



**İZMİR KÂTİPÇELEBİ UNIVERSITY
FACULTY OF ENGINEERING ARCHITECTURE
MECHANICAL ENGINEERING DEPARTMENT**

Form No:FRM-1

**First Pub
Date:**15/11/2016

**Rev.
No/Date:**25/01/2017

DESIGN PROJECT PROPOSAL FORM

Academic Year	2022 -2023	Semester	Fall•Spring X
Project Type	Research •ME 411 Thermal & Fluid Design •ME 413 Mechanical Design •ME 415 Robotics & Control Design	Application •ME 412 Thermal & Fluid Design X ME 414 Mechanical Design •ME 416 Robotics & Control Design	
Advisor	Prof. Dr. Buket OKUTAN BABA		
Project Title	Determination of Mechanical Properties of Lattice Structures		
Purpose and Scope	The aim of this study is to determine the mechanical properties of a lattice structure.		
Work Packages	• In this study, the mechanical properties of the lattice structure will be determined by using CAD/FEM finite element package programs. • Properties of different lattice structures such as tensile, compression and three-point bending will be determined.		
# of Team Members	1-2		
This section will be filled by the Commission	The Project Proposal <input type="checkbox"/> fulfills the regulations of the Department <input type="checkbox"/> should be revised according to the following suggestions:		

The projects are aimed to prepare students to attain the following program educational objectives:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Therefore, the final report of the project should contain the followings:

- i. Definition of the design problem and its limitations
- ii. Theoretical information about the topic, standards, and patents
- iii. Different design options and selection criteria
- iv. Optimal solution with appropriate selection criteria
- v. Cost accounting, feasibility, compliance with regulations and standards, environmental impacts, and compliance with ethical rules



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vi. Engineering drawing and presentation methods for presenting