

BILD87 (Philosophy of Science) The Philosophy of Science and the Science of the Supernatural

(1 unit/2 hrs per week)

Thursday, 1:00 pm-1:50 pm; Room 1129 Muir Biology Building

Description: This seminar class will discuss the basics for the scientific method, and follow some of the most significant discoveries. It will also evaluate the scientific basics for beliefs in supernatural entities. Rationalism and Humanism will be considered in relationship to religious belief systems

Contact information:

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Division of Biological Sciences

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Times available: afternoons and early evenings

Office hours: Immediately following class, by appointment, or

Professor Steve Baird

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Topics to be discussed:

Outline 1:

(1) Introduction and Overview

(2) Rationalism and Humanism

(3) The Creation Story in the Bible and its Sumerian, Babylonian, and Egyptian antecedents. This will introduce myths as a human tradition to explain the unknown.

(4) The Ptolemaic Universe with the Earth at the Center and the Sun, Planets and Stars Revolving around it. Early attempt at a model based on observations.

(5) Aquinas' proof of the existence of God, How to explain the supernatural.

(6) Copernicus and Galileo and the Heliocentric Solar System. The reaction of the Inquisition. Faith vs. Observation and Reason.

(7) Kepler's analysis of the data of Tycho Brahe. The Introduction of the idea of elliptical orbits of planets to explain the data better than Ptolemy did.

(8) Darwin and Evolution. A non-biblical explanation of the origin of species, including humans.

(9) Koch's Postulates for infectious diseases. Microbiology. Microscopes and culture methodology. Disease is due to bugs not devils. Jenner and vaccines to prevent disease.

(10) Mental Illness: possession by demons or cellular malfunction?

(11) Definition of the scientific method and definition of faith. The current state of antiscientific emotion in the faith community and growing atheism in the scientific community.

Outline 2:

(1) The Scientific Method (The Empirical Approach)

(2) The Natural World: From Atoms to the Universe

(3) Darwin, Evolution and The Third Law of Biology

(4) The Psychological Basis for a Belief in the Hereafter

(5) World Mythology: Themes and Variations

(6) The Dark Bible and Its Implications

(7) The Biological Basis for Belief Systems

(8) Richard Dawkins and "The God Delusion"

(9) Science: the record of dead religions (Oscar Wilde)

(10) Rationalism

Grading policy:

There will be no exams or quizzes. Active participation is **STRONGLY** encouraged.

Grading will be based on attendance and participation, additionally:

(1) During the quarter, each student should attend at least one HERO seminar. Attendance of a relevant seminar will be followed by a summary to the class (~5 mins).

All can be found on the HERO link (click on HERO) and will be announced in advance. Students will briefly report back to the class on the contents of each event attended and provide a personal

critique of the material covered. More than one student can attend and report on a single seminar.

(2) Each student will write a letter to the newspaper(s) or politician(s) (≤200 words) for some environmental/social issue of interest and importance to her/him, read it to the class, and submit it signed to Dr. Saier as well as to one or more newspaper(s) for publication.

(3) All students who are eligible to vote in the U.S. should have registered to vote. It is the responsibility of every citizen in a democratic country to become informed and vote. Only then can we hope to inspire the maintenance of a democratic way of life.

(4) Each student will present a short talk (<10 mins) (with slides if preferred) on an environmental issue of the student's choosing. You can do this with another student or alone, depending on your preference. The range of topics is almost unlimited, but over 30 such topics are listed above.

Suggested California newspapers for submission (with e-mail addresses):

UCSD Guardian editor@ucsdguardian.org <<http://ucsdguardian.org>> [Must specify as UCSD student]

Coast News editor@coastnewsgroup.com <<http://coastnewsgroup.com>>

San Diego Union-Tribune letters@uniontrib.com <<http://uniontrib.com>>

Los Angeles Times letters@latimes.com <<http://latimes.com>>

San Francisco Chronicle opinion@sfchronicle.com <<http://sfchronicle.com>>

San Jose Mercury dborenstein@bayareanewsgroup.com <<http://bayareanewsgroup.com>>

Sacramento Bee <http://www.sacbee.com/customer-service/contact-us/> <<http://www.sacbee.com/customer-service/contact-us/>>

[Use above link for a form to contact the Newspaper]

Orange County Register letters@ocregister.com <<http://ocregister.com>>

Note: Submissions must include full name, status (e.g., freshman student at UCSD), full address, telephone number and e-mail address. They may contact you to verify your identity. Any other newspapers that you may prefer are equally acceptable.

Most newspapers and magazines provide e-mail addresses for submission of editorials in each issue. They often pay for these if accepted for publication, providing incentive. They also provide directives concerning length, style, content, etc., when required. It's exciting to see your own thoughts and efforts in print; you just need to overcome the activation energy required to do it. I'm merely trying to help you with this by providing additional incentive.

Suggested California politicians to contact:

Senator Kamala Harris

Senator Dianne Feinstein

Etc., etc., depending on your district

The link is <http://capwiz.com/mygov/home/> <<http://capwiz.com/mygov/home/>>. If you enter your zip code, you get a list of your specific elected officials. You can select an official and then the website will let you type in a message to them. Unfortunately, there is no obvious way to send to a bunch of officials all at once, but that may be okay because it is noted that politicians often ignore emails that were sent to a bunch of people all at once. If the email is addressed just to them they are more likely to read it. Also, if the email greets them by name (i.e., Dear Senator Harris), they are more likely to read it.

Members of the class are also encouraged to join environmentally concerned student or community groups on and/or off campus. Participation in outreach programs, Earth Day, helping the environmental teachers in high schools (through HERO) and protests can be useful for bringing the important issues to the attention of the general public and other students. Do your part!