

REVISED

HPS324 NATURAL SCIENCE AND SOCIAL ISSUES
R10AM-12
LOCATION: NF119

Instructor: Professor Yiftach Fehige, Ph.D., Ph.D.: 416-946-5024, yiftach.fehige@utoronto.ca

Follow me on twitter: @FEHIGETORONTO

Office Hours: Wednesdays 1-2pm, and by appointment; the office is located at VC 313.

Accessibility Need: If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: www.accessibility.utoronto.ca.

Writing Support: If you requires assistance with writing please make use of one of them many writing centres at the University of Toronto: <http://www.writing.utoronto.ca/writing-centres>

Course Description: This course offers an interdisciplinary examination of the interactions of science (both as body of knowledge and as enterprise) with ideological, political and social issues.

Required Readings: The readings to be discussed in class are available electronically via the University Library webpage, or via Blackboard, or online (in which case I provide a link). Everybody is expected to study the readings to be discussed in class listed for each week.

Email Policy: I will *try* to respond to every email within 48 hours. In the past I have managed quite well to do so. However, in order not to trigger too high expectations and to avoid overcommitment, I would like to declare here that I will not *respond* to email inquiries unless it is an emergency or of great urgency. If the inquiry is legitimate but not an emergency or of great urgency I will respond to it within 4 days. I will take up 'generic' questions received via email if I think that they could be of interest to all students. The time for this will be the beginning of each class.

Form matters! Each email message **must include** in the subject line the course identifier and a concise and clear statement of purpose [for instance: "I have a conflict with the next test"] otherwise it is likely to be deleted. **Please address me either with "Dear Yiftach", or "Dear Professor Fehige". "Hi" and "Hey" or no recognition at all of me as the addressee of your message are not acceptable and I will ignore such messages.**

Please note: email should not be seen as an alternative to meeting with me. Nor should email be used as a mechanism to receive private tutorials (especially prior to tests) or to explain material that was covered in lectures/sessions you missed.

Final Mark: Weekly short essay take home assignment related to the readings to be prepared for class discussion [65%] (see Scheule 1 for further information and instructions), multiple choice [20%], class participation [15%].

Please note: excessive absence from class will count against final mark. If you missed more than 2 classes I will deduct 10% of the final mark. In case you missed more than 4 classes I will deduct 15%. If you missed more than half of the classes I will deduct 40%.

Due Date Policy: With regard to **due dates of assigned term work** please take careful notice that **categorically no late submission is possible**. After the due date I will accept your work for grading only if you either have a *medical certificate* or have *talked in person to your college registrar* to explain the reasons for your failure. In the latter case you have to ask him/her for a letter which states your reasons and the registrar's recommendation to me whether or not to accept your work. I will consider the suggestion and within three days notify you of my decision.

Course Objectives: (1) To acquire and demonstrate familiarity with the social dimensions of the natural sciences. (2) To acquire familiarity and a critical stance on particular arguments in assessing the impacts of natural science on society, and vice versa. (3) To develop a deep and critical understanding of the historical contingencies of the category 'science'. (4) To acquire familiarity with different approaches to the relationship between natural science and society. (5) To develop and demonstrate academic skills in careful reading and observation, critical analysis of arguments, and clear and written expression.

Academic Expectations: Students are expected to attend class regularly, to submit assignments on time, and to participate actively in class discussions. It is also expected that reading assignments will be completed by the date and time of the class for which the reading is assigned. Please turn off pagers and cell phones during class. All students in this class are bound by the Code of Behaviour on Academic Matters of the *University of Toronto Faculty of Arts and Science (St. George Campus) 2015-16 Calendar*. **Plagiarism is an academic offence!**

Course Schedule_HPS324_2015

R10AM-12

LOCATION: NF119

Introduction, Mechanism, Syllabus

(1) 9/17/15 *What Science? Whose Issues? Which perspective? Heidegger on Humanism*

Technology

(2) 9/24/15 *Pure Science? A Conceptual Analysis*

Reading to be prepared at home and then to be discussed in class: Philipp Kitcher. 2001. "The Myth of Purity." In: *Science, Truth, and Democracy* (Oxford University Press), pp. 85-91.

Short essay assignment (to be submitted at the beginning of this class in hardcopy): What is 'pure science', according to Kitcher, and in what sense does pure science exist? (max. 500 words, no quotes, only your own words!)

(3) 10/01/15 *Science, Technology, and Metaphysics I*

Reading to be prepared at home and then to be discussed in class: Martin Heidegger. 1977. "The Question Concerning Technology." In: *The Question Concerning Technology and Other Essays* (translated by William Lovitt) (New York et al.: Harper Colophon Books), pp. 3-35.

