

# ALGAL CULTURES AND PHYTOPLANKTON ECOLOGY

1	Course Title:	ALGAL CULTURES AND PHYTOPLANKTON ECOLOGY
2	Course Code:	BIO5304
3	Type of Course:	Optional
4	Level of Course:	Second Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	none
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Dr. Öğr. Üyesi DİDEM KARACAOĞLU
15	Course Lecturers:	-
16	Contact information of the Course Coordinator:	<p>Dr. Öğr. Üyesi Didem KARACAOĞLU  Uludağ Üniversitesi Fen-Edebiyat Fakültesi Biyoloji Bölümü  Görükle Kampüsü, Nilüfer/BURSA 16059  e-posta: didemk@uludag.edu.tr  Telefon: 0 (224) 294 1867</p> <p>Uludag University Faculty of Arts and Science Department of Biology  Gorukle Campus, Nilufer/BURSA 16059  e-mail: didemk@uludag.edu.tr  Phone: 0 (224) 294 1867</p>
17	Website:	
18	Objective of the Course:	The aim of the course is to explain basic concepts of algal culture techniques and phytoplankton ecology. The goal is to give advanced knowledge about relationships between algal culture and algal ecology.
19	Contribution of the Course to Professional Development:	Learns the basic concepts of microalgae culture. Can apply the knowledge learned about commercially important microalgae species and production methods in the field of algal biotechnology.
20	Learning Outcomes:	
	1	Be able to describe the structures and life histories of the common algal groups.
	2	Be able to explain the modern culture methods
	3	To be able to explain how the physical and chemical properties of water affect the algal growth
	4	Be able to solve culture problems
	5	Be able to discuss the effect of environmental factors on the algal culture

		6	Be able to make population analysis with different culture methods		
		7	Be able to make connections between biology and the other sciences		
		8	Be able to access and utilize pertinent large databases		
		9			
		10			
21	Course Content:				
	Course Content:				
Week	Theoretical		Practice		
1	Be able to access and utilize pertinent large databases Basic terminology related to algal culture				
2	The characteristics of algal growth in cultures of limited volumes				
3	Collection, storage and preservation, different culture types				
4	Culture parameters such as mixing, salinity, pH, light and temperature				
5	Sterilization of culture materials				
6	The growth of algae in continuous and semi-continuous cultures				
7	Midterm exam,				
Activites			Number	Duration (hour)	Total Work Load (hour)
Theoretical					
9	light, temperature, salinity, nutrient		14	3.00	42.00
Practicals/Labs			0	0.00	0.00
10	Self study		14	5.00	70.00
Homeworks			2	25.00	50.00
11	Projects		0	0.00	0.00
Field Studies			0	0.00	0.00
Midterm exams			0	0.00	0.00
12	Others		0	0.00	0.00
14	Final Exams		1	25.00	25.00
Total Work Load					187.00
22	Total work load/ 30 hr		Fogg, G.E. 1965. Algal Cultures and Phytoplankton Ecology. The University of Wisconsin Press. 126 p.		
ECTS Credit of the Course					6.00
			En Fakültesi Kitaplar Serisi No. 164. II. Baskı. 166 p. Barsanti L., Gualtieri P. 2002. Algae Anatomy, Biochemistry and Biotechnology. Taylor and Francis Group.301 p.		
23	Assesment				
TERM LEARNING ACTIVITIES		NUMBE R	WEIGHT		
Midterm Exam		0	0.00		
Quiz		0	0.00		
Home work-project		1	40.00		
Final Exam		1	60.00		
Total		2	100.00		

Contribution of Term (Year) Learning Activities to Success Grade	40.00
Contribution of Final Exam to Success Grade	60.00
Total	100.00
Measurement and Evaluation Techniques Used in the Course	The system of relative evaluation is applied.
<b>24</b>	<b>ECTS / WORK LOAD TABLE</b>

<b>25</b>	<b>CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS</b>															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
ÖK3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK7	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK8	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
<b>LO: Learning Objectives    PQ: Program Qualifications</b>																
<b>Contribution Level:</b>	<b>1 very low</b>		<b>2 low</b>		<b>3 Medium</b>		<b>4 High</b>		<b>5 Very High</b>							