PALYNOLOGY

1	Course Title:	PALYNOLOGY	
2	Course Code:	BYL4085	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	7	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	2.00	
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:	Prof. Dr. ADEM BIÇAKÇI	
15	Course Lecturers:	Prof. Dr. Adem BIÇAKCI	
16	Contact information of the Course Coordinator:	Uludağ Üniversitesi Fen-Edebiyat Fakültesi Biyoloji Bölümü Görükle Kampüsü, Nilüfer/BURSA 16059 e-posta: abicakci@uludag.edu.tr Telefon: 0 224 294 17 89 Uludag University Faculty of Arts and Science Department of Biology Gorukle Campus, Nilufer/BURSA 16059 e-mail: abicakci@uludag.edu.tr Phone: 0 224 294 17 89	
17	Website:		
18	Objective of the Course:	The aim of the course is to make the students learn the pollen and spore morphology in the basic of palynology and to apply the information, they learn in basic palynology, to the fields of other related with the palynology	
19	Contribution of the Course to Professional Development:	It will contribute to the professional development of students in pollen morphology and application areas of palynology (pollen analysis in honey, air, sediments).	
20	Learning Outcomes:		
		1	To understand the formation of pollen and spores
		2	To understand the morphological properties that are using in identification of pollen grains and spores
		3	To identificate pollen and spores of different taxa by morphological properties
		4	To apply basic palynological information on practical palynology
		5	To apply palynological informations to plant systematics
		6	To apply some methods for melitopalinological analysis
		7	To apply some methods for collecting atmospheric pollen
		8	To understand fosil pollen formation and to apply techniques for sedimentarypollen analysis
		9	
		10	
21	Course Content:		

	Course Content:	
Week	Theoretical	Practice
1	Palynological definition and history. Palynology contributed sciences. Study areas of palinology in thre plant kingdom	
2	Formation of spore and pollen. Pollen types, sporoderm, structure.	
3	Sculpture - Ornamentation	
4	Aperture: Place of pollen grains on the pollen. Classification of pollen grains according to apertures. Important features of apertures for systematics	
5	Measurements and shape of pollen and spores.	
6	Spore morphology. Intine. Chemical structure of intine and exine	
7	Features of Gymnospermae pollen and morphology of Gymnospermae pollen	
8	Features of Angiospermae pollen and morphology of Angiospermae pollen	
9	Contribution of palynology to plant systematics	
10	Evaluation of articles on pollen morphology	
11	Melitopalynology: pollen analysis of honey, importance and analysis of bee collected	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	1.00	14.00
Homeworks	2	9.00	18.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	30.00	30.00
Others	0	0.00	0.00
Final Exams	1	30.00	30.00
Total Work Load			120.00
Total work load/ 30 hr			4.00
ECTS Credit of the Course			4.00

22	Textbooks, References and/or Other	A.BICAKCI, Palinoloji, Ders Notları
23	Assesment	
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
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		Midterm exam, final exam
24	**ECTS / WORK LOAD TABLE**	

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