



SNS COLLEGE OF TECHNOLOGY



Coimbatore-36.

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COURSE NAME : PROFESSIONAL ETHICS AND HUMAN VALUES

IV YEAR/ VII SEMESTER

UNIT – I ENGINEERING ETHICS

Topic: Variety of moral issues , Types of inquiry

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Moral Issues

Considered as an issue to be resolved not only by considering the technical stuff but also by keeping moral values in mind.

“Moral issue is a working definition of an issue of moral concern is presented as any issue with the potential to help or harm anyone, including oneself.”

It would be relevant to know why and how do moral issues (problems) arise in a profession or why do people behave unethically?



Reasons for Moral Issues

It would be relevant to know why and how do moral issues (problems) arise in a profession or why do people behave unethically ?

The reasons for people including the employer and employees, behaving unethically may be classified into three categories:

1. Resource Crunch
2. Opportunity
3. Attitude

Varieties:

- Organization oriented issues
- Clients or customers oriented issues
- Competitors oriented issues
- Law, government and public agencies oriented issues
- Professional societies oriented issues
- Social and environmental oriented issues
- Family oriented issues



Types of Moral Issues

Two types of Moral issues that we mostly come across while keeping the ethical aspects in mind to respond.

Micro-ethics

This approach stresses more on the problems that occur on a daily basis in the field of engineering and its practice by engineers.

Macro-ethics

This approach deals with social problems which are unknown.

These problems may unexpectedly face the heat at both regional and national levels



Examples

Example 1:

What should an Engineer who observes his colleague copying confidential information unauthorized, do immediately? If he chooses to stop his friend, what if this gets repeated without his notice? If he chooses to report the management, what if his friend loses the job? Which is morally correct?

Example 2:

After a recent collapse of a structure in which many people died, an Engineer came to know about a bridge which is marginally safe. He informed his superior who asked him to stay calm and not to discuss with anyone, while waiting for the next year budget sessions to get some financial help for the repair required. What should the engineer do?

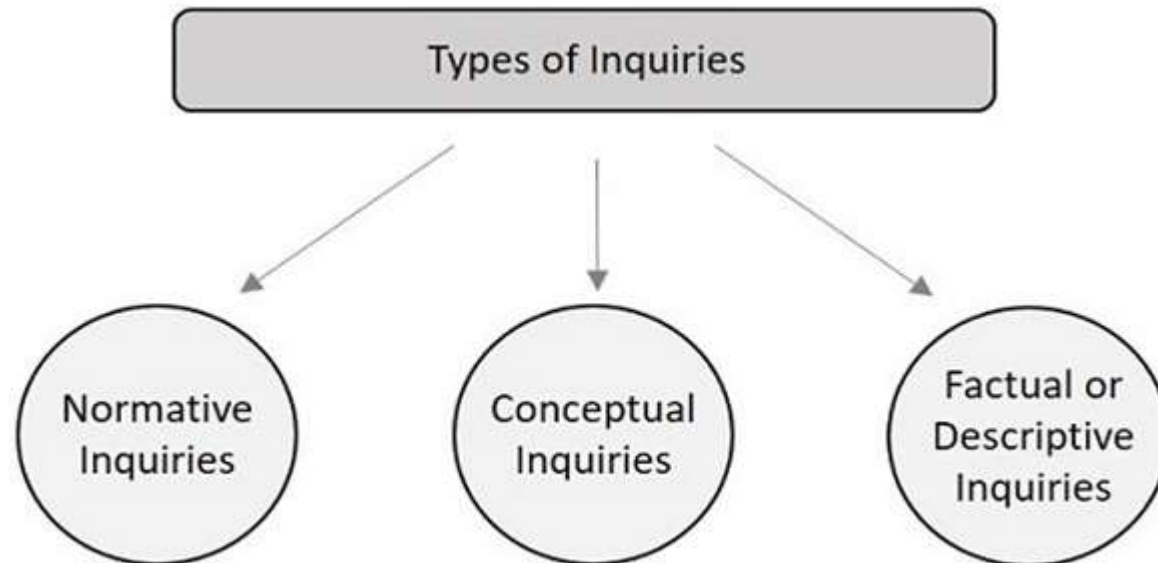


Types of Inquiries

Engineering ethics combines inquiries into values, meanings and facts in order to find answer many moral dilemmas.

The issues can be resolved by following an investigation procedure, step by step in order to have a clear understanding towards the issue.

Three different types of inquiries





Normative Inquiries

Normative Inquiry refers to the description that describes **what one ought to do** under a specific circumstance.

Expected ideal response, which might differ from what one believes to be right or wrong.

This list identifies and justifies the morally desirable nature for guiding individuals or groups.

This includes the responsibility of engineers to **protect the public safety** and how they should respond under such dangerous practices.

Quote the **laws and procedures** that affect the engineering practice on moral grounds.

They refer to the thought process where the moral rights are to be implemented in order to fulfil their professional obligations.

Eg: *Whose values ought to be primary in making judgment about acceptable risks in design for a public transport system or a nuclear plant?*



Conceptual Inquiries



Conceptual Inquiry refers to the description of the ***meaning of concepts, principles and issues*** related to engineering ethics. The ethics that an engineer should possess to ***protect the safety, health and welfare of the public***, etc. are described under conceptual inquiries.

It describes what safety is and mentions the ***marginal issues of safety*** along with the precautions an engineer should take to avoid risk. Conceptual inquiries mention the ***moral aspects of bribery*** and how its effects, along with the professional ethics and professionalism.

Eg: *What is meant by safety? How it is related to risk?*



Factual Inquiries

Factual Inquiry or the descriptive inquiry help to provide the ***facts for understanding and finding solutions to the value based issues***. The engineer has to conduct factual inquiries by using ***scientific techniques***.

This helps in providing the information ***regarding the business realities*** such as engineering practice, history of engineering profession, the effectiveness of professional societies, the procedures to be adopted when assessing risks and psychological profiles of engineers.

Eg: *What are short-term and long-term effects of drinking water being polluted*



References

1. Mike W. Martin and Roland Schinzinger, Ethics in Engineering, Tata McGraw Hill, New
2. R.R Gaur, R Sangal, G P Bagaria, A foundation course in Human Values and professional Ethics, Excel books, New Delhi, 2010, ISBN 978-8-174-46781-2

