



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Mechanic of Sowing							
Course Code		ZTM531		Couse Level		Second Cycle (Master's Degree)			
ECTS Credit	7	Workload	174 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		The investigation and analysis of the most suitable conditions for seed germination, sowing physico mechanical principles.							
Course Content		Germination, factors of affecting germination, examination of the mechanical resistance of germination, effect size statistically granular soil to germinate, the affect of other characteristics of the soil to germinate and creamy layer-effect relationship between germination.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation)					
Name of Lecturer(s)		Prof. İbrahim YALÇIN							

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Ekim Mekanığı Yüksek Lisans Ders Notları
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Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction, germination, germination environmental factors that affect
2	Theoretical	Analysis of forces occurring during germination of the seeds
3	Theoretical	Theoretical principles of intake of O ₂ in soil and water of the seeds.
4	Theoretical	Mechanical germination resistance, resistance factors that affect the progress of shoot
5	Theoretical	The effect of soil compaction and drying of the soil granule size.
6	Theoretical	The effect of soil compaction and granular size on the germination.
7	Intermediate Exam	Midterm exam
8	Theoretical	Soil temperature, salinity and aeration-germination relationship
9	Theoretical	The relationship of creamy layer-germination
10	Theoretical	Creamy layer resistance measurement methods
11	Theoretical	Characterization of soil compaction
12	Theoretical	Soil compaction prevention and removal methods
13	Theoretical	Soil temperature, salinity and aeration-germination relationship
14	Theoretical	Soil temperature, salinity and aeration-germination relationship
15	Theoretical	The relationship of creamy layer-germination
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70
Lecture - Practice	14	2	2	56
Assignment	2	0	20	40
Midterm Examination	1	2	2	4
Final Examination	1	2	2	4
Total Workload (Hours)				174
[Total Workload (Hours) / 25*] = ECTS				7

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	Understanding of favorable conditions for seed germination.
2	Understanding of the forces acting in the seed during germination.
3	Grit size of soil granule and other soil properties to be informed about the impact of germination.
4	Understanding of the causes and effects of the formation of creamy layer of soil to germinate.
5	Understanding of the causes and effects of the formation of creamy layer of soil to germinate.

Programme Outcomes (Agricultural Machinery Master)

1	Identification, formulation and solving the problems in the field of Agricultural Machinery
2	The ability to use modern engineering tools and techniques
3	The ability to use the information, which is obtained by following the scientific and technological developments, in the academic life and practice.
4	The ability to evaluate multi-faced relationship between them by understanding interaction among agricultural technology, soil, plants and animals
5	Professionalism and ethical responsibility
6	The ability to work in disciplinary and multi-disciplinary teams
7	The ability to communicate effectively
8	The ability to do research for accessing information and to use data base and other resources
9	The ability to do analyze and interpret the experimental results and the design of experiment
10	The ability to identify and interpret knowledge of current professional issues and events
11	The ability to get aware the universal and social effects of engineering solutions and applications
12	Accordance with the requirements of science and technology, ability to use scientific knowledge creative

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

	L1	L2	L3	L4
P1	4	4	4	4
P2	4	4	4	4
P3	4	4	4	4
P4	4	4	4	4
P5	4	4	4	4
P6	4	4	4	4
P7	4	4	4	4
P8	4	4	4	4
P9	4	4	4	4
P10	4	4	4	4
P11	4	4	4	4
P12	4	4	4	4

