SVKM's NMIMS Deemed-to-be University
Mukesh Patel School of Technology Management and Engineering

Program: B Tech All Program [except CSBS, CSE(DS) 311 (VT)] / MBA Tech All Program				**Semester:** I / II	
Course: Professional Ethics				**Code:**	
Teaching Scheme				**Evaluation Scheme**	
Lecture (Hours per week)	**Practical (Hours per week)**	**Tutorial (Hours per week)**	**Credit**	**Internal Continuous Assessment (ICA) (Marks-50)**	**Term End Examinations (TEE)**
1	0	0	1	Scaled to Marks 50	---

Pre-requisite: Nil

Course Objective

This course is designed to encourage students to inculcate human values, that will enable them to grow as a responsible human being. The course also helps students to understand how to maintainethical conduct in discharging professional duties, which will be beneficial for them in their professional lives.

Course Outcomes

After completion of the course, students will be able to -

1. Understand the engineering code of ethics and be able to apply them as necessary,
2. Understand moral complexities in many engineering activities and decision-making processes,
3. Understand some of the contemporary issues in the engineering professions,
4. Effectively communicate their knowledge and understanding of engineering ethics.

Detailed Syllabus

Unit	Description	Duration
1.	**Introduction to Ethics-** • Concept of morals and ethics, • Study of engineering ethics; • Laws and ethics; • Personal and professional ethics.	02
2.	**Professional Practice in Engineering-** • Common morality ASME code of ethics, • Technical codes and standards, • Accepted standards of Engineering practice and the standard of care.	02
3.	**Ethics as design-doing justice to moral Problem-** • Discuss about ethics as a design to solve moral problems • Comparison between moral problems and engineering design problems; • Moral lessons from design problems; • Implications of the dynamic character of problem situations.	02

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4.	**Rights and Responsibilities of Engineers-** • Moral responsibilities; • Conflicts of interests; • Confidentiality, • Engineers, organizations and ethics, • Engineer-manager relationships; • loyalty; • The concept of whistleblowing.	04
5.	**Responsibility for the Environment-** • Rapid Technological growth and depletion of resources, • Reports of the Club of Rome. • Limits of growth: sustainable development • Energy Crisis: Renewable Energy Resources • Environmental degradation and pollution. • Eco-friendly Technologies. • Environmental Regulations, • Environmental Ethics • Appropriate Technology, • Movement of Schumacher; later developments of Technology and developing notions. • Problems of Technology transfer, • Technology assessment impact analysis. • Problems of man, machine, interaction, • Impact of assembly line and automation. • Human centered Technology	05
	Total	**15**

Text Books

1. M.W. Martin and R. Schinzinger, Ethics in Engineering, 2nd Edition, McGraw-Hill, 2005.
2. Charles B. Fleddermann, Engineering Ethics, 3rd Edition, Pearson, 2007.
3. P.A. Vesilind and A. S Gunn, Engineering Ethics and Environment, 1st Edition , Cambridge University Press, 1998.

Reference Books

1. Caroline Whitbeck, Ethics in Engineering – Practice and Research, 2nd Edition, Cambridge University Press, 2011.

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