**Introduction:**

Question for students:

1. Why you selected Engineering as your career option?( Answer can vary student to student)
2. What is engineering?

**Engineering** is the process of developing an efficient mechanism which quickens and eases the work using limited resources, with the help of technology.

**Ethics** are the principles accepted by the society, which also equate to the moral standards of human beings.

Difference between Morals & Ethics

Let’s Start with the Morals first…

Morals

The word “Morality” originates from the Latin word “mos” meaning “custom”. Morals are the principles or habits with respect to right or wrong of one’s own conduct. They are not imposed by anyone. Morals are what you think is good and bad personally.

Though morals are not imposed, they can be understood as the preaching of our inner self. Depending on a few factors, our mind filters things as good or bad. These are the ideas that help frame our personality so that we can distinguish between what is right and what is wrong.

A moral is the code of conduct that you develop over time and set for yourself to follow, just like

* Being good to everyone
* Speaking only the truth
* Going against what you know is wrong
* Having chastity
* Avoid cheating
* Being a nice human being etc.

Morals are always defined by one’s own personality. Morals can be changed according to one’s beliefs as they are completely dependent on one’s perception towards the ethical values.

Now try to understand what Ethics is…

Ethics

The word “Ethics” originates from the Greek word “ethos” meaning “character”. Ethics are a set of rules or principles that are generally considered as standards or good and bad or right and wrong, which are usually imposed by an external group or a society or a profession or so.

Ethics can be understood as the rules of conduct proposed by a society or recognized with respect to a particular class of human actions or a particular group or culture. Ethics are dependent on others definition. They may or may not vary from context to context.

A person, who strictly follows a set of ethical principles, may not have any moral at all while a person, who violates ethical principles at times, may maintain a high moral integrity. The ethical theories include duty ethics, right ethics, and virtue ethics and so on. A best example that can explain ethics is utilitarianism.

**Utilitarianism** is the philosophy which explains that the happiness or pleasure of a greatest number of people in the society is considered as the greatest good. According to this philosophy, an action is morally right if their consequence leads to happiness of the people and wrong if the action leads to their unhappiness. This theory moves beyond the scope of one’s own interests and takes into account the interests of others.

What is the need of Ethics in Engineering?

**An engineer with ethics can help the society in a better way.**

Hence the study of **engineering ethics**, where such ethics are implemented in engineering by the engineers, is necessary for the good of the society. Engineering Ethics is the study of decisions, policies and values that are morally desirable in engineering practice and research.

Why we need to study Engineering ethics?

To understand governing standards, what is acceptable behavior in the practice of engineering…

**Scope of Engineering Ethics**

Ethical Standards in Engineering are Influenced by following factors.

1.Engineering as social experiment - engineering projects are social experiments that generate both new possibilities and risks and engineers share responsibility for creating benefits, preventing harm and pointing out dangers.

2.Ethics and excellence: Moral Values are embedded in Engineering – moral values permeate all aspects of technological development and hence ethics and excellence in engineering together.

3. Personal Commitment and Meaning – personal meaning and commitments matter in engineering ethics, along with principles of responsibility that are seated in codes of ethics and are incumbent on all engineers.

4. Promoting responsible conduct and preventing wrong doing – Promoting responsible conduct is even more important than punishing wrong doing.

5. Myriad moral reasons generate ethical dilemmas – ethical dilemmas arise in engineering, as elsewhere, because moral values myriad and can conflict.

6. Micro and Macro Issues – engineering ethics should explore both micro and macro issues, which are connected.

Micro issues – concern the decisions made by individuals and companies.

Macro issues – concern more global issues, such as the directions in technological development, the laws that should or should not be passed and the collective responsibilities of groups such as engineering professional societies and consumer groups.