

Course Code	HS 225001
Course Title	<b>Ethics in Engineering Profession</b>
Credits	L    T    P    C 3    0    0    3
Prerequisites (if any)	Nil
Course Instructor	Dr. Shukkoor.T,
Course Objective	<p>The purpose of the course <b>Ethics in Engineering Profession</b>’ is to introduce the engineering students to the concepts and practice of ethics in engineering profession. The course tries to address the question of how to educate engineers about the social implications and ethical issues of their work. The course will help the students with fundamental knowledge to explore and critically examine various ethical issues and dilemmas while discharging duties in professional life. A detailed discussion of case studies which are routinely encountered while implementing projects in industry are also included in the course. Contemporary issues in engineering ethics such as environmental ethics, human subjects’ protections, ethics in performing collaborative research, etc. in the context of engineering teams will be addressed in the class discussion. <i>The objectives of the course include</i> (1) To provide the students an understanding of the meaning of ethics in engineering profession (2) To introduce an awareness of ethical duties and responsibilities of engineers in the practice of their careers and (3) To provide a sociological understanding of the social impact of technology and engineering (4) To examine some of the classical cases as well as contemporary ethical issues in engineering profession.</p> <p><b>Evaluation scheme for the course</b></p> <p>Seminar/ Presentation–     25 % Mid semester examination – 25 %</p> <p>End semester examination – 50 %</p>

<p><b>Course Contents:</b></p>	<p><b>Unit 1: <i>Ethics in Engineering: Understanding basic concepts</i></b></p> <p>Ethics- Engineering Ethics- Engineering as Profession – Difference between occupation and professions- Professional Ethics - Codes of Ethics in Engineering profession- Moral dilemmas and moral autonomy in Engineering profession</p> <p><b>Unit 2: <i>Engineering as Social Experimentation</i></b></p> <p>Engineering as experimentation-Engineers as responsible Experimenters-A balanced outlook on Law</p> <p><b>Unit 3: <i>Social Impact of Technology and Engineering</i></b></p> <p>Ethos of science and engineering- Ethical leadership in engineering and society, social responsibility of scientist/ researchers, Intellectual property and society, Cross cultural issues in engineering research</p> <p><b>Unit 4: <i>Major Issues in Engineering Ethics</i></b> Ethics and Environment- Ethics and sustainable engineering- Computer ethics- Analysing ethical problems in research- Ethics in collaborative research- Engineers as expert consultants and advisors- Corporate Social Responsibility (CSR).</p>
<p><b>Textbooks/Reference</b></p>	<ol style="list-style-type: none"> <li>1. Martin, Mike W., and Roland Schinzinger: <i>Ethics in Engineering</i>, Third edition, McGraw- Hill, New Delhi, 2017)-Indian edition.</li> <li>2. Govindarajan M, Natarajan S, Senthil Kumar V.S, “<i>Engineering Ethics</i>”, Prentice Hall of India, New Delhi, 2004</li> <li>3. Charles E. Harris, Michael S. Pritchard and Michael J. Rabins, “<i>Engineering Ethics – Concepts and Cases</i>”, Cengage Learning, 2009</li> <li>4. Charles B. Fleddermann, “<i>Engineering Ethics</i>”, Pearson Prentice Hall, New Jersey, 2004.</li> </ol>

