

# AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Radiation and Environment								
Course Code		CSAG646		Couse Level		Third Cycle (Doctorate Degree)				
ECTS Credit 10		Workload	250 (Hours)	Theory	/	3	Practice	0	Laboratory	0
Objectives of the Course		It is aimed to I spectrum, nor environment.	earn the effec n-ionizing radia	ts of ele ation on	ectror hum	nagnetic wa an, environ	aves and their mental effects	effect mech and radiation	anisms, electrom on on human and	agnetic
Course Content		The character the environme	istics of electr ent.	omagne	etic w	aves incluc	le their effect i	mechanisms	s, their effects on p	people and
Work Placement		N/A								
Planned Learning Activities and Teach		and Teaching	Methods	Explan	ation	(Presentat	ion), Discussi	on		
Name of Lecturer(s)		Prof. Mehmet	Dinçer BİLGİ	N						

# Assessment Methods and Criteria

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

# **Recommended or Required Reading**

1	Prof.Dr.Hamza Esen, Prof.Dr. Ferhan Esen, Biyofizik. Yöntemler, Biyolojik Etkiler, Önlemler; Ankara Nobel Tıp Kitapevi, Ağustos 2017, Ankara
2	Prof.Dr.M.Dinçer Bilgin, Elektromanyetik Dalgalar ve Ses, Ders Notları, Kasım 2017Aydın
3	Prof.Dr.Şefik Dursun (Ed) Biyofizik Ders Kitabı, İ.Ü yayınları, 2010, İstanbul
4	Prof Dr. Farit Bablivan, Bivofizik, O. Book, Bolikan Kitanovi, 2017, Ankara

4	Prof. Dr. Feril Penilvan, Biyolizik, 9. I	Baski,Pelikan	Kilapevi, 2017	, Ankara	

Week	Weekly Detailed Course Contents						
1	Theoretical	Electromagnetic waves and general properties					
2	Theoretical	Substance interaction with light, which is an electromagnetic wave					
3	Theoretical	Electromagnetic spectrum					
4	Theoretical	Static field, Very low / low frequency Electromagnetic Waves: High voltage lines, electrical home / office devices					
5	Theoretical	Radiofrequency					
6	Theoretical	Microwaves: Health and environmental effects of mobile phones and base stations					
7	Theoretical	Microwaves: safety precautions, legal regulations					
8	Intermediate Exam	MIDTERM					
9	Theoretical	Infrared radiation properties, thermal energy transmission routes, effects of infrared radiation on human and environment, Greenhouse effect					
10	Theoretical	Visible light properties, colors					
11	Theoretical	Ultraviolet, solar safety, ultraviolet biological effects, UV index, ozone and its properties, protection methods, legal regulations					
12	Theoretical	General properties of ionizing radiation, atomic species and radioactive decays					
13	Theoretical	The interaction of the radiation causing the ionization with matter, X-rays and gamma rays					
14	Theoretical	Nuclear plants, the effects of ionizing radiation on human and environment, protection methods, legal regulations					

#### **Workload Calculation** Activity Quantity Preparation Duration Lecture - Theory 14 0 3 Quiz 3 4 15 Midterm Examination 3 1 70



Total Workload

42

72

73

				Course information i onn
Final Examination	1	60	3	63
	250			
		[Total Workload (	Hours) / 25*] = <b>ECTS</b>	10
*25 hour workload is accepted as 1 ECTS				

### Learning Outcomes

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1	To be able to have theoretical and practical up-to-date knowledge in the field of environmental health
2	Having knowledge about the techniques, techniques, and devices of the technology to treat, care and educate
3	Being able to take active role in environmental health organization and management
4	To be able to solve environmental health problems with scientific methods and to evaluate them with a critical approach
5	Obtaining theoretical and practical knowledge on environmental ethics, policy and planning, information systems, professional foreign languages, finance and intermediary institutions
6	Ability to produce, execute and finalize new projects for scientific research
7	To be able to interpret researches using appropriate statistical methods, to write a report of the research they have participated in, to publish it in a national / international accepted journal, to present it at scientific meetings
8	Having theoretical and practical knowledge about environmental health, historical development and economic dimension of environmental health
9	Being able to have theoretical and practical knowledge about the deterioration effects of the environment
10	Being able to have the knowledge and ability to apply in strategic management, marketing, performance management, quality management and human resources management in organizations providing services in the field of environmental health

### Programme Outcomes (Environmental Health Interdisciplinary Doctorate)

- Equipped with advanced knowledge and skills related to research methods, data analysis and interpretation of research results in the development and application of environmental health theories;
- 2 who can take part in professional arrangements; contributes to the development of health related institutions;
- 3 Knows, interprets and comments on national and international environmental health legislation,
- 4 Organizasyon Assuming an effective role in environmental health organization and management,
- 5 To Equipped with the knowledge and skills necessary for the effectiveness of environmental health practices in the future;

# 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	L10
P1	1	5	4	5	3	4 🤇	4	5	2	1
P2	2	4	5	4	3	2	4	5	3	2
P3	3	3	4	5	3	2	4	5	3	5
P4	4	2	5	4	3	3	4	5	5	4
P5	5	1	4	5	3	3	4	5	3	5