OSTIM TECHNICAL UNIVERSITY
FACULTY OF ENGINEERING

COURSE SYLLABUS FORM
2020-2021
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IUL 152 Building the Future

Course Name	Course Code	Period	Hours	Application	Laboratory	Credit	ECTS
BUILDING THE FUTURE	IUL 152	2	1	1	0	1	1

Language of Instruction	English
Course Status	Compulsory
Course Level	Bachelor
Learning and Teaching Techniques of the Course	Lecture, Experiments, Thought Experiments, Argumentation

Course Objective

The objective of this course is to make students planning their career properly so to bring up plausible decision maker citizens and also bring up engineers who could compete in job markets. It is also aimed to make students critical thinkers which is a basic engineering skill, on the basis of scientific, technological, and engineering improvements and creative thinking.

Learning Outcomes

1. Having opinion about scientific, technological, and engineering improvements.
2. Making plausible decisions with warrants among alternative ones.
3. Using self-regulation skills for career planning.

Course Outline

The improvements in science, technology, and engineering in 2021, Career planning (an example from science history – Marie Curie), Nanotechnology, Polymer industry, DNA fingerprint – Genetic Engineering, Nuclear reactors, “SCAMPER”ing satellites, Galileo’s ball, Einstein’s photon scale, Bondi’s mill, and other thought experiments from literature.

Weekly Topics and Related Preparation Studies		
Weeks	**Topics**	**Preparation Studies**
1	The improvements in science, technology, and engineering in 2021	Literature search
2	Career planning (an example from science history – Marie Curie)	Literature search
3	Nanotechnology	Literature search
4	Polymer industry	Literature search
5	DNA fingerprint – Genetic Engineering	Literature search
6	Nuclear reactors	Literature search
7	"SCAMPER"ing satellites	Literature search
8	**Midterm Exam** **A prototype design on the basis of satellites' SCAMPERing**	
9	Galileo's ball	Literature search
10	Einstein's photon scale	Literature search
11	Bondi's mill	Literature search
12	Other thought experiments from literature	Literature search
13	Other thought experiments from literature	Literature search
14	Other thought experiments from literature	Literature search
15	Other thought experiments from literature	Literature search
16	**Final Exam** **3D material designing for blind students**	

Textbook(s)/References/Materials:
Literature search

Assessment		
Studies	**Number**	**Contribution margin (%)**
Continuity		
Lab		
Application		
Field Study		
Course-Specific Internship (if any)		
Quizzes / Studio / Critical		
Homework	1	30
Presentation		
Projects		
Report		
Seminar		
Midterm Exams / Midterm Jury	1	30
General Exam / Final Jury	1	40
	Total	**100**
Success Grade Contribution of Semester Studies		
Success Grade Contribution of End of Term		
	Total	**100**

Relationship Between Course Learning Outcomes and Program Competencies						
Nu	Learning Outcomes	Contribution Level				
		1	2	3	4	5
1	Having opinion about scientific, technological, and engineering improvements.					X
2	Making plausible decisions with warrants among alternative ones.					X
3	Using self-regulation skills for career planning.					X

ECTS / Workload Table			
Activities	Number	Duration (Hours)	Total Workload
Course hours (Including the exam week: 16 x total course hours)	16	1	16
Laboratory			
Application			
Course-Specific Internship			
Field Study			
Study Time Out of Class			
Presentation / Seminar Preparation			
Projects			
Reports			
Homeworks	1	3	3
Quizzes / Studio Review			
Preparation Time for Midterm Exams / Midterm Jury	1	3	3
Preparation Period for the Final Exam / General Jury	1	10	10
Total Workload			**32**