

# FOOD MICROBIOLOGY

1	Course Title:	FOOD MICROBIOLOGY
2	Course Code:	GIDZ104
3	Type of Course:	Compulsory
4	Level of Course:	Short Cycle
5	Year of Study:	1
6	Semester:	2
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:	-
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Dr. Öğr. Üyesi ASUMAN KARAKAŞ ŞEN
15	Course Lecturers:	Yard.Doç.Dr. Asuman KARAKAŞ ŞEN
16	Contact information of the Course Coordinator:	Yard.Doç.Dr. Asuman KARAKAŞ ŞEN U.Ü. Yenişehir İ.O.M.Y.O. akarakas@uludag.edu.tr 773 60 42
17	Website:	
18	Objective of the Course:	To teach The History of Food Microbiology, Important Microorganisms in Foods, Microbial Contamination Sources, Factors Influencing Microbial Growth in Foods, Indicator Microorganisms in Foods, Microbial Food Poisoning, Principles of Food Preservation and Microbial Spoilage of Foods.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	The student learns The History of Food Microbiology.
	2	The student learns Factors Influencing Microbial Growth in Foods.
	3	The student learns Important Microorganisms in Foods.
	4	The student learns Microbial Contamination Sources.
	5	The student learns Control of Microbial Growth in Foods.
	6	The student learns Microbial Spoilage of Foods.
	7	The student learns Microbial Food Poisoning.
	8	The student learns The Techniques for The Microbiological Examination of Foods.
	9	The student learns the Method of Gram Staining.
	10	The student can use the light microscope.
21	Course Content:	
	<b>Course Content:</b>	
Week	Theoretical	Practice
1	Relationship Between Microorganisms and Foods	Text Books
2	Important Microorganisms in Foods (Bacteria)	Text Books

3	Important Microorganisms in Foods (Yeasts and Molds)	Text Books
4	Microbial Contamination Sources	Text Books
5	Factors Influencing Microbial Growth in Foods	Text Books
6	Indicator Microorganisms in Foods	Text Books
7	Repeating courses and midterm exam	
8	Microbial Food Poisoning	Text Books
9	Prevention of Microbial Contamination and Removal of Microorganisms, The control of Microbial Growth	Text Books
10	Spoilage of Meat and Meat Products	Text Books
11	Spoilage of Milk and Milk Products	Text Books
12	Spoilage of Egg and Egg products Spoilage of Vegetables and Fruits	Text Books
13	Spoilage of Canned Foods	Text Books
14	Spoilage of Cereals and Cereal based products Spoilage of Fermented Alcoholic Beverages	Text Books
22	Textbooks, References and/or Other Materials:	<p>1-Gıda Mikrobiyolojisi 3. Baskı. Editörler Prof. Dr. Adnan Ünlütürk ve Prof. Dr. Fulya Turantaş (2003) META Yayınevi</p> <p>2-Gıda Mikrobiyolojisi, Gıda Endüstrisi için Temel Esaslar ve Uygulamaları. Klaus Pichhardt (Ed. Yılmaz Sekin, Nural Karagözlü) (2004) Literatür Yayınevi</p> <p>3- Merck Mikrobiyoloji El Kitabı (Hızlı Erişim) A.K. Halkman, Ö.E. Sağdaş (2010), Ankara</p> <p>4- Food Microbiology: Fundamentals and Frontiers. Michael P. Doyle, Larry R. Beuchat, Thomas J. Montville (Eds) ASM Press Washington, (1997).</p> <p>5- Food Hygiene Microbiology and HACCP 3 rd Edition S.J. Forsythe and P.R. Hayes (1998) Aspen Publication.</p> <p>6- Bacillus subtilis and Its Closest Relatives: from Genes to Cells Abraham L. Sonenshein, James A. Hoch, and Richard M. Losick (1999) ASM Press</p>
23	Assesment	
<b>TERM LEARNING ACTIVITIES</b>		<b>NUMBE R</b>
Midterm Exam		1
Quiz		0
Home work-project		0
Final Exam		1
Total		2
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		
24	<b>ECTS / WORK LOAD TABLE</b>	

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	13	4.00	52.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	20.00	20.00
Others	0	0.00	0.00
Final Exams	1	22.00	22.00
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	3	3	5	0	1	1	0	3	2	0	2	2	0	0	0	0
ÖK2	2	5	5	3	1	1	0	3	2	0	2	2	0	0	0	0
ÖK3	3	5	5	3	1	1	0	3	2	0	2	2	0	0	0	0
ÖK4	3	5	5	3	1	1	0	3	2	0	2	2	0	0	0	0
ÖK5	3	5	5	3	1	1	0	3	2	0	2	2	0	0	0	0
ÖK6	0	5	5	3	1	1	0	3	2	0	2	2	0	0	0	0
ÖK7	0	5	5	3	1	1	0	3	2	0	2	2	0	0	0	0
ÖK8	3	5	5	3	1	1	0	3	2	0	2	2	0	0	0	0
ÖK9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives    PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			