Short essay assignment (to be submitted at the beginning of this class in hardcopy): (This is a very dense and challenging text. I am aware of it. Please read it carefully! Don't give up even when you have troubles following everything Heidegger is saying. Focus on what you do understand. The class discussion will help you to connect the insights you gained from your carefully study of the text, and enhance your understanding of the whole text) What is 'Gestell', according to Heidegger, and why is it indispensable for a proper philosophical understanding of technology? (max. 500 words, no quotes, only your own words!) to get a sense of the philosopher Martin Heidegger you might want to watch this 8 minutes long interview: <http://www.openculture.com/2014/05/martin-heidegger-talks-philosophy-with-a-buddhist-monk.html>

(4) 10/08/2015 *Science, Technology, and Metaphysics I*

Reading to be prepared at home and then to be discussed in class: Martin Heidegger. 1977. "The Question Concerning Technology." In: *The Question Concerning Technology and Other Essays* (translated by William Lovitt) (New York et al.: Harper Colophon Books), pp. 3-35.

Short essay assignment (to be submitted at the beginning of this class in hardcopy): (This is a very dense and challenging text. I am aware of it. Please read it carefully! Don't give up even when you have troubles following everything Heidegger is saying. Focus on what you do understand. The class discussion will help you to connect the insights you gained from your carefully study of the text, and enhance your understanding of the whole text) What is 'Gestell', according to Heidegger, and why is it indispensable for a proper philosophical understanding of technology? (max. 500 words, no quotes, only your own words!) to get a sense of the philosopher Martin Heidegger you might want to watch this 8 minutes long interview: <http://www.openculture.com/2014/05/martin-heidegger-talks-philosophy-with-a-buddhist-monk.html>

(5) 10/15/15 *Neuroimaging of Sex and Gender*

Reading to be prepared at home and then to be discussed in class: Baerbel Huesing. 2008. "Technology Assessment of Neuroimaging: Sex and Gender." In: *Sexualized Brains: Scientific Modeling of Emotional Intelligence from a Cultural Perspective* (Cambridge: MIT Press), pp. 103-116.

Short essay assignment (to be submitted at the beginning of this class in hardcopy): Please in your own words, reproduce one example that demonstrates how neuroimaging technologies may reproduce discriminatory views about sex and gender, according to Huesing. (max. 500 words, no quotes, only your own words!)

The Social Dimensions of Natural Science

(6) 10/22/15 *The Holocaust of the Enlightenment*

Reading to be prepared at home and then to be discussed in class: Theodor W. Adorno and Max Horkheimer. 2002. *Dialectic of Enlightenment* (Translated by Edmund Jephcott) (Stanford: Stanford University Press), pp. 1-34.

http://monoskop.org/images/2/27/Horkheimer_Max_Adorno_Theodor_W_Dialectic_of_Enlightenment_Philosophical_Fragments.pdf

Short essay assignment (to be submitted at the beginning of this class in hardcopy): (Another dense text. My advise concerning Heidegger's text applies here, too!) Please in your own words, reproduce three claims of what enlightenment is, according to Adorno and Horkheimer. (max. 500 words, no quotes, only your own words!)

(7) 10/29/15 *The Entanglement of Facts and Values*

Reading to be prepared at home and then to be discussed in class: Hilary Putnam. 1982. "Beyond the Fact Value Dichotomy." *Crítica: Revista Hispanoamericana de Filosofía* 14: 3-12

Short essay assignment (to be submitted at the beginning of this class in hardcopy): Name the positions in between which Putnam tries to position himself with respect to the fact-value dichotomy. (max. 500 words, no quotes, only your own words!)

(8) 11/05/15 *Science and Free Will*

Reading to be prepared at home and then to be discussed in class: Michael Esfeld. 2000. "Is Quantum Indeterminism Relevant to Free Will?" *Philosophia Naturalis* 37: 177-188.

Short essay assignment (to be submitted at the beginning of this class in hardcopy): What is Quantum Indeterminism, according to Esfeld? (max. 500 words, no quotes, only your own words!)

(9) 11/12/15 *Heterosexist Darwinism*

Reading to be prepared at home and then to be discussed in class: Joan Roughgarden. 2009. *Evolution's Rainbow: Diversity, Gender, and Sexuality in Nature and People* (Berkeley: University of California Press. 2nd Edition), pp. 159-181.

Short essay assignment (to be submitted at the beginning of this class in hardcopy): Please in your own words, reproduce two pieces of empirical evidence that Roughgarden presents to support her claim that Darwin's theory of sexual selection needs to be rejected. (max. 500 words, no quotes, only your own words!)

