



AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
FIELD CROPS
FIELD CROPS
FIELD CROPS MASTER
COURSE INFORMATION FORM

Course Title	Fertilizer Use And Plant Health Relations								
Course Code	ZTO510	Course Level			Second Cycle (Master's Degree)				
ECTS Credit	7	Workload	170 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	Relationships between plant diseases-pathogens and some physical and chemical properties of soils, fertilization rates and amounts. Effects of plant nutrition in terms of phytopathology- entomology . Effects of different fertilizers on harmful effects of plant diseases-pathogens on plants.								
Course Content	Pathogenesis•Diagnosis of major plant disease •Host-pathogen interactions •Defence mechanism of plants .Mineral nutrition and plant health (disease) relations								
Work Placement									
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Discussion, Case Study, Individual Study, Problem Solving								
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Anonymous, 1976. Fertilizer Use and Plant Health. Int.Potash Inst., Izmir,Turkey Pessarakli, M., 1999.Handbook of Plant and Crop Stress. 2nd Ed. Marcel Dekker,NewYork.
2	Börner, H., 1989.Pflanzenkrönkheiten un Pflanzenschutz. 6. Auflage.Eugen Ulmer ,Verlag
3	Hess, D ., 1988.Pflanzenphysiologie. 8 Auflage ,Eugen Ulmer ,Verlag
4	Schlösser, E.,1983.Allgemeine Phtopathologie. George Thieme Verlag,Stuttgart, NewYork.

Week	Weekly Detailed Course Contents	
1	Theoretical	Description of plant diseases and pest damages according to their symptoms
	Preparation Work	Practice and Theory
2	Theoretical	Inoculum resources, infection types and damage development in plant diseases
	Preparation Work	Practice and Theory
3	Theoretical	Host-pathogen interaction in disease development Defence mechanisms against disease and pests in plants
	Preparation Work	Practice and Theory
4	Preparation Work	Practice and Theory
5	Theoretical	The importance of nutrition elements on plant physiology
	Preparation Work	Practice and Theory
6	Theoretical	Relationships among rate and form N containing fertilizers and damage degree of plant pathogens and pests
	Preparation Work	Practice and Theory
7	Theoretical	Relationships among rate and form P containing fertilizers and damage degree of plant pathogens and pests
	Preparation Work	Practice and Theory
8	Intermediate Exam	Midterm Exam
9	Theoretical	Relationships among rate and form K containing fertilizers and damage degree of plant pathogens and pests
	Preparation Work	Practice and Theory
10	Theoretical	Relationships among rate and form Ca containing fertilizers and damage degree of plant pathogens and pests
	Preparation Work	Practice and Theory
11	Theoretical	Relationships among rate and form Mg containing fertilizers and damage degree of plant pathogens and pests
	Preparation Work	Practice and Theory



12	Theoretical	Relationships among rate and form of micro elements(Fe, Mn, Zn, B and Cu) containing fertilizers and damage degree of plant pathogens and pests
	Preparation Work	Practice and Theory
13	Theoretical	Conclusions
	Preparation Work	Practice and Theory
14	Theoretical	papers and presentation
	Preparation Work	Practice and Theory
15	Theoretical	papers and presentation
	Preparation Work	Practice Exam
16	Final Exam	FINAL EXAM

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Assignment	2	0	25	50
Term Project	1	0	14	14
Midterm Examination	1	0	20	20
Final Examination	1	0	30	30
Total Workload (Hours)				170
[Total Workload (Hours) / 25*] = ECTS				7

*25 hour workload is accepted as 1 ECTS

Learning Outcomes	
1	To be able to comprehend the plant disease and pathogenesis
2	To be able to comprehend the host-pathogen relations
3	To be able to comprehend defence mechanisms of plants
4	To be able to evaluate relations between macro elements (N,P,K,Ca,Mg and S) nutrition and plant health
5	To be able to evaluate relations between micro elements (Fe,Zn,Mn,Cu,B and Mo) nutrition and plant disease

Programme Outcomes (Field Crops Master)	
1	To be able to improve and deepen the level of expertise in field crops on the basis of the departments licenses qualifications.
2	To be able to recognize the subjects related to field crops, to be able to solve these and make interpretation.
3	To be able to have the skills of acting independently, to have power to decide and to create.
4	To be able to work in teams between departments
5	To be able to give briefing about latest information of Field Crops in written, oral and visual ways.
6	To be able to take responsibility for developing the new approaches and to formulate a solution facing unforeseen complex situations of applications,
7	To be able to defend the original opinions in both Turkish and in foreign languages by using these languages and communicating effectively.
8	To be able to contribute to science by producing knowledge for the aim of improving quality, efficiency and sustainability
9	To be able to apply breeding methods in order to improve new varieties for Field Crops.
10	To be able to maintain and select the appropriate statistical methods within the framework of the study, evaluation of scientific ethics; to convert the results into a report/dissertation and to offer them by producing scientific publications.

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	4
P2	4	4	4	4	4
P3	4	4	4	4	4
P4	4	4	4	4	4
P5	4	4	4	4	4
P6	4	4	4	4	4
P7	4	4	4	4	4
P8	4	4	4	4	4
P9	4	4	4	4	4



P10	4	4	4	4	4
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