RESIDUE ANALYSIS

1	Course Title:	RESIDUE ANALYSIS
2	Course Code:	VFR6014
3	Type of Course:	Optional
4	Level of Course:	Third Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	1.00
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:	Prof. Dr. HASAN HÜSEYIN ORUÇ
15	Course Lecturers:	Yard. Doç. Dr. Murat CENGİZ
16	Contact information of the Course Coordinator:	oruc@uludag.edu.tr + 90 224 2941322 Veteriner Fakültesi Farmakoloji ve Toksikoloji Anabilim Dalı 16059 Bursa
17	Website:	http://saglikbilimleri.uludag.edu.tr/anabilimdallari.php
18	Objective of the Course:	To educate residue, importance of human health, preventive, analyis material and methods.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	To comprehend residue and importance of human health
	2	To understand economical damage of residue
	3	To understand contain feed and food materials
	4	To choose method and instrument for detection of residue
	5	To prepare solutions and instruments for analysis
	6	To suggest solutions for prevent of residue
	7	
	8	
	9	
	10	

21 Course Content:

Course Content:

Week	Theoretical	Practice
1	Residue and importance	Principles in laboratory studies
2	Instruments used in residue analysis	Introduction of instrument and equipments used in residue analysis
3	Reasons of residue and prevention	Principles of work of instrument and equipments used in residue analysis
4	Criteria of residue	Plan for residue analysis

5	Residue in biological materials	Plan for residue analysis
6	Choose of methods	Choose of extraction methods
7	Check of methods (calibration curve, recovery, limit of detection)	Demonstration of calibration curve, recovery, limit of detection
8	Importance of reagent and solutions used in anaylsis	Preparation of reagent and solutions used in analysis
9	Mycotoxins	Mycotoxin analysis
10	Residue in meat, milk and fish	Residue analysis
11	Residue in honey and egg	Residue analysis
12	Tolerans limits for residues	Residue analysis
13	Evaluation of tolerans limits	Evaluation of analysis results
14	Evaluation of courses	Evaluation of application courses

22	Textbooks, References and/or Other Materials:	Adams H.R., Veterinary Pharmacology and Therapeutics, 8th edition, Iowa State University Press, Ames, 2001. Boothe D.M., Small Animal Clinical Pharmacology and Therapeutics. W.B. Saunders Company, USA, 2001. Prescott J.F., Baggot J.D., Walker R.D., Antimicrobial Therapy in Veterinary Medicine. Third Edition, Iowa State Pres, Ames, 2000. Deshpande S S., Handbook of Food Toxicology. Marcel Dekker, Inc. NY, 2002.

23	Assesment		Activites	Number	Duration (hour)	Total Work Load (hour)
	Midterm Exam	0	Theoretical	14	1.00	14.00
	Final Exams	2	Practicals/Labs	14	2.00	28.00
	Home work-project	2	Self study and preperation	14	6.00	84.00
	Total	3	Homeworks	2	5.00	10.00
			Projects	2	7.00	14.00
			Field Studies	0	0.00	0.00
			Midterm exams	0	0.00	0.00
			Others	5	4.00	20.00
			Final Exams	1	10.00	10.00
			Total Work Load			180.00
			Total work load/ 30 hr			6.00
			ECTS Credit of the Course			6.00
			Success Grade			
			Contribution of Final Exam to Success Grade			60.00
			Total			100.00
			Measurement and Evaluation Techniques Used in the Course			

Ecosystems and Human Health, Toxicology and

Heitzman R J., Veterinary Drug Residues. Second edition,

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	4	3	3	3	3	4	5	3	3	4	4	3	0	0	0	0

ÖK2	3	3	4	3	3	4	5	3	3	4	4	3	0	0	0	0
ÖK3	3	3	4	3	3	3	5	3	3	4	4	3	0	0	0	0
ÖK4	4	4	4	3	3	3	5	3	4	4	4	4	0	0	0	0
ÖK5	4	4	4	3	3	3	5	4	3	4	4	4	0	0	0	0
ÖK6	3	4	4	4	3	4	5	4	4	4	4	4	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

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