

Philosophy 120
Science, Technology, and Values
WI and Ethics-focused

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Course Description: An introductory course addressing the relationship between science, technology, and human values with a focus on contemporary ethical problems posed by developments in modern science. (3 credits)

General Education area: Diversification in Humanities

Note: This course is being offered as an Ethics-focused course and a Writing-Intensive course. As of Spring 05, UH-Manoa now accepts only 300+ courses for E-focus. Hence, this course will satisfy a Manoa and HCC Diversification requirement, a Manoa and HCC WI requirement, an HCC E-focus requirement, but not a Manoa E-focus requirement.

Prerequisite: English 100 and possess basic Internet skills. As a WI course, English 100 (C grade or higher) in the UH system or an equivalent college level composition course is an absolute prerequisite.

Course Purpose:

The course also aims to have students appreciate the vastness of the Universe and the wonder of its parts, and the philosophical significance of this for improving the quality of human life through value clarification.

As the world culture becomes increasingly driven by developments in science and technology, and as our curriculum becomes increasingly driven by the goal of achieving technical competence in a field, there is also a complementary need for value clarification and assessment of the ethical implications of new technologies and developments in modern science. The goal will not be a complete understanding in detail of every scientific topic discussed. The course is not intended to replace introductory courses in Astronomy, Biology, and Physics. The goal is to achieve a basic understanding of the scientific method and an appreciation for the scientific endeavor. It will present the worldview of modern science and discuss the implications of this view for the human prospect. It is an attempt to present the Big Picture in terms of what we think we know, how we have developed this knowledge, how values affect the development of knowledge, and the ethical choices that confront us, such that we may better

understand ourselves and appreciate what is truly human and valuable.

Course Objectives and Student Learning Outcomes: Students will demonstrate in college level writing

- an understanding of the role of cognitive and moral values in world views, by discussing and writing about the ethical implications of modern scientific and technological results
- a recognition of the difference between matters of fact and matters of value, while understanding the important ways in which facts influence value assessments and how value judgments shape our vision of "the facts"
- an understanding of ethical methodologies and competency in ethical deliberation on rationally applying these methodologies to contemporary ethical questions related to scientific progress and technological power
- why ethics plays an important role in science and technology
- a basic understanding of the scientific method, its modern results (astronomy, evolution, biotechnology), and its historical development

Texts:

[*Science and the Human Prospect*](#), by Ronald C. Pine

Handouts and Internet resources on case studies and contemporary ethical issues.

Course Content:

1. An introduction to the world view of modern science with emphasis on its relationship to ethical issues.
2. Scientific method and the philosophy of science: a sample of problems and an introduction to cognitive and moral values and problems in professional ethics.
3. Darwin's theory of evolution and an analysis of concrete moral questions: The moral value of genetic diversity, genetic engineering, cloning, stem-cell research.
4. Historical origins of modern science, an analysis of scientific revolutions and worldviews, and ethical analysis of power relationships in research.

5. An introduction to the field of Ethics, related terminology and methodology, deontological and teleological stances, instrumental naturalism, instrumental and intrinsic value questions.
6. An analysis and deliberation on selected modern ethical issues generated by advances in technology.

Evaluation:

10 short essays (page and half minimum) and class discussion Laulima posts, 250 pts. (Only one late essay will be counted; discussed more in class.)

One major capstone paper (five pages minimum), involving draft and revision, 100 pts.

Final Exam, 100 pts.

As an **Ethics-focused** course, approximately 40% of your grade will involve learning about contemporary ethical issues, various tools of ethical evaluation, and deliberation on these issues.

As a **WI-focused** course, the essay and WI-method of evaluation used in this course are based on the assumption that clear, well-organized writing is a way of acquiring, analyzing, and communicating knowledge, and that the act of writing does not merely record thought or even simply reformulate it -- it generates thought. In other words, in many disciplines you don't really know what you know until you write about it. Students must demonstrate a writing ability at the English 100+ level for a C grade or higher. Note that all the assignments in this course involve writing. As a WI course there will also be significant and ongoing interaction with the instructor on all the writing submitted. This interaction will be explained more on the first day of class.

The final grade will be based on a percentage of the total points as follows:

90-100%---A
80-89%----B
66-79%----C
55-65%----D
-54%----F, N or Inc.

Please note that the "N" and "Inc." grades are given only for special circumstances. Discussed the first day of class.

Note: Qualified students with disabilities will receive appropriate accommodations in this course. Students with disabilities may obtain information on available services online at honolulu.hawaii.edu/disability. Specific inquires may be made

by contacting Student ACCESS at 844-2392, by e-mail at access@hcc.hawaii.edu, or by simply stopping by the office located in 2/409.

Final Note:

The course goals are perhaps best represented by the following quote from the 18th century philosopher-physicist Immanuel Kant.

What can I know?
What should I do?
For what may I hope?