on this matter if you are in any doubt.

Note: Ignorance of what constitutes plagiarism will not be accepted as an excuse for it.
CLASS SCHEDULE

Please Note: All readings should be completed before the relevant class period.

**Week One:**
Monday 22nd August: “An introduction to the history of science, technology, and medicine.”
*Your first assignment will be to research and write 250 words on one of the scientists featured in the new ‘American Scientists’ series of stamps.*

Wednesday 24th August: “Science in American Culture - Scientists on stamps”.
*Your first assignment is due today.*
In this class we will discuss the results of your first research project! Yes, week one and you're already off on a voyage of discovery – and writing! We’ll discuss sources, reading and writing – all in the context of the new series of USPS ‘American Scientists’ stamp series.
Reading: No set reading for today’s class.

**The Human Condition**

**Week Two:**
Monday 29th August: “The Nature of Nature”
Ever since Darwin published *Origin of Species* in 1859 natural science has been taken as having a lot to say about the kinds of creatures we are – the kind of creatures we have become. We’ll look at this idea, and why and how it has been controversial over the next few classes.

Wednesday 31st August: “Science in Fiction”
No class meeting. Dr. Hale is visiting Northeastern State University.

**Week Three:**
Monday 5th September: No class meeting. American Labo(u)r Day.
Reading: No set reading

Wednesday 7th September: “The Island of Dr. Moreau”
H.G. Wells’s wrote *The Island of Dr. Moreau* (1896) in light of contemporary debates in science, most notably, he wrote about the relationship between man and other animals in light of Darwinian evolution.
*Your second assessment is to write 250 words in which you tell me something interesting about Wells and about the themes in Dr. Moreau.*

**Week Four:**
Monday 12th September: “Evolution and Vivisection”
*Your second assessment is due today.*
What became one of the most pressing issues in science in the second half of the nineteenth century was the use of animals as subjects in experiments. Over the next few classes we will look at this debate in some detail.
Wednesday 15th September: “The Royal Commission 1875”
Several distinct interest groups formed around the issue of vivisection. We will look at each of them. We will also take the opportunity to discuss the nature of different types of sources—Parliamentary papers, political pamphlets, science textbooks, and personal correspondence, and what to make of them. In this class we shall begin with a discussion of Francis Power Cobbe and The Royal Commission (Extracts 4a and 4b and extract 5.)

Reading:

Week Five:
Monday 19th September: “Networks of Science”
Your third assignment is to write a 250 word summary of either the main concerns and arguments of either 1: The RSPCA, 2: The Victoria Street Society, 3: The scientists lobby. [You will be assigned to one in class].
In this class we will consider the Royal Commission interviews and interviewers (extracts 1, 2, and 3) in light of the correspondence of Darwin, Huxley, Forster and others going on behind the scenes.

Reading:

Wednesday 21st September: “Science, Animals and Ethics”
*Your third assessment is due today.
Recently the use of animals in scientific experimentation has come up for discussion again. We will look at two brief articles in the pages of Science from earlier this year and debate the issues in the present day context.

Reading:
Extracts from the journal Science, will be provided for discussion.

Science, Technology and Progress?

Week Six:
Monday 26th September: “Technology the Liberator?“
Ambivalence about the relationship between science and technology and society is not something that is new. Some argue that science has brought us enlightenment and progress, others argue that at there are reasons to be ambivalent about the their impact upon our lives. Kranzberg is one of the optimists.

Reading:

Wednesday 28th September: “The Luddites”
*Your First Essay is due today
Kranzberg calls those who doubt the progress of science “Luddites”. Thompson in his classic work of social history looks at who the Luddites were and what motivated them to smash machinery.

Reading:
Week Seven:
Monday 3rd October: “The McDonaldization of Society”
Ritzer takes a more current look at the influence of technologies on our society, for good and for ill.
Reading:

Wednesday 5th October: “Advance and Ambivalence in Medicine”
*Your fourth assessment will be to write 300 words comparing the views of Thompson, Ritzer and McKibben on the relationship between Science/Technology/Medicine and society.
As we learn more about the ways in which genes dictate various aspects of our physiology and behaviour there has been great excitement at the possibilities that lie before us. At the same time, however, there are also people, from across the political spectrum, who look forwards with dread rather than anticipation.
Reading:

Science and Politics

Week Eight:
*Your fourth assessment is due today.
The Marxist historian Robert M. Young pointed out that Darwin’s theory of natural selection reflected the prevailing politics and economics of his day. We will consider his argument, and the argument that there is a politics of evolution.
Reading:
“Survival of the Fittest”, a prepared reader.

