

ESC 3361 (CV) – Social Issues and Ethics for Computer Science and Engineering

Dr. Douglas C. Dow

Autumn 2014: MW 2:30-3:45PM CV Seminar Room - GC 1.208B

Office: GC 2.206 Phone: 972-883-4934

Office Hours: MWF 12:00-1:00PM and by appointment

Email: dougdown@utdallas.edu

Course Description

The study of politics and values in science, engineering, and commerce involves an analysis of three interlocking areas: technology, politics and law, and ethics. We shall begin with a discussion of science and engineering as social institutions, and their unique place within ethical, political, and policy disagreements. Second, we shall initiate an overview of the two major languages of public normative evaluation (utilitarianism and deontology), as well as a discussion about the problems of debating the normative dimensions of public policy, given the fact of ethical pluralism. We shall then proceed to an examination of selected topics that concerns the interaction between science and technology, ethics, and public policy. Especially relevant will be the concern for how current ethical practices are influenced and challenged by political institutions and technological developments.

The intent of this seminar will not be to generate ‘correct’ answers to any of the conflicts we shall study. Instead, our goals will be to 1) raise awareness of the larger social and political impact of scientific and technological developments; 2) develop a working vocabulary of evaluative terms and concepts derived from political, economic, and ethical theory; and 3) apply this evaluative vocabulary in formulating and critiquing arguments and decisions regarding the ethical problems that are raised. While there are no right or wrong answers, over the course of the semester, we will come to discern better and worse arguments.

Course Requirements

Attendance and Participation: An important requirement for this honors seminar will be active participation in class discussion, debate and analysis. Regular attendance is required, and the professor will take attendance for each class. Please bring to class each day the texts under discussion – we will be referring to particular passages regularly. Each student is expected to have completed the day’s readings before class. Be prepared to talk. Everyone will be expected to demonstrate civility and a respect for the thoughts, opinions and beliefs of others. Notes or summaries will not be provided for missed classes. Cell phones and any other electronic noise-makers should be turned off (and not just on vibrate) during class. Because of the frequency by which many students using

laptops to take notes also succumb to the temptations to surf the Web, check email, IM, or otherwise disengage themselves from class discussions, laptop use will not be permitted during class.

Exams: There will be three exams, each closed book, closed note, in-class essay exams. They will cover both the assigned readings and lecture/discussion material. Each exam will be worth 20% of the final grade. The questions will be distributed one week in advance of the exam.

Issues Essay: Each student will be expected to write one issues essay, of between 8-10 pages. This essay will be worth 25% of the final grade, and will be due on Monday, December 1, 2014, at 2:30PM. Students are asked to submit a hard copy of the essay to the professor, and an electronic copy to turnitin.com. For more information on the issues essay, please see below.

Quizzes: Each class may begin with a brief quiz covering the readings that are required for that day. These quizzes will test recollection of the main ideas of the reading material and aid as a starter for class discussion. The accumulation of quizzes, combined with attendance and the quality of student participation, especially during the roundtables, will account for 15% of the final grade.

Roundtable Sessions: We will hold three formal student-led roundtable discussions, lasting one week for the Michaels, Nissenbaum, and Lewontin books. Roundtables are student lead discussion and debate. Each participant will be expected to come prepared with the book, notes on the book, as well as a list of approximately five to seven questions, comments, or quotations for further deliberation. Everyone participates – no one merely listens.

Make-ups: Make-up exams will be given only in documented emergency situations and at the discretion of the professor.

Syllabus Changes: The professor reserves the right to amend this syllabus during the semester. Any changes will be announced in class, and students will be responsible for getting and following the new information.

Grading Scale: All exams will be graded on a 100-point scale. The following conversion chart will be used to translate numbers into letter grades:

A: 94-100
A-: 90-93
B+: 87-89
B: 84-86

B-: 80-83
C+: 77-79
C: 74-76
C-: 70-73

D+: 67-69
D: 64-66
D-: 60-63
F: below 60

University Policies

All of the requirements and processes contained in this syllabus and made by the professor shall comply with university wide policies. For more information on UTD's academic policies, including student conduct and discipline, religious holidays, academic integrity, email use, withdrawal from the class, grievance policies, incomplete grade policies, and disability services, please go to: <http://go.utdallas.edu/syllabus-policies>

Books for Purchase

Books for this class can be purchased at the University Book Store. They may also be purchased at any number of online websites, where used copies may be found. All other readings will be made available by email, in class handout, or will be available online.

