

GRADUATE PROGRAM

Objectives and Outcomes

Objectives

CHEMICAL ENGINEERING DEPARTMENT MSc PROGRAM EDUCATIONAL OBJECTIVES

To train master level chemical engineers who are

- Able to design and conduct experimental studies that can bring appropriate solutions to contemporary problems, and able to evaluate the findings,
- Able to present research results at national and international scientific events,
- Able to take an active role in the management and implementation of research projects,
- Able to lead teamwork,
- Preferred in the sector with their acquired competencies.

CHEMICAL ENGINEERING DEPARTMENT PhD PROGRAM EDUCATIONAL OBJECTIVES

To train doctor engineers who are

- Able to contribute to universal science with the results obtained from original subjects,
- Able to develop, manage, and execute projects,
- Able to work as a lecturer at institutes and universities,
- Preferred to leading institutions, organizations, and R&D centers in their fields.

Outcomes

CHEMICAL ENGINEERING DEPARTMENT MSc PROGRAMME LEARNING OUTCOMES

LO1 Ability to obtain necessary knowledge deeply through scientific investigation, ability to evaluate, conclude, and apply this knowledge in chemical engineering.

LO2 Having comprehensive knowledge about up-to-date technologies and methods and their limitations in engineering.

LO3 Ability to complete and apply the limited or insufficient data through scientific methods and ability to use together the knowledge of different disciplines.

LO4 Awareness of new and improving applications in chemical engineering and the ability to learn and study on these applications.

LO5 Ability to define and formulate problems related to chemical engineering, ability to improve methods to solve these problems, and ability to apply innovative methods for solutions.

LO6 Ability to develop new and/or original ideas and methods, ability to design complex systems and processes, and develop innovative/alternative solutions in the designs.

LO7 Ability to design and apply theoretical, experimental, and modeling research activities and ability to discuss and solve the complex problems that arise in these processes.

LO8 Ability to study effectively in teams for in-discipline and interdisciplinary activities, ability to lead these teams, ability to develop useful problem-solving approaches in complex situations, ability to have responsibilities, and to study independently and individually in all cases.

LO9 Ability of written and oral communication using a foreign language sufficiently.

LO10 Ability to present properly, clearly, and systematically all processes and results of their studies oral or in written form in all kinds of national and international media.

LO11 To know social, environmental, health, safety, and legal aspects in engineering applications and the knowledge of project management and engineering activities, and awareness of all of their limitations in engineering operations.

LO12 Having social, scientific, and ethical responsibilities in all stages of collecting, interpreting, and presenting the related data and in all professional activities.

CHEMICAL ENGINEERING DEPARTMENT PhD PROGRAMME LEARNING OUTCOMES

LO1 Ability to understand and apply the most advanced levels of mathematics, science, and engineering knowledge in chemical engineering and other related areas

LO2 Ability to design, plan, supervise, conduct, conclude, and apply the original research and investigation processes for innovative scientific and technological studies, by obtaining up-to-date knowledge, in chemical engineering and other related areas

LO3 Ability to design, plan, supervise, conduct, conclude, and apply innovative multi-disciplinary studies

LO4 Ability to submit and publish the outcomes of academic studies in all kinds of respectable academic media

LO5 Ability to written, oral, and visual communication, in advanced level, in at least one foreign language

LO6 Ability to analyze, synthesize, evaluate, and criticize the arisen, suggested, and/or submitted ideas in the study area

LO7 Ability to assess up-to-date scientific, technological, social, cultural, and environmental issues, having an awareness of ethics and responsibility in all these areas