GENERAL CONCEPTS IN BIOTECHNOLOGY

1	Course Title:	GENERAL CONCEPTS IN BIOTECHNOLOGY
2	Course Code:	VET1514
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	3.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. ÖZDEN ÇOBANOĞLU
15	Course Lecturers:	Doç. Dr. Özden ÇOBANOĞLU
16	Contact information of the Course Coordinator:	Bursa Uludağ Üniv. Zootekni ve Hayvan Besleme Bölümü / Genetik Anabilim Dalı, Görükle Kampüsü Nilüfer/BURSA E-mail: ocobanoglu@uludag.edu.tr Tel: 0 224 294 1241
17	Website:	http://www.veteriner.uludag.edu.tr
18	Objective of the Course:	This course covers definition, scope, usage and history of biotechnology to students; Giving information about traditional and modern biotechnology. Biotechnology related fields, economic importance, situation in our country and in the world, application examples and opportunities in our country.
19	Contribution of the Course to Professional Development:	This course will provide students with the necessary information about the basic concepts of biotechnology and its applications during their professional development.
20	Learning Outcomes:	
	1	To explain the basic concepts of biotechnology
	2	To have general information about biotechnology usage areas and applications.
	3	To have knowledge about biotechnological applications in the field of plant, animal, and medicine and to make observations and experiments on the subject when it is necessary.
	4	To distinguish between modern biotechnology and traditional biotechnology.
	5	To be able to search about biotechnology and to transfer the information obtained orally or in writing.
	6	1.8 Be able to review and evaluate literature and presentations critically.

	7	1.10 Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health.
	8	1.13 Demonstrate an ability of lifelong learning and a commitment to learning and professional development. This includes recording and reflecting on professional experience and taking measures to improve performance and competence.
	9	2.11 Principles of effective interpersonal interaction, including communication, leadership, management and team working.
	10	

21	Course Content:

Course Content:

Week	Theoretical	Practice
1	What is Biotechnology? History of Biotechnology and Scope of Biotechnology Definitions of Biotechnology; Traditional Biotechnology Applications	
2	Definitions of Biotechnology; Traditional Biotechnology Applications	
5	Recombinant DNA Technology	
7	Bioinformatics, DNA Fingerprint Technology	
9	Plant Biotechnology	
11	Medical Biotechnology, Forensic	
12	Genetic Modified Organisms, Gene Therapy	
14	Biotechnology Regulations, Effects of Industry	

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	1	14.00	14.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm Exams	1	14.00	14.00
Others	2	7.00	14.00
Final Exams	1	20.00	20.00
Total Work Load			90.00
Total work load/ 30 hr			3.00
ECTS Credit of the Course			3.00

22	Textbooks, References and/or Other Materials:	1. Türkiye'de Biyoteknoloji ve Toplumsal Kesimler / Profesyoneller Kentsel Tüketiciler Köylüler. Erbaş, H. ISBN: 978-975-482-773-6. Yayın Yeri. Ankara Yayın Evi: Ankara Üniversitesi Biyoteknoloi Enstitüsü Yayınları No.4. 2008. 2. Introduction to Biotechnology. Pathak, R. Atlantic Publishers & Distributors (P) Ltd. ISBN: 978-812-690-598-0, 2006. 3. Microbial Biotechnology Principles and Applications. Lee, Y.K. Edited by: National University of Singapore, Singapore. ISBN: 978-981-256-676-8, 2006. 4. Plant Biotechnology and Transgenic Plants. Edited by: Oksman-Caldentey K-M. and Barz W.H. CRC Press. ISBN: 978-082-470-794-1, 2002. 5. Biyoteknolojiye Giriş. Palladino M.A. and Thieman W.J. Çeviri: Tekeoğlu M. Palma Yayınları.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	30.00
Quiz	0	0.00
Home work-project	2	10.00
Final Exam	1	60.00
Total	4	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		Exams of the course will be in the form of both classical and multiple choice questions.

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	3	1	2	2	1	5	1	1	1	2	1	1	1	2	0	0
ÖK2	1	1	1	1	1	1	4	1	1	1	1	2	1	2	0	0
ÖK3	2	1	2	1	1	4	1	1	1	1	1	2	2	2	0	0
ÖK4	1	1	2	1	1	4	1	2	1	1	2	1	1	3	0	0
ÖK5	1	2	3	4	1	3	3	1	2	1	1	2	1	0	0	0
ÖK6	1	1	2	3	4	3	3	1	2	1	1	2	1	1	0	0
ÖK7	2	3	1	1	2	1	3	1	2	2	1	1	2	4	0	0
ÖK8	3	2	1	3	4	2	1	1	3	1	2	3	1	2	0	0
ÖK9	2	1	3	1	3	2	3	2	1	3	3	4	2	1	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High