

## **BILD 87: The Philosophy of Science and the Science of the Supernatural**

**Day/time/location:** Thursday, 1:00-1:50pm; Room 3880 AP&M 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.

### **Syllabus:**

- 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 to 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 diseases.
- 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.

**Contact information:**

Prof. Milton Saier  
 Division of Biological Sciences  
 Office: Room 4254 Muir Biology Bldg.  
 John Muir College, UCSD  
 Phone: 858-534-4084  
 Times available: Afternoons and early evenings

Prof. Steve Baird  
 Department of Medicine UCSD  
 stephenbaird3@gmail.com

**Office hours:**

Immediately following class, by appointment.

**Class website:**

<https://bild87philosophyofscience.wordpress.com/>

**Grading Policy:**

- There will be no exams or quizzes. Active participation is STRONGLY encouraged.
- Grading will be based on attendance and participation, additionally:
  - 1) Each student will present a short talk (~10 mins, with slides if preferred) on an 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 many such topics are listed above.
  - 2) It is strongly recommended that each student writes a letter to one or more newspaper(s) or a letter to one or more politician(s) (less than 200 words) about some issue of interest and importance to her/him, read it to the class, and submit it signed to Dr. Saier (by E-mail or hard copy with your name) as well as to one or more newspaper(s) for publication, or one or more politicians.

**Suggested California newspapers for submission (with email addresses):**

Newspaper	Contact info
UCSD Guardian	opinion@ucsdguardian.org [Must identify as UCSD student]
Coast News	editor@coastnewsgroup.com jordan@coastnewsgroup.com

Newspaper	Contact info
San Diego Union-Tribune	letters@uniontrib.com
Los Angeles Times	letters@latimes.com
San Francisco Chronicle	opinion@sfchronicle.com
San Jose Mercury	dborenstein@bayareanewsgroup.com
Sacramento Bee	<a href="http://www.sacbee.com/customer-service/contact-us/">http://www.sacbee.com/customer-service/contact-us/</a> [Use above link for a form to contact the Newspaper]
Orange County Register	letters@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. 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 [Toni G. Atkins](#)

Senator [Dianne Feinstein](#)

Etc., etc., depending on your district

The link is <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.