

Philosophy 3372: Philosophy of Science (02)

Department of Psychology & Philosophy

Fall 2017, MWF 10:00 – 10:50

CHSS 242A

Course Description:

A survey of topics in philosophy of science including the logic of explanations in the physical and social sciences, the relations of science to the realm of values, and a look at the “mind-body problem.”

Class Description & Objectives:

This course introduces students to a selected survey of traditional and cutting-edge questions in the philosophy of science. What is science, and how can we distinguish it from non-science, pseudo-science, and other forms of knowledge? Should values come to bear on scientific pursuits, and if so, which ones? What is the difference between natural kinds and social kinds? Are there ethical limits on what scientists should be doing, and how might political considerations shape scientific agendas? Throughout this course, students will develop an understanding of some of the most exciting debates in the philosophy of science. They will learn how to think philosophically about science and why it is important to do so.

Professor:

Dr. Katie Stockdale, Assistant Professor of Philosophy

Office Hours:

My office hours are **Monday and Wednesday, 2:00 – 3:00**. I *strongly* encourage you to make use of my office hours. It's totally normal to have questions, concerns, or to need help—that's what I'm here for! If you cannot make my office hours, please email me to schedule an appointment. You are also more than welcome to drop by any time, though I can't promise I will be in my office outside of office hours.

Email & Email Policy:

I very much encourage you to email me at katiestockdale@shsu.edu with any questions you might have. I will do my best to reply within 24 hours (excluding weekends). Questions about course material should be asked in class or in office hours.

Classroom Policy:

Cell phones should be off in the classroom, and laptop users should sit in the back. Note that this course includes a discussion component: students are expected to ask questions and voice their own views about philosophical issues. Questions and comments should always be respectful to the professor and to fellow students.

Attendance Policy:

As per university policy, attendance in this class is mandatory.

Extension, Late Policy, and Make-Up Exams:

There will be no extensions granted for commentaries, and commentaries received late will not be accepted. Essays received late will be docked 3% per day, and no essays will be accepted after *two days* following the due date. For example, if an essay is due at 11:59pm on Tuesday, essays handed in between 12:00am and 11:59pm on Wednesday will be docked 3%. Essays handed in between 12:00am and 11:59pm on Thursday will be docked another 3%. Essays submitted after 11:59pm on Thursday will receive a grade of 0.

Requests for extensions or make-up exams should only be made in very extreme circumstances (e.g., serious illness, family crisis). Having other assignments due or tests on the same day for other courses is not a good reason to request an extension. I am happy to talk with you any time about strategies for managing your work load.

Required Readings:

Samir Okasha, *Philosophy of Science: A Very Short Introduction*, 2nd edition. Oxford: Oxford University Press, 2016. ISBN: 9780198745587; all other required readings will be posted on the course website.

Evaluation*:

*This course is “writing enhanced.” 60% of your grade comes from written assignments that are designed to help you develop and strengthen your writing skills. Commentaries provide the opportunity for low-stakes writing to learn, and the philosophical essay will help you practice defending a thesis statement, writing formally, and citing sources. You are encouraged to use my office hours to receive feedback on your writing assignments prior to handing them in. You will receive feedback on each of your writing assignments to help you improve for the next.

Participation	10%	Throughout the course. See below.
Commentaries (x 4, each worth 10%)	40%	Throughout the course. See below.
Mini Exam	10%	February 19.
Philosophical Essay	20%	April 25.
Final Exam	20%	May 7.

Attendance & Participation:

You are expected to attend class and participate in class discussion. In addition, you will complete 12 short in-class activities throughout the semester toward your participation grade. Each in-class activity is worth 1% of your final grade. If you are in class and complete the activity, as long as you put in a legitimate effort, you will be awarded the 1%. Note that your participation grade is worth 10%; this means that you can miss *two* in-class activities and still earn the full 10%.

