

III Year II Semester

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Code: 17CS633

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PROFESSIONAL ETHICS & HUMAN VALUES

Course Objectives:

1. To give basic insights and inputs to the student to inculcate Human values to grow as responsible human beings with proper personality.
2. Professional Ethics instills the student to maintain ethical conduct and discharge their professional duties.

UNIT I: Human Values: Morals, Values and Ethics – Integrity – Work Ethics – Service Learning – Civic Virtue – Respect for others – Living Peacefully – Caring – Sharing – Honesty – Courage – Value time – Co-operation – Commitment – Empathy – Self-confidence – Spirituality- Character.

UNIT II: Engineering Ethics: The History of Ethics-Purposes for Engineering Ethics-Engineering Ethics-Consensus and Controversy –Professional and Professionalism –Professional Roles to be played by an Engineer –Self Interest, Customs and Religion-Uses of Ethical Theories-Professional Ethics-Types of Inquiry – Engineering and Ethics Kohlberg’s Theory – Gilligan’s Argument –Heinz’s Dilemma.

UNIT III: Engineering as Social Experimentation: Comparison with Standard Experiments – Knowledge gained – Conscientiousness – Relevant Information – Learning from the Past – Engineers as Managers, Consultants, and Leaders – Accountability – Role of Codes – Codes and Experimental Nature of Engineering.

UNIT IV: Engineers’ Responsibility for Safety and Risk: Safety and Risk, Concept of Safety – Types of Risks – Voluntary v/s Involuntary Risk- Short term v/s Long term Consequences- Expected Probability- Reversible Effects- Threshold Levels for Risk- Delayed v/s Immediate Risk- Safety and the Engineer – Designing for Safety – Risk-Benefit Analysis-Accidents.

UNIT V: Engineers’ Responsibilities and Rights: Collegiality-Techniques for Achieving Collegiality –Two Senses of Loyalty-obligations of Loyalty misguided Loyalty – professionalism and Loyalty- Professional Rights –Professional Responsibilities – confidential and proprietary information-Conflict of Interest-solving conflict problems – Self-interest, Customs and Religion- Ethical egoism-Collective bargaining-Confidentiality-Acceptance of Bribes/Gifts when is a Gift and a Bribe-examples of Gifts v/s Bribes-problem solving-interests in other companies Occupational Crimes-industrial espionage-price fixing-endangering lives- Whistle Blowing-types of whistle blowing-when should it be attempted-preventing whistle blowing.

UNIT VI: Global Issues: Globalization- Cross-culture Issues-Environmental Ethics-Computer Ethics-computers as the instrument of Unethical behaviour-computers as the object of Unethical

Acts-autonomous computers-computer codes of Ethics-Weapons Development-Ethics and Research-Analysing Ethical Problems in Research-Intellectual Property Rights.

Course Outcomes:

- It gives a comprehensive understanding of a variety issues that are encountered by every professional in discharging professional duties.
- It provides the student the sensitivity and global outlook in the contemporary world to fulfill the professional obligations effectively.
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TEXT BOOKS

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