



UNIVERSITY OF RWANDA

College of Science and Technology

PRESANTATION OF ASSIGNMENT OF ENGINEERING ETHICS

GROUP 5

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PART I:

Why study Engineering Ethics?

INTRODUCTION

- **What is Ethics ?**

- Ethics is the study of characteristics of morals.
- Ethics also deals with the moral choices that are made by each person in his or her relationship with other persons

- Engineering ethics is the rules and standards governing the conduct of engineers in their role as professionals.

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

ETHICS

- Study of human morality
- Determining values in human conduct
- Deciding the “right thing to do” – based upon a set of norms
- In Engineering:
 - dealing with colleagues
 - dealing with clients
 - dealing with employees
 - dealing with “users”
 - dealing with public

WHY FOCUS ON ETHICS?

- Make decisions to make the right choice
- Take action to do the right thing
- Personal integrity and self-respect
- Element of professional reputation
- HIGH ETHICS => HIGH PROFITS

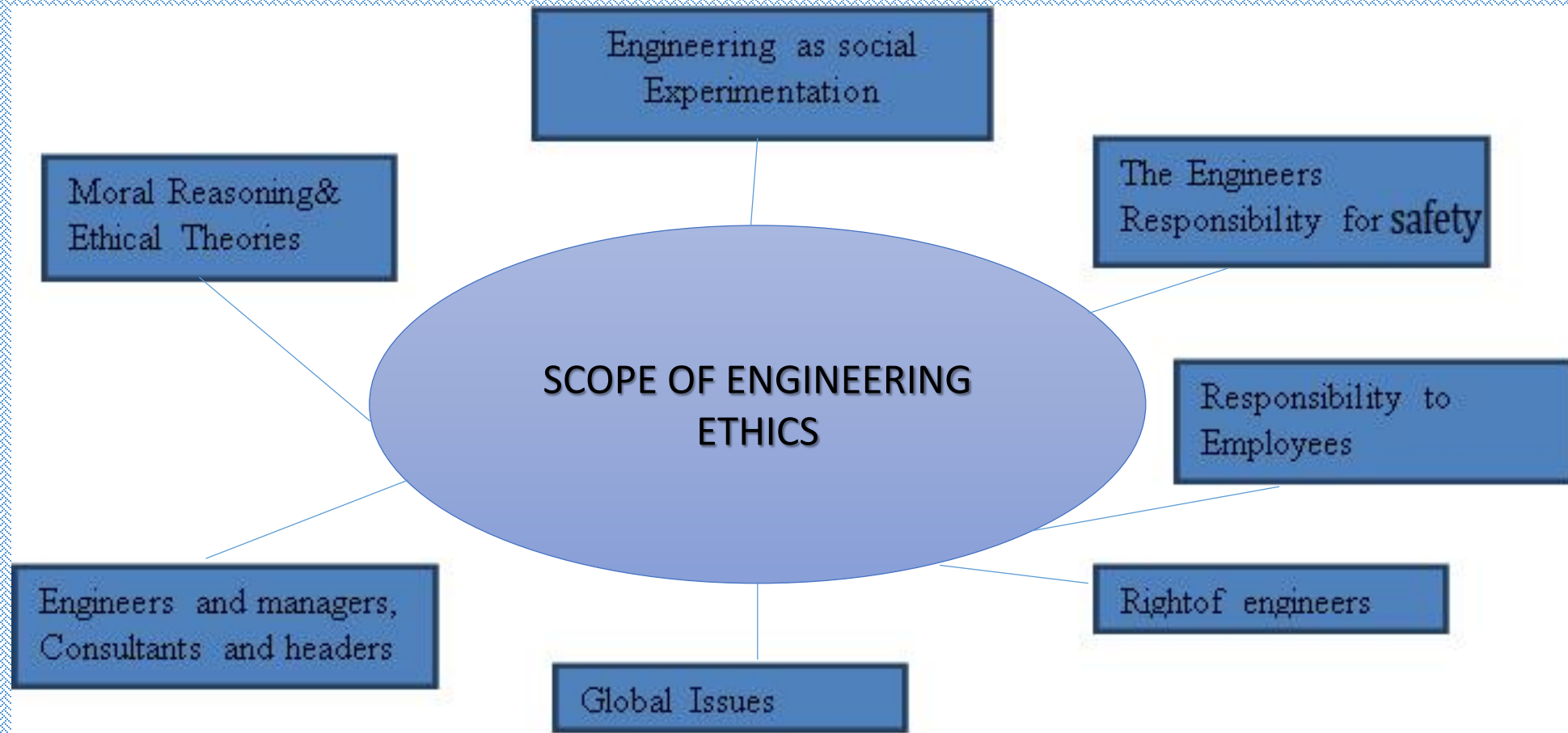
ENGINEERING ETHICS

- Engineering ethics is the study of moral values, issues and decisions involved in engineering practice.
- The moral values take many forms, including
 - ✓ responsibilities
 - ✓ ideal character traits
 - ✓ social policies
 - ✓ relationships desirable for individuals
 - ✓ corporation engaged in technological development.

