

Class #1 Tu 1/16 **Introduction, Course Overview, *Gilbane Gold***

Class #2 Th 1/18 **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

Fleming, "Engineers of Death," 19

* Tolkien, *Lord of the Rings*, "The Bridge of Khazad-Dum," 3, 335-46

Class #3 Tu 1/23 **Work, Responsibility, and Human Personhood**

Covey, "Inside-Out" [15-24, 31-38], "Principles of Personal Vision" [66-80],
"Principles of Personal Leadership" [98-111, 128-29], "Principles of Personal
Management" [149-56 and *First Things First*, "Appendix B," 322-41]

* Tolkien, *Lord of the Rings*, "The Breaking of the Fellowship," 411-23

Class #4 Th 1/25 **Engineering as a Profession**

Dunwoody, et al., *Fundamental Competencies for Engineers*, 9-13

Greenwood, "Attributes of a Profession," 67-77

Overview of Booth, Colomb, and Williams, *The Craft of Research*

Outline of Turabain, *A Manual for Writers*

* Lessons in Clarity and Grace

Class #5 Tu 1/30 **The Moral Responsibility of Engineers
Personal Mission Statement 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 Th 2/1 **The History of Engineering and Professional Codes of Ethics
Draft of Response Paper #1 Due**

Davis, "A History of Engineering in the United States," 18-30

Reynolds, "The Engineer in America," 1-2

IEEE and NSPE Codes of Ethics

* Cohesion

Class #7 Tu 2/6 **Tools and Methods of Case Study Analysis**

Engineering Ethics, Chapter 3: "Framing the Problem," 48-76

* Coherence

**Class #8 Th 2/8 Philosophy: Epistemology, Metaphysics, and Ethics
Ethical Theories: Teleological and Deontological Perspectives
Draft of Response Paper #2 Due**

Engineering Ethics, Chapter 4: "Organizing Principles," 77-100
Booth, Colomb, and Williams, *The Craft of Research*, Part III, 109-81
* Concision

**Class #9 Tu 2/13 The Scientific Method and the Tests of Truth
The Principles of *Contradiction* and *Causality***

Sandage, "Cosmology," 321-34
[For further study, see Bodanis, *E=mc²: 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]
Adler, *Aristotle*, "The Four Causes," 39-46

**Class #10 Th 2/15 Normative Ethical Naturalism
Aristotle, Darwin, and Nietzsche
Final Version of Response Paper #1 Due**

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 Tu 2/20 The Structure of Aristotelian Ethics
Research Topic Due**

Aristotle, *Nicomachean Ethics*, Book II [1103-1109]
White, "The Pursuit of Happiness," 12-21
Booth, Colomb, and Williams, *The Craft of Research*, Part II, 35-107, 297-315 [317-24]

**Class #12 Th 2/22 Normative Ethical Idealism
Plato, Kant, and Hegel
Final Version of Response Paper #2 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

[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 Tu 2/27 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 Th 3/1 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 Tu 3/6 The Structure of Biblical Theism

Selected Texts of the Biblical Narrative

**Class #16 Th 3/8 The Engineer and Society
Draft of Response Paper #3 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

**Class #17 Tu 3/13 Computer Ethics
Research Paper Bibliography Due**

Engineering Ethics, Chapter 5, "Computers, ... Morality, and Social Policy," 101–24
Gotterbarn, Miller, and Rogerson, "Software Engineering Code of Ethics," 102–7
Review and application of the principles of bibliographic citation according to the *Chicago Manual of Style*, as delineated in Turabian, *A Manual for Writers*, "Notes," 116–64, "Bibliographies," 165–74, and Examples, 185–213

**Class #18 Th 3/15 The Frontiers of Cyberspace
Final Version of Response Paper #3 Due**

Spinello, *CyberEthics: Morality and Law in Cyberspace*, 1–10, 29–52
Booth, Colomb, and Williams, *The Craft of Research*, Part IV, 183–282

**University of Illinois
Spring Vacation
March 18–24**

**Class #19 Tu 3/27 Fiduciary Relationships and Conflict of Interest
Research Paper Introduction and Synopsis Due**

Engineering Ethics, Chapter 6: "Honesty, Integrity, and Reliability," 125-49
Bayles, "Obligations between Clients and Professionals"
Davis, "Conflict of Interest," 589-95
Booth, Colomb, and Williams, *The Craft of Research*, Part V, 285-88

Class #20 Th 3/29 The Engineer's Responsibility for Safety

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

Class #21 Tu 4/3 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]
* Emphasis

**Class #22 Th 4/5 Employee-Employer Relations, Whistle-Blowing
Complete Draft of Research Paper Due**

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
*Elegance

Class #23 Tu 4/10 Engineers and the Environment

Engineering Ethics, Chapter 9: "Engineers and the Environment," 214-30
Selected Articles and Contemporary Issues for Discussion
* Economy

**Class #24 Th 4/12 Engineers as Citizens of the World
Peer Review of Research Papers
Personal Mission Statement Due
Final Version with Critical Reflection**

Engineering Ethics, Chapter 10: "International Engineering Professionalism," 244-71
* Lessons in Clarity and Grace: Review and Summary

**Class #25 Tu 4/17 Choosing a Vocation
Obligations of the Profession**

Engineering Ethics, Chapter 11.2-11.3, 275-82

Fleddermann, "Doing the Right Thing," 112-14

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

**Class #26 Th 4/19 Final Version of Research Paper Due
Research Project Presentations**

Class #27 Tu 4/24 Research Project Presentations

Class #28 Th 4/26 Research Project Presentations

Class #29 Tu 5/1 Research Project Presentations

**Class #30 Final class session of Research Project Presentations and Course
Evaluations to be held during the scheduled Final Examination time
University of Illinois, Urbana-Champaign, Spring Semester**

Section E2: 9:00-10:20 a.m., Wednesday, May 9

Section E3: 2:00-3:20 p.m., Friday, May 4