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

Course Title	Ecophysiology of Corn and Agronomic Practices								
Course Code	ZTB538		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	8	Workload	204 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	The aim of this course is to determine the physiological period of maize and effect of environmental factors (temperature, rainfall, relative humidity and wind) on the period. In addition it can be made a show of some agricultural practices to provide optimal conditions.								
Course Content	With this course, corn vegetative (4 leaf, 8 leaf, 12 leaf, 16 leaf and tasseling) and reproductive (pollination, blister, milk stage, dough stage dent stage and physiological maturity stage) growth stages are indicated. Effect of some different environmental factors (temperature, rainfall, relative humidity and wind) on corn plant development is also emphasized. Some agronomical practices (tillage, fertilization, irrigation and pesticide application) In order to provide an optimum environment for plants are determined. It is described that effects of these practices on length of physiological period of plant and the resulting of products.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Individual Study								
Name of Lecturer(s)	Lec. Yakup Onur KOCA								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	E.P. ODUM and G.W. BARRETT. 2005. Fundamentals of Ecology, Thomson Learning Brooks/Cole, Belmont, CA, USA, 624 pp).

Week	Weekly Detailed Course Contents	
1	Theoretical	Corn seed, germination physiology and light
	Practice	Application about Corn seed, germination physiology and light
	Preparation Work	Review of related issues with support of active education
2	Theoretical	Vegetative and reproductive growth stages
	Practice	Application about Vegetative and reproductive growth stages subjects
	Preparation Work	Review of related issues with support of active education
3	Theoretical	The effects of sowing time on growth stages
	Practice	Application about sowing time on growth stages
	Preparation Work	Review of related issues with support of active education
4	Theoretical	The effects of temperature changes on corn plant
	Practice	Application about the effects of temperature changes on corn plant
	Preparation Work	Review of related issues with support of active education
5	Theoretical	Natural rainfall and relative air humidity
	Practice	Application about Natural rainfall and relative air humidity subjects
	Preparation Work	Review of related issues with support of active education
6	Theoretical	Soil characteristics and Wind
	Practice	Application about soil characteristics and wind
	Preparation Work	Review of related issues with support of active education
7	Theoretical	The effects of environmental changes on corn grain quality
	Practice	Application about environmental changes on corn grain quality
	Preparation Work	Review of related issues with support of active education
8	Intermediate Exam	Midterm exam
9	Theoretical	Identification and determination of agronomical traits during corn growth period
	Practice	Defination of agronomical traits during corn growth period

9	Preparation Work	Review of related issues with support of active education
10	Theoretical	Tillage during corn growth period
	Practice	Tillage applications during corn growth period
	Preparation Work	Review of related issues with support of active education
11	Theoretical	First and second fertilizations of corn, effects of increasing the number of applications on corn grain
	Practice	Fertilizing applications
	Preparation Work	Review of related issues with support of active education
12	Theoretical	Foliar fertilization and is it necessary?
	Practice	Foliar fertilizer applications
	Preparation Work	Review of related issues with support of active education
13	Theoretical	Pesticide applications during the corn farming
	Practice	Pesticide applications
	Preparation Work	Review of related issues with support of active education
14	Theoretical	Irrigation times and methods during corn growth period
	Practice	Irrigation methods for corn cultivation
	Preparation Work	Review of related issues with support of active education
15	Theoretical	Harvest of grain and silage
	Practice	Harvest applications
	Preparation Work	Review of related issues with support of active education
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	2	56
Lecture - Practice	14	0	2	28
Assignment	4	0	20	80
Term Project	1	0	30	30
Midterm Examination	1	3	1	4
Final Examination	1	5	1	6
			Total Workload (Hours)	204
			[Total Workload (Hours) / 25*] = **ECTS**	8

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	Determination of physiological growth stages (vegetative and reproductive) on corn
2	The impact of environmental factors on the period
3	Determination of effects on agricultural practices of plant growth
4	Determination of effects on agricultural practices of products (grain and silage)
5	Determination of effects on quality of products

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	5	5	5	5	5
P2	5	5	5	5	5
P3	5	5	5	5	5
P4	5	5	5	5	5
P5	5	5	5	5	5
P6	5	5	5	5	5
P7	5	5	5	5	5
P8	5	5	5	5	5
P9	5	5	5	5	5
P10	5	5	5	5	5