



AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
MATHEMATICS AND SCIENCE EDUCATION
SCIENCE EDUCATION
SCIENCE EDUCATION MASTER
COURSE INFORMATION FORM

Course Title	Technology Assisted Practices in Science Education								
Course Code	İFB522		Course Level		Second Cycle (Master's Degree)				
ECTS Credit	8	Workload	200 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	To follow the developments on the field of Educational Technology								
Course Content	Learning and teaching concepts Instructional Design Instructional Theories: Behavioral / Thorndike, Watson, Skinner), cognitive (Ausubel, Dale, Paivio, Novak, Miller) and descriptive models (Reiguluth, Merrill, Malachowski, Morrison, Ross and Kemp, Briggs, Dick and Carey, Gagne) Keller and Malone's motivational theories								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Project Based Study, Individual Study								
Name of Lecturer(s)	Lec. Burak FEYZİOĞLU								

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümleri İçin Özel Öğretim Yöntemleri I-II. Altun, E.
2	Learning with computers, Analysing productive interaction, Karen Litteon & Paul Light, 1999.
3	Web Based Education: Learning from Experience, Anil Aggarwal, 2003.

Week	Weekly Detailed Course Contents	
1	Theoretical	Information Technology
	Preparation Work	
2	Theoretical	Computer-based learning, Computer assisted learning
	Preparation Work	
3	Theoretical	Computer assisted learning practices
	Preparation Work	
4	Theoretical	Computer assisted learning practices, Distance Learning
	Preparation Work	
5	Theoretical	Web -based learning
	Preparation Work	
6	Theoretical	Hybrid learning
	Preparation Work	
7	Theoretical	The use of computers in education and its advantages
	Preparation Work	
8	Intermediate Exam	MIDTERM
9	Theoretical	The use of computers in education and its advantages
	Preparation Work	
10	Theoretical	Sample Computer Practices
	Preparation Work	
11	Theoretical	Sample Computer Practices
	Preparation Work	
12	Theoretical	Sample Field Practices
	Preparation Work	
13	Theoretical	Sample Field Practices
	Preparation Work	
14	Theoretical	Sample Field Practices



14	Preparation Work	
15	Theoretical	Sample Field Practices
	Preparation Work	
16	Final Exam	TERM

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	3	70
Assignment	5	10	0	50
Reading	5	9	0	45
Midterm Examination	1	10	2	12
Final Examination	1	20	3	23
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To be able to acquire the aspects of the educational software used in science education.
2	To be able to develop course material according to different theories of learning.
3	To be able to examine models of instructional design.
4	To be able to develop different models of instructional design, and implement appropriate materials.
5	To be able to carry out teaching based on a selected teaching model

Programme Outcomes (Science Education Master)

1	To be able to have an expert theoretical knowledge within the field of science education.
2	To be able to transfer expert knowledge gained in science education into various instructional environment.
3	To be able to integrate science education knowledge with the other disciplines and product functional knowledge
4	To be able to use information and communication technologies efficiently in conceptual learning
5	To be able to find scientific solutions to the problems in the field of science education
6	To be able to evaluate the knowledge critically in the field
7	To be able to participate in team projects in the science education field
8	To be able to adopt lifelong learning strategies to his/her studies
9	To be able to use at least one foreign language efficiently in oral and verbal communication
10	To be able to share national and international data in the field of science education
11	To be able to comprehend and evaluate science-technology-society and environment interactions
12	To be able to comprehend science under the ethical values and take account of ethical considerations
13	To be able to use scientific information in the other domains that is gained in the masters field and have the transfer skills
14	To be able to follow the current development in the science education field
15	To be able to develop strategical plans and evaluate them in the context of quality processes

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

	L1	L2	L3	L4	L5
P1	5	4	4		
P2		5		5	5
P3	4	3	4	4	5
P6			4		5
P7	4	4			5
P8	4	4	5	4	5
P11	4	3		4	5
P13	4	4			
P14	5	5	4	4	5
P15		5	4	3	

