

AMME27 PROFESSIONAL ETHICS IN ENGINEERING

UNIT-1 HUMAN VALUES

- 1.1 Morals, values and Ethics, Integrity, Work ethic, Service learning, Civic virtue,
- 1.2 Respect for others, living peacefully, Caring, Sharing, Honesty, Courage,
- 1.3 Valuing time, Cooperation, Commitment, Empathy,
- 1.4 Self-confidence, Character, Spirituality,
- 1.5 Introduction to Yoga and meditation for professional excellence and stress management.

UNIT-2 ENGINEERING ETHICS

- 2.1 Senses of 'Engineering Ethics', Variety of moral issues,
- 2.2 Types of inquiry, Moral dilemmas,
- 2.3 Moral Autonomy, Kohlberg's theory, Gilligan's theory,
- 2.4 Consensus and Controversy, Models of professional roles,
- 2.5 Theories about right action, Self-interest,
- 2.6 Customs and Religion, Uses of Ethical Theories.

UNIT-3 ENGINEERING AS SOCIAL EXPERIMENTATION

- 3.1 Engineering as Experimentation,
- 3.2 Engineers as responsible Experimenters
- 3.3 Codes of Ethics, a Balanced Outlook on Law.

UNIT-4 SAFETY, RESPONSIBILITIES AND RIGHTS

- 4.1 Safety and Risk, Assessment of Safety and Risk, Risk Benefit Analysis and Reducing Risk,
- 4.2 Respect for Authority, Collective Bargaining, Confidentiality, Conflicts of Interest.
- 4.3 Occupational Crime, Professional Rights, Employee Rights,
- 4.4 Intellectual Property Rights (IPR), Discrimination.

UNIT-5 GLOBAL ISSUES

- 5.1 Multinational Corporations, Environmental Ethics, Computer Ethics,
- 5.2 Weapons Development, Engineers as Managers,
- 5.3 Consulting Engineers, Engineers as Expert Witnesses and Advisors,
- 5.4 Moral Leadership, Code of Conduct, Corporate Social Responsibility.

Reference Books:

1. Charles B. Fleddermann, "Engineering Ethics", Pearson Prentice Hall, New Jersey, 2004.
2. Charles E. Harris, Michael S. Pritchard and Michael J. Rabins, "Engineering Ethics – Concepts and Cases", Cengage Learning, 2009.