ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES
UGC Autonomous
(Affiliated to AU, Approved by AICTE & Accredited by NBA & NAAC with 'A' Grade)
SANGIVALASA-531 162, Bheemunipatnam Mandal, Visakhapatnam District
Phone: 08933-225083/84/87 Fax: 226395
website: www.anits.edu.in email: principal@anits.edu.in

Human Values & Professional Ethics

(Common for All Branches)

Sessional Marks: 50
L-T-P-E-O-C
2- 0- 0- 0- 1- 0

Course Objectives:

- To create an awareness on Engineering Ethics and Human Values.
- To impart Moral and Social Values and Loyalty
- To appreciate the rights of others.
- To create awareness on assessment of safety and risk

Course Outcomes

The students will be able to

	COURSE OUTCOMES	Bloom's Taxonomy	Bloom's Taxonomy Level
CO-1	Understand the role of human values and ethical principles in the perception of professional and real life	Understand	L1
CO-2	Solve the ethical issues and moral dilemmas in engineering profession through the application of ethical theories and moral development	Solve	L3
CO-3	Apply the code of ethics in professional and societal development while playing different roles as responsible engineers to solve complex problems	Apply	L2
CO-4	Understand the concept of risk assessment by responsible engineer for safety	Understand	L1
CO-5	Predict the global issues and able to apply ethical principles to resolve situations that arise in their professional lives	Predict	L3

CO-PO Mapping :

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1								3	1			
CO2				2				2		1		
CO3		1	1			2		1				
CO4			1			2		1				1
CO5			1				3					

Unit I: HUMAN VALUES:
Morals, Values and Ethics-Integrity-Work Ethic-Service learning – Civic Virtue – Respect for others –Living Peacefully –Caring –Sharing –Honesty -Courage-Cooperation–Commitment – Empathy –Self Confidence Character –Spirituality-Case Study.

LEARNING OUTCOMES:
1. Learn about morals, values & work ethics.
2. Learn to respect others and develop civic virtue.
3. Develop commitment
4. Learn how to live peacefully

Unit II: ENGINEERING ETHICS:
Senses of 'Engineering Ethics-Variety of moral issued –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 –Valuing time –Co operation –Commitment-Case Study

LEARNING OUTCOMES:
1. Learn about the ethical responsibilities of the engineers.
2. Create awareness about the customs and religions.
3. Learn time management
4. Learn about the different professional roles.

Unit III: ENGINEERING AS SOCIAL EXPERIMENTATION
Engineering As Social Experimentation –Framing the problem –Determining the facts –Codes of Ethics –Clarifying Concepts –Application issues –Common Ground -General Principles –Utilitarian thinking respect for persons-Case study
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LEARNING OUTCOMES:
1. Demonstrate knowledge to become a social experimenter.
2. Provide depth knowledge on framing of the problem and determining the facts.
3. Provide depth knowledge on codes of ethics.
4. Develop utilitarian thinking

UNIT IV: ENGINEERS RESPONSIBILITY FOR SAFETY AND RISK:
Safety and risk –Assessment of safety and risk –Risk benefit analysis and reducing risk-Safety and the Engineer-Designing for the safety-Intellectual Property rights (IPR)-.

LEARNING OUTCOMES:

1. Create awareness about safety, risk & risk benefit analysis.
2. Engineer's design practices for providing safety.
3. Provide knowledge on Intellectual Property Rights.

UINIT V: GLOBAL ISSUES

Globalization –Cross culture issues-Environmental Ethics –Computer Ethics –Computers as the instrument of Unethical behavior –Computers as the object of Unethical acts –Autonomous Computers-Computer codes of Ethics –Weapons Development -Ethics and Research –Analyzing Ethical Problems in research- Case Study

LEARNING OUTCOMES:

1. Develop knowledge about global issues.
2. Create awareness on computer and environmental ethics
3. Analyze ethical problems in research.
4. Give a picture on weapons development.

Text Books:

1. "Engineering Ethics includes Human Values" by M. Govindarajan, S. Natarajananad, V.S.SenthilKumar-PHI Learning Pvt. Ltd-2009
2. "Engineering Ethics" by Harris, Pritchard and Rabins , CENGAGE Learning, India Edition, 2009.
3. "Ethics in Engineering" by Mike W. Martin and Roland Schinzinger –Tata McGraw-Hill–2003.
4. "Professional Ethics and Morals" by Prof.A.R.Aryasri, DharanikotaSuyodhana-Maruthi Publications.
5. "Professional Ethics and Human Values" by A.Alavudeen, R.KalilRahman and M.Jayakumaran – Laxmi Publications.
6. "Professional Ethics and Human Values" by Prof.D.R.Kiran-
7. "Indian Culture, Values and Professional Ethics" by PSR Murthy-BS Publication