

ME402-404-406 Engineering Design
2nd Progress Presentation Schedule - Spring 2026

ME402 Mechatronics System Design

Location: D07

Instructor	Project Title and Definition	Time
Prof. Dr. Serhan Özdemir	AI-based Black-box Model Generation and Learning on Vehicle Parking	15:15-15:35
Prof. Dr. M. İ. Can Dede	Modular Quadruped Legged Robot	15:35-16:00
Prof. Dr. Gökhan Kiper	Design of Pine Seed Extraction and Sorting Machine	16:00-16:25

ME404 Thermal-Fluid Systems Design Session 1

Location: Seminar Room

Support: 404 Session 2 Professors

Instructor	Project Title and Definition	Time
Assoc. Prof. Dr. Şenay Mihçin	Design and Development of a Low-Cost Portable Seawater Desalination Device for Emergency and Remote Applications	13:00-13:25
Assoc. Prof. Dr. Şenay Mihçin	Design and Development of a Low-Cost Portable Seawater Desalination Device for Emergency and Remote Applications	13:25-13:50
Prof. Dr. Erdal Çetkin	Investigation of the Thermal Effects of Preheating Applied to Lithium-Ion Batteries	13:50-14:10
Prof. Dr. Erdal Çetkin	Latent Solar Thermal Energy Storage: The Effect of Phase Change Material Domain	14:10-14:25

ME404 Thermal-Fluid Systems Design Session 2

Location: Seminar Room

Support: 404 Session 1 Professors

Instructor	Project Title and Definition	Time
Assoc. Prof. Dr. Ünver Özkol	Design of Fighter Aircraft Exterior Geometry with Rapid Iteration using Parametric Modelling Methods	14:40-15:05
Assoc. Prof. Dr. Ünver Özkol	Design of an Axial Fan for a Heat Exchanger and Its Test Setup	15:05-15:25
Assoc. Prof. Dr. Ünver Özkol	Design of an Axial Fan for a Heat Exchanger and Its Test Setup	15:25-15:40
Dr. Ayşe Korucu	Acoustic Fire Extinguishing	15:40-16:00
Assoc. Prof. Dr. Ünver Özkol	Improving Performance Of A Small Underwater Vehicle	16:00-16:15
Assoc. Prof. Dr. Ünver Özkol	Thrust Improvement Of A Drone Propeller and Its Test Setup	16:15-16:35
Assoc. Prof. Dr. Ünver Özkol	Thrust Improvement Of A Drone Propeller and Its Test Setup	16:35-16:50

ME406 Manufacturing and Materials Design Session 1

Location: D03

Support: 402 Professors

Instructor	Project Title and Definition	Time
Dr. Benay Uzer	Development of a Sheet Metal Forming Test Setup	13:30-13:50
Dr. Benay Uzer	Extrusion Test Setup for Education	13:50-14:10
Dr. Benay Uzer	Design and Experimental Analysis of a Rolling Test Setup	14:10-14:30
BREAK (14:30 - 14:45)		
Dr. Halil Tetik	Design of a Printhead for Robotic Additive Manufacturing of Continuous Fibre Reinforced Thermoplastic Materials	14:45-15:05
Dr. Büşra Karaş	Digital Model of Advanced Production Systems	15:05-15:25
Dr. Büşra Karaş	Redesign and Mechanical Performance Investigation of an Automotive Brake Caliper Using Topology Optimization and Additive Manufacturing	15:25-15:40
Dr. Büşra Karaş	Design and Performance Analysis of Additively Manufactured Bionic Cell Shock Absorber Structures	15:40-16:00

ME406 Manufacturing and Materials Design Session 2

Location: D07

Instructor	Project Title and Definition	Time
Prof. Dr. Mustafa Güden	Miniature Split-Hopkinson Pressure Bar design for hard and soft materials	13:30-13:55
Prof. Dr. Mehmet Dördüncü	Strain Data-Driven Shape Sensing for Real-Time Structural Health Monitoring of UAV Wings	13:55-14:15
Prof. Dr. Alper Taşdemirci	Mechanical Performance Assessment of Molded Paper Pulp as an Eco-friendly Packaging Material	14:15-14:35
Assoc. Prof. Dr. Şenay Mihçin	Hybrid Optimization and Bench Testing of PLA 3D-Printed Hip Stems Combining Cross-Section Geometry and Lattice Infill	14:35-14:55