Curriculum

Table 1: Summary of Course Requirements

COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE
General Education Requirements: 28 Credit Hours					
MEC 511	Advanced Mathematics and Applied Statistics	MEC 522	Advanced Heat Transfer	MEC 524	Finite Element Applications in Solid Mechanics & Heat Transfer
MEC 513	Advanced Fluid Mechanics	MEC 526	Renewable Energy	MEC 515	Linear Elasticity
Elective 1	Technical Elective 1	Elective 2	Technical Elective 2	MEC 599	Thesis 2
MEC 589	Thesis 1				

Students who lack the expected knowledge for unconditional admission must complete the required prerequisite undergraduate courses as recommended by the graduate advisor. Table 3 shows the expected prerequisite knowledge for the MSME:

Table 2: Expected Pre-core Requirement

COURSE CODE	COURSE TITLE	Cr
MEC 465 or equivalent	Numerical & Finite Element Simulations of Engineering Problems	3

Table 3: Study Plan

The following is the study plan for a typical full-time student:

First Year	
Semster 1	**Semster 1**
MEC 511 Advanced Mathematics and Applied Statistics	MEC 524 Finite Element Applications in Solid Mechanics & Heat Transfer
MEC 513 Advanced Thermo-Fluid	MEC 522 Advanced Heat Transfer
MEC 515 Linear Elasticity	MEC 526 Renewable Energy
Second Year	
Semster 1	**Semster 1**
Technical Elective 1	Technical Elective 2
MEC 589 Master Thesis 1	MEC 599 Master Thesis 2

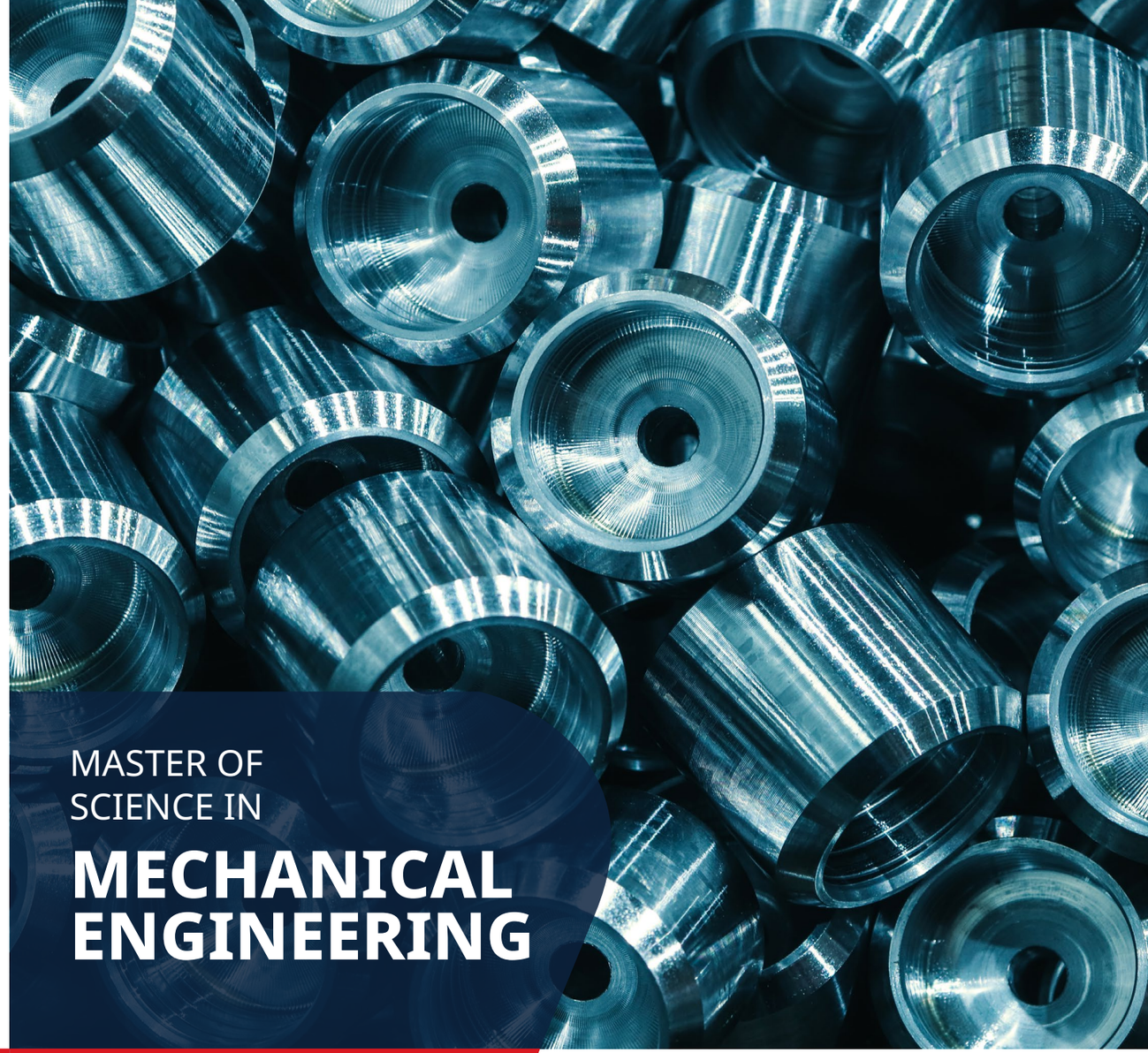
The following is the Technical courses for the MSME:

