



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Free Radicals and Antioxidants							
Course Code		VBY528		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	2	Workload	50 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		To give basic information about free radicals and antioxydants							
Course Content		Free radicals and celluler immunity, oxydative stres, antioxydant species and theirs effects, antioxydant foods, drugs. Usage of antioxydants in industry. Measuring the activity of antioxydants.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)		Prof. Funda KIRAL, Prof. Serap ÜNÜBOL AYPAK							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	60
Quiz	2	5
Assignment	1	5

Recommended or Required Reading

1	Serbest Radikaller ve Fizyopatolojik Etkileri
2	SERBEST RADİKALLER ve ANTİOKSİDAN SAVUNMA SİSTEMİ

Week	Weekly Detailed Course Contents	
1	Theoretical	Free radicals and celluler defence
2	Theoretical	Oxydative stress and antioxidants
3	Theoretical	Antioxidants and effects
4	Theoretical	Enzymatic antioxidants.
5	Theoretical	SOD and GSHpx
6	Theoretical	Glutatyon S-transferazlar, catalase
7	Theoretical	Mitokondriyal citokrom oxydase
8	Intermediate Exam	Midterm exam
9	Theoretical	Non enzymatic antioxidants
10	Theoretical	Exogen antioxidants
11	Theoretical	Antioxidant foods
12	Theoretical	Antioxidant drugs
13	Theoretical	Industriel usage of antioxidants
14	Theoretical	Measuring the antioxidant activity
15	Theoretical	Evaluation
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	0	2	30
Term Project	1	2	0	2
Reading	8	0	1	8
Quiz	2	2	0.5	5
Midterm Examination	1	4	1	5
Total Workload (Hours)				50
[Total Workload (Hours) / 25*] = ECTS				2

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	To be able to explain cellular response to free radicals
2	To be able to comprehend antioxidants and their effects.
3	To be able to identify antioxidant foods and drugs.
4	To be able to explain how the determination methods of antioxidant activity is.
5	To be able to learn produce free radical

Programme Outcomes (Biochemistry (Veterinary Medicine) Master)

1	To be able to tell and describe the interdisciplinary interaction with the associated fields.
2	To be able to express original ideas using his/her higher education knowledge theoretically and practically information and to be able to create original definitions, products, methods improving and questioning these ideas.
3	To be able to manage a free research according to scientific and methodological methods and be able to hypothetically and practically about his/her own field.
4	To be able to compose and interpret the information from different disciplines, and create solution suggestions and scientific information which can contribute to the solution process.
5	To be able to involve in professional organizations and institutions related with the educational background.
6	To be able to take responsibility for individual and group work, and do the assignments in line with the skills.
7	To be able to communicate with the professionals out of the field when it is necessary, and contribute to the solution as a team member.
8	To be able to tell about the production and publishing methods of scientific information.
9	To be able to design the source and the type of information that is needed related with the field and chooses the activities that s/he wants to participate, by using his/her critical thinking abilities that is developed in the education.
10	To be able to use technological devices both for professional and social purposes.
11	To be able to compose and interpret any kind of data related with the field (field observations, produced scientific information etc.) and analyzes and interprets the results according to the aims of the research.
12	To be able to define the environmental health rules and apply them for prevention.
13	To be able to apply the knowledge gained in professional level with the awareness of the needs of the region and the country, and develop a defense capability.
14	To be able to conceptualize the phenomena and the events related with the field; study scientific methods and techniques, interpret results; analyze and hypothesize methods in accordance with the results and design solution or treatment alternatives addressing the problems.
15	To be able to interpret the updates of information in the field by using all kinds of sources (scientific information, legislations etc.), and use when needed.

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

	L1	L2	L3	L4
P2	5	5	5	5
P4	4			
P9	4			
P14	5	5	5	5

