ETHICS AND GENETIC TECHNOLOGIES
PHIL-546-01

GOAL AND OBJECTIVES

The principal goal of this course is to explore some of the ethical and public-policy questions raised by human genetics. Specific course objectives are the following:

1. To provide a brief introduction to the science of molecular biology, cell biology, and population genetics.

2. To provide an overview of the eugenics movements in the United States and Germany, especially in the twentieth century.

3. To examine proposals to map, then sequence, the human genome and the possible implications of such proposals.

4. To evaluate current and future approaches to genetic testing and screening, with special attention to the problems that may arise with presymptomatic genetic screening.

5. To investigate the normative and other philosophical questions that may surround attempts to perform somatic-cell and germ-line gene therapy and the enhancement of human capabilities by genetic means.

OVERVIEW

Class 1 (January 27): Introduction to the Course

Class 2 (February 3): Eugenics I: The United States, 1875-1927

Class 3 (February 10): Eugenics II: The United States, 1928-present

Class 4 (February 17): Eugenics III: Germany, 1895-1934

Class 5 (February 24): Eugenics IV: Germany, 1934-1984

Class 6 (March 3): Introduction to Molecular Biology, Cell Biology, and Population Genetics
Spring Break

Class 7 (March 17): The Human Genome Project

Class 8 (March 24): Site Visit or Guest Speaker

Class 9 (March 31): Genetic Testing and Screening I

Class 10 (April 7): Genetic Testing and Screening II

Class 11 (April 14): Gene Therapy I

Class 12 (April 21): Gene Therapy II

Class 13 (April 28): Gene Therapy III: Germ-Line Intervention

Class 14 (May 5): Genetic Engineering

TEXTBOOKS


ASSIGNED READINGS

Class 2 (February 3): Eugenics I: The United States, 1875-1927

Reilly, *Surgical Solution*, chaps. 1-6 (pp. 1-87).


Class 3 (February 10): Eugenics II: The United States, 1928-present

Reilly, *Surgical Solution*, chaps. 7-10 (pp. 88-165).


Class 4 (February 17): Eugenics III: Germany, 1895-1934

Proctor, *Racial Hygiene*, chaps. 1-5 (pp. 1-130).


Class 5 (February 24): Eugenics IV: Germany, 1935-1984

Proctor, *Racial Hygiene*, chap. 6 through Epilogue (pp. 131-312).

*Denotes materials available on reserve, in readings packet at Kinko's, or through distribution in class.

Class 6 (March 3) Introduction to Molecular Biology, Cell Biology, and Population Genetics


Peruse a textbook of cell biology or molecular biology.

Spring Break

Class 7 (March 17): The Human Genome Project


Class 8 (March 24): Site Visit or Guest Speaker

Readings to be assigned.

Class 9 (March 31): Genetic Testing and Screening I


Suzuki-Knudtson, *Genethics*, chaps. 6-7 (pp. 123-162).

*Troy Duster, Backdoor to Eugenics (New York: Routledge, Chapman and Hall, 1990), chap. 7 (pp. 112-129).


Class 10 (April 7): Genetic Testing and Screening II


Class 11 (April 14): Gene Therapy I

*National Institutes of Health, Gene Therapy for Human Patients: Information for the General Public (Bethesda, Md.: NIH, April 1990), entire work.

Nichols-IOM, Human Gene Therapy, pp. 1-3, 9-16 and chaps. 4-6 (pp. 68-161).


Class 12 (April 21): Gene Therapy II

Suzuki-Knudtson, Genethics, chap. 8 (pp. 163-191).
*National Institutes of Health, "Points to Consider in the Design and Submission of Protocols for the Transfer of Recombinant DNA into the Genome of Human Subjects" (current version).

*A recent gene-therapy research protocol submitted to the Office of Recombinant DNA Activities at the National Institutes of Health.


Arthur L. Caplan, "If Gene Therapy Is the Cure, What Is the Disease?" Annas-Elias, Gene Mapping, chap. 7 (pp. 128-141).

Class 13 (April 28): Gene Therapy III: Germ-Line Intervention


Class 14 (May 5): Genetic Engineering


COURSE REQUIREMENTS

Students are requested to complete all assigned readings in advance of the class for which they are assigned and to participate actively in class discussion. This facet of each student's work will constitute 25% of the final grade.

There will be two written assignments for the course. The first is a short paper on eugenics that can take one of two forms. Option 1 is a critical review of a book on eugenics that is not included in the required readings for the course. The review should state the author's thesis, if there is a thesis, summarize the contents of the book, and analyze the strengths and weaknesses of the book. Option 2 is a brief analytical essay on eugenics. The essay should define all important terms and should reflect your ability to do independent critical analysis or to construct original philosophical positions supported by convincing arguments. The book review or analytical essay should not exceed 10 double-spaced pages in length. This assignment is due on Wednesday, March 17. The review or analytical essay constitutes 25% of the final grade.

The second written assignment is a semester-end term paper on some aspect of ethics and genetic technologies or on eugenics. Criteria for evaluation of the term papers will be distributed later in the semester. The term paper should not exceed 20 double-spaced pages in length and is due on Wednesday, May 12. The term paper constitutes 50% of the final grade.

Students are requested to submit papers on time, both in the interest of justice (equal time for all students) and in the interest of efficiency (the opportunity to grade all papers within a particular time period). A personal or familial emergency can, of course, constitute a legitimate reason for an extension beyond a deadline, if an arrangement for such an extension is made in advance of the deadline date.