- Richard C. Lewontin. *Biology as Ideology: The Doctrine of DNA* (Harper, 1993).
- David Michaels. *Doubt is Their Product: How Industry's Assault on Science Threatens Your Health* (Oxford University Press, 2008)
- Helen Nissenbaum. *Privacy in Context: Technology, Policy, and the Integrity of Social Life* (Stanford University Press, 2010)

Issues Essay

Each student will be expected to write one "issues essay", of between 8-10 pages. This assignment will consist of identifying and assessing a range of opinions on one discrete controversy within professional ethics or public policy (which can encompass business, engineering, computer science, bioethics, health care, and the law). Your goal will be to identify a concrete ethical problem that involves a current topic of public concern, explain why a dilemma or controversy exists, and explore two or more possible positions on this controversy, assessing their principles, their strengths and weaknesses.

This essay will be worth 25% of the final grade. Students will submit to the professor a paragraph description of their topic choice, along with at least two sources, by Wednesday, September 17. This paragraph will both identify a concrete issue of contemporary significance, as well as explain why the issue involves an ethical dilemma.

A hard copy of the final essay will be due at the beginning of class, Monday, December 1, 2014. Students are asked to submit a hard copy of the essay to the professor and an electronic copy to **turnitin.com**.

Possible Topics for the Issues Essay

Abortion

Advance directives

AIDS treatment in developing nations

Animal research

Birth control

Coercive treatment in psychiatry

Consumer privacy

Corporate responsibility

Disaster preparation

Electronic surveillance

Euthanasia
 Fetal research
 Gene research
 Genetically modified food
 Greenhouse effect
 Health and safety regulations
 IP conflicts
 Land use controversies
 Nuclear testing
 Organ transplants and fair distribution
 Overuse/damage of natural resources

Patent Law Abuses
 Physician assisted suicide
 Privacy and technology
 Production and disposal of
 hazardous/toxic substances
 Stem cell research
 Teaching of evolution in public schools
 Wildlife conservation
 War on terrorism and privacy
 Whistle blowing

Turnitin.com: We will be using **turnitin.com** to guard against plagiarism in the issues essays. Each student must submit her or his issue essay to **turnitin.com**. I have established an account for this class. For those who have never used this website before, on the homepage there is a brief tutorial on setting up your class account. You will need both your class ID # and class enrollment password. Be careful: the password is case-sensitive:

Class ID #: 8346139
Class Enrollment Password: pluralism

Schedule of Readings

August 25: Introductions

Syllabus

August 27: Ethical Disagreement, Public Policy, and Role Morality

Michael Davis, "Thinking Like an Engineer: The Place of a Code of Ethics in the Practice of a Profession" from *Philosophy and Public Affairs* (Spring, 1991), pp. 150-167.

Amy Gutmann and Dennis Thompson, "Deliberating on Bioethics" from *Hastings Center Report* (May-June 1997), pp. 38-41.

There will be no official seminar meeting today, as Dr. Dow will be out of town attending an academic conference.

September 1: Labor Day – Official University Holiday

September 3: Science and Engineering as a Culture and an Institution

Robert K. Merton. "The Normative Structure of Science" from *The Sociology of Science: Theoretical and Empirical Investigations* (University of Chicago Press, 1973), pp. 267-278.

Piotr Sztompka. "Trust in Science." *Journal of Classical Sociology* V. 7, No. 2 (2007) pp. 211-220.

September 8, 10, 15: The Languages of Utilitarianism

Tim Chappell and Roger Crisp. "Utilitarianism" from *Routledge Encyclopedia of Philosophy* pp. 551-556.

Jeremy Bentham. *An Introduction to the Principles of Morals and Legislation* (1789) excerpts.

John Stuart Mill. *Utilitarianism* (1863) excerpts.

John Tierney. "Life: The Cost-Benefit Analysis." *The New York Times*. May 18, 2003.

Dirk Haubrich. "Cost-Benefit Analysis" from *International Encyclopedia of the Social Sciences*, 2nd Ed. pp. 150-151.

Robert H. Frank. "Why is Cost-Benefit Analysis so Controversial?" *Journal of Legal Studies* (June 2000), pp. 913-930.

