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GE8076
Professional Ethics

Department: CSE
Batch/Year:2017-21/IV
Created by: Ms.S.SRIJAYANTHI
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2. COURSE OBJECTIVES

- **To enable the students to create an awareness on Engineering Ethics and Human Values**

- **To instill Moral and Social Values and Loyalty and to appreciate the rights of others.**

3. PRE REQUISITES

- **Ethics in engineering practice is about professional responsibilities of engineers.**

- **Professional ethics have been recognized as an important foundation in the practice of engineering for several decades in many industrialized countries.**

4. SYLLABUS

GE8076   PROFESSIONAL ETHICS IN ENGINEERING

UNIT I   HUMAN VALUES

Morals, values and Ethics – Integrity – Work ethic – Service learning – Civic virtue – Respect for others – Living peacefully – Caring – Sharing – Honesty – Courage – Valuing time – Cooperation – Commitment – Empathy – Self confidence – Character – Spirituality – Introduction to Yoga and meditation for professional excellence and stress management.

UNIT II   ENGINEERING ETHICS

Senses of ‗Engineering Ethics' – Variety of moral issues – Types of inquiry – Moral dilemmas – Moral Autonomy – Kohlberg's theory – Gilligan's theory – Consensus and Controversy – Models of professional roles - Theories about right action – Self-interest – Customs and Religion – Uses of Ethical Theories.

UNIT III   ENGINEERING AS SOCIAL EXPERIMENTATION

Engineering as Experimentation – Engineers as responsible Experimenters – Codes of Ethics – A Balanced Outlook on Law.

UNIT IV   SAFETY, RESPONSIBILITIES AND RIGHTS

Safety and Risk – Assessment of Safety and Risk – Risk Benefit Analysis and Reducing Risk - Respect for Authority – Collective Bargaining – Confidentiality – Conflicts of Interest – Occupational Crime – Professional Rights – Employee Rights – Intellectual Property Rights (IPR) – Discrimination.

UNIT V   GLOBAL ISSUES

Multinational Corporations – Environmental Ethics – Computer Ethics – Weapons Development – Engineers as Managers – Consulting Engineers – Engineers as Expert Witnesses and Advisors – Moral Leadership –Code of Conduct – Corporate Social Responsibility.

5. COURSE OUTCOMES

CO	Course outcome(CO) – Statements
CO1	Create awareness on human values and apply ethics in society.
CO2	Identify an ethical issue and assess variety of moral issues using ethical theories in engineering.
CO3	Analyze engineering, social experimentation and engineers as responsible experimenters
CO4	Realize engineers' safety and their responsibilities, professional rights, employee rights, and intellectual property rights.
CO5	Interpret various types of ethics like business ethics, environmental ethics and computer ethics.
CO6	Take part an engineers as managers, consulting engineers, engineers as expert witness and advisors.

6. CO- PO/PSO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	-	-	-	-	-	3	3	3	3	3	-	3
2	-	-	-	-	-	3	3	3	3	3	-	3
3	-	-	-	-	-	3	3	3	3	3	-	3
4	-	-	-	-	-	3	3	3	3	3	-	3
5	-	-	-	-	-	3	3	3	3	3	-	3
6	-	-	-	-	-	3	3	3	3	3	-	3

	PSO1	PSO2	PSO3
CO1	-	-	-
CO2	-	-	-
CO3	-	-	-
CO4	-	-	-
CO5	-	-	-
CO6	-	-	-

UNIT I - HUMAN VALUES

7. LECTURE PLAN

	UNIT - HUMAN VALUES						
S. No.	Topic	Total No. Of Periods	Proposed Date	Actual Lecture Date	Pertaining CO	Taxonomy Level	Mode of Delivery
1	Morals, values and Ethics	1			CO1	K1	PPT
2	Integrity – Work ethic	1			CO1	K1	PPT
3	Service learning – Civic virtue – Respect for others	1			CO1	K2	PPT
4	Living peacefully – Caring – Sharing – Honesty	1			CO1	K2	PPT
5	Courage – Valuing time	1			CO1	K2	PPT
6	Cooperation – Commitment – Empathy	1			CO1	K2	PPT
7	Self confidence – Character	1			CO1	K2	PPT
8	Spirituality	1			CO1	K2	PPT
9	Introduction to Yoga and meditation for professional excellence and	1			CO1	K2	PPT
10	stress management.	1			CO1	K3	PPT

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8. ACTIVITY BASED LEARNING

Case Study 1.

A fresh engineering graduate gets a job in a prestigious chemical industry. She likes the work. The salary is also good. However, after a few months she accidentally discovers that a highly toxic waste is being secretly discharged into a river nearby. This is causing health problems to the villagers downstream who depend on the river for their water needs. She is perturbed and mentions her concern to her colleagues who have been with the company for longer periods. They advise her to keep quite as anyone who mentions the topic is summarily dismissed. She cannot risk losing her job as she is the sole bread-winner for her family and has to support her ailing parents and siblings. At first, she thinks that if her seniors are keeping quiet, why should she stick out her neck. But her conscience pricks her to do something to save the river and the people who depend upon it. At heart she feels that the advice of silence given by her friends is not correct though she cannot give reasons for it. She thinks you are a wise person and seeks your advice.

a) What arguments can you advance to show her that keeping quiet is not morally right?

(b) What course of action would you advice her to adopt and why?

Case Study 2.

A junior member of staff has just returned to work after taking special leave to care for her elderly mother. For financial reasons she needs to work full-time. She has been having difficulties with her mother's home care arrangements, causing her to miss a number of team meetings (which usually take place at the beginning of each day) and to leave work early. She is very competent in her work but her absences are putting pressure on her and her overworked colleagues. You are her manager, and you are aware that the flow of work through the practice is coming under pressure. One of her male colleagues is beginning to make comments such as "a woman's place is in the home", and is undermining her at every opportunity, putting her under even greater stress.

How should you proceed so as not to discredit yourself, your **profession** *or the practice for which you work and at the same time maintaining* **integrity** *and* **confidentiality** *in your actions?*

9. LECTURE NOTES
UNIT I   HUMAN VALUES

OBJECTIVES

The objectives of this course on 'Professional Ethics and Human Values' are:

(*a*) to understand the moral values that ought to guide the Engineering profession,

(*b*) resolve the moral issues in the profession, and

(*c*) justify the moral judgment concerning the profession. It is intended to develop a set of beliefs, attitudes, and habits that engineers should display concerning morality.

The prime objective is to increase one's ability to deal effectively with moral complexity in engineering practice.

The objectives of the study on Professional Ethics may be listed as:

A) Improvement of the cognitive skills (skills of the intellect in thinking clearly)

1. Moral awareness (proficiency in recognizing moral problems in engineering)
2. Cogent moral reasoning (comprehending, assessing different views)
3. Moral coherence (forming consistent viewpoints based on facts)
4. Moral imagination (searching beyond obvious the alternative responses to issues and being receptive to creative solutions)
5. Moral communication, to express and support one's views to others.

