

MENG 190 – Introduction to Mechanical Engineering						
Eastern Mediterranean University						
Faculty of Engineering						
Department: Mechanical Engineering						
Program Code: 23		Program: Mechanical Engineering		Year/Semester: 2021-2022 SPRING		
Course Code: MENG 190		Course Title: Introduction to Mechanical Engineering		Credit hours		
				Lec.	Tut/Lab	Total
				1	1	1
Categorization of Course: <input checked="" type="checkbox"/> Engineering or Area Core <input type="checkbox"/> Engineering Course offered by other programs <input type="checkbox"/> Engineering Area Elective <input type="checkbox"/> Mathematics and Basic Sciences <input type="checkbox"/> General Education			Categorization of Credits: Mathematics & Basic Science: Engineering Topics: 1 General Education: Major Engineering Design:			
Instructor Name: Mert İnanlı			Office no: ME022	Office Tel: 6301534		
			Email: mert.inanli@emu.edu.tr			
Course Web Page: https://staff.emu.edu.tr/muratozdenefe/en/teaching						
Textbook(s): An Introduction to Mechanical Engineering: Part 1 / Michael Clifford (Optional)						
Catalog Description: This course aims to familiarize first year mechanical engineering students by introducing them the fundamentals of discipline; program curriculum and faculty; job opportunities for mechanical engineers; basic study skills; an overview of fundamentals laws and principles of mechanical engineering; introduction to problem layout and problem solving methods; simplified engineering modeling and analysis of mechanical systems; collection, and presentation of engineering data; Ethical issues; Occupational Health and Safety issues; and the importance of computers and language skills for effective communication.						
Prerequisite(s)		NA				
Type of Course		<input checked="" type="checkbox"/> Required <input type="checkbox"/> Selected Elective <input type="checkbox"/> Elective				
Student Outcomes						
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			<input checked="" type="checkbox"/>		
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.			<input type="checkbox"/>		
3	An ability to communicate effectively with a range of audiences.			<input checked="" type="checkbox"/>		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.			<input checked="" type="checkbox"/>		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.			<input type="checkbox"/>		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.			<input type="checkbox"/>		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.			<input type="checkbox"/>		

Course Learning Outcomes		Student Outcomes							Assessment Percentages
		1	2	3	4	5	6	7	
1	Understand the fundamentals of Mechanical Engineering.	X							Attendance 15% Midterm Exam: 25% Quizzes 30% Final Exam: 30%
2	Understand the use of units/dimensions and unit conversion in engineering calculations	X							
3	Understand basic principles of scientific computation and engineering solution i.e. Problem Identification, Problem Formulation and Problem Solution.	X							
4	Understand collection and presentation of engineering data			X					
5	Understand the Ethical issues and Professional Responsibilities in Engineering.				X				
6	Understand the fundamentals of Occupational Health and Safety, and safety practices at departmental laboratories and university campus.				X				
Weight of Student Outcomes		L		L	H				

Topics Covered and Class Schedule:	
Week 1	Introduction ; mechanical engineering profession, mechanical engineering fields, program curriculum; program faculty and departmental facilities.
Week 2	Engineering Ethics ; Research and Publication ethics committee of EMU. Professional engineering organizations and Code of Ethics.
Week 3	Technical Problem solving and communication skills , Presenting engineering calculations. Unit Systems and Unit Conversion, Dimensional Consistency
Week 4	Introduction to Mechanics : Principles of statics and dynamics; force, moment, torque, equilibrium of forces and moments, free-body diagram
Week 5	Introduction to Mechanics of Materials : Strength of Materials
Week 6	Technical Trip 1
Week 7	Introduction to Materials Science and Manufacturing Technology : Materials classification, introduction to manufacturing, classification of manufacturing processes.
Week 8 & 9	Midterm Examination
Week 10	Introduction to Engineering Design : Introduction to Design. CAD/ CAM
Week 11	Technical Trip 2
Week 12	Introduction to Fluid Engineering : Introduction to Fluid Mechanics
Week 13	Introduction to Thermal and Energy Systems : Introduction to Thermodynamics & Heat Transfer
Week 14	Technical Trip 3
Week 15	Occupational Health and Safety
Week 16	Final Examination