

## PROFESSIONAL ETHICS

(Common to all Branches)

**Course Code: 13NM1101**

<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>

### Course Educational Objectives:

- ❖ To educate and make the young generation students aware of their Social responsibilities make an Endeavour to tell them first we are humans and then we are scientists, engineers, technocrats and professionals.
- ❖ To make students accountable to whatever job they do whether it is less paid or heavily paid.
- ❖ To inculcate a spirit of togetherness, unity and team work in an organization.
- ❖ To make him reasonably a ‘good’ professional conscious of his duties to the society that graced this wonderful life.
- ❖ To induce the spiritual aspect of life in one’s own practical and real life.
- ❖ To give an overview of a decent, dignified, humane, dedicated professional with a sense of social responsibility and security.

### Course Outcomes:

By the end of this course, it is expected that the student will be able to

- ❖ Deal with complex situations while dealing with the people in the society (parents, friends, and co-professionals) in making the work environment congenial, encouraging and loving.
- ❖ Discriminate when he is forced through certain undesirable and ambiguous situations either in his day today life as a student and as a professional in his career further.
- ❖ Understand the basics regarding the leadership and to become a conscious professional.

- ❖ Be aware of codes of professional bodies.
- ❖ Implement these concepts in one's career for achieving excellent 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.

Character: definition, 'A bundle of Virtues and weaknesses of Head and Heart- the resulting individuality of a person from the balance sheet of 'good' and 'bad qualities' is his/her character.

### TRAITS OF GOOD CHARACTER:

Honesty and integrity, sense of duties and obligations to one's own profession, Adherence to truth and principles, excellent team work with a good rapport with the subordinates and colleagues, self-discipline, Responsibilities and accountability, self-lessness. Unity in thought, word and deed (Case studies relating to these aspects can be drawn from history & epics or from one's own experience)

Human values as practiced in the Indian societal context-past and present. (Examples drawn from any standard scriptures and many other sources available may be illustrated, debated and discussed).

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 Bhabha, Sarabhai, Dhavan, Abdul J Kalam, and Benjamin Franklin, Martin Luther King, or any renowned personalities)

## UNIT-II

(6 Lectures)

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)

The 5 Ds (Discipline, Devotion, Dedication, Discrimination and Determination) against 3 Ps (Pay-Prospects and Promotion)

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)

### **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)

### **LEADERSHIP IN PROFESSIONALISM:**

Characteristics of a Leader? Case studies and examples (Leadership by Dr M L Chibber)

## **UNIT-III**

**(6 Lectures)**

Religion and Ethics and Morals-Debate and discussion- Spirituality, social consciousness and ethics

### **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)

Engineering Profession as a social responsibility, His 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-IV**

**(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)

Selected topics from Ch 5 and 6 and case studies on pages 200-201,

## **UNIT-V**

**(6 Lectures)**

Engineers as Managers and leaders promoting ethical climate (350-358)  
–Ethics in Engineering by Mike W Martin and Roland Schinzinger)

Why a code of Ethics for professional Engineers? (‘A code of ethics is not something you post on the Bulletin board; it is something you live every day in your life and career)

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 Of Mike W Martin and Roland Schinzinger)

### **PROFESSIONAL BODIES:**

IEEE, IETE, IE, ASME, ASCE, ABET, NSPE, ISTE 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 Engineering*”, 3<sup>rd</sup> Edition, Tata McGraw Hill Education Pvt. Ltd., 2003.
2. P S R Murthy : “*Indian Culture Values and Professional Ethics*”, 2<sup>nd</sup> Edition, B S Publications, Hyderabad. 2013.

### REFERENCES:

1. M. Govindarajan, S Natarajan and V.S. Senthil Kumar : “*Engineering Ethics and Human Values*”, 1<sup>st</sup> Edition, PHI Publications , 2013.
2. A. Alavudden, R. Kalil Rahaman & M . Jayakumaran : “*Professional Ethics & Human Values*”, 1<sup>st</sup> 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, 1<sup>st</sup> Edition, 2009.
4. Kalam A P J : “*Wings of Fire*”, Universities Press Publications, 2013.
5. Charles B. Fleddermann : “*Engineering Ethics*”, 4<sup>th</sup> Edition, PHI, 2012.

