

ABET Programme Outcomes

A. An ability to apply knowledge of mathematics, science and engineering.

Application of knowledge of mathematics, science and core engineering fundamentals to solve engineering problems.

- A.1. Knowledge of underlying sciences (mathematics, physics, chemistry, biology, statistics).
- A.2. Core engineering fundamental knowledge.

B. An ability to design and conduct experiments as well as to analyze and interpret data.

Design of experiments, computational models or simulations and analysis and interpretation of results and data.

- B.1. Hypothesis formulation.
- B.2. Survey of literature.
- B.3. Hypothesis test and analysis of results and data.

C. An ability to design a system, component or process to meet desired needs with realistic constraints.

Design of systems, components and processes according to requirements and constraints.

- C.1. Definition of requirements and constraints.
- C.2. Modelling to meet requirements and constraints.
- C.3. Design.
- C.4. Validation.
- C.5. Implementation.

D. An ability to function on multidisciplinary teams.

Work in teams comprised of individuals of different disciplines and/or performing different roles.

- D.1. Team formation and evolution.
- D.2. Collaboration.
- D.3. Communication.
- D.4. Leadership.
- D.5. Decision making.
- D.6. Self-management.

E. An ability to identify, formulate and solve engineering problems.

Identification, formulation and solution of engineering problems associated with the discipline.

- E.1. Problem identification and formulation.
- E.2. Modelling.
- E.3. Estimation and qualitative analysis.
- E.4. Analysis with uncertainty.
- E.5. Solution and recommendation.

F. An understanding of professional and ethical responsibility.

Knowledge, understanding and application of professional and ethical codes; assessment of the impact of professional actuations in society and organizations.

- F.1. Professional ethics, integrity, responsibility and accountability.
- F.2. Professional behaviour.

G. An ability to communicate effectively.

Skill to convey ideas and thoughts correctly, using an appropriate medium (speech, text, graphs, algorithms, diagrams) and do so in an easy-to-understand and attractive manner.

- G.1. Communication strategy.
- G.2. Communication structure.
- G.3. Written communication.
- G.4. Electronic/multimedia communication.
- G.5. Graphical communication.
- G.6. Oral presentation and inter-personal communication.

H. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context.

Ability to estimate the impact of engineering solutions in various contexts: global, economic, environmental and societal.

- H.1. Roles and responsibility of engineers.
- H.2. The impact of engineering on society.
- H.3. Society's regulation of engineering.

I. A recognition of the need for, and the ability to engage in life-long learning.

Recognition of the need for lifelong learning and ability to engage in it.

- I.1. Motivation and skills for continued self-education.
- I.2. Skills of self-education.
- I.3. Willingness to learn new material.

J. A knowledge of contemporary issues.

Knowledge of contemporary issues (technical, scientific, socio-economic, environmental and political) that could influence engineering practice.

- J.1. Awareness of current scientific and engineering issues.
- J.2. Awareness of current environmental issues.
- J.3. Awareness of current socio-economic and political issues.

K. An ability to use the techniques, skills and modern engineering tools necessary for engineering practice.

Ability to use appropriate modern technologies (hardware, software, methodologies) in the engineering practice.

- K.1. Advanced engineering fundamental knowledge.
- K.2. Use of modern hardware tools.
- K.3. Use of modern software tools.
- K.4. Use of modern professional methodologies.