B) To *act* in morally desirable ways, towards moral commitment and responsible conduct

1. Moral reasonableness i.e., willing and able to be morally responsible.
2. Respect for persons, which means showing concern for the well-being of others, besides oneself.
3. Tolerance of diversity i.e., respect for ethnic and religious differences, and acceptance of reasonable differences in moral perspectives.
4. Moral hope i.e., believe in using rational dialogue for resolving moral conflicts.
5. Integrity, which means moral integrity, and integrating one's professional life and personal convictions.

LECTURE NOTES

MORALS

❀ Morals are the welfare principles enunciated by the wise people, based on their experience and wisdom.

❀ They were edited, changed or modified or evolved to suit the geography of the region, rulers (dynasty), and in accordance with development of knowledge in science and technology and with time.

❀ Morality is concerned with principles and practices of morals such as:

❀ (*a*) What ought or ought not to be done in a given situation?

❀ (*b*) What is right or wrong about the handling of a situation? and

❀ (*c*) What is good or bad about the people, policies, and ideals involved?

❀ Morality is different from Ethics in the following ways:

Morality	Ethics
1. More general and prescriptive based on customs and traditions.	1. Specific and descriptive. It is a critical reflection on morals.
2. More concerned with the results of wrong action, when done.	2. More concerned with the results of a right action, when not done.
3. Thrust is on judgment and punishment, in the name of God or by laws.	3. Thrust is on influence, education, training through codes, guidelines, and correction.
4. In case of conflict between the two, morality is given top priority, because the damage is more. It is more common and basic.	4. Less serious, hence second priority only. Less common. But relevant today, because of complex interactions in the modern society.
5. Example: Character flaw, corruption, extortion, and crime.	5. Example: Notions or beliefs about manners, tastes, customs, and towards laws.

LECTURE NOTES

VALUES

Definition

❀ Humans have the unique ability to define their identity, choose their values and establish their beliefs. All three of these directly influence a person's behavior.

❀ *A value is defined as a principle that promotes well-being or prevents harm."*

❀ *Values are our guidelines for our success—our paradigm about what is acceptable."*

❀ Personal values are defined as: "*Emotional beliefs in principles regarded as particularly favorable or important for the   individual."*

❀ *"Values are the scales we use to weigh our choices for our actions, whether to move towards or away from something."*

Not all values have the same weight or priority. Some are more important than others and must be satisfied before others can be addressed. **Dr. Abraham Maslow** illustrated this with his hierarchy of human needs. Survival has a higher priority than security, which has a higher priority than social acceptance. Self-esteem can only be addressed to the degree that social acceptance is fulfilled. Similarly, self-actualization can only be pursued to the degree that self-esteem has been satisfied.

A person's beliefs, values and identity are usually acquired unconsciously based on his personal experience or observations of others' experiences as to what produces desirable or undesirable results in the environment.

Types of Values

❀ The five core human values are: (1) Right conduct, (2) Peace, (3) Truth, (4) Love, and (5) Non- violence.

1. Values related to RIGHT CONDUCT are:

    ❀ SELF-HELP SKILLS: Care of possessions, diet, hygiene, modesty, posture, self reliance, and tidy appearance

    ❀ SOCIAL SKILLS: Good behavior, good manners, good relationships, helpfulness, No wastage, and good environment, and

    ❀ ETHICAL SKILLS: Code of conduct, courage, dependability, duty, efficiency, ingenuity, initiative, perseverance, punctuality, resourcefulness, respect for all, and responsibility

2. Values related to PEACE are: Attention, calmness, concentration, contentment, dignity, discipline, equality, equanimity, faithfulness, focus, gratitude, happiness, harmony, humility, inner silence, optimism, patience, reflection, satisfaction, self-acceptance, self-confidence, self-control, self-discipline, self-esteem, self-respect, sense control, tolerance, and understanding

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LECTURE NOTES

3. Values related to TRUTH are: Accuracy, curiosity, discernment, fairness, fearlessness, honesty, integrity (unity of thought, word, and deed), intuition, justice, optimism, purity, quest for knowledge, reason, self-analysis, sincerity, sprit of enquiry, synthesis, trust, truthfulness, and determination.

4. Values related to LOVE are: Acceptance, affection, care, compassion, consideration, dedication, devotion, empathy, forbearance, forgiveness, friendship, generosity, gentleness, humanness, interdependence, kindness, patience, patriotism, reverence, sacrifice, selflessness, service, sharing, sympathy, thoughtfulness, tolerance and trust

5. Values related to NON-VIOLENCE are:

   ❀PSYCHOLOGICAL: Benevolence, compassion, concern for others, consideration, forbearance, forgiveness, manners, happiness, loyalty, morality, and universal love

   ❀SOCIAL: Appreciation of other cultures and religions, brotherhood, care of environment, citizenship, equality, harmlessness, national awareness, perseverance, respect for property, and social justice.

PERSEVERANCE

❀ is defined as persistence, determination, resolution, tenacity, dedication, commitment, constancy, steadfastness, stamina, endurance and indefatigability.

❀ To persevere is described as to continue, carry on, stick at it (in formal), keep going, persist, plug away, (informal), remain, stand firm, stand fast, hold on and hang on. Perseverance builds character.

ACCURACY

❀ means freedom from mistake or error; conformity to truth or to a standard or model and exactness.

❀ Accuracy is defined as correctness, exactness, authenticity, truth, veracity, closeness to truth (true value) and carefulness.

❀ The value of accuracy embraces a large area and has many implications. Engineers are encouraged to demonstrate accuracy in their behavior through the medium of praise and other incentives.

❀ Accuracy includes telling the truth, not exaggerating, and taking care over one's work.

DISCERNMENT

❀ means discrimination, perception, penetration, and insight. Discernment means the power to see what is not obvious to the average mind.

❀ It stresses accuracy, especially in reading character or motives. Discrimination stresses the power to distinguish or select what is true or genuinely excellent.

LECTURE NOTES

Evolution of Human Values

The human values evolve because of the following factors:

1. The impact of norms of the society on the fulfillment of the individual's needs or desires.
2. Developed or modified by one's own awareness, choice, and judgment in fulfilling the needs.
3. By the teachings and practice of Preceptors (Gurus) or Saviors or religious leaders.
4. Fostered or modified by social leaders, rulers of kingdom, and by law (government).

ETHICS

- Ethics is the word that refers to morals, values, and beliefs of the individuals, family or the society. Basically it is an activity and process of inquiry.

- Secondly, it is different from non-moral problems, when dealing with issues and controversies.

- Thirdly, ethics refers to a particular set of beliefs, attitudes, and habits of individuals or family or groups concerned with morals.

- Fourth, it is used to mean 'morally correct'.
  - The study on ethics helps to know the people's beliefs, values, and morals, learn the good and bad of them, and practice them to maximize their well-being and happiness.
  - It involves the inquiry on the existing situations, form judgments and resolve the issues.
  - In addition, ethics tells us how to live, to respond to issues, through the duties, rights, responsibilities, and obligations.
  - In religion, similar principles are included, but the reasoning on procedures is limited. The principles and practices of religions have varied from to time to time (history), region (geography, climatic conditions), religion, society, language, caste and creed. But ethics has grown to a large extent beyond the barriers listed above.
  - In ethics, the focus is to study and apply the principles and practices, universally.

