

**PVP SIDDHARTHA INSTITUTE OF TECHNOLOGY, KANURU, VIJAYAWADA  
(AUTONOMOUS)  
INFORMATION TECHNOLOGY**

**ENGINEERING ETHICS**

<b>Course Code</b>	19MC1601	<b>Year</b>	III	<b>Semester</b>	II
<b>Course Category</b>	MC	<b>Branch</b>	IT	<b>Course Type</b>	Theory
<b>Credits</b>	0	<b>L-T-P</b>	3-0-0	<b>Prerequisites</b>	-----
<b>Continuous Internal Evaluation :</b>	100	<b>Semester End Evaluation:</b>	---	<b>Total Marks:</b>	100

<b>Course Outcomes</b>		
<b>Upon Successful completion of course, the student will be able to</b>		
CO1	Realize the importance of human values.	L2
CO2	Understand that excessive desires of the mind make a person unethical and restless, while fewer desires lead to peace and professional progress.	L2
CO3	Assess different types of risks involved in unethical practices. Know various means of protesting against unethical practices and to understand the prominence of ethical codes and become benchmarks against which individual and organizational performance can be measured.	L4
CO4	Assess the benefits of restraining from unethical practices like bribery, extortion, nepotism, nexus between politicians and industrialists.	L4
CO5	Summarize case studies of ethical violations in Chernobyl meltdown, Challenger disaster, Ford Pinto design, Kingfisher Airlines financial misappropriation.	L5

<b>Contribution of Course Outcomes towards achievement of Program Outcomes &amp; Strength of correlations (H:High, M: Medium, L:Low)</b>														
CO1								3						
CO2								3						
CO3								3						
CO4								3						
CO5								3						

<b>Syllabus</b>		
<b>Unit No</b>	<b>Contents</b>	<b>Mapped CO</b>
<b>I</b>	<b>Introduction To Terminology In Ethics:</b> Integrity, Honesty, Courage, Empathy, Personality, Character, Self-Confidence, Respect for Others – Work culture, Social responsibility, Responsibilities as a citizen, Cooperation and commitment – Religion vs. Spirituality, Philosophy, Customs and practices – Self-interest, Fear, Deception, Ignorance, Ego, Uncritical acceptance of authority.	<b>CO1</b>
<b>II</b>	<b>Mind And Its Mysteries:</b> What is Mind? Mind and body, Mind and food – Mental faculties – Theory of perception, Memory, Imagination, Thought-Culture, Desires – Cultivation of Virtues, Control of Senses and Mind – Concentration, Meditation and Enlightenment.	<b>CO2</b>
<b>III</b>	<b>Risk And Safety In Engineering:</b> Estimating risk – What is acceptable risk? – Engineer’s liability, Changing legal rights of the employees by non-participation, by protest – Environmental laws and judicial intervention in related matters. <b>Ethical Codes:</b> Codes from Other Profession-Advertising Standards Council of India, Corporate Codes-Tata Group of Companies will give them the profound knowledge of ethical codes.	<b>CO3</b>
<b>IV</b>	<b>Non-Ethical Practices In Vogue:</b> Conflict of Interest, Occupational crime – How multinational corporations influence government decisions, public policy – Engineers as managers, advisors and experts, Engineers as moral leaders – Problem of bribery, extortion, grease payments, nepotism – Nexus between politicians and industrialists. <b>Case Study:</b> Chinese Minister Sentenced to Death for Corruption.	<b>CO4</b>
<b>V</b>	<b>Case Studies – Variety Of Moral Issues In Profession:</b> Chernobyl nuclear disaster, Fukushima reactor meltdown, Challenger blowup, Ford Pinto design, Highway safety, Kingfisher Airlines financial misappropriation.	<b>CO5</b>

<b>Learning Recourses</b>
<b>Text Books</b>
<ol style="list-style-type: none"> <li>1. Charles E Harris, Micheal J Rabins, Engineering Ethics, Cengage Learning Pub.</li> <li>2. Mike Martin and Roland Schinzinger, Ethics in Engineering, McGraw Hill Pub.</li> <li>3. Swami Sivananda, Mind, Its Mysteries and Control, Divine Life Society Pub.</li> <li>4. Professional Ethics by- R. Subramanian</li> </ol>
<b>References</b>
<ol style="list-style-type: none"> <li>1. Mika Martin and Roland Scinger, ‘Ethics in Engineering’, Pearson Education/Prentice Hall, New York 1996.</li> <li>2. Govindarajan M., Natarajan S., Senthil Kumar V. S., ‘Engineering Ethics’ Prentice Hall of India, New Delhi, 2004.</li> <li>3. Charles D. Fleddermann, ‘Ethics in Engineering’, Pearson Education/Prentice Hall, New Jersey, 2004 (Indian Reprint).</li> <li>4. Charles E. Harris, Michael S. Protchard and Michael J. Rabins, ‘Engineering Ethics – Concept and Cases’, Wadsworth Thompson Learning, United States, 2000 (Indian Reprint now available).</li> </ol>