

SEMESTER – VII

		L	T	P	C
IT 0401	PROFESSIONAL ETHICS	2	0	0	2
	Prerequisite				
	Nil				

PURPOSE

The global issues and environmental changes are posing great challenges to engineers of today to shift their focus from basic engineering to applied and ethical engineering solutions. Engineers have come a long way in realigning themselves to the needs of Health, Safety and responsible citizenship. This subject is very vital and apt for today's engineers who are in the preparation phase for the future challenges in their near future.

INSTRUCTIONAL OBJECTIVES

After successful completion of the course, the students should be able to

- Learn methodologies to resolve moral dilemmas
- Understand how to practice the role of engineers as responsible experimenters
- Learn the knowhow's of Implementing engineer's responsibilities for safety and their duty rights and ethics
- Understand the role of engineers as managers, consultants, expert witnesses, advisors and the code of conduct

UNIT 1 ENGINEERING ETHICS

6

Senses of 'Engineering Ethics'-Variety of Moral Issues-Types Of Inquiry-Moral Dilemmas-Moral Autonomy-Kohlberg's Theory-Gilligan's Theory-Consensus And Controversy-Professions And Professionalism-Professional Ideals And Virtues-Theories About Right Action-Self-Interest-Customs And Religion-Uses Of Ethical Theories

UNIT 2 ENGINEERING AS SOCIAL EXPERIMENTATION

6

Engineering as Experimentation-Engineers As Responsible Experimenters-Codes of Ethics-A Balanced Outlook On Law-The Challenger Case Study

UNIT 3 ENGINEER'S RESPONSIBILITY FOR SAFETY

6

Safety and Risk-Assessment Of Safety And Risk-Risk Benefit Analysis-Reducing Risk-Case Studies

UNIT 4 RESPONSIBILITIES AND RIGHTS

6

Collegiality and Loyalty-Respect For Authority-Collective Bargaining-Confidentiality-Conflicts Of Interest-Occupational Crime-Professional Rights-Employee Rights-IPR-Discrimination

UNIT 5 GLOBAL ISSUES**6**

Multinational Corporations-Environmental Ethics-Computer Ethics-Weapons Development-Engineers as Managers-Consulting Engineers-Engineers As Experts Witnesses And Advisors-Moral Leadership-Sample Code Of Conduct.

TOTAL**30****TEXT BOOK**

1. Mike Martin and Roland Schinzinger, *Ethics in Engineering*, McGraw Hill, New York 4th edition, 2005.

REFERENCE BOOKS

1. M.Govindarajan, S.Natarajan, V.S.SenthilKumar, *Engineering Ethics*, PHI, 2005
2. Charles D.Fleddermann, *Engineering Ethics*, Prentice Hall, New Mexico, 4th Edition 2011.