SPECIAL MICROBIOLOGY

1	Course Title:	SPECIAL MICROBIOLOGY
2	Course Code:	VET3001
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	3
6	Semester:	5
7	ECTS Credits Allocated:	4.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	2.00
10	Laboratory (hour/week):	0
11	Prerequisites:	General Microbiology, Immunology Serology
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. MIHRIBAN ÜLGEN
15	Course Lecturers:	Yard. Doç. Dr. Esra Büyükcangaz
16	Contact information of the Course Coordinator:	ulgenm@uludag.edu.tr , +90 224 294 12 93 Uludağ Üniversitesi Veteriner Fakültesi Hayvan Hastanesi Mikrobiyoloji Anabilim Dalı, Nilüfer,BURSA ulgenm@uludag.edu.tr , +90 224 294 12 93 Uludag Univercity, Faculty of Veterinary Medicine, Department of Microbiology, BURSA/TURKEY
17	Website:	http://www.veteriner.uludag.edu.tr
18	Objective of the Course:	To educate qualified students in the field of bacterial, fungal diseases of animals except poultry; especially, related to epidemiology, laboratory diagnosis, control and vaccines of these diseases and control of zoonoses
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	Able to recognize colony and microscopic appearance of bacteria and fungi.
	2	Able to grasp route of transmission and pathogenesis of bacteria and fungi.
	3	Able to predict the disease according to the symptoms.
	4	Able to collect and send the samples from infected animals.
	5	Able to carry out laboratory diagnosis methods.
	6	Able to carry out antimicrobial susceptibility test
	7	Able to carry out prevention and control procedures and vaccines
	8	Able to carry out eradication programs in notifiable diseases
	9	
	10	
21	Course Content:	

Course Content:

Week	Theoretical	Practice

1	Introduction to Special Microbiology and information about the course, mastitis and other infections caused by Streptococcus and Staphylococcus species	Gram stain and microscopic examination of Streptococcus and Staphylococcus species; collection and transportation of milk samples with mastitis, laboratory diagnosis, CAMP and koagulase tests.
2	General features of Enterobacteriaceae family, Colibacillosis, other infections of E.coli; Salmonella , Klebsiella, Yersinia and Aeromonas infections and zoonotic importance of these infections	Gram stain and microscopic examination of Enterobacteriae species; collection and transportation of faecal samples; laboratory diagnosis
3	General features of Pasteurella, Mannheimia, Haemophilus, Actinobacillus, Pseudomonas and Burkholderia species; Glanders and other infections	Gram stain and microscopic examination of Pasteurella, Mannheimia, Haemophilus, Actinobacillus, Pseudomonas species; examination of colonial properties of them
4	General features of Moraxella, Taylorella, Bordetella,Bartonella and Brucella species and infections caused by them; zoonotic importance of Brucellosis	Microscopic examination of Moraxella, Bordetella and Brucella species ; laboratory diagnosis of Brucellosis
5	Zoonotic importance of Campylobacter, Helicobacter and Listeria infections	Gram stain and microscopic examination of Campylobacter, Listeria species and laboratory diagnosis
6	General features of Erisipelothrix, Actinomyces, Nocardia, Corynebacterium and Rhodococcus species and infections caused by them	Gram stain and microscopic examination of Corynebacterium species and Rhodococcus equi; examination of colonial properties of them; CAMP test (R.equi, C.renale)

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	3.00	42.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	1.00	1.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			115.00
Total work load 30 hr			3.83
ECTS Credit of the Course			4.00

7	[illegible] laboratory diagnosis	[illegible]
8	[illegible]	[illegible]
9	Clostridium (II), Bacteriodes, and	Laboratory diagnosis of anaerobic non-spore-forming
10	General features of Leptospira and Mycoplasma species and infections caused Leptospirosis	Examination of Mycoplasma colony and isolation - identification procedures of them
11	Ricketsia, Chlamidia and Chlamydophila infections	Laboratory diagnosis of Ricketsia, Chlamidia and Chlamydophila species
12	Dermatophytes and Subcutaneous mycoses	Antibacterial susceptibility testing
13	Systemic mycoses (I)	Isolation and identification procedures and other diagnostic techniques of fungi
14	Systemic mycoses (II) and mycotoxins	Direct microscopic examination and staining methods of fungi

22	Textbooks, References and/or Other Materials:	- Veterinary Microbiology (Bacterial Disease), (N. Aydın, M. İzgür, K. Serdar Diker, H. Yardımcı, Ö. Esendal, J. Paracıkoğlu, M. Akan, İlke-Emek Press, Ankara, 2006) - Veterinary Microbiology- Bacterial and Fungal Agents of Animal Disease (J. Glenn Songer, Karen W. Post, Elsevier Saunders, USA, 2005) - Essentials of Veterinary Bacteriology and Mycology , Sixth Edition (G.R.Carter, Darla J. Wise, Iowa State Press, Iowa, 2004) - Veterinary Microbiology and Microbial Disease (P.J. Quinn, B.K. Markey, M.E. Carter, W.J. Donnelly, F.C. Leonard, Blackwell, Great Britain, 2002) - Clinical Veterinary Microbiology (P.J.Quinn,M.E., Carter, B.Markey, G.R.Carter, Mosby, London, 2000) - Special Microbiology Lecture Notes (Prof. Dr. Mihriban Ülgen-2013) (unpublished)
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	1	10.00
Home work-project	0	0.00
Final Exam	1	50.00
Total	3	100.00
Contribution of Term (Year) Learning Activities to Success Grade		50.00
Contribution of Final Exam to Success Grade		50.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

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