1/4 B.Tech. SECOND SEMESTER

CE2T1 PROFESSIONAL ETHICS Credits: 2

Lecture: 2 periods/week **Internal assessment: 30 marks**
Tutorial: -- **Semester end examination: 70 marks**

Objectives:

- To create awareness on ethics and its significance to the provisional students.
- To make them gain the knowledge of fundamental aspects of engineering ethics.
- To in culcate value and make them realize the significance of ethics in professional environment

Learning outcomes:

At the end of the course the students will have:

- Profound knowledge of moral and ethical values
- Mutual respect
- Social responsibility

UNIT I

Profession-Definition, - Engineering and professionalism, - Engineering Ethics – Definition,Three types of ethics.

UNIT II

Connotations of Engineering Ethics – code of ethics - Role of Code – Kohlberg's theory – Gilligan's theory.

UNIT III

Engineering as social Experimentation - Engineers social responsibility – Promises and perils of technology (Technological Pessimism, Technological optimism).

UNIT IV

Computer Ethics – Computer hacking – Computer privacy - Computer as an instrument for unethical behavior.

UNIT V

Environmental Ethics – Criteria for clean Environment – Respect for nature.

UNIT VI

Human Values – Morals, values and ethics, - Work Ethics, - Respect for others – Mutual Coexistence – Honesty, courage, valuing time – Empathy.

UNIT VII

Trust and reliability – Dishonesty – Confidentiality.

UNIT VIII

Engineers' responsibility and Rights –Respect for authority- Moral autonomy – Employee Rights Learning resources.

Learning resources

Text books:

1. Ethics in Engineering, (3rd edition) by Mike Martin and Roland Schinzinger, McGraw Hill Publications, 2012.
2. Engineering Ethics, (4th edition) by Charles E Harris and Michael J Rabins, Cengage Learning, 2009.

Reference books:

1. Fundamentals of Ethics for Scientists and Engineers by Seebauer Edmund, G. and Robert L Barry., Oxford University Press, 2001.
2. Indian Culture Values and Professional Ethics, (2nd edition) by Murthy, P.S.R. BS Publications, 2012.
3. Ethics in Engineering Practice and Research, (2nd edition) by Caroline Whitback. Cambridge University Press, 2012.