Commentaries:

You will write 4 commentaries, each worth 10%. Commentaries are 2-3 page, double-spaced reflections on course readings that demonstrate understanding of the course material and independent thought. Commentaries are due in class on the day we discuss the readings. No extensions will be granted for commentaries, and late commentaries will not be accepted. There are four rounds of “commentary days” on the syllabus. For each round, you may choose to write Commentary A *or* Commentary B. There is 1 optional commentary assignment; however, you are only qualified to write the optional commentary if you submit *all* required commentaries. Your best 4 will count toward your final grade. Specific instructions for writing commentaries will be provided on the course website.

Mini Exam:

The mini exam will consist of short answer questions designed to test your understanding of the course material. You will be given a set of practice questions in advance, some of which will appear on the exam.

Philosophical Essay:

The philosophical essay should be 4-5 double-spaced pages. It should include an introductory paragraph with a thesis statement, arguments in support of the thesis statement, and a conclusion. The thesis statement will be an answer to a question posed by the professor. Specific instructions for writing essays will be provided on the course website, and there will be an in-class tutorial on how to write a formal philosophical essay.

Final Exam:

The final exam will have exactly the same format as the mini exam – it will involve short answer questions designed to test your understanding of the course material. You will be given a set of practice questions in advance, some of which will appear on the exam.

Grading Rubric*:

*Since there is no fair way to do so, I will not round any grades.

Grade	Description
A (90-100)	Excellent
B (80-89.99)	Above Average
C (70-79.99)	Average
D (60-69.99)	Passing (not necessarily satisfying degree requirements)
F (59.99 and below)	Failure

Course Schedule: *If changes to the course schedule are made, students will be notified in class and on the course website.*

Part 1: Philosophy of Science & Scientific Reasoning

Jan. 19	Welcome to the Course	<i>No readings. Review of course goals and expectations.</i>
Jan. 22	<i>Philosophy of Science</i>	Bertrand Russell, "The Value of Philosophy" Samir Okasha, <i>Intro</i> p. 1-11 (Begin)
Jan. 24		Okasha, <i>Intro</i> p. 1-11 (Finish)
Jan. 26	Scientific Reasoning	David Hume, from <i>An Enquiry Concerning Human Understanding</i> (542-555) Samir Okasha, <i>Intro</i> p. 16-26
Jan. 29		Carl G. Hempel, "Scientific Inquiry"

Part 2: The Problem of Demarcation

Jan. 31	Falsifiability	Samir Okasha, <i>Intro</i> p. 11-15 Karl Popper, "Science: Conjectures and Refutations"
		<i>Commentary Round 1: Option A Due</i>
Feb. 02	Case Study	Michael Ruse, "Creation Science is not Science" (Begin) Samir Okasha, <i>Intro</i> p. 118-122
		<i>Commentary Round 1: Option B Due</i>
Feb. 05		Michael Ruse, "Creation Science is not Science" (Finish)
Feb. 07		Larry Laudén, "Science at the Bar—Causes for Concern"
Feb. 09		Michael Ruse, "Response to the Commentary: Pro Judice"
Feb. 12	A New Demarcation Problem?	ICSU and UNESCO, "Science, Traditional Knowledge, and Sustainable Development" (Begin)
		<i>Commentary Round 2: Option A Due</i>
Feb. 14		ICSU and UNESCO, "Science, Traditional Knowledge, and Sustainable Development" (Finish)
Feb. 16	Review & Study	<i>No readings. In-class exam review and study time.</i>
Feb. 19	Mini Exam	<i>No readings. Good luck on the mini exam!</i>

Part 3: Scientific Method, Change, and Progress

Feb. 21	Paradigms & Revolutions	Samir Okasha, <i>Intro</i> p. 71-88 Thomas S. Kuhn, "The Nature and Necessity of Scientific Revolutions" (Begin)
Feb. 23		Thomas S. Kuhn, "The Nature and Necessity of Scientific Revolutions" (Finish)
Feb. 26	The Psych Sciences	Rachel Valerie Cooper, "When Paradigms Meet" (Begin) <i>Skip sections 6.1 & 6.2 unless you need a refresh on Kuhn.</i>
		<i>Commentary Round 2: Option B Due</i>
Feb. 28		Rachel Valerie Cooper, "When Paradigms Meet" (Finish)