(10) 11/19/15 *Circumcision*

Reading to be prepared at home and then to be discussed in class: David. L. Gollaher. 1994. "From Ritual to Science: The Medical Transformation of Circumcision in America." *Journal of Social History* 28: 5-36.

Short essay assignment (to be submitted at the beginning of this class in hardcopy): What is Gollaher's central claim concerning the rise of the medical practice of circumcision? (max. 500 words, no quotes, only your own words!)

(11) 11/26/15 *Between Naturalism and Religion*

Reading to be prepared at home and then to be discussed in class: Juergen Habermas. 2008. "Religion in the Public Sphere: Cognitive Presuppositions for the 'Public Use of Reason' by Religious and Secular Citizens." In: *Between Naturalism and Religion* (Cambridge, UK: polity Press), pp. 114-147.

Short essay assignment (to be submitted at the beginning of this class in hardcopy): Why does Rawls's position discriminate religious citizen in secular societies, according to Habermas? (max. 500 words, no quotes, only your own words!)

Conclusion

(12) 12/03/15 *Summary, Open Questions, Next Steps* _____ Multiple Choice Test!

Reading to be prepared at home and then to be discussed in class: Peter Gluckman. 2014. "The Art of Science Advice to Government." *Nature* 507: pp. 163-165.

<http://www.nature.com/news/policy-the-art-of-science-advice-to-government-1.14838>

Schedule 1

Short Essay Instruction Sheet

HPS324_2015 Natural Science and Social Issues

Prof. Yiftach Fehige

The task: to write a short essay with a maximum word count of 500. The topic of the essay is not your own choice. I have provided you with a concrete topic for the essay. Please refer to the course outline for this course to retrieve the assigned topics. You must address this topic. It is not necessary to use any other sources than the reading to which the short essay relates, which is the reading to be prepared for the class at which the essay is due. But this does not make background research superfluous. If you are unfamiliar with terminology, the broader context of the required reading, details of an argument, or issues raised in the starred reading then you are expected to conduct some background research.

The style: give your essay a title, name the course identifier, and me as course instructor. State the word count. I have no preference for a particular font or font size. But, please do not submit a text that is single spaced. Your text should reflect best practices of academic writing. If you need help with academic writing, the University of Toronto has much help to offer: <http://www.writing.utoronto.ca/writing-centres> Here are some guidelines: <http://www.writing.utoronto.ca/advice>

The essay should have a logical structure, flow from paragraph to paragraph, framed by an introduction remark (stating the topic) and a conclusion (summing up the discussion/considerations/arguments). Never quote, but only use your own words.

The nature: I expect you to write a *philosophical* essay. This requires you to state a thesis (a claim to be supported by arguments) and to name arguments (instantiating evidence) to support that thesis. For example, “Juergen Habermas argues that John Rawls' political theory discriminates religious citizens of a liberal state (thesis). He shows in what ways Rawls' position creates an asymmetry between religious and secular citizens (argument). Such an asymmetry is unacceptable, according to Habermas, because it can damage the kind of discourse that a democracy needs in order to explore all possible sources of support for its central institutions (argument).”

Assessment: most important criteria for my assessment of your short essay are the following: (1) is the topic addressed that I assigned? (2) Does your essay reflect a close reading of the text to which the essay relates. (3) Does the essay reflect overall good comprehension of the related reading? If you fail to address the topic, I will assign an F to your paper regardless of any other merit it may demonstrate. Of secondary concern for my assessment are stylistic matters, such as grammar, tone of the essay, structure of your paper. Your paper could be written in terrible English, use sexist language, and have a condescending tone, and still earn a grade in the B range. This doesn't mean I like those kinds of essays, but it reflects the nature of the essay, and the task at hand. You wouldn't receive an A, however. Together with your marked essay you will receive from me an assessment sheet (see Schedule 2) that breaks down the grade I assigned.

Friendly advise: never submit a rough draft, or an essay that wasn't read by at least one other person with some expertise in academic writing.

Please note: I will not accept late submissions.

Thank you!

Schedule 2

Short Essay Assessment Sheet

HPS324_2015 Natural Science and Social Issues
Prof. Yiftach Fehige

Name of Student:

Topic/Title:

Assessment Criterium	Excellent	Very Good	Good	Satisfactory	Needs Improvement
The assigned topic is addressed					
Essay reflects close reading					
Overall, reflects comprehension of reading					
Thesis is stated					
Arguments are clear					
Reflects background research					
Introductory remark provided					
Structure is logical					
Conclusion sums up the essay					
Tone and Style					
Length within expected range of word count					
Overall, essay is polished					

Grade:

Date:

Remarks