

BILD87 (Freshman Seminar) Earth's Fragile Biosphere

(1 unit/2 hrs per week)

Tuesday, 1:00 PM-1:50 PM; Room 3880 AP&M Building

Description: The human population has caused documented global warming, polluted the environment, and caused extensive species extinction. We face an environmental crisis of unprecedented magnitude. This seminar class will focus on these issues in the context of our complex human society.

Contact information:

Prof. Milton Saier

Division of Biological Sciences

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Potential topics to be discussed:

- |                              |   |
|------------------------------|---|
| (1) The Human Population     | (17) Assisted Suicide                     |
| (2) Global Warming           | (18) Microbes and regeneration            |
| (3) The Ozone Layer          | (19) Renewable Energy                     |
| (4) Our Oceans and Forests   | (20) Nutrition-McDonald's Society         |
| (5) Species Extinction       | (21) The Frozen Zoo                       |
| (6) Why Eat Vegetarian?      | (22) Population Dynamics                  |
| (7) Social Consciousness     | (23) Env. History                         |
| (8) World Ethics             | (24) Sustainability                       |
| (9) Governmental Policies    | (25) Pollution to air, water, earth, etc. |
| (10) Water We doing?         | (26) The human animal                     |
| (11) Agribusiness            | (27) Abortion                             |
| (12) Marine life and death   | (28) Contraception                        |
| (13) Organic Farming         | (29) Rapid Transit                        |
| (14) War and the environment | (30) Coral Reefs                          |

(15) Rainforest destruction

(31) The Meat Industry

(16) Bees-decline

#### Grading policy

- There will be no exams or quizzes. Active participation is STRONGLY encouraged.
- Grading will be based on attendance and participation as follows:

(1) Each student will write a "letter to the editor" or politician ( $\leq 200$  words) about some environmental/social issue of interest and importance to you, read it to the class, and submit it signed to Dr. Saier as well as to one or more newspaper(s) for publication or to one or more politicians.

(2) 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.

(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.

#### Tentative Class Outline (topics to be included)

1. The Population Bomb and the Solution
2. The Human Animal: Population Dynamics
3. Our Oil Addiction and Climate Change
4. Our Protective Stratospheric Ozone Layer
5. Why Vegetarian: The Harms of Eating Meat
6. Living in a McDonald's Society and its consequences
7. Water We Doing? Environmental Consequences
8. The Rape of our Forests and Oceans
9. Species Extinction and Conservation Efforts
10. Social Consciousness and World Ethics

Here is the other:

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

(1 unit/2 hours per week)

Thursday, 1:00pm-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.

#### Contact information:

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Division of Biological Sciences

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John Muir College, UCSD  
Phone: 858-534-4084  
Times available: Afternoons and early evenings  
Office hours: Immediately following class, by appointment or  
Professor Steve Baird  
Department of Medicine UCSD  
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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 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.

Outline 2:

- (1) The Scientific Method (The Empirical Approach)
- (2) The Natural World: From Atoms to 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