California State University Sacramento

Philosophy 105-01: Science and Human Values

Spring 2016 Course Syllabus and Schedule (Updated April 8)

***********Read this now and refer to it regularly during the course***********

Course Instructor and Details

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Course Information

Course Name: Science and Human Values
Catalog Code: PHIL 105, Section 01
Days of Class Meetings: Monday & Wednesday
Times of Class Meetings: 1:30-2:15PM
Room of Class Meetings: DH208

Contacting me: The best way to contact me is via email. I should respond to emails sent during business hours within a few hours and by the next business day morning at the latest. I do occasionally respond to emails outside of business hours, but that should not be relied upon.

About the Course

Catalog Description:
Examination of the values implicit in a scientific culture and the problems that arise as a commitment to the development of scientific knowledge and technology. These problems include: distinguishing good scientific practice from bad; the intrinsic value of scientific knowledge independent of its benefits in application; the proper and improper applications of scientific knowledge. Units: 3.0.

GE Area:
This course satisfies GE area D (see the outcomes below). It is a writing intensive class, which requires students to write a minimum of 5,000 words of structured prose.

Prerequisites:
You must have GWAR certification before Fall 2009; or WPJ score of 80 or above; or 3-unit placement in ENGL 109M/W; or 4-unit placement in ENGL 109M/W + co-enrollment in ENGL 109X; or WPJ score 70/71 + co-enrollment in ENGL 109X.

Course Objectives: The course examines the following questions:

1. What is the role of science in society? How has science as the process and product of human inquiry changed human culture?
2. What values underlie a scientific world-view and which guide scientific research efforts?
3. How do human values affect science and how does science affect human values, interests, activities and goals.
4. Does science offer evidence for or against a universal set of values?
5. Do human values such as justice, kindness, compassion, intimacy, and love have any place in scientific practice or progress?
6. Science tells us that we are the products of our genes and our environments, but can it offer any advice for how to cope with this brute fact in a world of desperate, selfish, competitive,

voyeurs and narcissists? How shall individuals live, given our evolved impulses, emotions, and cognitive capabilities?

7. Are there questions for which scientists should not seek answers, or are there areas of human activity that should not be influenced by science? Are there any moral limits to scientific explanations, experiments and technological innovation?
8. Is science enlightened, objective, rational, liberating and democratic or is it biased, subjective, male-centered, political, atheistic, and elitist?
9. Are vaccines, GM crops, and cloning safe? What should the public know about these technologies, given scientific findings? And what should we do about them?
10. Scientific progress and social advances conflict apparently with traditional values and popular worldviews. Are religious and scientific world-views really compatible? What shall we teach our children when science and tradition conflict?

Outcomes:

As per the GE area D and writing intensive requirements, students will be able to:

1. Describe and evaluate ethical and social values in their historical and cultural contexts.
    - Such values have influenced science as both a process and product of human interests. For example, we discuss the morality of the effects that scientific values and practices have had on women throughout history. We also describe and evaluate various values that underpin scientific thinking, such as honesty.
2. Explain and apply the principles and methods of academic disciplines to the study of social and individual behavior.
    - Students apply the principles and methods of various scientific disciplines to the study of social and individual behavior by considering recent scientific trends in research programs. For example, relatively new sciences such as evolutionary biology and psychology describe and explain human cognition and behavior under the assumption that rationality and culture are evolved physical systems shaped by our genetic endowments, environmental circumstances, and natural selection. Some, such as Sam Harris, even make the case that not only does this scientific perspective explain our moral sense, it also offers solutions to moral problems. If evolution has endowed us with universal ethical impulses, then emotional and cognitive adaptations to social living explain the origins and prevalence of, say, cooperation, reciprocal altruism, social contracts, a sense of fairness, and moral judgments. Students will examine whether and to what extent science determines human values and how, if at all, science helps us resolve moral and social problems.
3. Demonstrate an understanding of the role of human diversity in human society, for example, race, ethnicity, class, age, ability/disability, sexual identity, gender and gender expression.
    - Students examine major scientific movements and findings that have profound effects on the quality of human life, and the practice of science itself. Science offers to explain and guide these changes, but not without alienating lots of people resistant to major shifts in personal values and societal goals. Throughout the course, and especially in the later weeks, we focus our discussions on specific issues where science and public life intersect in conflicting and controversial ways. For example, students will show that they understand how significant these issues are by writing papers on such socially charged issues as the once anomalous role of women in scientific research, or whether vaccines, GM crops, and cloning are safe or should be regulated. Students also discuss how evolutionary biology has implications for religious worldviews and in particular their applications in public education. Through these examinations and discussions, students will demonstrate an understanding of the role of human