LECTURE NOTES

INTEGRITY

❀ Integrity is defined as the unity of thought, word and deed (honesty) and open mindedness.

❀ It includes the capacity to communicate the factual information so that others can make well-informed decisions.

❀ It yields the person's 'peace of mind', and hence adds strength and consistency in character, decisions, and actions. This paves way to one's success.

❀ It is one of the self-direction virtues. It enthuse people not only to execute a job well but to achieve excellence in performance. It helps them to own the responsibility and earn self-respect and recognition by doing the job.

❀ Moral integrity is defined as a virtue, which reflects a consistency of one's attitudes, emotions, and conduct in relation to justified moral values.

WORK ETHICS

❀ Industry and Society are the two systems which interact with each other and are interdependent.

❀ Society requires industry/business system which provides manufacturing, distribution and consumption activities. It needs investment (capital input), labor (input), supply (raw materials), production (industries, business organizations), marketing and distribution (transport), and consumption (public, customer).

❀ A lot of transactions (and interactions) between these sub-systems involving people are needed for the welfare of the society. It is here, the work ethics plays an essential role.

❀ Work ethics is defined as *a set of attitudes concerned with the value of work, which forms the motivational orientation*.

The 'work ethics' is aimed at ensuring the economy (get job, create wealth, earn salary), productivity (wealth, profit), safety (in workplace), health and hygiene (working conditions), privacy (raise family), security (permanence against contractual, pension, and retirement benefits), cultural and social development (leisure, hobby, and happiness), welfare (social work), environment (anti-pollution activities), and offer opportunities for all, according to their abilities, but without discrimination.

LECTURE NOTES

Many complex social problems exist in the industrial/business scenario, because:

❖ The people desire to be recognized as individuals and treated with dignity, as living human beings. Work is intrinsically valuable so far as it is enjoyable or meaningful in allowing personal expression and self-fulfillment. Meaningful work is worth doing for the sense of personal identity and the self-esteem it holds.

❖ Economic independence: Work is the major instrumental good in life. It is the main source of providing the income needed to avoid economic dependence on others, for obtaining desired materials and services, and for achieving status and recognition from others.

❖ Pay as well as the pace of work should be in commensurate with the expertise required, acquired, and utilized in the persons. Exploitation and bargained pay should be discouraged.

❖ Privacy (personal freedom) of the employee, including women, is to be protected. At the same time, confidentiality of the employer is also to be protected. Mutual trust and loyalty both ways play major roles in this aspect.

❖ Security during job and upon retirement: This concept is being accepted only in government jobs, public limited companies, and corporate organizations. The western thought has influenced the Indian private industries and multinationals in a paradigm shift from 'life- long employment' to policies such as 'merit only', 'hire and fire', 'pay and use' etc. This situation has no doubt created tension in the Indian scene.

❖ Recognition to non-work activities, such as leisure, paid holiday on the day of visit of a dignitary, social service, and other developmental activities. The workers in prosperous countries are less willing to consider 'work' as their prime interest in life. They claim that such service activities give them peace of mind and happiness. However, such a trend is likely to decline the work ethics.

❖ Hard work and productivity are very essential for the success of an industry. The quality of work life deserves to be improved. Hard labor, undignified jobs (human-drawn *rikshaw*, people carrying night soil), and hazardous jobs are to be made less straining, dignified, and safer. Automation and CNC systems to a large extent have been successful in lessening the human burden. Still, many a hard work can not be replaced by 'virtual work', in the near future.

❖ Employee alienation: Absence of or inadequate 'recognition and reward system' and 'grievance redressal system', lack of transparency in policy implementation, factions in trade unions etc. lead to ethical problems, affecting the work ethics. Participative management, quality circles, job rotation, and flexible working hours are some of the measures to counter this situation.

LECTURE NOTES

❁ A different view of work ethics: Work is considered as a necessary evil. It is a thing one must do in order to avoid worse evils, such as dependency and poverty. That is a major source of anxiety and unhappiness.

❁ As per the Protestant Work Ethics, the financial success is a sign that is favored by God. It means making maximal profit is a duty mandated by God. It is to be obtained rationally, diligently, and without compromising with other values such as spending time with one's family and not exploiting or harming others

By work ethics, duties to the self, family, society, and nation are fulfilled. Rights of the individuals are respected and nourished. Values and virtues are cultivated and enjoyed by all human beings. Further, the quality of life is improved and the environment protected. On the other hand, unemployment and under-employment lead to frustration, social tensions, and occasional militancy. For a developing economy and society, like ours, we need to *promote work ethics*, at all levels, to flourish as developed nation.

SERVICE LEARNING

❁ Service learning refers to learning the service policies, procedures, norms, and conditions, other than 'the technical trade practices'.

❁ The service learning includes the characteristics of the work, basic requirements, security of the job, and awareness of the procedures, while taking decisions and actions.

❁ It helps the individuals to interact ethically with colleagues, to effectively coordinate with other departments, to interact cordially with suppliers as well as the customers, and to maintain all these friendly interactions.

❁ Alternatively, the service learning may be defined as the *non-paid activity*, in which service is provided on voluntary basis to the public (have-nots in the community), non-profitable institutions, and charitable organizations.

❁ The service learning is a methodology falling under the category of experiential education. It is one of the forms of experiential learning and community service opportunities. It is distinguished in the following ways:

1. *Connection to curriculum*: Integrating the learning into a service project is a key to successful service learning. Academic ties should be clear and built upon existing disciplinary skills.

2. *Learner's voice*: Beyond being actively engaged in the project, trainees have the opportunity to select, design, implement, and evaluate their service activity.

3. *Reflection*: Structured opportunities are created to think, talk, and write about the service experience. The balance of reflection and action allows the trainee to be constantly aware of the impact of their *work*.

4. *Partners in the community*: Partnership with community agencies are used to identify genuine needs, provide mentorship, and contribute input such as labor and expertise towards completing the project.

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LECTURE NOTES

VIRTUES

- Virtues are *positive* and *preferred* values.

- Virtues are desirable attitudes or character traits, motives and emotions that enable us to be successful and to act in ways that develop our highest potential.

- They energize and enable us to pursue the ideals that we have adopted. Honesty, courage, compassion, generosity, fidelity, integrity, fairness, transparency, self-control, and prudence are all examples of virtues.

- Virtues are tendencies which include, solving problems through peaceful and constructive means and follow the path of the golden mean between the extremes of 'excess and deficiency'.

- They are like habits, once acquired, they become characteristics of a person. Moreover, a person who has developed virtues will naturally act in ways consistent with moral principles. The virtuous person is the ethical person.

Civic Virtues

Civic virtues are the moral duties and rights, as a citizen of the village or the country or an integral part of the society and environment. An individual may exhibit civic virtues by voting, volunteering, and organizing welfare groups and meetings.

- The duties are:
    - To pay taxes to the local government and state, in time.
    - To keep the surroundings clean and green.
    - Not to pollute the water, land, and air by following hygiene and proper garbage disposal. For example, not to burn wood, tyres, plastic materials, spit in the open, even not to smoke in the open, and not to cause nuisance to the public, are some of the civic (duties) virtues.
    - To follow the road safety rules.

