COURSE DESCRIPTION FORM	
Course Code and Title	CHE388 EVOLUTION of TECHNOLOGY
Course Semester	6
Catalog Description (Content) of the Course	What is Technology? Relationships among science, technology and engineering. Technological developments in the prehistorical era, the antiquity and medieval. Contributions of different civilizations to the technological developments. Contributions of the Central Asian and the Middle East civilizations to science, technology and engineering processes. Contemporary technologies.
Main Textbook	B. Bunch and A. Hellemans, "The History of Science and Technology" , Houghton Mifflin Company, Boston, NEW YORK, 2004.
Supporting Textbooks	Toby E. Huff, "The rise of early modern science: Islam, China, and the West", Cambridge University Press, 2nd ed, 2003. "An Introduction to the History of Science in Non-Western Traditions", Editors: R. DeKosky and D. Allchin, History of Science Society Seattle ,2008. M. Iqbal, "Science and Islam", Greenwood Press, Westport, Connecticut, London, 2007 "Bilim Teknoloji ve Sosyal Değişme", Editör: B. Ata, Pegem Akademi, 2008.
Course Credit (ECTS)	3
Prerequisites of the Course (Compulsory attendance should be indicated here.)	There is no prerequisite or co-requisite for this course. Attandence of the course must be 70%.
Type of the Course	Elective
Instruction Language of the Course	English
Object and Target of the Course	Relate the science, technology and engineering to discuss their contributions to the civilizations by designing their applications, with students, to understand evolution of science, technological and engineering processes. Preparation of projects for the course purposes.
Learning Outcomes of the Course	To understand idea beheaind the science and the technological developments.
Mode of Delivery	Courses are given only face to face.
Weekly Schedule of the Course	1. Week: Conceptual approach to science, technology and engineering 2. Week: The prehistoric era and the antiquity of technology 3. Week: Technological processes in the medieval and the modern age 4. Week: Technological developments of far east Asia civilizations 5. Week: Technological developments of Central Asia and the Middle East civilizations 6. Week: Technological developments of Central Asia and the Middle East civilizations 7. Week: Technological developments of Central Asia and the

	Middle East civilizations
8. Week	Technological developments of Central Asia and the Middle East civilizations
9. Week	Technological development and evaluation of engineering applications in modern age
10. Week	.Technological development and evaluation of engineering applications in modern age
11. Week	Technological development and evaluation of engineering applications in modern age
12. Week	Discussion of selected topics with student groups
13. Week	Discussion of selected topics with student groups
14. Week	Discussion of selected topics with student groups

Educative Activities *(Credit will be determined based on the time given for these activities. Should be filled carefully.)*	Theoretical Study Hours of Course Per Week Reading Searching in Internet and Library Preparing Reports Preparing Presentation Presentation Mid-Term and Studying for Mid-Term Final and Studying for Final

Assessment Criteria

	Quantity	**Total Contribution (%)**
Midterm	2	30
Homework	2(at least)	5
Assignment	0	0
Projects	1	20
Practice	0	0
Quiz	1 (at least)	5
Contribution of In-term Studies to Overall Grade		60
Contribution of Final Examination and Term Project to Overall Grade		40
Attendance		70

Workload of the Course

Activity	**Total Week Count**	**Weekly Duration (in hour)**	**Total Workload in Semester**
Theoretical Study Hours of Course Per Week	14	3	42
Practicing Hours of Course Per Week	0	0	0
Reading	6	1	6
Searching in Internet and Library	5	1	5
Designing and Applying Materials	0	0	0
Preparing Reports	2	2	4
Preparing Presentation	1	2	2

Presentation	1	2	2
Mid-Term and Studying for Mid-Term	4	2	8
Final and Studying for Final	1	3	3
Other			
Total work load			72
Total work load/25			2,88
ECTS of the course			3

Course's Contribution To Program

Number	Program Outcomes	1	2	3	4	5
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.	X				
2	Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.	X				
3	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.	X				
4	Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.				X	
5	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.	X				
6	Ability to devise, select, and use modern techniques and tools needed for engineering practice; ability to employ information technologies effectively.		X			
7	Ability to design and conduct experiments, gather data, analyze and interpret results for investigating engineering problems.		X			
8	Ability to work efficiently in intra-disciplinary teams.			X		
9	Ability to work efficiently in multi-disciplinary teams;				X	
10	Ability to work individually.	X				
11	Ability to communicate effectively in Turkish/English, both orally and in writing; Ability to write effective reports and comprehend written					X

		reports, make effective presentations,					
	12	prepare design and production reports, give and receive clear and intelligible instructions.	X				
	13	Recognition of the need for lifelong learning; ability to access information, to follow developments in science and technology, and to continue to educate him/herself.	X				
	14	Awareness of professional and ethical responsibility.			X		
	15	Information about business life practices such as project management, risk management, and change management.	X				
	16	Information about awareness of entrepreneurship, innovation, and sustainable development.	X				
	17	Knowledge about contemporary issues and the global and societal effects of engineering practices on health, environment, and safety.	X				
Name of Lecturer(s) and Contact Iınformation	1. Prof.Dr. Kırali Mürtezaoğlu						