AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Protein Analysis Methods								
Course Code	TBY415		Couse Level	First Cycle (Bachelor's Degree)					
ECTS Credit	4	Workload	104 *(Hours)*	Theory	2	Practice	0	Laboratory	2
Objectives of the Course	Protein purification is a series of processes intended to isolate one or a few proteins from a complex mixture, usually cells, tissues or whole organisms. Protein purification is vital for the characterization of the function, structure and interactions of the protein of interest.								
Course Content	Protein purification is a series of processes intended to isolate one or a few proteins from a complex mixture, usually cells, tissues or whole organisms. Protein purification is vital for the characterization of the function, structure and interactions of the protein of interest.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading	
1	Lehninger Principles of Biochemistry

Week	Weekly Detailed Course Contents	
1	Theoretical	Homojenisation
2	Practice	Homojenisation
3	Theoretical	Santrifuge
4	Practice	Santrifuge
5	Theoretical	Dialysis
6	Practice	dialysis
7	Intermediate Exam	Exam
8	Theoretical	Gel Filtration
9	Theoretical	Protein Structure
10	Theoretical	PAGE
11	Practice	PAGE
12	Theoretical	SDS-PAGE
13	Practice	SDS-PAGE
14	Theoretical	Protein staining on PAGE and SDS-PAGE gels

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	2	56
Lecture - Practice	14	1	2	42
Midterm Examination	1	2	1	3
Final Examination	1	2	1	3
			Total Workload (Hours)	104
			[Total Workload (Hours) / 25*] = **ECTS**	4
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Know the principles of homogenization
2	Knows centrifugation
3	Knows dialysis and gel filtration

4	Know the structure of proteins
5	Knows PAGE Electrophoresis

Programme Outcomes *(Agricultural Biotechnology)*	
1	To be able to develop skills in identifying, modeling and solving problems in agricultural biotechnology
2	To be able to synthesize life and engineering sciences for the effective resource planning of agricultural biotechnology applications
3	To be able to interpret about living organisms structure, metabolic and physiological processes in order to propose biotechnological solutions to the agricultural problems
4	To be able to analyze genomic, metabolomic and proteomic information via bioinformatic tools.
5	To have the ability to analyze collected data and interpret the results.
6	To have the ability of individual working ability and to make independent decisions, to work in inter-disciplinary and interdisciplinary teamwork, to communicate by expressing their ideas orally and in writing, clearly and concisely
7	To have the awareness of professional liabilities and ethics
8	To be able to follow current national and international problems

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	5	5	5	5	5
P2	5	5	5	5	5
P3	3	3	3	3	3
P4	5	5	5	5	5
P5	5	5	5	5	5
P6	4	4	4	4	4
P7	5	5	5	5	5
P8	4	4	4	4	4