

**Class #1**    **Th 8/24**    **Introduction, Course Overview, *Gilbane Gold***

**Class #2**    **Tu 8/29**    **Moral Theory: Concepts and Cases**

*Engineering Ethics*, Chapter 1: "Engineering Ethics: Making a Difference," 1-20, 320-22,  
Case 25: "Forklifter" and Case 27-28: "Gilbane Gold I, II"  
Grahm, "Palchinsky's Travels," 23-31, and Fleming, "Engineers of Death," 19  
\* Tolkien, *Lord of the Rings*, "The Bridge of Khazad-Dum," 3, 335-46

**Class #3**    **Th 8/31**    **Work, Responsibility, and Human Personhood**

Covey, "Inside-Out" [15-24, 31-38], "Principles of Personal Vision" [66-80],  
and "Principles of Personal Leadership," [96-111, 128-29]  
\* Tolkien, *Lord of the Rings*, "The Breaking of the Fellowship," 411-23

**Class #4**    **Tu 9/5**    **Engineering as a Profession: Social Context  
Personal Mission Statement Due**

Dunwoody, et al., *Fundamental Competencies for Engineers*, 9-13  
Greenwood, "Attributes of a Profession," 67-77  
\* Adler, *How to Read a Book*, vii-ix, 119-29, 266-67, 354-71

**Class #5**    **Th 9/7**    **The Moral Responsibility of Engineers  
Draft of Response Paper #1 Due**

*Engineering Ethics*, Chapter 2: "Responsibility in Engineering," 21-47  
Alpern, "Moral Responsibility for Engineers," 187-95  
\* Williams, "The Grammar of Clarity," 7-32, [204-21]

**Class #6**    **Tu 9/12**    **The History of Engineering and Professional Codes of Ethics  
Peer Review of Response Paper #1**

Davis, "A History of Engineering in the United States," 18-30  
Reynolds, "The Engineer in America," 1-2  
IEEE and NSPE Codes of Ethics  
\* The Three C's of Good Writing: Cohesion, Coherence, and Concision

**Class #7**    **Th 9/14**    **Tools and Methods of Case Study Analysis  
Final Version of Response Paper #1 Due**

*Engineering Ethics*, Chapter 3: "Framing the Problem," 48-76  
Turabian, *A Manual for Writers*, Overview of Chapters 1-14  
Booth, Colomb, and Williams, *The Craft of Research*, Overview of Chapters 1-16

**Class #8    Tu 9/19    The Discipline of Philosophy  
Epistemology, Metaphysics, and Ethics  
Introduction to Normative Ethical Theories  
Teleological and Deontological Theories**

*Engineering Ethics*, Chapter 4: "Organizing Principles," 77-100

**Class #9    Th 9/21    The Scientific Method and the Tests of Truth  
The Principles of *Contradiction* and *Causality*  
Draft of Response Paper #2 Due**

Sandage, "Cosmology," 321-34

Greene, *The Elegant Universe*, ix, 135-38, 374-76, 386-87

[Bodanis, *E=mc<sup>2</sup>: A Biography of the World's Most Famous Equation*]

The Principle of Contradiction: Aristotle, *Metaphysics*, Book IV, 1-8 [1003a-1012b]

The Principle of Causality: Aristotle, *Posterior Analytics*, I 1-2 [71a-72b]; and the *Metaphysics*, Book V, 1-2 [1012b-1013b]

**Class #10    Tu 9/26    Normative Ethical Naturalism  
Aristotle, Darwin, and Nietzsche**

Aristotle, *Nicomachean Ethics*, Book I [1094-1103]

White, "The Pursuit of Happiness," xi-xii, 3-11

[For further study of other perspectives on *Ethical Naturalism*, see Darwin, *The Descent of Man*; Nietzsche, *On the Genealogy of Morality*; and Spinoza, *Ethics*.]

**Class #11    Th 9/28    The Structure of Aristotelian Ethics  
Final Version of Response Paper #2 Due**

Aristotle, *Nicomachean Ethics*, Book II [1103-1109]

White, "The Pursuit of Happiness," 12-21

**Class #12    Tu 10/3    Normative Ethical Idealism  
Plato, Kant, and Hegel  
Research Topic Due**

Kant, *Grounding for the Metaphysics of Morals*, "Transition from the Ordinary Rational Knowledge of Morality to the Philosophical" [393-405]

Paton, "The Good Will," 34-37, 44-45, "Duty," 46-55

Booth, Colomb, and Williams, *The Craft of Research*, 40-52

[For further study of other perspectives on *Ethical Idealism*, see Plato, *The Republic*; Hegel, *The Phenomenology of Spirit*; Schwartz, *The World of Thought in Ancient China*; Raju, *The Philosophical Traditions of India*; and Hackett, *Oriental Philosophy*.]

