

**COURSE INFORMATION FORM**

<b>Faculty/ Institute</b>	Faculty of Fine Arts and Architecture
<b>Department</b>	Department of Industrial Design
<b>Course Code</b>	EÜT 110
<b>Course Title</b>	Structural Design
<b>Language</b>	English
<b>Program</b>	Industrial Design Undergraduate Program
<b>Course Type</b>	Must
<b>Course Level</b>	
<b>Course ECTS</b>	2
<b>Prerequisites</b>	None
<b>Course Catalogue Description</b>	This course includes the topics that are related to the basics of structural design for the industrial design practice. It provides knowledge on basics of physics, statics, dynamics and optics, thus constitutes a scientific basis that is required at the every stage of the design process.
<b>Course Objectives</b>	The aim of the course is to explain the basics of physics for designers. It is also intended to cover the topics such as the basics of physics, force, movement, statics dynamics, impulse, momentum, energy, magnetics, optics and mechanisms and also show students how to use this knowledge in the product design process.
<b>Course Learning Outcomes</b>	At the end of the course, students are expected to gain knowledge about the basics of physics, force, movement, statics dynamics, impulse, momentum, energy, magnetics and optics. They are also required to understand the details of basic mechanisms and apply these in their projects.
<b>Resources and References</b>	Course notes, books on physics, statics, dynamics, electrics, optics and mechanisms at the level of high school and university.  www.megep.meb.gov.tr
<b>Course Grading</b>	<b>Grade Points</b>
<b>Attendance</b>	10
<b>Laboratory</b>	
<b>Applications</b>	
<b>Field Study</b>	
<b>Tasks</b>	40
<b>Presentations</b>	
<b>Projects</b>	
<b>Seminars</b>	
<b>Midterms</b>	20
<b>Quiz</b>	
<b>Final</b>	30
<b>Total</b>	100

<b>Weekly Outline</b>	<b>Topics</b>
	Definition of the course, identification of the expectations of the students from the course and their existing knowledge. Units, physical features of matters such as color, smell, taste, solubility, hardness, volume, mass, electrical conductivity, heat, flexibility, density, expansion etc.
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2	Statics, Force, Momentum, Center of gravity, Equilibrium, Dynamics, Movement, Torque, Speed, Acceleration. Examination of the systems in regards to statics and dynamic and their conditions.
3	Work, Force, Energy, Impulse, Momentum, Mechanical Vibrations Explanation of the concepts work, force and energy, potential and kinetic energy, conservation of energy, stimulation in linear and circular movement, collision and mechanical vibrations.
4	Thermodynamics, Temperature, Heat, Heat Transfer Explanation of the thermodynamic structure of matters and systems and the concepts of temperature and heat
5	Electronics, Magnetism, Electromagnetics, Light, Optics, LED, Laser Electric The features of electric, its application areas, static electric, network, low voltage, current, resistance, electronic devices and their usage in product design, magnetic features, optics, LED and its usage areas, laser technologies.
6	Mechanisms -1 Investigation of the frequently used mechanisms in design, adaptation methods of varying mechanisms for different purposes.
7	Mechanisms -2 Investigation of the frequently used mechanisms in design, adaptation methods of varying mechanisms for different purposes.
8	Mechanisms -3 Investigation of the frequently used mechanisms in design, adaptation methods of varying mechanisms for different purposes.
9	Mechanisms -4 Investigation of the frequently used mechanisms in design, adaptation methods of varying mechanisms for different purposes.
10	Mechanisms -5 Investigation of the frequently used mechanisms in design, adaptation methods of varying mechanisms for different purposes.
11	Mechanisms -6 Investigation of the frequently used mechanisms in design, adaptation methods of varying mechanisms for different purposes.
12	Overview of the Course and Evaluation of the Project Evaluation of the final projects and overview of the topics in the context of the course.