

TOROS ÜNİVERSİTESİ

Faculty Of Engineering
Industrial Engineering (English)

Course Information

HISTORY OF CIVILIZATION AND SCIENCE					
Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
HIS202	Spring	2	0	2	3

Prerequisites and co-requisites	
Language of instruction	English
Type	Elective
Level of Course	Bachelor's
Lecturer	Prof. Dr. Yusuf Zeren
Mode of Delivery	Face to Face
Suggested Subject	
Professional practise (internship)	None
Objectives of the Course	The course aims to explain the origins of the science and the nature of the scientific knowledge; the major theories and discoveries which led to modern concept of science are discussed in the following phases: Science in the ancient civilisations (Egypt, Mesopotamia, Greek World); Science in the Medieval Europe and the Islamic World; the Renaissance and the emergence of modern science; science during the Reformation and the Industrial Revolution; the science in today's world and the future of science in Turkey.
Contents of the Course	"The course covers issues such as the definition of science: aims, properties, development and stages. History of science: Philosophy of science, philosophical trends and their effect of development of science, History of inventions. Epistemology, ontology, nature of scientific concepts, how can be reached to knowledge, scientific information and its properties. Concept of being. Scientific method: Scientific mind, Scientific questionnaire. Science society: sociology and anthropology of science, ethic of science "

Learning Outcomes of Course

#	Learning Outcomes
1	Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied information in these areas to model and solve engineering problems.
2	Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.
3	Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose. (Realistic constraints and conditions may include factors such as economic and environmental issues, sustainability, manufacturability, ethics, health, safety issues, and social and political issues, according to the nature of the design.)
4	Ability to devise, select, and use modern techniques and tools needed for engineering practice; ability to employ information technologies effectively.
5	Ability to design and conduct experiments, gather data, analyze and interpret results for investigating engineering problems.
6	Ability to work efficiently in intra-disciplinary and multi-disciplinary teams; ability to work individually.
7	Ability to communicate effectively in Turkish, both orally and in writing; knowledge of a minimum of one foreign language.

Course Syllabus

#	Subjects	Teaching Methods and Technics
1	Introduction	Lecturing

2	Description of Science	Lecturing
3	History of Human Beings	Lecturing
4	History of Civilizations	Lecturing
5	Science in Ancient Greece	Lecturing
6	Science in Asia Minor and Mesopotamia	Lecturing
7	Midterm	Exam
8	Science in Ancient Indian and Egyptian Cultures	Lecturing
9	Science in Ancient China	Lecturing
10	Science in Islam	Lecturing
11	Science and Christianity	Lecturing
12	Science in European history	Lecturing
13	Science after WWI and WWII	Lecturing
14	Science and Turkey	Lecturing
15	Science and Turkey	Lecturing
16	Final Exam	Exam

Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Colin A.Ronan, History of Science 1983		
2	John Desmond Bernal, Science in History, London 1954 (Übers. Ludwig Boll: Die Wissenschaft in der Geschichte, Berlin, 1967		

Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied information in these areas to model and solve engineering problems.	3	1,2
2	Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.	3	1,2
3	Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose. (Realistic constraints and conditions may include factors such as economic and environmental issues, sustainability, manufacturability, ethics, health, safety issues, and social and political issues, according to the nature of the design.)	2	1,2
4	Ability to devise, select, and use modern techniques and tools needed for engineering practice; ability to employ information technologies effectively.	2	1,2
5	Ability to design and conduct experiments, gather data, analyze and interpret results for investigating engineering problems.	2	1,2
6	Ability to work efficiently in intra-disciplinary and multi-disciplinary teams; ability to work individually.	4	1,2
7	Ability to communicate effectively in Turkish, both orally and in writing; knowledge of a minimum of one foreign language.	4	1,2

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method

Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	2	28
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	2	28
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	1	6	6
8	Midterm Exam	1	1	1
9	Quiz	0	0	0
10	Homework	2	5	10
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0
13	Final Project	0	0	0
14	Final Exercise	0	0	0
15	Preparation for Final Exam	1	6	6
16	Final Exam	1	1	1
				80