**Class #13    Th 10/5    The Structure of Kantian Ethics**

Kant, *Grounding for the Metaphysics of Morals*, "Transition from Popular Moral Philosophy to a Metaphysics of Morals" [406–45]; "Transition from a Metaphysics of Morals to a Critique of Pure Practical Reason" [446–63]  
Paton, "The Maxim of Morality," 58–62, "The Law," 69–73

**Class #14    Tu 10/10    Normative Ethical Theism  
Augustine, Aquinas, and Luther**

Aquinas, Selected Texts from the *Summa Theologiae*, Question #2 [5–17], #6 [83–93]  
*Genesis* 1:1–31

[For other perspectives on *Ethical Theism*, see the *Talmud* and the *Koran*.]

**Class #15    Th 10/12    The Structure of Biblical Theism**

Selected Texts of the Biblical Narrative

**Class #16    Tu 10/17    The Engineer and Society  
Research Paper Bibliography Due**

Bellah, et al., *Habits of the Heart*, "Preface," vii–viii  
Alexis de Tocqueville, *Democracy in America*, 27–35, 39, 274–75  
Martin and Schinzinger, "Engineering as Social Experimentation," 88–106  
*Chicago Manual of Style*, as delineated in Turabian, *A Manual for Writers*,  
"Notes," 116–64, "Bibliographies," 165–74, and Examples, 185–213

**Class #17    Th 10/19    Computer Ethics  
Draft of Response Paper #3 Due**

*Engineering Ethics*, Chapter 5, "Computers, ... Morality, and Social Policy," 101–24  
Gotterbarn, Miller, and Rogerson, "Software Engineering Code of Ethics," 102–7

**Class #18    Tu 10/24    The Frontiers of Cyberspace**

Spinello, *CyberEthics: Morality and Law in Cyberspace*, 1–10, 29–52  
Booth, Colomb, and Williams, *The Craft of Research*, 114–22, 222–40

**Class #19    Th 10/26    Fiduciary Relationships and Conflict of Interest  
Final Version of Response Paper #3 Due**

*Engineering Ethics*, Chapter 6: "Honesty, Integrity, and Reliability," 125–49  
Bayles, "Obligations between Clients and Professionals"  
Davis, "Conflict of Interest," 589–95

**Class #20 Tu 10/31 The Engineer's Responsibility for Safety**  
**Research Paper Introduction and Synopsis Due**

*Engineering Ethics*, Chapter 7: "Safety, Risk, and Liability in Engineering," 150-80  
Petroski, "Accidents Waiting to Happen," 85-97  
Martin and Schinzinger, "Dimensions of Engineering," 16-20  
\* Williams, "Sustaining the Longer Sentence," 79-105, 205-17  
\* The Three E's of Strong Writing: Emphasis, Elegance, and Economy

**Class #21 Th 11/2 The Challenger and Columbia Case**

Bell and Esch, "The Fatal Flaw in Flight 51-L," 36-51  
Boisjoly, "... Moral Responsibility and the Working Engineer," 6-14  
*The CAIB Report: Columbia Accident Investigation Board*, "History as Cause:  
*Columbia and Challenger*," 195-204 [for the full text of the report, see [www.caib.us](http://www.caib.us)]

**Class #22 Tu 11/7 Employee-Employer Relations, Whistle-Blowing**

*Engineering Ethics*, Chapter 8: "Engineers as Employees," 181-213  
De George, "Ethical Responsibilities of Engineers in Large Organizations," 175-86  
James, "Whistle-Blowing: Its Moral Justification," 263-78

**Class #23 Th 11/9 Engineers and the Environment**  
**Complete Draft of Research Paper Due**

*Engineering Ethics*, Chapter 9: "Engineers and the Environment," 214-30  
Farrell, "Sustainability and the Design of Knowledge Tools," 220-29  
Young and Vanderburg, "A Materials Life Cycle Framework for Preventative  
Engineering," 236-41  
Gorman, Mehalik, and Werhane, "American Solar Network," 67-73

**Class #24 Tu 11/14 Engineers as Citizens of the World**  
**Peer Review of Research Papers**

*Engineering Ethics*, Chapter 10: "International Engineering Professionalism," 244-71

**Class #25 Th 11/16 Choosing a Vocation and Obligations of the Profession**  
**Revised Version of Personal Mission Statement Due**

*Engineering Ethics*, Chapter 11.2-11.3, 275-82  
Meese, "The Sealed Beam Case: Engineering in the Public and Private Interest," 1-20  
Martin and Schinzinger, "Saving Citicorp Tower," 12-14  
Morgenstern, "The Fifty-Nine Story Crisis," 45-53

**Thanksgiving Vacation, November 19-26**

**Class #26** Tu 11/28 **Final Version of Research Paper Due**  
**Research Project Presentations**

**Class #27** Th 11/30 **Research Project Presentations**

**Class #28** Tu 12/5 **Research Project Presentations**

**Class #29** Th 12/7 **Research Project Presentations**

**Class #30** **Final Research Project Presentations & Course Summary**

**Tu 12/12, 2:00–4:00 PM, Scheduled Final Examination Time: Section E2**

**Sat 12/16, 2:00–4:00 PM, Scheduled Final Examination Time: Section E3**