- On the other hand, the rights are:

- To vote the local or state government.

- To contest in the elections to the local or state government.

- To seek a public welfare facility such as a school, hospital or a community hall or transport or communication facility, for the residents.

- To establish a green and safe environment, pollution free, corruption free, and to follow ethical principles. People are said to have the right to breathe in fresh air, by not allowing smoking in public.

- People have inalienable right to accept or reject a project in their area. One has the right to seek legal remedy, in this respect, through public interest petition

LECTURE NOTES

These virtues are divided into four categories:

Civic Knowledge

❀Citizens must understand what the Constitution says about how the government is working, and what the government is supposed to do and what not to do.

❀ We must understand the basis of our responsibilities as citizens, besides duties and rights.

❀We must be able to recognize when the government or another citizen infringes upon our rights.

❀It implies that the government requires the participation of the enlightened citizens, to serve and survive

Self-Restraint

For citizens to live in a free society with limited government each citizen must be able to control or restrain himself; otherwise, we would need a police state—that is, a dictatorial government to maintain safety and order.

Self-Assertion

Self-assertion means that citizens must be proud of their rights, and have the courage to stand up in public and defend their rights. Sometimes, a government may usurp the very rights that it was created to protect. In such cases, it is the right of the people to alter or abolish that government (e.g., voting rights, rights call back).

Self-Reliance

Citizens who cannot provide for themselves will need a large government to take care of them.

Once citizens become dependent on government for their basic needs, the people are no longer in a position to demand that government act within the confines of the Constitution.

Self-reliant citizens are free citizens in the sense that they are not dependent on others for their basic needs.

They do not need a large provider-government, which has the potential to become an oppressive government, to meet those needs.

Only a strong self-reliant citizenry will be able to enjoy fully the blessings of liberty. These civic virtues, applicable to local, state, and central governments, nourish freedom and civil liberty at the root of democracy.

LECTURE NOTES

RESPECT FOR OTHERS

❀ This is a basic requirement for nurturing friendship, team work, and for the synergy it promotes and sustains. The principles enunciated in this regard are:

❀ Recognize and accept the existence of other persons as human beings, because they have a right to live, just as you have.

❀ Respect others' ideas (decisions), words, and labor (actions). One need not accept or approve or award them, but shall listen to them first. One can correct or warn, if they commit mistakes. Some people may wait and watch as fun, if one falls, claiming that they know others' mistakes before and know that they will fall! Appreciate colleagues and subordinates on their positive actions. Criticize constructively and encourage them. They are bound to improve their performance, by learning properly and by putting more efforts.

❀ Show 'goodwill' on others. Love others. Allow others to grow. Basically, the goodwill reflects on the originator and multiplies itself on everybody. This will facilitate collinearity, focus, coherence, and strength to achieve the goals.

LIVING PEACEFULLY

To live peacefully, one should start install peace within (self). Charity begins at home. Then one can spread peace to family, organisation where one works, and then to the world, including the environment. Only who are at peace can spread peace.

One should adopt the following means to live peacefully, in the world:

Nurture

❀ Order in one's life (self-regulation, discipline, and duty).
❀ Pure thoughts in one's soul (loving others, blessing others, friendly, and not criticizing or hurting others by thought, word or deed).
❀ Creativity in one's head (useful and constructive).
❀ Beauty in one's heart (love, service, happiness, and peace).

Get

❀ Good health/body (physical strength for service).

Act

❀ Help the needy with head, heart, and hands (charity). Service to the poor is considered holier than the service to God.
❀ Not hurting and torturing others either physically, verbally, or mentally.

LECTURE NOTES

- The following are the factors that promote living, with internal and external peace:
    - Conducive environment (safe, ventilated, illuminated and comfortable).
    - Secured job and motivated with 'recognition and reward'.
    - Absence of threat or tension by pressure due to limitations of money or time.
    - Absence of unnecessary interference or disturbance, except as guidelines.
    - Healthy labor relations and family situations.
    - Service to the needy (physically and mentally-challenged) with love and sympathy.

CARING

- Caring is feeling for others.

- It is a process which exhibits the interest in, and support for, the welfare of others with fairness, impartiality and justice in all activities, among the employees, in the context of professional ethics.

- It includes showing respect to the feelings of others, and also respecting and preserving the interests of all others concerned.

- Caring is reflected in activities such as friendship, membership in social clubs and professional societies, and through various transactions in the family, fraternity, community, country and in international councils.
    - In the present day context, caring for the environment (including the *fauna and flora*) has become a necessity for our very survival.

SHARING

- Caring influences 'sharing'.

- Sharing is a process that describes the transfer of knowledge (teaching, learning, and information), experience (training), commodities (material possession) and facilities with others.

- The transfer should be genuine, legal, positive, voluntary, and without any expectation in return. However, the proprietary information it should not be shared with outsiders.

- Through this process of sharing, experience, expertise, wisdom and other benefits reach more people faster.

- Sharing is voluntary and it can not be driven by force, but motivated successfully through ethical principles. In short, sharing is 'charity'

LECTURE NOTES

- For the humanity, 'sharing' is a *culture*. The 'happiness and wealth' are multiplied and the 'crimes and sufferings' are reduced, by sharing.

- Sharing not only paves the way to prosperity, early and easily, and sustains it. Economically speaking, benefits are maximized as there is no wastage or loss, and everybody gets one's needs fulfilled and satisfied. Commercially speaking, the profit is maximized. Technologically, the productivity and utilization are maximized by sharing.

- In the industrial arena, code-sharing in airlines for bookings on air travels and the common Effluent Treatment Plant constructed for small-scale industries in the industrial estates, are some of the examples of sharing. The co-operative societies for producers as well as consumers are typical examples of sharing of the goods, profit and other social benefits.

HONESTY

- Honesty is a virtue, and it is exhibited in two aspects namely,

- Truthfulness and

- Trustworthiness.

- Truthfulness is to face the responsibilities upon telling truth. One should keep one's word or promise. By admitting one's mistake committed (one needs courage to do that!), it is easy to fix them. Reliable engineering judgment, maintenance of truth, defending the truth, and communicating the truth, only when it does 'good' to others, are some of the reflections of truthfulness. But trustworthiness is maintaining integrity and taking responsibility for personal performance. People abide by law and live by mutual trust. They play the right way to win, according to the laws or rules (legally and morally). They build trust through reliability and authenticity. They admit their own mistakes and confront unethical actions in others and take tough and principled stand, even if unpopular.

- Honesty is mirrored in many ways. The common reflections are:

- Beliefs (intellectual honesty).

- Communication (writing and speech).

- Decisions (ideas, discretion).

- Actions (means, timing, place, and the goals). and

- Intended and unintended results achieved.

some of the actions of an engineer that leads to dishonesty are:

❀*Lying*: Honesty implies avoidance of lying. An engineer may communicate wrong or distorted test results intentionally or otherwise. It is giving *wrong* information to the *right* people.