diversity and how various human beliefs and values that tend to stem from that diversity can clash with science.

4. Explain and critically examine social dynamics and issues in their historical and cultural contexts.
    - Especially while discussing these later issues, students will critically examine how social dynamics change over time and across cultures in ways that can be both usefully guided and misled by science. The encroachment of science into the moral realm will be the main example of this.
5. Structure logical arguments, write well-formed sentences, and write prose that clearly demonstrates a sustained logical argument.
    - Through detailed feedback on drafts and assignments, structured reflection on the writing process, and in-class writing exercises, students' will improve their writing skills. Specifically, students will be able to structure logical arguments, write well-formed sentences, and write prose that clearly demonstrates a sustained logical argument.

Required Materials:

1. Science and The World, edited by Jeffrey Foss (Broadview Press). Available from the Bookstore, Amazon.com (don't worry that the picture has the wrong title), and Broadview Press (broadview20% may work as a discount code).
2. Additional required online videos, articles, and PDFs (all free) are noted on the schedule (see it on SacCT)

Technology Requirements: Students must have a reliable way of accessing SacCT. All important course announcements, information, and resources will be communicated and available through SacCT (except the material in the required text). Furthermore, students must have a reliable way of accessing Turnitin. All papers will be submitted via Turnitin. Technical problems must be directed to the ITC Help Line @ 278-7337.

Grading and Assessment

Grading: Your final grade is determined by how many points you earn out of 100%, with these grade floors: 93%=A, 90%=A-, 87%=B+, 83%=B, 80%=B-, 77%=C+, 73%=C, 70%=C-, 67%=D+, 63%=D, 60%=D- (and F = all scores less than 60%). Definition of Grade Symbols.

Implicit bias and anonymous grading: Social scientists have discovered that professor are more likely to give work the grade it deserves if assignments are graded anonymously. Even professors with the best intentions may be prejudice without knowing it, e.g., perhaps giving worse grades to a minority group despite being a member of that minority him or herself. For these reasons, I intend to grade as much work as possible anonymously.

I need you to help me grade anonymously. You must learn your student ID# by heart, or bring your ID card to every class (so you can put your ID# instead of your name on the Surprise Reading Quizzes). You must also set up a Turnitin account that uses your student ID# instead of your name to identify you (i.e., enter your whole student ID# into both of the name fields). Go to Turnitin now (http://www.turnitin.com/) and use the following details: Class ID: 11596929, Password: phil105s1s16. Please note that if you already have a Turnitin account, then you can simply login and change your name in the settings section.

Assessment:

Your total points are calculated by adding the following differently weighted assessment items:

Assessment	Details	Due date (due by 9AM Monday, unless stated otherwise)	% of final mark	Required to pass the course?
Participation	0.5 of a mark per useful contribution to class discussion. Max of 0.5 per regular class and 1.0 per online class.	Any class	10%	No
Surprise Reading Quizzes	Best 8 out of 12 count. In class. You may use notes, but not the textbook or the Internet.	First 5 minutes of any class from week 4 onwards.	24%	No
Argument summary	500-600 words. Submit to Turnitin.	2/29	7%	Yes
Analysis Paper	1,500-1,700 words. Submit to Turnitin.	4/4	19%	Yes
Position Paper Plan	Respond to all prompts (see SacCT>Assignments. Submit to Turnitin.	5/2	5%	No
Position Paper (Final)	3,000-3,300 words. Submit to Turnitin.	5/16	35%	Yes
Total			**100%**	

There is no mid-term or final exam.

