AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Resistance to Stress Conditions								
Course Code	TBY412		Couse Level	First Cycle (Bachelor's Degree)					
ECTS Credit	4	Workload	97 *(Hours)*	Theory	2	Practice	0	Laboratory	2
Objectives of the Course	To have knowledge about stress factors in plants and to develop varieties resistant to stress factors with biotechnological study								
Course Content	Stress factors in plants, stress factors n tissue cultures, breeding of resistance against stress								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Discussion, Individual Study								
Name of Lecturer(s)									

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

Recommended or Required Reading	
1	Bitki Biyoteknolojisi (Genetik Mühendisliği ve Uygulamaları) Sebahattin Özcan, Ekrem Gürel, Mehmet Babaoğlu. Selçuk Üniversitesi Vakfı Yayınları.

Week	Weekly Detailed Course Contents	
1	Theoretical	İntroduction, having knowledge about stress
	Preparation Work	Having knowledge from source books
2	Theoretical	Stress factors in plants and responses from plants
	Preparation Work	Having knowledge from source books
3	Theoretical	Stress in light and other radiation factors
	Preparation Work	Having knowledge from source books
4	Theoretical	Stress against extreme temperatures
	Preparation Work	Having knowledge from source books
5	Theoretical	Stress aganist drought and water
	Preparation Work	Having knowledge from source books
6	Theoretical	Stress because of soil air
	Preparation Work	Having knowledge from source books
7	Theoretical	Salt stress
	Preparation Work	Having knowledge from source books
8	Intermediate Exam	Midterm exam
9	Theoretical	Antropogenic stress
	Preparation Work	Having knowledge from source books
10	Theoretical	The mechanism of stress tolerance and molecular determination
	Preparation Work	Having knowledge from source books
11	Theoretical	The stress factors in tissue cultures
	Preparation Work	Having knowledge from source books
12	Theoretical	Genetic engineering and stress
	Preparation Work	Having knowledge from source books
13	Theoretical	Breeding of resistance against stress

13	Preparation Work	Having knowledge from source books
14	Theoretical	The biotechnological research against stress
	Preparation Work	Having knowledge from source books
15	Theoretical	General evaluation
	Preparation Work	Having knowledge from source books
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70
Laboratory	7	1	2	21
Midterm Examination	1	2	1	3
Final Examination	1	2	1	3
			Total Workload (Hours)	97
			[Total Workload (Hours) / 25*] = **ECTS**	4

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	Stress mechanisms are learned in plants
2	Learns drought stress
3	Salinity stress and its effects are learned
4	Temperature, heavy metal and pollution stress learned
5	Learn the mechanism of stress genes

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	4	4	4	4	5
P2	5	5	5	5	5
P3	5	5	5	5	5
P4	4	3	3	3	5
P5	4	3	3	3	3
P6	3	3	3	3	3
P7	3	3	3	3	3
P8	3	2	2	2	2