

PROBIOTICS, PREBIOTICS AND MICROBIOLOGY OF DIGESTIVE TUBE

1	Course Title:	PROBIOTICS, PREBIOTICS AND MICROBIOLOGY OF DIGESTIVE TUBE	
2	Course Code:	VBH6009	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	5.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	none	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. Recep Çıbık	
15	Course Lecturers:	yok	
16	Contact information of the Course Coordinator:	Prof Dr Recep Çıbık, Veteriner Fakültesi, Gıda Hijyeni ve Teknolojisi ABD rcibik@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	To provide knowledge on the probiotic notion, microorganisms and their use in food domain	
19	Contribution of the Course to Professional Development:	PhD students learn necessary knowledge about the probiotics and prebiotisc as well as their influence on health	
20	Learning Outcomes:		
		1	Role of probiotics on health
		2	Activity of probiotics in human bofy
		3	Symbiosis
		4	İdentification of probiotic microorganisms
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Probiotics and microorganisms	Identification of lactobacillus	
2	Prebiotics	Identification of bifidobacteria	
3	Colonizations	Identification of streptecoccus	
4	microorganisms in newborns	Genetik identification of probiotic microorganisms	
5	Lactobacillus	RAPD PFGE technics	
6	Bifidobacteria	Sequencing for identification	

7	Microbiata and disease	In situ identification of microorganisms
8	Diabetes and microorganisms	Probiotics in milk
9	Cholesterol and microorganisms	Probiotic microorganisms in gut
10	Probiotics and antibiotics	Resistance to gastric acidity
11	Use of probiotics in animals	Resistance to bile acids
12	Commercially available probiotics their effectiveness	Resistance in gut
13	Functional foods	Daily use of probiotics
14	General knowledges and repeats	General evaluation
22	Textbooks, References and/or Other Materials:	<p>L T. Wadström, Asa Ljungh Lactobacillus Molecular Biology: From Genomics to Probiotics. 2009</p> <p>Probiotics for Health: 100 Amazing and Unexpected Uses for Probiotics Book by Jo A. Panyko. 2017</p> <p>Victor Preedy, Ronald Watson. Probiotics, Prebiotics, and Synbiotics: Bioactive Foods in Health Promotion. 2015</p> <p>The Power of Probiotics: Improving Your Health with Beneficial Microbes. Book by Gary Elmer, Lynne V. McFarland, and Marc McFarland. 2007</p>
23	Assesment	
TERM LEARNING ACTIVITIES		NUMBE R
		WEIGHT
Midterm Exam		0
Quiz		0
Home work-project		0
Final Exam		1
Total		1
Contribution of Term (Year) Learning Activities to Success Grade		0.00
Contribution of Final Exam to Success Grade		100.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		Final exam
24	ECTS / WORK LOAD TABLE	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	8	5.00	40.00
Homeworks	2	7.00	14.00
Projects	1	10.00	10.00
Field Studies	0	0.00	0.00
Midterm exams	1	15.00	15.00
Others	0	0.00	0.00
Final Exams	1	15.00	15.00
Total Work Load			150.00
Total work load/ 30 hr			5.00
ECTS Credit of the Course			5.00

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	2	3	2	4	5	3	3	2	4	2	4	3	3	4	3	2
ÖK2	3	3	4	4	3	4	3	3	4	3	4	4	5	1	2	2
ÖK3	2	2	3	1	3	4	4	4	2	5	4	5	4	2	1	3
ÖK4	3	3	4	1	4	4	4	2	4	3	4	1	4	3	3	4
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			