❀*Deliberate deception*: An engineer may judge or decide on matters one is not familiar or with insufficient data or proof, to impress upon the customers or employers. This is a self deceit.

❀*Withholding the information*: It means hiding the facts during communication to one's superior or subordinate, intentionally or otherwise.

❀*Not seeking the truth*: Some engineers accept the information or data, without applying their mind and seeking the truth.

❀*Not maintaining confidentiality*: It is giving *right* information to *wrong* people. The engineers should keep information of their customers/clients or of their employers confidential and should not discuss them with others.

❀Giving professional judgment under the influence of extraneous factors such as personal benefits and prejudice. The laws, experience, social welfare, and even conscience are given a go-bye by such actions. Certainly this is a higher-order crime.

COURAGE

❀Courage is the tendency to accept and face risks and difficult tasks in rational ways. Self-confidence is the basic requirement to nurture courage.

❀Courage is classified into three types, based on the types of risks, namely

❀Physical courage,

❀Social courage, and

❀Intellectual courage.

In physical courage, the thrust is on the adequacy of the physical strength, including the muscle power and armaments. People with high adrenalin, may be prepared to face challenges for the mere 'thrill' or driven by a decision to 'excel'.

The social courage involves the decisions and actions to change the order, based on the conviction for or against certain social behaviors. This requires leadership abilities, including empathy and sacrifice, to mobilize and motivate the followers, for the social cause.

The intellectual courage is inculcated in people through acquired knowledge, experience, games, tactics, education, and training. In professional ethics, courage is applicable to the employers, employees, public, and the press.

LECTURE NOTES

Facing the criticism, owning responsibility, and accepting the mistakes or errors when committed and exposed are the expressions of courage. In fact, this sets their mind to be vigilant against the past mistakes, and creative in finding the alternate means to achieve the desired objectives. Prof. Sathish Dhawan, Chief of ISRO, was reported to have exhibited his courage and owned responsibility, when the previous space mission failed, but credited Prof. A.P.J. Abdul Kalam (now our revered President), when the subsequent mission succeeded.

The courageous people own and have shown the following characteristics, in their professions:

* Perseverance (sustained hard work),

* Experimentation (preparedness to face the challenges, that is, unexpected or unintended results),

* Involvement (attitude, clear and firm resolve to act), and

* Commitment (willing to get into action and to reach the desired goals by any alternative but ethical means).

VALUING TIME

* Time is rare resource. Once it is spent, it is lost for ever. It can not be either stored or recovered. Hence, time is the most perishable and most valuable resource too. This resource is continuously spent, whether any decision or action is taken or not.

* The history of great reformers and innovators have stressed the importance of time and valuing time. The proverbs, 'Time and tide wait for nobody' and 'Procrastination is the thief of time' amply illustrate this point.

COOPERATION

* It is a team-spirit present with every individual engaged in engineering. Co-operation is activity between two persons or sectors that aims at integration of operations (synergy), while not sacrificing the autonomy of either party. Further, working together ensures, coherence, i.e., blending of different skills required, towards common goals.

* Willingness to understand others, think and act together and putting this into practice, is cooperation. Cooperation promotes collinearity, coherence (blend), co-ordination (activities linked in sequence or priority) and the synergy (maximizing the output, by reinforcement). The whole is more than the sum of the individuals. It helps in minimizing the input resources (including time) and maximizes the outputs, which include quantity, quality, effectiveness, and efficiency.

* According to professional ethics, cooperation should exist or be developed, and maintained, at several levels; between the employers and employees, between the superiors and subordinates, among the colleagues, between the producers and the suppliers (spare parts), and between the organisation and its customers.

LECTURE NOTES

- The codes of ethics of various professional societies insist on appropriate cooperation to nourish the industry. The absence of cooperation leads to lack of communication, misinformation, void in communication, and undue delay between supply, production, marketing, and consumption. This is likely to demoralize and frustrate the employees, leading to collapse of the industry over time and an economic loss to the society.

The impediments to successful cooperation are:

- Clash of ego of individuals.

- Lack of leadership and motivation.

- Conflicts of interests, based on region, religion, language, and caste.

- Ignorance and lack of interest. By careful planning, motivation, leadership, fostering and rewarding team work, professionalism and humanism beyond the 'divides', training on appreciation to different cultures, mutual understanding 'cooperation' can be developed and also sustained.

COMMITMENT

- Commitment means *alignment to goals and adherence to ethical principles during the activities*.

- First of all, one must believe in one's action performed and the expected end results (confidence).

- Holding sustained interest and firmness, in whatever ethical means one follows, with the fervent attitude and hope that one will achieve the goals, is commitment. It is the driving force to realize success.

- This is a basic requirement for any profession. For example, a design engineer shall exhibit a sense of commitment, to make his product or project designed a beneficial contribution to the society

EMPATHY

- Empathy is social radar. Sensing what others feel about, without their open talk, is the essence of empathy.

- Empathy begins with showing concern, and then obtaining and understanding the feelings of others, from others' point of view.

- It is also defined as the ability to put one's self into the psychological frame or reference or point of view of another, to know what the other person feels.

- It includes the imaginative projection into other's feelings and understanding of other's background such as parentage, physical and mental state, economic situation, and association.

LECTURE NOTES

To practice 'Empathy', a leader must have or develop in him, the following characteristics[5]

1. *Understanding others*: It means sensing others feelings and perspectives, and taking active interest in their welfare.

2. *Service orientation*: It is anticipation, recognition and meeting the needs of the clients or customers.

3. *Developing others*: This means identification of their needs and bolstering their abilities. In developing others, the one should inculcate in him the 'listening skill' first. Communication = 22% reading and writing + 23% speaking + 55% listening

4. *Leveraging diversity* (opportunities through diverse people): This leads to enhanced organizational learning, flexibility, and profitability.

5. *Political awareness*: It is the ability to read political and social currents in an organization.

The benefits of empathy include:

❁ Good customer relations (in sales and service, in partnering).

❁ Harmonious labor relations (in manufacturing).

❁ Good vendor-producer relationship (in partnering.) While dealing with customer complaints, empathy is very effective in realising the unbiased views of others and in admitting one's own limitations and failures. According to Peter Drucker, purpose of the business is not to *make a sale*, but to *make and keep a customer*.

SELF-CONFIDENCE

❁ Certainty in one's own capabilities, values, and goals, is self-confidence. These people are usually positive thinking, flexible and willing to change. They respect others so much as they respect themselves.

❁ Self-confidence is positive attitude, wherein the individual has some positive and realistic view of himself, with respect to the situations in which one gets involved. The people with self-confidence exhibit courage to get into action and unshakable faith in their abilities, whatever may be their positions.

❁ The self-confidence in a person develops a sense of partnership, respect, and accountability, and this helps the organization to obtain maximum ideas, efforts, and guidelines from its employees.

The people with self-confidence have the following characteristics:

❁ A self-assured standing,

❁ Willing to listen to learn from others and adopt (flexibility),

❁ Frank to speak the truth, and respect others' efforts and give due credit.

