

# HUMAN VALUES & PROFESSIONAL ETHICS

Course Code: 20HM11Z1

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## Course Outcomes

At the end of the course, the student will be able to:

**CO1:** Explain various concepts of ethics and ethical issues (L2)

**CO2:** Describe various theories relating to professional ethics at work place (L2)

**CO3:** Determine the fundamental concepts of social experimentation and problem solving (L3)

**CO4:** Understand an engineer responsibility for social safety and concepts of risk benefits (L2)

**CO5:** Describe human values and environment in the era of digitisation and globalisation of Workplace (L2)

## UNIT-I

(10 Lectures)

### Human Values:

Morals, Values and Ethics – Integrity-Work Ethics -Service learning – Civic Virtue – Respect for others –Living Peacefully –Caring –Sharing –Honesty – Courage–Cooperation–Commitment – Empathy –Self Confidence Character –Spirituality

### Learning outcomes:

At the end of this unit students will be able to:

1. define morals, values & work ethics (L1)
2. demonstrate respecting others and developing civic virtue (L2)
3. describe commitment (L2)
4. describe how to live peacefully (L2)

## UNIT-II

(10 Lectures)

### 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 – Cooperation – Commitment

### Learning outcomes:

At the end of this unit students will be able to:

1. summarise ethical responsibilities of the engineers (L2)
2. describe various theories of professional ethics (L2)
3. explain about time management (L2)
4. recite different professional roles and theories (L1)

## UNIT-III

(10 Lectures)

### 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

### Learning outcomes:

At the end of this unit students will be able to:

1. describe issues relating to social experimentation (L2)
2. determine the process of framing the problem and the facts. (L3)
3. summarise the concept of code of ethics (L2)
4. demonstrate the concept of utilitarian thinking (L3)

#### **UNIT IV**

**(10 Lectures)**

##### **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:**

At the end of this unit students will be able to:

1. define safety, risk & risk benefit analysis (L1)
2. describe engineer's responsibility for providing safety (L2)
3. summarise Intellectual Property Rights (L2)

#### **UNIT-V**

**(10 Lectures)**

##### **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 –Analyzing Ethical Problems in research

##### **Learning outcomes:**

At the end of this unit students will be able to:

1. interpret changes in human value system in the era of globalisation (L2)
2. discuss the computer ethics and environmental ethics (L2)
3. outline ethical issues relating to weapons development (L2)
4. describe ethical problems in research (L2)

##### **Text books:**

1. A.Alavudeen, R.Kalil Rahman and M.Jayakumaran, “Professional Ethics and Human Values” Laxmi Publications, 2016.
2. M.Govindarajan, S.Natarajanad, V.S.SenthilKumar, “Engineering Ethics includes Human Values”, PHI Learning Pvt. Ltd, 2009.
3. “Engineering Ethics” by Harris, Pritchard and Rabins, CENGAGE Learning, India Edition, 2009.
4. Mike W. Martin and Roland Schinzinger, “Ethics in Engineering”, Tata McGraw-Hill, 2003.

##### **References:**

1. A.R.Aryasri, “Professional Ethics and Morals”, Dharanikota Suyodhana Maruthi Publications.
2. D.R.Kiran, “Professional Ethics and Human Values”, Mc Graw Hill, 2013.
3. PSR Murthy, “Indian Culture, Values and Professional Ethics”, 2<sup>nd</sup> Edition, BS Publications, 2013.