



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE NAME: 16GE301 Professional Ethics

III YEAR / V SEMESTER

Unit 2– Engineering as Social Experimentation

Topic 1: Engineers as responsible experimenters



What We'll Discuss

TOPIC OUTLINE



Engineers as Responsible Experimenters
Conscientiousness
Comprehensive Perspective
Moral Autonomy
Accountability



Engineers as Responsible Experimenters



- In the engineering project, the engineers are the main technical enablers(or) facilitators.
- Their responsibility is shared with management, public, and others.
- The engineers have so many responsibilities for serving the society.
- Yet their expertise places them in a unique position to monitor projects, to identify risks, and to provide clients and the public with the information needed to make reasonable decisions.



Engineers as Responsible Experimenters



- Four features characterize what it means to be a responsible person while acting as an engineer:



1. A primary obligation to protect the safety of human subjects and respect their right of consent.
2. A constant awareness of the experimental nature of any project.
3. Autonomous, personal involvement in all steps of a project.
4. Accepting accountability for the results of a project

Conscientiousness

Comprehensive
Perspective

Moral Autonomy

Accountability



Conscientiousness



- Conscientiousness implies consciousness: open eyes, open ears, and an open mind.
- Gradually the minimal negative duties, such as not falsifying data, not violating patent rights, and not breaching confidentiality, may come to be viewed as the full extent of moral aspiration.
- Conceiving engineering as social experimentation restores the vision of engineers as guardians of the public interest, whose professional duty it is to hold paramount the safety, health, and welfare of those affected by engineering projects.



Comprehensive Perspective



- Without relevant factual information, conscientious is not possible.
- Moral concern involves a commitment to obtain and properly assess all available information that is pertinent to meeting moral obligations.
- Engineering as social experimentation urges the engineer to view the specialized activities in a project as part of a larger whole having a social impact—an impact that may involve a variety of unintended effects.
- The goal is to practice “preventive technology,” which parallels the idea of preventive medicine.



Moral Autonomy



- People are morally autonomous when their moral conduct and principles of action are their own.
- Viewing engineering as social experimentation can help overcome the tendency of disowned and restore a sense of autonomous participation in one's work.
- The attitude of management plays a decisive role in how much moral autonomy engineers feel they have.





Accountability



- Finally, responsible people accept moral responsibility for their actions.
- An engineer is always answerable for what he had undertaken. He must observe care and caution at every stage of his experiment, monitor it by his best capacity and skills and ultimately produce the outcome in the expected manner. If there be failures or errors ,he must accept them with grace.
- The divorce between causal influence and moral accountability is common in business and the professions, and engineering is no exception.



RECALL TIME

**ASSESSMENT
TIME**



THANK YOU