

# ENGINEERING ETHICS: SOCIAL EXPERIMENTATION

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# INTRODUCTION

- Engineering improves life through technology and efficiency.
- Social experimentation involves practical use with human subjects.
- Not conducted under controlled lab conditions.

# ENGINEERS AS EXPERIMENTERS

- Trial and error method is common.
- Preliminary simulations are used to test designs.
- Experiments carry risks and uncertainties.

# RESPONSIBILITY IN EXPERIMENTATION

- Ensure safety of human subjects.
- Obtain informed consent.
- Communicate project risks and nature.
- Monitor results and accept accountability.
- Demonstrate professionalism.

# CONSCIENTIOUSNESS

- Engineers should have a strong moral awareness.
- Must balance employer obligations with public responsibility.
- Be prepared for unexpected outcomes and be accountable.

# INFORMED CONSENT

- Engineers must inform stakeholders about project nature and risks.
- Avoid producing harmful or illegal products.
- Suggest better alternatives when necessary.

# MORAL AUTONOMY

- Commitment to moral values leads to responsible behavior.
- Personal responsibility earns trust and improves outcomes.

# ACCOUNTABILITY

- Moral responsibility is essential in teamwork.
- Both credit and failure must be accepted.
- Engineers cannot avoid personal responsibility.



# CODES OF ETHICS

- Developed by AAES, ABET, NSPE, IEEE, AICTE.
- Help engineers stay committed to ethical conduct.

# ROLES OF CODES OF ETHICS

- Protect public health and safety.
- Offer guidance and motivation.
- Promote shared standards and professionalism.
- Support ethical professionals.

## MORE ROLES OF CODES

- Promote education and mutual understanding.
- Deter unethical behavior and provide discipline.
- Improve profession's image and reduce need for regulation.

## ADVANTAGES OF CODES

- Define ideals and responsibilities.
- Protect professionals and clients.
- Enhance professional image.
- Provide regulatory guidance and consistency.

# CONCLUSION

- Engineering ethics guide responsible innovation.
- Ethical codes build public trust and ensure professionalism.