NEAR EAST UNIVERSITY
Faculty of Veterinary Medicine Course Curriculum

1.	**Course Name**	MEAT HYGIENE, INSPECTION AND TECHNOLOGY
2.	**Course Code**	VTE405
3.	**Course Type**	Compulsory
4.	**Course Level**	Undergraduate
5.	**Year**	4
6.	**Semester**	Fall, 7VET
7.	**ECTS Credits**	2
8.	**National credits**	2
9.	**Theoretical Course Hours (hours/week)**	1h/week
10.	**Practical Course Hours (hours/week)**	2h/week
11.	**Course Prerequisites**	None
12.	**Other Topics Recommended for the Course**	None
13.	**Course Language**	English
14.	**Course Format**	Face to Face
15.	**Course Coordinator**	Assoc. Prof. Dr. Beyza Hatice ULUSOY
16.	**Other Lecturers that Give the Course**	
17.	**Communication Details of the Coordinator**	Near East University, Faculty of Veterinary Medicine Department of Food Hygiene and Technology, Nicosia / TRNC e-mail: beyza.ulusoy@neu.edu.tr
18.	**Course Web Address**	

19.	**Course Aim**	Within the scope of the section regarding meat inspection, it is aimed to provide the students with information regarding the structural features of slaughterhouses, the transportation of butchery animals, slaughtering methods of butchery animals, systematic meat inspection, bacterial, viral, and parasitic diseases detected during meat inspection, pathological changes, and decisions to be made within the framework of legal provisions. In the meat products technology section, it is aimed to teach about post-mortem changes in meat after slaughtering, meat preservation methods, production technologies of meat products, cleaning and disinfection procedures in meat processing and packing plants.	
20.	**Contribution of the Course to Occupational Development**	1. Explaining/describing the determined concept(s) 2. Improving the students' knowledge about the determined concept/theory/subjects 3. Renewing the students' knowledge on the determined concept/theory/subjects.	
21.	**Course Learning Outcomes**	**LO1**	Will be able to discuss possible real-life applications of related concepts/theories and offer suggestions.
		LO2	Will be able to apply related concepts/theories to real life/other given situations/cases.
		LO3	Preparation for the presentation(s).
		LO4	Will be able to assess their own work according to given criteria.
		LO5	Will be able to carry out a given study independently.
		LO6	Will be able to work as a group on a given study.

22.	**Course Content**	**WEEK**	**THEORETICAL COURSE CONTENT**	**PRACTICAL COURSE CONTENT**
		1.	Description of the course, introduction to reference books, legal regulations regarding the red meat industry, meat and meat products in our country, mandatory records to be kept in slaughterhouses, duties and powers of the responsible manager and official veterinarian of the slaughterhouse, documents required for slaughtering.	Rules required to be followed while working in the laboratory, laboratory accidents and precautions.

		2.	Transportation of butchery animals, and documents required for the transportation, classification of abattoirs, sections forming the abattoirs and chilling premises, slaughterhouse waste water.	Determination of dry matter in meat and meat products.
		3.	Ante-mortem inspection and its importance, resting of butchery animals before slaughter, stunning methods, slaughter of cattle, sheep, goats and pigs, compulsory slaughter, diagnosis of slaughter after death, types of stamps.	Determination of ash content in meat and meat products via ash determination test.
		4.	Systematic meat inspection of cattle, sheep, pigs: blood, hide, head, lung, liver, spleen, intestine, bladder, udder, genital organs. Ante mortem and post-mortem inspection for anthrax, tuberculosis, brucellosis, Para-tuberculosis, infectious diseases caused by Clostridium chauvoei, tetanus, pasteurellosis, and tularaemia in slaughter animals, findings and decision.	Determination of protein and fat in meat and meat products.
		5.	Ante mortem and post-mortem inspection for actinomycosis, actinobacillosis, salmonellosis, rabies, scrapie, contagious bovine pleuropneumonia, contagious caprine pleuropneumonia, foot-and-mouth disease, blue tongue, leucosis, and Bovine spongiform encephalopathy (BSE) in slaughter animals, findings and decision.	Determination of acidity of meat and meat products with pH meter.
		6.	Findings and decision in conditions such as septicaemia, toxaemia, pigmentation, jaundice, abscess, hematoma, cachexia, caseification, uraemia, etc.	Determination of salt content in meat and meat products.
		7.	Midterm Exam	

		8.	Meat inspection for parasitic infections such as cysticercosis, trichinellosis, distomatosis, coenurosis, echinococcosis, trichostrongyloidosis, toxoplasmosis, sarcosporidiosis; findings and decision.	Detection of putrefaction in meat and meat products.
		9.	Carcass deboning, pH changes observed after slaughter, rigor mortis and meat ripening, DFD, PSE meats, cold shortening, thaw rigor, artificial ripening of meats.	The procedures to be applied before starting the microbiological analysis, the preparation of solid and liquid media, and points to be considered during the preparation.
		10.	Chilling, cold storage, freezing, heating used in meat preservation.	Sowing methods in solid-liquid media, isolation and identification of microorganisms.
		11.	Basic processes applied in the production of meat products; classification of meat products; drying, smoking, curing methods.	Making colony counts.
		12.	Meat selection in the production of fermented meat products, preparation of sausage fillers, basic points to be considered in filling and fermentation of sausage, pastrami production technology.	Applications of the gram stain method.
		13.	Selection of meat in sausage-salami production, points to be considered in preparation of emulsion; heating and smoking processes.	Field visit.
		14.	Cleaning and disinfection in meat processing plants.	Field visit.
23.	**Course Book, References and/or Other Resources**	1. Anar, Ş. Et ve Et Ürünleri Teknolojisi, Dora Yayınevi, Bursa, 2010 2. Tayar, M. Et Muayenesi, Bursa, 2011. 3. Hui,Y.H.,Nip,W., Rogers, R.W., Young, O.A. Meat Science and Applications, Marcel Dekker, Inc, New York, 2001. 4. Gracey, J., Collins, D.S., Huey, R. Meat Hygiene, W.B. Saunders Comp., London, 1999. 5. Anonym. Good Practices for The Meat Industry, FAO Animal Production and Health Manuals, 2004.		

24.	**Evaluation**	**SEMESTER WORK**	**NUMBER**	**PERCENTAGE OF CONTRIBUTION**
		Midterm Exam	1	20
		Short Exam	1	10
		Homework, Performance	1	10
		End of Year Exam	1	60
		Total	4	100
		Evaluation Approaches	Classical and multiple choice written exam	

25.	**ECTS / Workload Table**	**Activity**	**NUMBER**	**Duration [Hours]**	**Total Workload [Hours]**
		Theoretical Courses	14	1	14
		Applied Courses	14	2	28
		Extracurricular Lesson Study Time (Preparation, revising)	2	4	8
		Homework, Performance	1	3	3
		Projects	1	3	3
		Field Studies	2	1	2
		Mid-term Exams	1	1	1
		Other			
		End of Semester Exams	1	1	1
		Total Workload			60
		Total Workload / 30 hours			60/30
		Course ECTS Credits			2