



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Science and Technology Based Problems							
Course Code		FBÖ455		Couse Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	100 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		The aim of this course is To understand the effects of developments in science and technology on society and environment, to develop a critical perspective on the interaction between Science and Technology Community Environment							
Course Content		The chronological history of science and technological developments; innovations in science and technology (agriculture, artificial cell, transgenic creatures, electronics, automation sen), the positive effects of these innovations on human life, risks to human health, greenhouse gases and global warming, disaster scenarios, projections for the future							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Project Based Study					
Name of Lecturer(s)		Lec. Hediye CAN							

Assessment Methods and Criteria

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

Recommended or Required Reading

1	1. Ayvaci, H.Ş., 2009; Teknoloji ve Tasarım, Pegema Yayıncılık: Ankara
2	2. Çepni, S., Ayvaci, H. Ş., Bacanak, A. (1999). Fen Teknoloji ve Toplum, Trabzon: Celepler Matbaacılık

Week	Weekly Detailed Course Contents	
1	Theoretical	1) Scientific literacy, technology literacy
2	Theoretical	2) Scientific knowledge, types of scientific knowledge, scientific processes, characteristics of science
3	Theoretical	3) Past, present and future of scientific knowledge
4	Theoretical	4) history of science technology society and environment
5	Theoretical	5) relation of science technology environment and society
6	Theoretical	6) genetic and biotechnology applications and its effects on society
7	Theoretical	7) effects of scientific and techological developments on health
8	Intermediate Exam	midterm
9	Theoretical	9) effects of scientific and techological developments on ecosystems and climate
10	Theoretical	10) greenhouse gases, global warming
11	Theoretical	11) scientific and technological developments and politics
12	Theoretical	12) Energy crisis and its consequences
13	Theoretical	13) biological war
14	Theoretical	14) scientific and technological developments and ethics
15	Theoretical	15) General Evaluation
16	Final Exam	final

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Lecture - Practice	14	1	1	28
Assignment	12	0	1	12
Midterm Examination	1	6	1	7



Final Examination	1	10	1	11
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	1) Understanding the nature of science and technology
2	2) Understands the relationship between science and technology
3	3) Realizes the social and environmental context of science and technology
4	4) The technology differs in history in the same subject, has undergone a change and the new developed technology products
5	5) Explain how natural resources, living things and habitats can be protected by using technological products and systems and how wastes from the use of various products and systems can be reduced
6	(6) Knows local, national and global environmental problems and discuss possible solutions and results
7	7) Understands that science and technology applications can have positive or negative effects on individuals, society and environment
8	8) It is possible to take precautions against the negative effects of science and technology with developments in science and technology;
9	9) Explain that a certain scientific or technological development can have positive or negative, predicted or unforeseen effects to the individual, society and environment.

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 developing 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	L7	L8	L9
P1	5	5	5	5	5	5	5	5	5
P2	5	4	5	5	4	4	4	5	5
P3	4	4	4	5	5	5	5	5	5
P4	5	5	5	5	4	5	4	5	4
P5	5	5	4		4	4	4	4	5
P6	5	4	5	4	5	5	4	4	5
P7	5	5	5	5	4	5	5	5	5
P8	5	5	4	5	5	4	5	5	
P9	4	5	5	5	5	5	4		5
P10	5	4	5	5	5	4	4	4	4