Part 4: The Pursuit of Scientific Knowledge: Values & Objectivity

Mar. 02	Values & Objectivity	Samir Okasha, <i>Intro</i> p. 123-130
		Thomas S Kuhn, "Objectivity, Value Judgment, and Theory Choice" (Begin)
Mar. 05		Thomas S Kuhn, "Objectivity, Value Judgment, and Theory Choice" (Finish)
Mar. 07		Helen Longino, "Values and Objectivity" (Begin)
Mar. 09		Commentary Round 3: Option A due!
Mar. 12 – 16	SPRING BREAK (!!)	Helen Longino, "Values and Objectivity" (Finish)
Mar. 19		NO CLASS. ENJOY YOUR SPRING BREAK (!!)
		Sandra Harding, "Stronger Objectivity for Sciences from Below" (Begin)
		Commentary Round 3: Option B Due!
Mar. 21		Sandra Harding, "Stronger Objectivity for Sciences from Below" (Finish)
Mar. 23	Applications	Kristen Intemann & Immaculada de Melo-Martín, "Addressing Problems in Profit-Driven Research" (Begin)
Mar. 26		Kristen Intemann & Immaculada de Melo-Martín (Continue)
Mar. 28		Kristen Intemann & Immaculada de Melo-Martín (Finish)
Mar. 30	GOOD FRIDAY (!!)	NO CLASS. ENJOY YOUR HOLIDAY (!!)

Part 5: Natural & Social/Human Kinds

Apr. 02	Distinguishing Kinds	Muhammad Ali Khalidi, "Natural Kinds vs. Human Kinds"
Apr. 04	Social/Human Kinds	Sally Haslanger, "Gender and Other Social Categories" (Begin)
Apr. 06		Sally Haslanger, "Gender and Other Social Categories" (Finish)
Apr. 09		No readings. In-class tutorial on writing a formal philosophy essay.
Apr. 11		Ian Hacking, "The Looping Effects of Human Kinds" (Begin)
		Commentary Round 4: Option A Due!
Apr. 13		Ian Hacking, "The Looping Effects of Human Kinds" (Continue)
Apr. 16		Ian Hacking, "The Looping Effects of Human Kinds" (Finish)

Part 6: Ethics & Politics of Science

Apr. 16	Moral Responsibility	Heather Douglas, "The Moral Responsibilities of Scientists" (Begin)
		Commentary Round 4: Option B Due!
Apr. 18		Heather Douglas, "The Moral Responsibilities of Scientists" (Finish)
Apr. 20	Climate Science	No readings. In-class documentary, <i>Before the Flood</i> .
Apr. 23		No readings. In-class documentary, <i>Before the Flood</i> .
Apr. 25		No readings. In-class documentary, <i>Before the Flood</i> .
		Philosophical Essay Due, 11:59pm to Blackboard!
Apr. 27		Evelyn Fox Keller, "What are Climate Scientists to Do?"
Apr. 30	Science & the Future of Humanity	Michael J. Selgelid, "Moderate Eugenics and Human Enhancement" (Begin)
		Optional commentary due!
May 02		Michael J. Selgelid, "Moderate Eugenics and Human Enhancement" (Finish)
May 04	Study & Review	No readings. In-class exam review and study time.

Academic Dishonesty:

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain honesty and integrity in the academic experiences both in and outside of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subjected to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including but not limited to cheating on an examination or other academic work which is to be submitted, plagiarism, and collusion in the abuse of resource materials.

Student Absences on Religious Holy Days:

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Section 51.911(a)(2) defines a religious holy day as: "a holy day observed for a religion whose places of worship are exempt from property taxation under Section 11.20..." A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to be absent from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed. For a complete listing of the university policy, see: <http://www.shsu.edu/dept/academic-affairs/documents/aps/students/861001.pdf>.

Students with Disabilities:

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program from the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (phone #: 936-294-3512), TDD 936-294-3786, and email disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may adversely affect your work in this class, I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. Note: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see: <http://www.shsu.edu/dotAsset/7ff819c3-39f3-491d-b688-db5a330ced92.pdf>

Visitors in the Classroom:

Only registered students may attend class. Exceptions may be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit the class must apply to do so through the Registrar's Office.

<http://www.shsu.edu/syllabus/>