LECTURE NOTES

The factors that shape self-confidence in a person are:

✿ Heredity (attitudes of parents) and family environment (elders),

✿ Friendship (influence of friends/colleagues),

✿ Influence of superiors/role models, and

✿ Training in the organization (e.g., training by Technical Evangelists at Infosys Technologies). The following methodologies are effective in developing self-confidence in a person:

✿ Encouraging SWOT analysis. By evaluating their strength and weakness, they can anticipate

✿ and be prepared to face the results.

✿ Training to evaluate risks and face them (self-acceptance).

✿ Self-talk . It is conditioning the mind for preparing the self to act, without any doubt on his capabilities. This make one accepts himself while still striving for improvement.

✿ Study and group discussion, on the history of leaders and innovators (e.g., Sam Walton of Wal-Mart, USA).

Character

✿ It is a characteristic property that defines the behavior of an individual.

✿ It is the pattern of virtues (morally-desirable features).

✿ Character includes attributes that determine a person's moral and ethical actions and responses.

✿ People are divided into several categories, according to common tendencies such as ruthless, aggressiveness, and ambition, constricting selfishness, stinginess, or cheerfulness, generosity and goodwill.

✿ Individuals vary not only in the type of their character but also in the degree.

✿ The character is exhibited through conduct.

✿ Character is determined by the expectations of society

The Four Temperaments

✿ The original endowment or native element in character with which the individual starts life is practically identical with what the Ancients recognized as *temperament.* From the times of Hippocrates, they distinguished four main types of temperaments: the Sanguine, the Choleric, the Phlegmatic, and the Melancholic

LECTURE NOTES

Types of Character

From the four fundamental temperaments, various classifications of character have been adopted by different psychologists. M. Ribot, with more subjective division and excluding indefinite types as 'characterless', recognizes the forms as:

- the sensitive (humble, contemplative and emotional,
- the active (great and the mediocre), and
- the apathetic (purely apathetic or dull), and
- the intelligent.

Building Character in the Workplace

1. Employee Hiring, Training, and Promotion Activities

- Institute and adopt an organization policy statement to positive character in the workplace.
- Prominently and explicitly include character considerations in recruiting procedures, during interviews and in the hiring deliberations.
- Emphasize the importance of character and adherence to the 'six pillars' of character in orientation, initial job training, and during in-service training. The six pillars of character are the ethical values, such as: trustworthiness, respect, responsibility, fairness, caring and citizenship.
- Respect means showing high regard for self, others, authority, property and country. It includes showing appreciation for cultural diversity by valuing all people as human beings.
- Responsibility is
  - being accountable for one's actions,
  - being dependable in carrying out obligations and duties,
  - being reliable and consistent in word and action, and
  - being committed to community development.
  - Integrity or fairness means showing the inner strength and courage to be truthful, trustworthy, fair and honest in all things. It includes acting justly and honorably.
  - Caring means being kind, considerate, courteous, helpful, friendly and generous to others, and being compassionate by treating others as you would like to be treated.
  - Citizenship means accepting and adopting civic rights and duties as a citizen of the country.
- Include evaluation of fundamental character values such as honesty, promise keeping, accountability, fairness, and caring, in appraisals/reviews.
- Institute recognition and reward system for the employees who exemplify the positive character. for example, awards and medals.
- Think of your employees, especially the younger ones, as people whose personal and work values will be influenced by what you expect of them and how you treat them.
- Think of your employees as present or future mentors, coaches, and volunteers.

LECTURE NOTES

2. Internal Communication

❁ Use internal communication channels to create a friendly environment that praises positive role modeling at the workplace and in the community by encouraging voluntarism, and mentoring, e.g., through

  ❁ Internal newsletters,
  ❁ Workplace posters in canteens and recreation rooms,
  ❁ Mailers, and
  ❁ Electronic mails.

3. External Communication

In relations with customers, vendors and others, consciously communicate affirming messages about character and ethics, such as

  ❁ Advertise and market honoring consensual values (the six pillars),
  ❁ Assure that none of your products and services undermines character building,
  ❁ Include positive messages about voluntarism and celebrate, and
  ❁ 'Character counts' week in advertising, billings and other mailers.

4. Financial and Human Resources

  ❁ Support local and national 'character' projects and the activities of the members by encouraging staff members to get involved. Offer incentives such as paying employees for the time they contribute at a local youth-service organization.
  ❁ Sponsor 'character' movement through financial support.

5. Community Outreach

  ❁ Use public outreach structures to encourage mentoring and other character-building programs.
  ❁ Encourage educational and youth organizations to become active in character building.
  ❁ Use corporate influence to encourage business groups (chambers of commerce, conference boards, and Rotary clubs) and other companies to support 'character' building.

LECTURE NOTES

SPIRITUALITY

Spirituality is a way of living that emphasizes the constant awareness and recognition of the spiritual dimension (mind and its development) of nature and people, with a dynamic balance between the material development and the spiritual development.

Spirituality includes creativity, communication, recognition of the individual as human being (as opposed to a life-less machine), respect to others, acceptance (stop finding faults with colleagues and accept them the way they are), vision (looking beyond the obvious and not believing anyone blindly), and partnership (not being too authoritative, and always sharing responsibility with others, for better returns).

Creativity in spirituality means conscious efforts to see things differently, to break out of habits and outdated beliefs to find new ways of thinking, doing and being. Suppression of creativity leads to violence. People are naturally creative. When they are forced to crush their creativity, its energy turns to destructive release and actions.

Spirituality in the Workplace

- Building spirituality in the workplace: Spirituality is promoted in the workplace by adhering to the following activities:
    - Verbally respect the individuals as humans and recognize their values in all decisions and actions.
    - Get to know the people with whom you work and know what is important to them. Know their goals, desires, and dreams too.
    - State your personal ethics and your beliefs clearly.
    - Support causes outside the business.
    - Encourage leaders to use value-based discretion in making decisions.
    - Demonstrate your own self-knowledge and spirituality in all your actions.
    - Do unto others as you would have them do unto you.

Sprituality for Corporate Excellence

- The spiritual traits to be developed for excellence in corporate activities are listed as follows:
    - *Self-awareness* — Realization of self-potential. A human has immense capability but it needs to be developed.
    - *Alertness in observation and quickness in decision making*, i.e., spontaneity which includes quick reflexes, no delay but also no hasty decisions.
    - *Being visionary and value based* — This includes an attitude towards future of the organization and the society, with clear objectives.
    - *Holism* — Whole system or comprehensive views and interconnected with different aspects. Holistic thinking, which means the welfare of the self, family, organization and the society including all other living beings and environment.
    - *Compassion* — Sympathy, empathy and concern for others. These are essential for not only building the team but also for its effective functioning.

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LECTURE NOTES

- *Respect for diversity* — It means search for unity in diversity i.e., respect others and their views.
- *Moral Autonomy* — It means action based on rational and moral judgment. One need not follow the crowd or majority i.e., band-wagon effect.
- *Creative thinking and constant reasoning* — Think if we can do something new and if we can improve further?
- *Ability to analyze and synthesize* — Refrain from doing something only traditional.
- *Positive views of adversity* — Make adversities one's source of power—a typical Karma yogi's outlook! Every threat is converted into opportunity.
- *Humility* — The attitude to accept criticism (it requires courage!) and willing to correct. It includes modesty and acknowledging the work of colleagues.
- *Sense of vocation* — Treat the duty as a service to society, besides your organization.

