

Professional Ethics

Engineering Ethics constitute the rules & standards governing the conduct of engineers in their role as professionals.

Engineering Ethics encompasses the more general definition of ethics, but applies it more specifically to situations involving engineers in their professional lives.

Thus, engineering ethics is a body of philosophy indicating the way that engineers should conduct themselves in their professional capacity.

Significance of engineering ethics:-

The work of engineers can affect public health and safety and it can influence professional practices and even qualities.

One result of this increase in awareness is that nearly every measure ~~control~~ corporation now has an ethics officer that has the responsibility to ensure that employees have the ability to enforce their concerns about ~~into~~ their issues such as safety, and corporate business practices in that way ~~for~~ it will produce results.

Ethics officers also try to foster an ethical culture that will help to head off ethical problems in a corporation before they start.

However, many times the ethical problem encountered in engineering practice are very complex and involve conflicting ethical principles.

Moral Autonomy & Professional Responsibility

Autonomy means self-determination or independent. But not just any kind of independent reflection about ethics amount to moral autonomy. Moral autonomy can be viewed as the skill and the habit of thinking rationally about ethical issues on the basis of moral concern.

Moral autonomy can be accomplished by improving various practical skills that will help produce effective independent thought about moral issues.

As a result, to engineering ethics, these skills include the following:-

- i) Proficiency in recognising moral problems ^{and} issues in engineering. This involves being able to distinguish them from, as well as relate them to problems in law, economics, religion or the description of physical systems.
- ii) Skill in comprehending, clarifying and critically assessing argument on opposing sides of moral issues.
- iii) The ability to form consistent & comprehensive view points based upon consideration of relevant facts.
- iv) Imaginative awareness of alternative responses to the issues and creating solutions for practical difficulty.
- v) Enhance precision in the use of a common ethical language which is necessary to be able to express and defend one's moral views adequately to others.

Professional Responsibility

Work culture is the ^{environment} involvement of workman, with work. The degree of each involvement impacts performance, whether he gives high or low quality.

Work ethics will be different at different levels.

i) At the basic level, it is about discipline i.e. to maintain punctuality, coming to work on time, behaving properly with seniors, colleagues and subordinates. At top level, it is about commitment and accountability to feel responsible for the task assigned to you.

ii) Protecting the interest of the organisation.

No employee should make any adverse comment about orgⁿ in public.

There are other fundamental principles which govern the conduct of professional can be broadly identified as

a) Need to absorb certain values which encompass personal, corporate and social values.

b) Need to achieve professional competence.

c) One should strive to achieve high standards of efficiency, before offering any service of a professional nature.

d) Need to quality of service, this depends on personal attributes like personality and personal qualities, knowledge which must be constantly updated.

e) Need to maintain confidentiality, this imposes obligation that is not disclosure of information of the client to outsiders.

f) Need to maintain a high degree of ethical behaviour and morality.

Types of Ethical Enquiry

i) Normative :- First and foremost involves normative enquiries aimed at identifying and justifying the morally desirable norms or standards that ought to guide individual or groups.

Normative questions are about what ought to be and what is good.

Some example of normative enquiry are how far do the obligations of engineers to protect public safety extend in given situations.

When if ever should engineers be expected to blow the whistle on dangerous practices of the employer for whom they work.

Normative enquiries also have the theoretical goal of justifying particular moral judgements. For example, what are the reasons engineers have obligation to their employer, to their clients and the general public.

ii) Conceptual Enquiry :- Conceptual enquiries are directed towards clarifying the meaning of concepts, principles and the issues in engineering ethics. For example, what does safety mean and how is it related to the idea of risk.

What does it mean when code of ethics, say engineers should protect the ~~saf~~ safety, health and welfare of the public.

Conceptual issues have to do with the meaning or applicability of an idea.

iii) In engineering ethics, a bribe as offered to an acceptable gift or determine whether certain information is priority.

iii) Factual :- Factual enquiries also called descriptive enquiries seek to uncover information bearing upon various ~~area~~ value issues. Where possible, researchers attempt to conduct factual enquiries using proven scientific technique. They provide information about the professional realities of contemporary engineering profession, the effectiveness of professional societies in fostering moral conduct, the procedure used in making risk assessment and psychological profiles of engineers.