Detailed information on each item of assessment can be found on SacCT in the Assignments area.

Other Important Information

Attendance at Class:

Attending class is expected. The roll will be taken every day. *Any student who misses 2 or more classes in the first 2 weeks may be administratively dropped* to make room for students on the waitlist.

Classroom behavior:

The other people in the class are people, so treat them with respect. Yes, even I am a person, so treat me with respect too! If you are unsure how to do this, please ask me during a class. The use of electronic devices (laptops, tablets, cellphones, etc.) in class is prohibited (see below).

Electronic devices policy (updated after in-class discussion):

Academic research, and my own personal experience, indicate that electronic device use in the classroom makes it harder for the user and others in the class to learn effectively. Use of these devices is also distracting to me. For these reasons, non-necessary electronic devices, such as laptops, tablets, phones, and Google Glasses, will not be permitted in the class. The exception to this rule is the use of laptops or tablets for notetaking or other uses directly relevant to the class. Anyone using such a device must sit in the first 2 rows.

Plagiarism and other such issues:

Don't cheat. Plagiarism is a serious academic offence and is not tolerated. Always use quotation marks and a footnote citation to indicate sentences or passages you borrow from another author. Assignments in which plagiarism is found will at the least be graded at 0 (not just an F). ALL incidents of plagiarism will be reported both to the Department Chair and to the Judicial Officer in the Office of

Student Affairs for possible further administrative sanction. You are responsible for reading and understanding the details of the University's plagiarism policy. All papers will be put through plagiarism software. See the current student handbook for further information on student rights and responsibilities. Here is a link to the university's honesty policy.

Turnitin:
Consistent with Sacramento State's efforts to enhance student learning, foster honesty, and maintain integrity in our academic processes, Turnitin will be used to compare all students' papers in this course with multiple sources. The tool compares each student's work with an extensive database of prior publications and papers, providing links to possible matches and a 'similarity score'. The tool does not determine whether plagiarism has occurred or not. Instead, I will make a complete assessment and judge the originality of each student's work. Students should submit papers to Turnitin assignments *without* identifying information included in the paper (e.g. name or student number), the system will automatically show me the name you registered under. Please note that, in order to promote academic honesty around the world, your papers will be retained in the global Turnitin repository.

Make-up work, late submissions, and reasonable accommodation:
Quizzes may not be made-up. Late papers turned in after 9:00AM on their due dates will be docked 10% (e.g., A- 90% becomes B- 80%); later papers will not be accepted (i.e., *papers submitted after midnight at the end of the due date will not be marked and will receive a zero grade*). Allowances may be made for documented illness, or other family or personal emergencies *if* you contact me as soon as you can after the emergency and before the due date (i.e., extensions will usually not be given on or after the due date).

Extra credit:
There will be several opportunities for students to earn extra credit in this course. Interested students should refer to the Extra Credit section in SacCT.

Special needs:
Please tell me early if you have a disability requiring accommodation (documentation to SSWD, Lassen Hall 1008, 916-278-6955) or if you need to miss something to participate in officially recognized student activities. More information available here.

I am here to help:
Remember that I am here to help you learn as best I can. Please utilize my office hours for further feedback and guidance on course-related issues.

Strike action:
The California Faculty Association is in the midst of a difficult contract dispute with management. It is possible that the faculty union will call a strike or other work stoppage this term. I will inform the class as soon as possible of any disruption to our class meeting schedule.

Schedule:
The schedule is a very important document for this course. The schedule shows you exactly what you can expect from every class and what you are expected to do to prepare for it. If the schedule changes, I will alert students in class, with an announcement on SacCT, and via an email to the address that is registered with SacCT. It is your responsibility to come to class, check SacCT, and check your SacCT-registered email. You can find the schedule on SacCT (in the sidebar on the left).

