Master's Program Guide

Applied Mechanical Engineering Technologies

Welcome Message

The Department of Applied Mechanical Engineering Technologies is pleased to present this guide to the Master's Program. This guide serves as a reference for prospective graduate students and researchers seeking advanced studies in the field. The program aims to prepare highly qualified engineers capable of contributing to scientific advancement, technological innovation, and industrial development.

Program Overview

The Master's Program in Applied Mechanical Engineering Technologies is an advanced academic and research-oriented program designed to enhance students' scientific, technical, and research capabilities in the fields of applied mechanics, engineering design, stress analysis, manufacturing processes, materials engineering, and engineering simulation.

Vision

To achieve excellence and leadership in engineering education and scientific research in the field of Applied Mechanical Engineering Technologies at both national and regional levels.

Mission

To prepare competent engineers and researchers equipped with advanced knowledge, practical skills, and research capabilities necessary for developing innovative engineering solutions and supporting sustainable development.

Program Objectives

The program aims to:

- Prepare highly qualified engineers with advanced expertise in Applied Mechanical Engineering Technologies.
- Develop advanced research and analytical skills.
- Enhance students' capabilities in the design and analysis of mechanical systems.
- Promote the effective use of modern engineering software and simulation tools.
- Encourage innovation and creativity in engineering and industrial applications.
- Prepare academic staff capable of teaching and conducting scientific research.
- Strengthen collaboration with industrial and service sectors.
- Contribute to scientific advancement through high-quality research and publications.

Program Learning Outcomes

Upon successful completion of the program, graduates will be able to:

Knowledge and Understanding

- Demonstrate advanced knowledge of applied mechanics and engineering technologies.
- Understand the behavior of engineering materials and mechanical systems.

Professional Skills

- Design, analyze, and optimize mechanical systems.
- Apply modern engineering software and simulation techniques.
- Conduct engineering testing and performance evaluation.

Research Skills

- Conduct independent scientific research.
- Analyze experimental and computational results.
- Publish research findings in scientific journals and conferences.

Study Mode and Duration

The Master's Program extends over two academic years:

First Year (Coursework Stage)

- Number of Courses: 12
- Total Credits: 25
- Distribution: Two academic semesters

Second Year (Research Stage)

- Completion of a specialized Master's Thesis
- Thesis Credits: 10

Learning Environment

The program is delivered in English and includes:

- Face-to-face lectures
- Engineering laboratories
- Seminars and workshops
- Blended learning activities
- Research projects

Assessment Methods

Student performance is assessed through:

- Midterm examinations
- Final examinations
- Technical reports and assignments
- Seminars and presentations
- Thesis evaluation and defense

A minimum average of 70% is required to successfully complete the coursework stage.

Curriculum Structure

Year One – Coursework Stage

Component	Number
Courses	12
Credits	25

Year Two – Research Stage

Component	Number
Master's Thesis	10 Credits

Total Graduation Requirements

Coursework Credits	Thesis Credits	Total Credits
25	10	35