

DEVELOPMENTAL BIOLOGY

1	Course Title:	DEVELOPMENTAL BIOLOGY
2	Course Code:	BYL4004
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	4
6	Semester:	8
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. Hikmet Sami Yıldırımhan
15	Course Lecturers:	Prof. Dr. Hikmet S. YILDIRIMHAN
16	Contact information of the Course Coordinator:	<p>Uludağ Üniversitesi Fen-Edebiyat Fakültesi Biyoloji Bölümü Görükle Kampüsü, Nilüfer/BURSA 16059 e-posta: yhikmet@uludag.edu.tr Telefon: 0 224 294 17 90</p> <p>Uludag University Faculty of Arts and Science Department of Biology Gorukle Campus, Nilufer/BURSA 16059 e-mail: yhikmet@uludag.edu.tr Phone: 0 224 294 17 90</p>
17	Website:	
18	Objective of the Course:	The aim of the course is to give knowledge about vertebrate and invertebrate development stages.
19	Contribution of the Course to Professional Development:	The aim of the course is to give knowledge about vertebrate and invertebrate development stages.
20	Learning Outcomes:	
	1	Describes the theory of the epigenesis and gametogenesis.
	2	Describes the developmental stages and reproduction of protozoan species.
	3	Describes the fertilization, segmentation and division.
	4	Describes the development in metazoon.
	5	Describes the mechanisms of morphogenesis and animal development.
	6	Describes the environmental factors affecting the development.
	7	Describes the basic concepts related to development, morphogenesis and tissue formation.
	8	Various species of animals embryological development and basic principles that describes the factors that affect embryonic development.
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21	Course Content:			
	Course Content:			
Week	Theoretical	Practice		
1	The history of developmental biology, epigenesis, genetics and development, reproduction of viruses.			
2	Cell division, gametogenesis, development in protozoon, sexual reproduction, fertilization.			
3	Segmentation, division types, development in Metazoon.			
4	Development in Porifera, Coelenterata and Ctenaria			
5	Development in Plathelminthes, Acanthocephala, Nematelminthes and Rototaria			
6	Development in Annelida, Mollusca and Arthropoda.			
7	Development in Echinodermata and Chaetognata.			
8	Development in Hemichordata, Chordata and Cephalochodata.			
9	Development in vertebrates, fishes, amphibia,			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	Formation of tissues., gastrulation and stimulation of nörons.	14	2.00	28.00
Practicals/Labs		0	0.00	0.00
Self study and preperation	Mechanism, environmental factors in development	14	3.00	42.00
Homeworks		0	0.00	0.00
Projects	Genetically disorders.	0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm Exams		1	25.00	25.00
22	Textbooks, References and/or Other	Lecturer's course notes		
Others		0	0.00	0.00
23	Assesment Exams	1	25.00	25.00
Total Work Load				120.00
Total work load/ 30 hr				4.00
Midterm Exam		1	40.00	
ECTS Credit of the Course				4.00
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		The writing examination		
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	4	1	4	5	3	5	4	5	3	4	5	5	0	0	0	0
ÖK2	3	2	4	5	3	5	4	5	4	4	5	5	0	0	0	0
ÖK3	5	1	4	5	2	5	4	4	3	5	5	5	0	0	0	0
ÖK4	4	3	5	5	5	3	4	4	4	5	5	5	0	0	0	0
ÖK5	5	1	5	5	3	5	4	4	3	4	5	5	0	0	0	0
ÖK6	5	2	5	5	3	5	4	5	5	5	5	5	0	0	0	0
ÖK7	4	3	4	5	3	5	4	5	5	5	5	5	0	0	0	0
ÖK8	5	3	4	5	3	4	4	5	4	5	5	5	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			