Wk	Date	Day	What	Topic	Details	Learn-ing Out-comes	Required for the class/task
1	1/25	M	Lecture 1	Intro.	Learn about the course		-Read: Getting Started (SacCT) -Read: Syllabus (SacCT)
1	1/27	W	Lecture 2	Intro.	Learn about how to do well in the course		Read: Introduction for students (text)
2	2/1	M	Lecture 3 Guest lecture	Mini topic	Implicit bias, scientific methods and institutions	1, 2 & 3	-Read: Ohio State University Primer on Implicit Bias http://kirwaninstitute.osu.edu/wp-content/uploads/2014/03/2014-implicit-bias.pdf (pp. 16-21) -Register with the implicit bias website, then take a test: https://implicit.harvard.edu/implicit/
2	2/3	W	Lecture 4 Guest lecture	Mini topic	Values in agricultural science	1, 2 & 4	Read: Thompson & Noll: Agricultural Ethics (SacCT>Lecture slides and readings)
2	2/5	F	**Homework**	Mini topic	Caregiving robots in healthcare	1, 2 & 4	**-Complete form (by Saturday 2/6):** https://docs.google.com/forms/d/1J2XTCDtBq4CknNqW35l_3eMrKWxF-Muxli5HK2DxafM/viewform
3	2/8	M	Lecture 5 Guest lecture	Mini topic	Caregiving robots in healthcare	1, 2, 3 & 4	-Read: Vallor: Carebots and Caregivers (Sections 1-4; SacCT>Lecture slides and readings) -Read: Banks, Willoughby & Banks: Animal Assisted Therapy (SacCT>Lecture slides and readings) -Watch: DigInfo TV segment on a robotic seal designed for use in nursing homes: https://youtu.be/oJq5PQZHU-I
3	2/10	W	Lecture 6 Guest lecture	Mini topic	Sex and gender in science	1, 2 & 3	-Read: Lombrozo: Using Science to Blame Mothers: http://www.npr.org/sections/13.7/2014/08/25/343121679/using-science-to-blame-mothers-check-your-values
4	2/15	M	**Lecture 7 ONLINE**	Mini topic	Vaccines: Should they be mandatory? Join the discussion online in the Discussions>Vaccines section of SacCT	1, 2 & 4	-Watch: PBS: The Vaccine Wars (video) -Read: Kluger: Who's Afraid of a Little Vaccine? (SacCT>Lecture slides and readings)
			Assignment		**Surprize quizzes could start today**	1 & 4	Always do the set reading before class and bring your Journal
4	2/17	W	Lecture 8	Mini topic	GM Crops: Should we label them?	1, 2 & 4	Read: PBS: Should We Grow GM Crops? Read: Sunstein: Don't Mandate Labeling for Gene-Altered Foods

5	2/22	M	Lecture 9	What is Science?	-There could be a quiz any day from today on -Be prepared to discuss study questions (text)	1	Read: Chap 1 (text)
5	2/24	W	Lecture 10	What is Science?	Be prepared to discuss study questions (text)	1, 2	Read: Chap 2 (text)
6	2/29	M	Lecture 11	What is Science?	Be prepared to discuss study questions (text)	1	Read: Editor's introductions to Chaps 3 & 4 (pp. 37-41 & 55-58)
			Assignment	What is Science?	Argument Summary due 9AM (to Turnitin)	1, 5	Read: Siegel: Is Astrology a Science?
6	3/2	W	**Lecture 12 ONLINE**	What is Science?	Join the discussion online in the Discussions>Khun section of SacCT	1	Read: Chap 6 (text)
			Special event & extra credit opportunity	TBA	TBA - talk by Hannah Tierny, 1.30-2.45pm, DH208	1, 4	Ask a useful question at the event to get 1 point of extra credit
7	3/7	M	Lecture 13	What is Science?	Be prepared to discuss study questions (text)	1	Read: Chap 5 (text)
7	3/9	W	Lecture 14	What is Science?	Be prepared to discuss study questions (text)	1	Read: Chapter 10 (text)
8	3/14	M	Lecture 15	Feminist Science	Be prepared to discuss study questions (text)	1, 3	Read: Chap 7 (pp.117-124, 139-140)
8	3/16	W	Lecture 16	Feminist Science	Be prepared to discuss study questions (text)	1, 3	Read: Chap 8 (text)
	3/21	M	**Holiday**		Spring Break		
	3/23	W	**Holiday**		Spring Break		
9	3/28	M	Lecture 17	Feminist Science	Be prepared to discuss study questions (text)	1, 3	Read: Chap 9 (text)
9	3/30	W	Lecture 18	Science and Religion	Be prepared to discuss study questions (text)	1, 4	Read: Chap 14 (text)
10	4/4	M	Lecture 19	Science and Religion	Be prepared to discuss study questions (text)	1, 4	Read: Chap 15 (text) and Gould: Nonoverlapping Magisteria
			Assignment	Feminist Science	Analysis Paper due 9AM (submit to Turnitin)	1, 3, 5	Read: Longino: Can There Be A Feminist Science?
10	4/6	W	Lecture 20	Science and Religion	Be prepared to discuss study questions (text)	1, 4	Read: Chap 16 (text)
11	4/11	M	Lecture 21 **Class now Online**	Science and Religion	Score up to 3 half marks for participation with useful comments (on	1, 4	Watch: Bill Nye debates Ken Ham (Youtube video)

