

Professional Ethics

Course Code HU-222	Credit Hours 2-0
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Course Description

In general, Ethics is both an academic “subject” and a thoughtful way of doing things. Theoretical Ethics is that branch of Philosophy concerned with determining what is right (with regard to principles and actions) and what is good (what ends or ideals are worth pursuing and what values are worth holding). Practical Ethics is the art of figuring out how to make things better rather than worse with regard to concrete or actual situations. Professional Ethics is a type of applied ethics as such; it is concerned with principles applied and actions taken in the workplace and the boardroom. At the same time, since engineering practice is inseparable from the rest of human life, Ethics has to take account of the well-being of human society and the natural environment.

Text Book:

1. **“Ethics in Engineering”** 3th edition, by Mike W. Martin, Roland Schinzinger, McGraw-Hill, New York,

Reference Book:

1. **Fundamentals of Engineering Economics**, 3rd ed., by Chan S. Park
2. **“Engineering Ethics: Concepts and Cases”**, 4th edition, by Charles E. Harris, Michael S. Pritchard, Michael J. Rabin’s, Wadsworth, 2008.
3. **The Seven Habits of Highly effective people** by Stephan r. Covey
4. **Principle Centered Leadership** Stephan r. Covey
5. **“Ethics in Engineering”** 2nd edition, by Mike W. Martin, Roland Schinzinger, McGraw-Hill, New York,
6. **How to Manage** by Ray Wild
7. **Happiness** by Richard Layard

Prerequisites :

Nil.

ASSESSMENT SYSTEM FOR THEORY

	Without Project (%)	With Project/Complex Engineering Problems (%)
Quizzes	15	10-15
Assignments	10	5-10

Mid Terms	25	25
Project	-	5-10
End Semester Exam	50	45-50

ASSESSMENT SYSTEM FOR LAB

Lab Work/ Psychomotor Assessment/ Lab Reports	70%
Lab Project/ Open Ended Lab Report/ Assignment/ Quiz	10%
Final Assesment/ Viva	20%

Teaching Plan

Week No	Topics/Learning Outcomes
1	What is Philosophy Engineering Ethics, Ethical concepts,
	Types of Philosophies and its linkage with ethics
	Challenges involved in decision making
	Group Formation and Class Exercise 1 (Trust)
2	Moral Dilemmas, Moral Autonomy, Kohlberg's & Gilligan's Theory
	Moral Development
	Case Study Heinz Dilemma.
	Semester Project Brief
3	Ethics Vs Morality
	Dimensions of Engineering
	Hypothetical and Categorical Imperatives
	Potential Moral Problems
	Semester Project Topic Selection
4	Profession and Professionalism
	Ethical Dilemmas
	Steps in Resolving Ethical Dilemmas
	How to Be Ethical
5	Conflict of Interest
	Code of Ethics , Roles and Limitations
	Class Exercise 2 (Applying Code of Ethics to a situation)
	Guidelines about Presentation Rubrics
6	Moral Reasoning
	Branches of Ethics
	Class Exercise 3 Trolley Problem, Doctors dilemma
	Descriptive Ethics
7	Meta Ethics
	Normative Ethics

	Applied Ethics
	Duty/Virtues/Utilitarianism and Right Ethics
	Roles and Limitations
8	Designing Aluminium Cans
	Engineering learning from Design Evolution
	Dimensions of Ethics
	Case Study : The Ingenious Design of the Aluminium Beverage Can (Video and Class Discussion)
9	ESE
10	Responsibility
	Citicorp Structural Design Case Study
	Senses of Responsibility
	Case Study "How Manhattan escaped tragedy"
11	Assessment of safety and risk, Design considerations, uncertainty
	Class Exercise (Prospect Theory)
	Risk-benefit analysis, Safe-exit and fail-safe systems
12	Responsibility to Employers
	Collegiality
	Respect for Authority
13	Rights of Engineers
	Whistle-blowing, case studies on professional behaviour/policies on the job
	Discrimination
	Case study (Monster Inc)
	Class Exercise with Q&A (Discussion)
14	Engineers as Managers Consultants and Leaders
	Engineers as Expert Witnesses and Advisers
	Moral Leadership
15 & 16	Semester Presentations and Guest Lecture : Engineering by Choice
17-18	End Semester Exam

Practical: Nil.