



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Nature of Science and History of Science							
Course Code		FBÖ304		Course Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		To have knowledge about the connections in historical process among science, technology and mathematics. Providing an environment for studnts to produce innovative ideas.							
Course Content		Evolution of the science since ancient Near East civilizations. Science in the period of Iyonya-Helen, Islam-Turk (Arabian, Horosan, Selcuk, Endulus, Ottoman) . The development of Astronomy, Mathematics, Physics, Medicine, Biology etc. . during the above periods and since Renaissance in the West. Science and Technology Revolutions in the 20th century.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Case Study, Problem Solving					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Ronan, C. A (2005).bilim tarihi.tubitak akademik dizi
2	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
3	Çepni, S. Ayvaci, H.Ş. ve Bacanak, A. (2004). Fen Teknoloji Toplum, Top-kar Matbaacılık, Trabzon.
4	Ata, B. (2008). Bilim Teknoloji ve Sosyal Değişme, Pegem Yayıncılık, Ankara.
5	Doğan, N., Çakıroğlu, J., Bilican, K. ve Çavuş, S. (2009). Bilimin Doğası ve Öğretimi, Pegem Yayıncılık, Ankara.

Week	Weekly Detailed Course Contents	
1	Theoretical	Evolution of the science since ancient Near East civilizations
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
2	Theoretical	Science in the period of Iyonya-Helen, Islam-Turk (Arabian, Horosan, Selcuk, Endulus, Ottoman)
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
3	Theoretical	The development of Astronomy, Mathematics, Physics, Medicine, Biology etc. . during the above periods and since Renaissance in the West
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
4	Theoretical	Science and Technology Revolutions in the 20th century.
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
5	Theoretical	Science, scientific knowledge, scientific process
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
6	Theoretical	Scientific literacy
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
7	Theoretical	Technology and technology literacy-Science-Technology-Society
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
8	Theoretical	Presentations of group homeworks of students in relation to the scientist who contributed to the mathematics field.
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
9	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
	Intermediate Exam	Midterm exam
10	Theoretical	Presentations of group homeworks of students in relation to the scientist who contributed to the mathematics field.
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
11	Theoretical	Presentations of group homeworks of students in relation to the scientist who contributed to the mathematics field.
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul



12	Theoretical	Presentations of group homeworks of students in relation to the scientist who contributed to the mathematics field.
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
13	Theoretical	Presentations of group homeworks of students in relation to the scientist who contributed to the mathematics field.
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
14	Theoretical	Presentations of group homeworks of students in relation to the scientist who contributed to the mathematics field.
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
15	Theoretical	watching movie about history of science
	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
16	Preparation Work	Yıldırım.C. (2008).bilim tarihi. Remzi kitabevi İstanbul
	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	3	42
Assignment	4	0	1	4
Reading	14	0	3	42
Midterm Examination	1	5	1	6
Final Examination	1	5	1	6
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	explain the improvement of science from the Near East civilizations to present.
2	express the change and the development of science history in Islam-Turks period.
3	express the development in the field of the mathematics from Renaissance to present.
4	use the living interesting events regarding the process of the contribution of the scientists mentioned in the secondary physics curriculum topics, to increase students' attention and attitudes to the course.
5	recognizing the relationship between philosophy and science.
6	Beholding the changes and development of science, associate with the nature of science.

Programme Outcomes (Science Teacher Education)

1	To be able to gain subject knowledge of profession in theory and practice in the learning process.
2	To be able to gain the competence of using the appropriate approach, strategy, method and technique for the instructional plans to be prepared in the learning process.
3	To be able to gain the skills of the teaching profession in the learning process.
4	To be able to implement teaching profession knowledge, skills, attitudes and habits related to the subject-matter in a real teaching and learning environment in the learning process.
5	To be able to comprehend contemporary approaches of education and the philosophy they are based on.
6	To be able to gain the basic skills such as comprehending, expressing, commenting, evaluating, being aware and enterprising, communicating, acknowledging the individual related to the subject-matter.
7	To be able to become individuals faithful to the Principles and Revolutions of Atatürk, be modern democratic, secular, protecting and deveoping one's country, being alive to the nation, respecting human rights, preserving the nature, not being discriminatory, giving importance to the traditions and customs, protecting the values
8	To be able to improve oneself in terms of sport, art and culture.
9	To be able to become individuals believing in lifelong learning.
10	To be able to gain the vision of being individuals who keep up with developments in social, economic, technological and scientific areas, who investigate the main reasons of World problems and try to contribute to the solutions of these problems.

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5	L6
P1					4	
P3	5	5		5		5
P4					4	



P10	5	4	5	4	5	5
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