Wednesday 12th October: “Is science sexist?”
In 1980 Carolyn Merchant published a book that still has significant influence in the history of science. Her thesis is controversial even today.
Reading:

Week Nine:
Monday 17th October: “Do Artefacts Have Politics?”
Is science can have politics, what about technology? Langdon Winner’s article is compelling. Look in particular at the structure of his argument. He uses subheadings to help you through.
Reading:

Wednesday 19th October: “Women and Technology in American History”
If technologies can have politics as Winner suggests, then can their be sexist or feminist technologies?
Reading:
Week Ten:
Monday 24th October: “The History of Birth Control in America”
In this class we will look at the writings and career of Margaret Sanger, the founder of Planned Parenthood. She is at once a feminist hero, but also has been charged with being an ardent eugenicist. Is it possible that she was both, and in what ways, if at all, is this important today?
Reading:

Wednesday 26th October: “Margaret Sanger’s Eugenic Legacy”
*Your fifth assessment is due today:
For this class I would like you to do some research of your own. Bring into class evidence of your research into one of the following: (a) further context for Sanger’s views. (2) The reception of Sanger’s views in her own era. (3) The ways in which Sanger is variously portrayed in the present. We’ll discuss your research in class.
* A 300 word summary of your findings is your fourth assessment.
Reading:
Student research.

Week Eleven: “Whose view of Life?”
Monday 31st November:
Much of present debate, not only about abortion, but about issues in bio-medicine have to do with the debate over the moral status of embryos. Jane Maienschein offers a view on this subject from the perspective of the history of biology.
Reading:

Science, Society, Technology and Environment

Wednesday 2nd November: “Rachel Carson and Silent Spring.”
The modern environmental movement in the US can be dated to the public response to the publication in 1962 of extracts from Rachel Carson’s Silent Spring in the New Yorker Magazine. Over the next few classes we will look at the controversy, politics and the science of the environment.
Reading:

Week Twelve:
Monday 7th November: “The 1963 Commission on Pesticides”
*Your second essay will be to write 750-1000 words on the debate that followed the publication of Rachel Carson’s Silent Spring in 1962.
Reading:
Prepared Reader on 1963 President’s Commission on Pesticides.

Wednesday 9th November: “The Tragedy of the Commons and the rediscovery of scarcity”
Malthus’s view of the natural world continues to play an important role in how we view the relationship between science and the environment: that is, nature is a resource that makes our lives possible, but with this caveat: there is not enough for everyone.
Reading:

Week Thirteen:
Monday 14th November: “Golden Rice and the Green Revolution”
*Your Second Essay is due today.
Debate about the genetic modification of food continues, (although there are differences between the intensity of public feeling between Britain and North America), in these two readings we get two very different sides of the debate.

**Reading:**

**Wednesday 16th November:** “Agricultural research and international policy”
Although written in the late 1980s, Kenneth Dahlberg’s critique of the export of Western agricultural technologies remains relevant today.

**Reading:**

**Week Fourteen:**
**Monday 21st November:**
History of Science Collections (TBC)

**Wednesday 23rd November:** THANKSGIVING BREAK

**Week Fifteen:**
**Monday 28th November:**
History of Science Collections (TBC)

**Wednesday 30th December:** “Good Science/Bad Science and who decides”
The politics of science remains controversial. In the next two classes we will look at the relationship between big tobacco and the denial of anthropogenic climate change.

**Reading:**

**Week Sixteen:**
**Monday 5th December:** “The Denial of Global Warming”
*your sixth assessment is to write 300 words on the politics of climate change.*

**Reading:**

**Wednesday 7th December:** “Environment and Society: Rethinking the Human Place in Nature”
*Your sixth assessment is due today.*

**Reading:**


**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 (be careful to keep a record of the page numbers and full citation details of the sources you use – you will need them). 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 – having your own thesis is when you can expect to reach the higher grade levels in terms of assessment). 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. (note: this is not something that can be done the evening before the essay is due). 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.

**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.

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.
And finally, a note on:
References:
Do you have enough of them? Each significant point you make should have a reference – either to the source you have used as evidence to support your own argument, or to the source that shows where another author has made the point under discussion. As a rough guide: if you are not making three significant points in a page, you might want to. Thus three footnotes on a page would seem a fair estimate.

References should be accurate and adequate: You should provide the authors name, the title, the date and place of publication and the page number. See comments above for further explanation of referencing.

Wikipedia?:
While Wikipedia is often a good source of general information, it is not acknowledged to be a reliable or scholarly source of information. Wiki often gives you references – chase them up and do your own research!

Website research:
Online research is increasingly the first port of call for scholars; however, you should be aware that there is a lot available on line that is of a poor quality, and a lot that is certainly not reliable in terms of academic standards. Your subject librarians will be able to guide you in your search, and also give you guidance as to how to cite various online sources. In general you should cite the title of the document, its author, (assuming one is acknowledged), the full web address, and the date accessed. If you are submitting your assignment electronically, you might also insert your reference as a link. In general, though, if you are unsure as to the quality of the site you are looking at, cross-reference your information with a source you know to be reputable.
GRADING PRACTICES AND STANDARDS

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