Introduction to Yoga and meditation for professional excellence and stress management.

- Yoga, which developed in India, is an ancient tradition of bringing together the physical, emotional, mental and spiritual aspects of our being.

- The goal of yoga is to recognize our true nature and the inherent wisdom.

- The word yoga is derived from the Sanskrit verbal root "yuj" which means "to yoke". It has a wide array of meanings which range from "union" to "spiritual endeavour".

- Essentially, yoga means union; union within yourself, union with the divine spirit within and harmony between you and all that is within your world.

- Meditation is a practice in which an individual trains the mind or induces a mode of consciousness, either to realize some benefit

- Meditation seeks to intentionally remove the distraction of the external world to let us observe what our mind will naturally produce on its own, allowing us to gain a deeper understanding of our own thought process.

LECTURE NOTES

🌼 Meditation originally was meant to help deepen understanding of the sacred and mystical forces of life. These days, meditation is commonly used for relaxation and stress reduction.

🌼 Meditation produces a deep state of relaxation and eases many health concerns, such as high blood pressure, depression and anxiety by repeating a mantra and closing the eye

🌼 The term meditation refers to a broad variety of practices that includes techniques designed to promote relaxation, build internal energy or life force and develop compassion, love, patience, generosity and forgiveness.

🌼 Meditation aims at effortlessly sustained single-pointed concentration meant to enable its practitioner to enjoy as indestructible sense of well-being and practice human values while in any life activity.

🌼 Yoga and Meditation together helps an individual to achieve professional excellence and manage stress because of the work pressure and other factors in the organization.

🌼 Mental health problems such as depression, anxiety, stress are the most common reasons that lack individuals from performing their best.

🌼 Yoga and meditation encourages one to relax, slow the breath and focus on the present, shifting the balance from the sympathetic nervous system and the flight-or-fight response to the parasympathetic system and the relaxation response.

🌼 The practice of yoga and meditation generates balanced energy which is vital to the function of the immune system.

🌼 This practice optimizes the body's sympathetic responses to stressful stimuli and restores autonomic regulatory reflex mechanisms associated with stress.

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LECTURE NOTES

❀ This inhibition results in lower anxiety, heart rate, respiratory rate, blood pressure and cardiac outputs in students and professional practicing yoga and meditation.

❀ Stress has a negative impact on the immune system and prolonged exposure increases susceptibility to disease and leads to physical and mental health problems such as anxiety and depression

❀ Practicing yoga and meditation as a means to manage and relieve both acute and chronic stress helps individuals overcome other co-morbidities associated with diseases and leads to increased quality of life

Benefits of Yoga and Meditation

❀ Improved flexibility

❀ reduced aches and pains.

❀ increases blood flow, hemoglobin in red blood cells

❀ allows more oxygen to reach the body cells, enhancing their function

❀ dilutes the blood which reduces the risk of heart attack and stroke.

❀ reduce stress, promote healing and enhance quality of life for patients with cancer

❀ increase relaxation and induce a balanced mental state

10.ASSIGNMENT

1. What are the needs for value education in technical and other professional institutions?

- ❁ Course Outcome : 01

- ❁ Program Outcome :PO6, PO8, PO9, PO10, PO12

2. What are three basic entities of life and how can we know about them through yoga's?

- ❁ Course Outcome: 01

- ❁ Program Outcome : PO6, PO8, PO9, PO10, PO12

Lecture Notes - e-Book Reference

Lecture Notes PPT LINK

https://www.slideshare.net/drgst/ge6075-professional-ethics-in-engineering-unit-1

11. Part A Question & Answer
Unit 4

S.No	Question and Answers	CO	K
1	**What are human values?** Values decide the standard of behavior. Some universally accepted values are freedom justice and equality. Other principles of values are love, care, honesty, integrity, self-respect.	CO1	k1
2	**What are ethical values?** Trustworthiness, respect, responsibility, fairness, caring is ethical values	CO1	k1
3	**What is integrity?** Integrity is the unity of character based on moral values. Consistency in attitudes, emotions and conduct in relations to morally justified actions and values are also the part of integrity of individual. It implies honesty, trustworthiness	CO1	K1
4	**Define work ethics** By one"s work one cannot harm others. Any worker cannot escape accountability. Worker has the moral responsibility to see that no other person"s right, private or freedom is impaired or transgressed.	CO1	K1
5	**What is service learning?** Service learning refers to learning the service policies, procedures, norms, and conditions, other than 'the technical trade practices'. The service learning includes the characteristics of the work, basic requirements, security of the job, and awareness of the procedures, while taking decisions and actions.	CO1	K1
6	**Write short notes on caring and sharing.** Caring is the essence of moral life. Caring involves feelings, relationship, contends with other persons and protecting others and causing least damage to others. Sharing means sharing of feelings, ideas, thoughts, resources and profits. Sharing is always mutually beneficial. Sharing morally acceptable feelings, resources and materials is a value.	CO1	K1
7	**Differentiate Self-respect and Self-esteem?** Self-respect: It is a moral concept; refers to the virtue properly valuing oneself. Self-esteem: It is a psychological concept; means having a positive attitude toward Oneself, even if the attitude is excessive or otherwise unwarranted.	CO1	K1

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S.No	Question and Answers	CO	K
8	List the five Characteristics of a Good Work Ethic Reliability, Dedication, Productivity, Cooperation, and Character	CO1	K1
9	Define co-operation. Co-operation means extending help to others, for a good cause. Co-operation may be through an idea, a suggestion, an assistance or physical work which extends to others for common benefit	CO1	K1
10	What is courage as a value? Courage implies self-respect and governs confrontations with danger and risk. It is not excessive rashes or cowardice, but it is the middle ground. Taking calculated risks and boldness in facing crises are the hallmarks of courage as a human value.	CO1	K1
11	Define empathy. Empathy means putting self in a position of someone else and thinking as the later and reasoning suitable action.	CO1	K1
12	Give the two aspects of Honesty? Truthfulness – meeting responsibilities concerning truth-telling. Trustworthiness –Meeting responsibilities concerning trust.	CO1	K1
13	Define Integrity? Integrity is the bridge between responsibility in private and professional life.	CO1	K1
14	Define Compromise? In a negative sense it means to undetermined integrity by violating one's fundamental moral principles. In a positive sense, however, it means to settle differences by mutual concessions or to reconcile conflicts through adjustments in attitude and conduct.	CO1	K1
15	Define spirituality. Spirituality raises a man above the materialistic world into a realm where he seeks peace and real happiness.	CO1	K1