GROUP A: Students can select up to three technical courses from the following:

COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE
General Education Requirements: 28 Credit Hours					
MEC 551	Computational Fluid Dynamics (CFD) & Heat Transfer (HT)	MEC 553	Online condition-based monitoring of rotating equipment	MEC 558	Computer Aided Analysis of Multi-Body systems
MEC 552	Mechanical Design Optimization	MEC 557	Advanced Mechatronics	MEC 559	Design of Robotics Manipulators
MEC 554	MEMS (Microelectromechanical systems)	MEC 560	Production Systems Operations	MEC 555	Bio-Materials
MEC 561	Dynamics of Mechanical Systems	MEC 556	Solar Energy	MEC 562	Transport Phenomena in Porous Media
MEC 563	Advanced Thermodynamics				

GROUP B: Students can select maximum of one course from the following group as a technical elective:

COURSE CODE	COURSE TITLE	CR	Pre-requisites
MEM 501	Project Management	3	-
MEM 504	Quality Engineering	3	Knowledge of basic statistics



MASTER OF SCIENCE IN

MECHANICAL ENGINEERING

جامعة أبوظبي
Abu Dhabi University
College of Engineering

Program Overview

The Master of Science in Mechanical Engineering (MSME) program is offered by the College of Engineering at Abu Dhabi University (ADU). The MSME program has been designed to provide a wide range of technical knowledge and skills that would enhance analytical abilities and knowledge in the area of Mechanical Engineering. The program is also beneficial for working ME professionals seeking competitive edge to aid promotional opportunities by obtaining a master's degree in Mechanical Engineering on a carefully designed schedule that minimizes disruption of work commitments.

Students with a bachelor degree in mechanical engineering and related fields are eligible to apply. However, students with undergraduate degrees other than mechanical engineering may be admitted on conditional basis. Such students will have to take some undergraduate-level deficiency courses, as determined by the graduate advisor after examination of their undergraduate transcripts.

Student's Testimonial

Eng. Omar Ahmad Mohamad - Alumni

I completed my Bachelor of Science in Mechanical Engineering in 2018. I didn't want to pursue a Master- Degree, but after listening to the advises of the surrounding and remember the support that my instructors provided in the Bachelor program, I said "Let us do it". It was literally "us" as the faculty are so keen about the students and they believe in them more the students believe in themselves. In several cases, it felt like the faculty members are putting more time into the projects more the student himself is doing. I have several friends who finished their masters abroad, yet they hardly have any research skills. However, in ADU, this is not an option given the emphasize the faculty members place on the research and how it is embedded in the course work. The only word I can say, THANK YOU.

Curriculum

The Master of Science in Mechanical Engineering is a 30-credit-hour program. Table 1 summarizes the degree requirements. Students have to complete 8 graduate-level courses (24 credit hours) in addition to a master's thesis (6 credit hours). This program is ideal for students wishing to complete the degree in about 2 years and to use their advanced degree as a foundation for a career in industry related to design and analysis, testing, consulting, or management.