

GE6075 PROFESSIONAL ETHICS IN ENGINEERING - Syllabus

GE6075	PROFESSIONAL ETHICS IN ENGINEERING	L T P C 3 0 0 3
OBJECTIVES: <ul style="list-style-type: none">To enable the students to create an awareness on Engineering Ethics and Human Values, to instill Moral and Social Values and Loyalty and to appreciate the rights of others.		
UNIT I	HUMAN VALUES	10
Morals, values and Ethics – Integrity – Work ethic – Service learning – Civic virtue – Respect for others – Living peacefully – Caring – Sharing – Honesty – Courage – Valuing time – Cooperation – Commitment – Empathy – Self confidence – Character – Spirituality – Introduction to Yoga and meditation for professional excellence and stress management.		
UNIT II	ENGINEERING ETHICS	9
Senses of 'Engineering Ethics' – Variety of moral issues – Types of inquiry – Moral dilemmas – Moral Autonomy – Kohlberg's theory – Gilligan's theory – Consensus and Controversy – Models of professional roles - Theories about right action – Self-interest – Customs and Religion – Uses of Ethical Theories		
UNIT III	ENGINEERING AS SOCIAL EXPERIMENTATION	9
Engineering as Experimentation – Engineers as responsible Experimenters – Codes of Ethics – A Balanced Outlook on Law.		
UNIT IV	SAFETY, RESPONSIBILITIES AND RIGHTS	9
Safety and Risk – Assessment of Safety and Risk – Risk Benefit Analysis and Reducing Risk – Respect for Authority – Collective Bargaining – Confidentiality – Conflicts of Interest – Occupational Crime – Professional Rights – Employee Rights – Intellectual Property Rights (IPR) – Discrimination.		
UNIT V	GLOBAL ISSUES	8
Multinational Corporations – Environmental Ethics – Computer Ethics – Weapons Development – Engineers as Managers – Consulting Engineers – Engineers as Expert Witnesses and Advisors – Moral Leadership – Code of Conduct – Corporate Social Responsibility		
		TOTAL: 45 PERIODS
OUTCOMES: <ul style="list-style-type: none">Upon completion of the course, the student should be able to apply ethics in society, discuss the ethical issues related to engineering and realize the responsibilities and rights in the society		
TEXTBOOKS: <ol style="list-style-type: none">Mike W. Martin and Roland Schinzinger, "Ethics in Engineering", Tata Mc Graw Hill, New Delhi, 2003.Govindarajan M, Natarajan S, Senthil Kumar V. S, "Engineering Ethics", Prentice Hall of India, New Delhi, 2004.		
REFERENCES: <ol style="list-style-type: none">Charles B. Fleddermann, "Engineering Ethics", Pearson Prentice Hall, New Jersey, 2004.Charles E. Harris, Michael S. Pritchard and Michael J. Rabins, "Engineering Ethics – Concepts and Cases", Cengage Learning, 2009John R Boatright, "Ethics and the Conduct of Business", Pearson Education, New Delhi, 2003Edmund G Seebauer and Robert L Barry, "Fundamentals of Ethics for Scientists and Engineers", Oxford University Press, Oxford, 2001Laura P. Hartman and Joe Desjardins, "Business Ethics: Decision Making for Personal Integrity and Social Responsibility" Mc Graw Hill education, India Pvt. Ltd., New Delhi 2013.World Community Service Centre, "Value Education", Vethathiri publications, Erode, 2011		