GOAL AND OBJECTIVES

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

1. To provide a brief introduction to molecular biology, recombinant DNA research, population genetics, and human genetics.

2. To provide an overview of the eugenics movements in the United States and Nazi Germany, especially in the years 1900 to 1950.

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 16: Introduction to the Course

Class 2: January 23: Introduction to Cell Biology, Molecular Biology, and Population Genetics; History of Eugenics

Class 3: January 30: The Human Genome Initiative I

Class 4: February 6: The Human Genome Initiative II

Class 5: February 13: Site Visit or Guest Speaker 1

Class 6: February 20: Genetic Testing and Screening I
Class 7: February 27: Genetic Testing and Screening II
Class 8: March 6: Genetic Testing and Screening III
Class 9: March 13: Genetic Testing and Screening IV
Class 10: March 20: Site Visit or Guest Speaker 2
Spring Break
Class 11: April 3: Gene Therapy and Genetic Engineering I
Class 12: April 10: Gene Therapy and Genetic Engineering II
Class 13: April 17: Gene Therapy and Genetic Engineering III
Class 14: April 24: Gene Therapy and Genetic Engineering IV
Class 15: May 1: Synthesis

TEXTBOOKS


ASSIGNED READINGS

Class 2: January 23: Introduction to Cell Biology, Molecular
Biology, and Population Genetics; History
of Eugenics

Suzuki and Knudtson, Genethics, chaps. 1-5.

*Robert N. Proctor, Racial Hygiene: Medicine under the Nazis

*Philip R. Reilly, "Eugenic Sterilization in the United
States," in Aubrey Milunsky and George J. Annas, eds.,
Genetics and the Law III (New York: Plenum Press, 1985),
pp. 227-241.

*Stephen Jay Gould, "Carrie Buck's Daughter," in his The
Flamingo's Smile: Reflections in Natural History (New York:

Class 3: January 30: The Human Genome Initiative I

OTA, Mapping Our Genes, chaps. 1-4.

*James D. Watson, "The Human Genome Project: Past, Present

*James D. Watson and Robert Mullan Cook-Deegan, "The Human
Genome Project and International Health," Journal of the
American Medical Association 1990 June 27; 263(24): 3322-
3324.

Class 4: February 6: The Human Genome Initiative II


*George J. Annas, "Mapping the Human Genome and the Meaning
629-664.

*Alexander Morgan Capron, "Which Ills to Bear?: Reevaluating
the 'Threat' of Modern Genetics," Emory Law Journal 1990
Summer; 39(3): 665-696.

*Rebecca S. Eisenberg, "Patenting the Human Genome," Emory

* = Readings distributed in class or available through Kinko's.
Class 5: February 13: Site Visit or Guest Speaker 1

*Materials from the NIH-DOE Working Group on the Ethical, Legal, and Social Implications of Genome Research

Class 6: February 20: Genetic Testing and Screening I


Holtzman, Proceed with Caution, pp. xi-xiii, chaps. 1-5.

Class 7: February 27: Genetic Testing and Screening II

*President's Commission, Screening and Counseling for Genetic Conditions, chap. 2.

Holtzman, Proceed with Caution, chaps. 6-9.

Class 8: March 6: Genetic Testing and Screening III

OTA, Genetic Monitoring and Screening in the Workplace, chaps. 1-5.

Class 9: March 13: Genetic Testing and Screening IV

OTA, Genetic Monitoring and Screening in the Workplace, chaps. 6-9.

Suzuki and Knudtson, Genethics, chaps. 6-7.

Class 10: March 20: Site Visit or Guest Speaker 2

*President's Commission, Screening and Counseling for Genetic Conditions, chap. 3.


Spring Break

Class 11: April 3: Gene Therapy and Genetic Engineering I


Class 12: April 10: Gene Therapy and Genetic Engineering II

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


Class 13: April 17: Gene Therapy and Genetic Engineering III

Nichols-IOM, Human Gene Therapy, chaps. 5-9.


Class 14: April 24: Gene Therapy and Genetic Engineering IV

Suzuki and Knudtson, Genethics, chap. 8.


Class 15: May 1: Synthesis


Suzuki and Knudtson, Genethics, chap. 9 and Epilogue (pp. 330-339).
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 that can take one of two forms. Option 1 is a critical review of a book on ethics and one or more genetic technologies or on eugenics. 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 the ethical aspects, as you view them, of either (a) the human genome initiative or (b) eugenics programs as they were developed in the United States or Germany in the 20th century. The brief 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 review or analytical essay should not exceed 10 double-spaced pages in length. This assignment is due on Wednesday, March 6. 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 Friday, May 10. The term paper constitutes 50% of the final grade.

Students are urged to submit both written assignments on time.