ENGINEERING ETHICS

- Teaching engineering ethics can achieve at least four desirable outcomes:
 - ✓ increased ethical sensitivity
 - ✓ increased knowledge of relevant standards of conduct
 - ✓ improved ethical judgment
 - ✓ improved ethical will-power (i.e, a greater ability to act ethically when one wants to).

SCOPE OF ENGINEERING ETHICS



ENGINEERING AS AN ETHICAL PROFESSIONAL

- What is a Profession?
 - special expertise
 - shared moral values
 - dependent public
 - self-regulation
 - promote and protect right actions
- The responsibility to be ethical
- The right to be ethical
- Values embedded in technology

PART II:

COMPARISON AND CONTRAST BETWEEN AMERICAN ASSOCIATION OF ENGINEERS AND RWANDAN INSTITUTE OF ENGINEERS



THE INSTITUTION OF ENGINEERS RWANDA

- started in 2008
- Their mission is to advance, promote and develop engineering profession by providing all the expertise necessary for the socio-economic needs of man-kind.

IER OBJECTIVES

- To promote professional engineering practices, standards and ethics.
- To Strengthen Institutional Capacity of IER.
- To promote training and development of Engineers.
- To promote the status, Rights and welfare of Engineers.
- To promote culture of Creativity, innovation and application of research finding.
- To foster research and development of the engineering field
- To enhance the character and status and to advance the interest of the Profession of engineering and those engaged therein.
- To provide quality service to its members and the nation.

ROLES AND CORE VALUES

Roles

- Represent the engineers nationally and internationally;
- Advance the knowledge and expertise of engineers;
- Uphold the status and image of engineers; and
- Provide a platform where engineers gather for social, business, professional and career development.

CORE VALUES

- In achieving our vision and roles, we will embrace the following core values:
- Integrity
- Professionalism
- Innovation
- Accountability
- Passion
- Social Responsibility

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS (AMERICAN)

- Founded in 1852

Mission

- Mission is to help you succeed with yours, by providing essential value to our members, their careers, our partners and the public by developing leadership, advancing technology, advocating lifelong learning, and promoting the profession
- We observed also that all rules and regulation that relay on ethics and they all aim to promote training and development of Engineers, provide quality service to its members and the nation.
- even though they face different problems like financial one and lack of skills on management for example in Rwanda

RULES OF PRACTICE

- 1. Engineers shall hold paramount the safety, health, and welfare of the public
- 2. Engineers shall perform services only in the areas of their competence.
- 3. Engineers shall issue public statements only in an objective and truthful manner.
- . Engineers shall be objective and truthful in professional reports, statements, or testimony
- 4. Engineers shall act for each employer or client as faithful agents or trustees

PROFESSIONAL OBLIGATIONS

- 1. Engineers shall be guided in all their relations by the highest standards of honesty and integrity.

Engineers shall acknowledge their errors and shall not distort or alter the facts.

- 2. Engineers shall at all times strive to serve the public interest.
- in order to protect the environment for future generations.
- 3. Engineers shall avoid all conduct or practice that deceives the public.

Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact.

FUNDAMENTAL CANONS

- Engineers, in the fulfillment of their professional duties, shall:
 - 1. Hold paramount the safety, health, and welfare of the public.
 - 2. Perform services only in areas of their competence.
 - 3. Issue public statements only in an objective and truthful manner.
 - 4. Act for each employer or client as faithful agents or trustees.
 - 5. Avoid deceptive acts.
 - 6. Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

RECOMMENDATION

- As recommendation they must be trip and training on Rwandan Engineers in order to improve their skills and see where developed country are in development.

CONCLUSION

- After contrasting and comparing Rwandan professional engineers and American profession engineers we found that American profession engineers are very experienced because they have started before institute engineers Rwanda and now they have a big numbers of members and many activities and achievements. Institute engineers Rwanda have much challenge compared to American profession engineers such as lack of knowledge of project management, economics and planning. They are also weak on report writing and data analysis. In addition, engineers in the public sector lack expertise in monitoring and evaluating contracted work and in supervising projects in general.

**THANK YOU FOR YOUR
ATTENTION!**