



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• SpringX
Project Type	Research <ul style="list-style-type: none">•ME 411 Thermal & Fluid Design•ME 413 Mechanical Design•ME 415 Robotics & Control Design	Application <ul style="list-style-type: none">•ME 412 Thermal & Fluid DesignXME 414 Mechanical Design•ME 416 Robotics & Control Design	
Advisor	Prof. Dr. Buket OKUTAN BABA		
Project Title	Impact Analysis of Curved Composite Shells		
Purpose and Scope	The aim of this study is to design curved epoxy-glass composite shell and investigate impact response under different impact energy levels.		
Work Packages	<ul style="list-style-type: none">• In this study, an epoxy-glass composite shell with R0, R100, R125 and R160mm radius of curvature will be designed using CAD / FEM finite element package programs.• Then, impact analyses of composite shells will be performed under different impact energies using FEM finite element package programs.		
# 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



**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

- v. Cost accounting, feasibility, compliance with regulations and standards, environmental impacts, and compliance with ethical rules
- vi. Engineering drawing and presentation methods for presenting