This seminar course, intended primarily for juniors and seniors, explores the relationship between the biological sciences and society in the U.S. throughout the twentieth century. We shall discuss the depressing history of eugenics and investigate how the U.S. government saw eugenics as proffering an objective tool for measuring traits deemed desirable. The eugenics program culminated in the sterilizations of tens of thousands of Americans who possessed ‘undesirable’ traits. We shall continue by asking if there is a link between eugenics and the Human Genome Project, which was created, in part, with a view to treat diseases genetically rather than chemically. We shall also see how economics, politics, and religion have shaped biotechnology and human-embryonic-stem-cell research. The student is invited to think about the way in which debates concerning ‘nature versus nurture’ have been framed historically, in order to understand current controversies over that distinction. Perhaps the most recent ethical challenge faced by future scientists and engineers is biotechnology. Students of bioengineering and molecular biology need to be made aware of the public’s perception of and response to human-embryonic-stem-cell research. Similarly, students trained in the humanities and social sciences need to add their expertise to the conversation, as much is at stake. Debates concerning the ethical, legal, and social implications of the Human Genome Project are raging throughout university lecture halls, newspaper editorials, and the newsrooms of major networks. Who should be given access to your genetic information? Your employer? Your insurance company? The government? How is molecular biology challenging antiquated notions of race? Just how much of human behavior is shaped by genes, and how does that affect issues concerning free will and culpability? How has the patenting of human and plant genes reshaped both the conduct and content of scientific research as well as intellectual property law? Several studies have shown that patenting actually increases the level of secrecy, thereby thwarting its initial purpose. Other studies have demonstrated compellingly that some patents of human genes have thwarted further research into potential cures. Finally, we shall investigate how the HIV/AIDS epidemic has challenged our notion of the doctor-patient relationship, the FDA’s rules for testing drug efficacy, and patient activism.

We shall stress the importance of learning how to read and write critically. Also, it is imperative that you play an active role in class. Indeed, part of your grade will be based on class participation. The papers are due at the beginning of the class as listed in the syllabus. Late papers, which are not accompanied by a physician’s note, will not be accepted, and you will reserve a 0 (zero) for that assignment. Also note that it is neither in your interest nor mine for you to ask for an incomplete; however, if there is a family emergency, or you have been ill, we can certainly discuss the possibility of you receiving an incomplete.
Note on plagiarism: “As a Gallatin student you belong to an interdisciplinary community of artists and scholars who value honest and open intellectual inquiry. This relationship depends on mutual respect, responsibility, and integrity. Failure to uphold these values will be subject to severe sanction, which may include dismissal from the University. Examples of behaviors that compromise the academic integrity of the Gallatin School include plagiarism, illicit collaboration, doubling or recycling coursework, and cheating. Please consult the Gallatin Bulletin or Gallatin website [www.gallatin.nyu.edu/academics/policies/policy/integrity.html] for a full description of the academic integrity policy.”

Week 1: Science, Objectivity and Politics, Part I

Wednesday: Introduction: Course Goals and Mechanics.

Week 2: Science, Objectivity and Politics, Part II


Week 3:


Week 4: The Human Genome Project: Molecular Biology and Race, Part I

Monday: NO CLASS

Week 5: The Human Genome Project: Molecular Biology and Race, Part II and Genetic Essentialism

Monday: **STUDENT PRESENTATIONS 1 AND DISCUSSION:** Troy Duster, “Race and Reification in Science,” (on electronic reserve) and “Lessons from History: Why Race and Ethnicity Have Played A Major Role in Biomedical Research,” (on electronic reserve); Duana Fullwiley, “The Molecularization of Race” (on electronic reserve)

**Wednesday: Human Genome Project III:** Genetic Essentialism, Testing, and Privacy. Reading: Hood and Kevles, eds., *The Code of Codes* (T), Chapters 8, 9, 11, 12 and 13. **PAPER ONE DUE IN CLASS, 4 pages in length, 15 %**

Week 6: The Human Genome Project: Intellectual Property Gene Patenting

**Monday:** NO CLASS, COLUMBUS DAY


Week 7: Plant Biotechnology and Market Economies, Part I

**Monday:** **Student Presentations 2 on Gene Patenting and Genetic Essentialism**

**Wednesday:** Biotechnology I. Plant Biotechnology. Reading: Winston, *Travels in the Genetically Modified Zone* (T), pp. 11-106. Also, have a gander at web sites of biotech companies, such as Pfizer and Monsanto ([www.pfizer.com](http://www.pfizer.com) and [www.monsanto.com](http://www.monsanto.com)).

Week 8: Plant Biotechnology and Market Economies, Part II


**Wednesday:** Film: “Harvest of Fear”

Week 9: Biotechnology Presentations

**Monday:** **Students Presentations 3 on GMOs:**

**Wednesday:** **Students Presentations 4 on GMOs:**

Week 10: Stem-Cell Research and Religion

**Monday:** Stem-Cell Research, Part I. Reading: *Stem Cell Controversy*, edited by Ruse and Pynes, pp. 9-97. **PAPER TWO DUE IN CLASS, 5 pages long, 20 %**

**Week 11: Stem-Cell Research and Public Policy**

Monday: **Student Presentations 5 on Stem Cells**
Wednesday: Stem-Cell Research, Part III: Reading: *Stem Cell Controversy*, ed. by Ruse and Pynes (T), pp. 285-346 and **Student Presentations 6 on Stem Cells**

**Week 12: HIV: The Politics of Disease, Part I**


**Week 13: HIV: The Politics of Disease, Part II**

Wednesday: **Student Presentations 7 on HIV/AIDS**

**Week 14: HIV: The Politics of Disease, Part III**

Monday: **Student Presentations 8 of HIV/AIDS** and the movie “The Age of AIDS”
Wednesday: Movie: “The Age of AIDS”

**Week 15:**

Monday: Finish watching “The Age of AIDS”
Wednesday: Course Conclusion and Evaluation. **PAPER THREE DUE IN CLASS, 6 pages long, 25%**.

**GRADE CALCULATION:**

Three papers totaling, 60%
Class Presentation, 20 minutes, 20%
Class Participation, 20%.

**OFFICE HOURS AND RELEVANT INFORMATION:**

Myles W. Jackson, Ph.D., The Dibner Family Professor of the History and Philosophy of Science and Technology of the Polytechnic Institute of New York University and Professor of the History of Science of the Gallatin School of Individualized Study of New York University.
Office Hours: Wednesdays from 2 to 4 pm, or by appointment. Office: 405 Gallatin and Tuesdays from 4 to 5:30 pm at 201D Rogers Hall, NYU-Poly, 6 MetroTech Center, Brooklyn. mjackson@poly.edu, myles.jackson@nyu.edu

Required Texts (all available at the book store or on reserve in Bobst library):