September 17, 22, 24: Deontological Ethics and Rights

Immanuel Kant. *Groundwork for a Metaphysics of Morals* (1785) excerpts.

Onora O'Neill. "Kantian Ethics" from *Routledge Encyclopedia of Philosophy*, pp. 200-203.

Thomas E. Hill, Jr. "The Importance of Autonomy" in *Autonomy and Self-Respect* (Cambridge University Press, 1991), pp. 43-51.

Willard Gaylin. "Worshiping Autonomy" *The Hastings Center Report* (Nov.-Dec. 1996), pp. 43-45.

September 29: First Exam

Oct. 1, 3, 8: Controversies in Stem Cell Research

National Bioethics Advisory Commission. *Ethical Issues in Human Stem Cell Research: Executive Summary* (September 1999)

George W. Bush. Statement on Federal Stem Cell Research Policy (August 9, 2001).

Barak Obama. Statement on Federal Stem Cell Research Policy (March 9, 2009)

John A. Robertson. "Ethics and Policy in Embryonic Stem Cell Research" *Kennedy Institute of Ethics Journal* 9.2 (1999) 109-136.

Glenn McGee and Arthur Caplan. "The Ethics and Politics of Small Sacrifices in Stem Cell Research." *Kennedy Institute of Ethics Journal* 9.2 (1999) 151-158

Robert P. George and Patrick Lee. "Acorns and Embryos" *The New Atlantis* (2005), pp. 90-100.

Liza Mundy. "Souls On Ice: America's Embryo Glut and the Wasted Promise of Stem Cell Research." *Mother Jones*. July/August 2006.

October 13, 15: Interest Group Products and Scientific Credibility (Roundtable)

David Michaels. *Doubt is our Product* (2008).

October 20, 22, 27: Technology and Democracy

Norman J. Vig. "Technology, Philosophy, and the State: An Overview" in *Technology and Politics* (eds.) Michael E. Kraft and Norman J. Vig (Duke University Press, 1988)

Langdon Winner. "Do Artifacts Have Politics?" in *The Whale and the Reactor: A Search for Limits in an Age of High Technology* (University of Chicago Press, 1986)

Peter Paul Verbeek. "Moralizing Technology: On the Morality of Technological Artifices and Their Design" in *Readings in the Philosophy of Technology* (Rowman and Littlefield, 2009).

Bruno Latour. “A Collective of Humans and Non-Humans: Following Daedalus’s Labyrinth” in *Pandora’s Hope* (Harvard University Press, 1999).

October 29: Second Exam

November 3, 5: Roundtable: Social and Biological Determinism (Roundtable)

Richard C. Lewontin. *Biology as Ideology*. (1993).

November 10, 12: The Environment and the Form of Tragedy

Garrett Hardin. “The Tragedy of the Commons” *Science* 162 (1968) pp. 1243-1248.

Tim Haywood – “Human Rights vs. Emissions Rights: Climate Justice and the Equitable Distribution of Ecological Space” *Ethics and International Affairs* (Winter 2007) pp. 431-450.

Carter F. Bales and Richard D. Duke. “Containing Climate Change” *Foreign Affairs* (September-October 2008)

Graeme Wood. “Re-engineering the Earth” *The Atlantic* (July-August 2009).

“Making Carbon Markets Work.” Danny Cullenward and David G. Victor. – *Scientific American*. September 24, 2007.

November 17, 19: Death and End-of-Life Medical Choices

Daniel Bergner. “Death in the Family” *New York Times*. December 2, 2007.

Douglas C. Dow. “Washington v Glucksberg”. *Encyclopedia of the United States Constitution*

New York State Task Force on Life and the Law. *When Death is Sought: Assisted Suicide and Euthanasia in the Medical Context*. Supplement to the Report (April 1997)

Kathryn L. Tucker. “In the Laboratory of the States: the Progress of *Glucksberg’s* Invitation to States to Address End-Of-Life Choice” *University of Michigan Law Review* (June 2008).

Neil M. Gorsuch. “An Argument Against Legalization” in *The Future of Assisted Suicide and Euthanasia* (Princeton University Press, 2006), pp. 157-180.

Fall Break: Monday 11/24 - Friday 11/28

December 1, 3, 8: Technological Innovation and Privacy (Roundtable)

Helen Nissenbaum. *Privacy in Context: Technology, Policy, and the Integrity of Social Life* (2010).

December 10: Third Exam