PROFESSIONAL ETHICS

(Common to all Branches)

Course Code : 15HM11PE

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Course Outcomes:

At the end of the Course, the Student will be able to:

CO 1 Explain how to deal with complex situations arising out of interaction with people. (Parents, friends and Co-professionals) in making the work environment congenial, encouraging and loving.

CO 2 Discriminate when he is forced through certain undesirable and ambiguous situations either in his day to day life as a student and as a professional in his career.

CO 3 Identify the basic tenets of leadership and to become a worthy professional.

CO 4 Relate codes of different professional bodies.

CO 5 Understand job satisfaction.

UNIT-I **(6 Lectures)**

BASIC HUMAN VALUES:

'Be a Human First and then one can become a good Professional'; so the basic Human Values-Truth, Right Conduct (Righteousness), Love, Non-violence and Peace, Humility and character. What is ethics? Core areas of ethics: Social ethics, personal ethics Integrity and Trustworthiness, Honesty, Loyalty, Courage, Prudence, Confidence, Confidentiality.

Spirit of Nationalism and Patriotism with examples from 'struggle for Freedom' (Case studies in the lives of Mahatma Gandhi & His team who strived for Freedom from the British, Scientists and Engineers like Bhaha, Sarabhai, Dhavan, Abdul J Kalam, and Benjamin Franklin, Martin Luther King, or any renowned personalities) Self study and debate.

What is a profession? Who is a Professional? Special criteria to meet the definition of professional, criteria to be a 'professional engineer (Pages 24-36) of Mike W Martin and Roland Schinzinger)

Personal ethics-Social ethics and professional ethics – are they different-How would you distinguish? –A debate

General and Applied ethics, Relationship between these two in day-to-day functioning of an Engineering Professional- (Pages 10-12 of Mike W Martin and Roland Schinzinger)

UNIT-II (6 Lectures)

PROFESSIONAL AND ENGINEERING ETHICS:

Why Engineering ethics? Moral issues encountered by professional engineers during their day-to-day operations both at home and office/ workplace- Moral problems that frequently arise in ones Profession, (case studies from Chapter 1 pages 2-9, analysis of the case studies on pages 13 &14)

MORAL AUTONOMY:

Moral integrity and social and professional behavior. Different theories proposed under moral autonomy-Kohlberg's and Gilligan's Theory. Heinz's Dilemma- Motive behind aggression (16-23 Pages)

THEORY ABOUT MORALITY:

Virtue ethics, Utilitarianism, Duty ethics, Right ethics based on the concepts of Virtues and vices, most good for most people, Duties to respect for persons, Human rights respectively (pages 53-61, Study Questions for analysis and discussion on pages 60 &61)

Responsibility and accountability while dealing with public issues such as safety, risk, hazards, Risk Analysis and assessment-a brief

discussion (risk assessment problem on Page (Chapter 4, specified topics and Case studies)

(Present the case studies on Challenger space shuttle(97), Chernobyl (173), Bhopal tragedy (299), Titanic disaster (p 83), SLV-3, the Indian Space Shuttle (Wings of Fire) recent nuclear holocaust in Japan recent floods and other man-made and natural calamities or accidents we come across frequently in our society)

Environmental ethics (304-308) & Computer ethics 319-323328-330) (All Pages from Mike W Martin and Roland Schinzinger)

UNIT-III (6 Lectures)

RESPONSIBILITIES AND RIGHTS OF ENGINEERS:

Collegiality (Ones attitude) towards other engineers working in the same Organization or outside) and Loyalty (to the Employer), obligation of Loyalty and misguided loyalty, Respect for authority and its limitations, Bootlegging, Collective bargaining, Commitments and Convictions (APJ Abdul Kalam's "Wings of Fire") Confidentiality while changing jobs, Conflicts of interests, Gifts, bribes, kickbacks -case studies related, Occupational Crime and industrial espionage Whistle blowing and moral guide line (case studies), Discrimination, preferential treatment and harassment Rights of Engineers (page 284-286) Engineers as Managers and leaders promoting ethical climate (350-358) –Ethics in Engineering by Mike W Martin and Roland Schinzinger)

Code of ethics for Engineers, Organizational Culture, and Guidelines for use with the Fundamental canons of ethics; (pages 142-162 Indian Culture and Professional Ethics by P S R Murty and 399-414 0f Mike W Martin and Roland Schinzinger)

PROFESSIONAL BODIES:

IEEE, IETE, IE, ASME, ASCE, ABET, NSPE, ISTE, IIChE Etc…

{** Any topic can be discussed and debated with known live examples and illustrations we find in our day-to-day -living circumstances.}

TEXT BOOKS:

1. Mike W Martin and Ronald Schinzinger : "Ethics in Engineering", 3rd Edition, Tata McGraw Hill Education Pvt. Ltd., 2003.
2. P S R Murthy : "Indian Culture, Values and Professional Ethics", 2nd Edition, B S Publications, Hyderabad. 2013.

REFERENCES:

1. M. Govindarajan, S Natarajan and V.S. Senthil Kumar : "Engineering Ethics and Human Values", 1st Edition, PHI Publications , 2013.
2. A. Alavudden, R. Kalil Rahaman & M . Jayakumaran : "Professional Ethics & Human Values", 1st Edition, University Science Press (An Imprint of Laxmi Publications Pvt Ltd., Chennai, Bangalore. 2008.
3. Lieunt Gen Dr. M. L. Chibber : "Leadership-Education in Human Values", Sri Sathya Sai Books and Publications Trust, Prasantinilayam, 1st Edition, 2009.
4. Kalam A P J : "Wings of Fire", Universities Press Publications, 2013.
5. Charles B. Fleddermann : "Engineering Ethics", 4th Edition, PHI, 2012.