					this calendar day) in SacCT>Discussions> Nye-Ham Debate		
11	4/12	Tu	**Special event & extra credit opportunity**	Nammour: Power and injustice	Screening of the film Remittance (2014) and then talk by the film's maker, Dr. Patrick Daly, 12-3pm, The Hinde Auditorium, The University Union	1, 4	Ask a useful question at the event to get 1 point of extra credit
11	4/13	W	**No Class**				
			Special event & extra credit opportunity Back on	Nammour: Power and injustice	Student panel: The Argument from Causal Impotence (e.g. why should *I* bother recycling?) in the Forest Suite of The Union, 1:30-3PM	1, 4	Ask a useful question at the event to get 1 point of extra credit
11	4/15	F	**Special event & extra credit opportunity Back on**	Nammour: Power and injustice	Milking the Young - talk by Loren Lomasky, 11am-1pm, California Suite, The Union	1, 4	Ask a useful question at the event to get 1 point of extra credit
12	4/18	M	Lecture 22 **Online Class Back on**	Science and Religion	Should Intelligent Design be taught in schools? Score up to 3 half marks for participation with useful comments (on this calendar day) in SacCT>Discussions> Judgment Day	1, 4	Watch: Judgment Day: Intelligent Design on Trial (PBS: video)
12	4/20	W	Lecture 23	Science and Religion	What do science and religion say about the meaning of life?	1, 2, 4	Read: SacCT: Tolstoy: My Confession (SacCT>Content>Readings)
13	4/25	M	**Assignment**	Varies	Position Paper Plan due 9AM (submit to Turnitin)		
13	4/25	M	**No Class**				
			Special event & extra credit opportunity	Religion and Morality	Marriage in a Liberal Democracy, 3 panel talks (details)	1 &4	Ask a useful question at the event to get 1 point of extra credit
13	4/27	W	Lecture 24	Science and Morality	Be prepared to discuss study questions (text)	1, 2, 4	Read: Chap 20 (text)
14	5/2	M	**Assignment**	Varies	Position Paper Plan due 9AM (submit to Turnitin)		
			Lecture 25	Science and Morality	Be prepared to discuss study questions (text)	1, 2, 4	Read: Chap 21 (text)
14	5/4	W	Lecture 26	Science and Morality		1, 2, 4	Watch: Harris: Science Can Answer Moral Questions (video)

15	5/9	M	Lecture 27	Cloning	Be prepared to discuss study questions (text)	1, 2, 4	Read: Chap 22 (text)
			Extra credit assignment	TBC	*The Great Debate* (in class)	1, 2, 4	
15	5/11	W	Lecture 28	Cloning	Be prepared to discuss study questions (text)	1, 2, 4	Read: Chap 23 (text)
			Extra credit assignment	Varies	*Present your Position Paper* (in class)	1-4	Bring: Your presentation materials
Exam week	5/16	M	**Assignment**	Varies	Position Paper due 9AM (submit to Turnitin)	1-4, & 5	