~~concept~~
Factual enquiries examples are what is actually known about a case what the facts are.

Although this concept seems straight forward but the fact of a particular case are not always clear and may be controversial.

Consequentialism (8 marks)

Consequentialist Theory (concern with outcomes) sees good as defined not by action, but by the consequences.

In this theory, example - ~~not killing~~ another human being may be morally good, provided it gives rise to some ~~to~~ greater good.

One particular form of this theory utilitarianism sees good ~~as~~ ^{being} defined by the maximization of good consequences. The greatest good for the greatest number. This theory states that we can know what is good ~~and~~ only when we have fully understood the context is called teleological approach.

The consequentialist theory ignores the importance of intention and motive in any ethical judgement. It also runs the danger of the ends justifying any mean and even of denying the right of minorities. In deciding among different options, there has to be some understanding what constitutes good in the 1st place.

Utilitarianism

Holds that those actions are good that serve to maximize human well-being. The emphasis in utilitarianism is not in maximizing the well-being of the individual, but rather on maximizing the well-being of society as a whole, and as such it is some what of a collective approach.

Ex - Building of dam.

Utilitarianism tries to balance the need of society with the need of the individuals, with an emphasis on what will provide the most benefit to the most people.

Utilitarianism focuses on individual action rather than on rules. The best rule proponent of utilitarianism was John Stuart Mill who felt that most of the common rules

① Traffic Congestion Public Transportation

of the morality are good guidelines derived from centuries of human experience. However, Mill felt that individual action should be based on whether the most good was produced in a given situation, and rules should be broken if doing so will lead to the most good.

Karma Yoga

- Agami Karma
- Prarabadha Karma
- Sanchita Karma
- Kriyamana Karma
- Saham
- Nishkam

Dentology Theory

Dentology is the study of nature of duty and obligation. Dentological theories are good at something that is self evident and can be cum up in general rules which apply to all. In this theory, the action of killing is always wrong.

It breaks the basic rule of respect for life. Moral good is discovered through reason reflections. This approach is concerned primarily with the quality of an action, with the means of achieving a desire and end. This approach ~~and~~ ^{has} more to do of a religious under tone.

For dentological theory, assume the reasonableness of human being i.e., they are capable of seeing what is good. Ironically, the dentologically rely upon consequentialist consideration to justify themselves.

Respect for life, for instnt, it is justified ultimately by the survival of the self, the community and even the species.

Kantian Ethics

Immanuel Kant

According to Immanuel Kant, a German Philosopher, dentology is an ethical approach, centred on rules and professional duties.

Dentology derived from the greek word Deont, which refers to their which is binding. Can Kant Dentology Philosophy steamed from ^{his} ~~its~~ belief that human possesses the ability to reason and understand universal moral law that they can apply in all situations. Unlike many other ethical theories, dentology doesn't focus on the consequences of individual action. Personal emotion behind actions also do not metal with Kantian dentology because Kant

believe human doesn't always have rational control over their feelings. Instead the intent behind chosen action holds far more importance. Therefore, deontology proponents judge action based on what most people consider to be morally correct, regardless of actual consequences.

Duty Ethics

This theories hold that those actions are good that respect the right of the individual. Measure proponent of duty ethics was Emmanuel Kant who held that moralities are fundamental. Ethical actions are those actions that would could be written down as a list of duties, be honest, do not cause suffering to other people, be fair to others, etc. These actions are our duties because they express respect for person, have an unqualified regard for autonomous moral agent and are universal principles. Once a person's duties are recognised, the ethically correct moral actions are obvious. In this formulation, ethical acts are a result of proper performance of one duties.

Significance of Duty Ethics

- 1) It emphasises on the value of every human being.
- 2) Duty based ethical system tend to focus on giving equal respect, to all human being.
- 3) This provide a basis for human rights. It forces due regard to be given to the interest of a single person even those are at urge with the interest of a larger group.
- 4) The Kantian Duty Ethics say, that something should never be done, no matter what the consequences, they produce.

5) Duty Ethics can include intention in atleast 2 ways - if a person did not intend to do a particular wrong at, it was an accident perhaps then from a deontological point of view you might think that they hadn't done anything deserving of criticism.