S.No	Question and Answers	CO	K
16	Define spirituality? Spirituality raises a man above the materialistic world into a realm where he seeks peace and real happiness	CO1	K1
17	Explain Stress Management. Stress management refers to the wide spectrum of techniques and psychotherapies aimed at controlling a person's levels of stress, especially chronic stress, usually for the purpose of improving every day functioning.	CO1	K1
18	Explain Respect for others. Respect is a positive feeling of admiration or deference for a person. Respect can be a specific feeling of regard for the actual qualities of the one respected.	CO1	K1
19	Explain civic virtue. Civic virtues are the moral duties and rights, as a citizen of the village or the country or an integral part of the society and environment. Civic virtues are divided into four categories: 1. Civic Knowledge 2. Self-Restraint 3. Self-Assertion 4. Self-Reliance	CO1	K1
20	What are the objectives Professional Ethics and Human Values? (a) to understand the moral values that ought to guide the Engineering profession (b) resolve the moral issues in the profession	CO1	K1
21	What are the objectives of the study on Professional Ethics Improvement of the cognitive skills To act in morally desirable ways, towards moral commitment and responsible conduct	CO1	K1
22	What is moral? Morals are the welfare principles enunciated by the wise people, based on their experience and wisdom.	CO1	K1
23	What are the five core human values? The five core human values are: (1) Right conduct, (2) Peace, (3) Truth, (4) Love, and (5) Non- violence.	CO1	K1

PART - B

S.No	Question and Answers	CO	K
1	What is courage? What are salient features of courage?	CO1	K1
2	Write short notes on the human values civic virtue commitment	CO1	K1
3	What is empathy? Discuss its role in the spiritual development for excellence in an organization with suitable examples	CO1	K1
4	What is service learning? Discuss its role in caring and sharing in society with suitable examples	CO1	K1
5	Define empathy? State and explain the elements benefits of empathy and compare empathy with sympathy	CO1	K1
6	What is service learning? Why service is important? Explain the characteristics of service learning	CO1	K1
7	Discuss the role of yoga in professional excellence and stress management	CO1	K1
8	Explain the scope and importance of professional ethics in engineering	CO1	K1
9	What is spirtuality? What are the spiritual traits to be developed for excellence in an organization. Discuss with suitable examples	CO1	K1
10	Write short notes honesty and integrity	CO1	K1
11	What do you understand by the term spirituality? Explain in detail	CO1	K1
12	Define the terms Values, Morals & Ethics?	CO1	K1
13	Explain the importance of self-confidence in ethics	CO1	K1
14	Explain the role of yoga in professional ethics What is integrity? How integrity plays a major role in work ethics? Discuss with suitable examples	CO1	K1

13. SUPPORTIVE ONLINE CERTIFICATION COURSES

Sl.No.	Name of the Institute	Name of the Course	Website Link
1.	UDEMY	Value Education and Professional Ethics	https://www.udemy.com/course/value-education-and-professional-ethics/
2.	NPTEL	Ethics in Engineering Practice	https://onlinecourses.nptel.ac.in/noc20_ge02/preview
3.	COURSERA	Ethics in the Age of AI Specialization	https://www.coursera.org/specializations/ethics-in-ai

14. REAL TIME APPLICATIONS IN DAY TO DAY LIFE AND TO INDUSTRY

1. Ethics of Artificial Intelligence

- ❁ Source   : https://plato.stanford.edu/entries/ethics-ai/

- ❁ Course Outcome   : CO1

- ❁ Program Outcome   : PO6, PO8

Artificial intelligence (AI) and robotics are digital technologies that will have significant impact on the development of humanity in the near future. They have raised fundamental questions about what we should do with these systems, what the systems themselves should do, what risks they involve, and how we can control these.

The ethical issues of AI in surveillance go beyond the mere *accumulation* of data and direction of attention: They include the *use* of information to manipulate behavior, online and offline, in a way that undermines autonomous rational choice. Of course, efforts to manipulate behavior are ancient, but they may gain a new quality when they use AI systems. Given users' intense interaction with data systems and the deep knowledge about individuals this provides, they are vulnerable to "nudges", manipulation, and deception. With sufficient prior data, algorithms can be used to target individuals or small groups with just the kind of input that is likely to influence these particular individuals. A 'nudge' changes the environment such that it influences behavior in a predictable way that is positive for the individual, but easy and cheap to avoid. There is a slippery slope from here to paternalism and manipulation.

15. Content Beyond Syllabus

What are the steps in Ethics Management?

1.   Appraisal Appraisal of costs of unethical decisions (errors, wastage, rework, lost customers), cost of intentional wrong doing (theft or fraud in accounting), and mistaken beliefs.

2.   Prevention Against 'Pressure'—Prescribe, promote, and publish goals or objectives, involving every body, against 'opportunity-frame' and follow transparent and uniform promotion policies, and help to solve problems, and against 'Attitude', train all and have open discussion.

3.   Promotion Continuously exhibit ethical behavior to develop ethical culture that is transparent and effective.

2. Explain the term 'self-realization ethics'

Right action consists in seeking self-fulfillment. One view is that, the self should care the relationships with other individuals and communities. In another view, called ethical egoism, right action consists in always promoting what is good for oneself, with no presumption that the self is defined in terms of caring and community relationships

16. ASSESSMENT SCHEDULE

| Assessment Tools	Proposed Date	Actual Date
I ASSESSMENT	22.03.2021	22.03.2021
II ASSESSMENT	19.04.2021	
MODEL	10.05.2021	

17.PRESCRIBED TEXT BOOKS &REFERENCE BOOKS

TEXT BOOKS:

1. Mike W. Martin and Roland Schinzinger, —Ethics in Engineering‖, Tata McGraw Hill, New Delhi, 2003.

2. Govindarajan M, Natarajan S, Senthil Kumar V. S, —Engineering Ethics‖, Prentice Hall of India, New Delhi, 2004.

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1. Charles B. Fleddermann, —Engineering Ethics‖, Pearson Prentice Hall, New Jersey, 2004.

2. Charles E. Harris, Michael S. Pritchard and Michael J. Rabins, —Engineering Ethics – Concepts and Cases‖, Cengage Learning, 2009.

3. John R Boatright, —Ethics and the Conduct of Business‖, Pearson Education, New Delhi, 2003

4. Edmund G Seebauer and Robert L Barry, —Fundamentals of Ethics for Scientists and Engineers‖, Oxford University Press, Oxford, 2001.

5. Laura P. Hartman and Joe Desjardins, —Business Ethics: Decision Making for Personal Integrity and Social Responsibility‖ Mc Graw Hill education, India Pvt.Ltd.,New Delhi, 2013.

6. World Community Service Centre, ‗ Value Education`, Vethathiri publications, Erode, 2011.
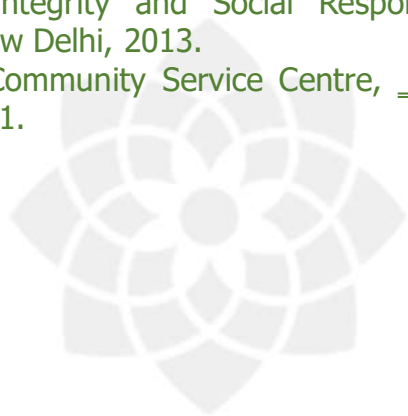
18. Mini Project Suggestion

What do we consider important as a family? Is our time and effort applied for what we consider important? What do we evaluate at the end of every month? Discuss this at home and articulate your conclusions

What is one valuable lesson from your tradition? Study its impact on Trust in your family

Thank you

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