AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Instrumental Analysis of Foods								
Course Code	KGK100		Couse Level		Short Cycle (Associate's Degree)				
ECTS Credit	3	Workload	78 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	The aim of this course is to learn theoretic and practical knowledge of the instruments used in the food analysis.								
Course Content	Molecular spectroscopy (UV-visible, FT-IR), mass spectrometry (EI-MS, MALDI-TOF), Nuclear Magnetic Resonance (NMR), Chromatographic techniques (column chromatography, GC, HPLC, UPLC), hyphenated techniques (GC-MS, HPLC-MS, HPLC-MS/MS), refractive index, optical activity, atomic absorption (AAS), their principles and practical.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation)								
Name of Lecturer(s)	Lec. Kübra GENÇDAĞ ŞENSOY								

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Skoog, A.D., 1985. Principles of Inst. Analysis. HRW Int Ed. CBS College publ. Printed in Japan

Week	Weekly Detailed Course Contents	
1	Theoretical	Quantitative and Qualitative Analysis
2	Theoretical	UV-visible spectroscopy
3	Theoretical	Fourier Transform Infrared spectroscopy
4	Theoretical	Mass Spectrometry (EI-MS)
5	Theoretical	MALDI-TOF
6	Theoretical	Nuclear Magnetic Resonance (NMR)
7	Intermediate Exam	Midterm Exam
8	Theoretical	Column chromatography
9	Theoretical	Gas Chromatography
10	Theoretical	High pressure liquid chromatography (HPLC)
11	Theoretical	Ultra pressure liquid chromatography (UPLC)
12	Theoretical	Atomic absorption spectroscopy (AAS)
13	Theoretical	Refractive index, optical activity
14	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Assignment	1	1	1	2
Midterm Examination	1	10	2	12
Final Examination	1	20	2	22
			Total Workload (Hours)	78
			[Total Workload (Hours) / 25*] = **ECTS**	3

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	1. Learn various instruments used in food analysis

2	To learn the working principles of instruments used in food analysis
3	Learn GC-MS instruments used in food analysis
4	Learn UPLC instruments used in food analysis
5	Learn FTR instruments used in food analysis

Programme Outcomes *(Food Technology)*	
1	To be able to remember technolgies used in food sector
2	to be able to recognise food production condition and provide to food safety
3	to be able to comprehend basic processes in food production
4	to be able to apply hygien and sanitation rules in food facilities
5	to be able to remember basic chemistry, food chemistry and microbiology
6	to be able to write physicial, chemical and nutritional properties of foods and to comment their effect on human health
7	to be able to memorise food quality control technics and to evaluate result of control according to food legislation
8	to be able to have knowledge of proffessional ethics and responsibility
9	to be able to work in team and individual
10	to be able to communicate orally and profiency in writing
11	to be able to follow professional development that adopt of life-long learning
12	to be able to be a person who wanted for sector

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	4	4			
P2	4	4			
P5	4	4			
P6	4	4			
P7	4	4	4	4	4
P8	4	4			
P12	4	4			