AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Greenhouse Design								
Course Code	ZTY508			Couse Level		Second Cycle (Master's Degree)			
ECTS Credit	7	Workload	175 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	Gain knowledge on greehouse types, glazing material and features, structural materials and influencing environmental-economic factors, quantity takeoff process, feasibility analysis.								
Course Content	Statics of PE and glass covered greehouses, roof systems, roof trussings, statics and strenght analyses, aluminum and steel structures, quantity takeoff process, feasibility analysis								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Project Based Study, Individual Study, Problem Solving								
Name of Lecturer(s)	Lec. Yasin MERCAN								

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

Recommended or Required Reading	
1	Yüksel, A.N., Yüksel, E., 2012. Sera Yapım Tekniği. Hasat Yayıncılık, İstanbul
2	Doğan, H., 2002. Havalandırma ve İklimlendirme Esasları, Seçkin Yayıncılık, Ankara
3	Olgun, M., 2011. Tarımsal Yapılar, Ankara Ü. Ziraat Fakültesi, Yayın No: 1577, Ankara.
4	Şahin, A., Ünal, H. B., 2005. Yapı Malzeme Bilgisi, E.Ü.Ziraat Fakültesi Yayınları, Yayın No: 568, Bornova-İzmir.
5	Filiz, M., 2001. Sera İnşası ve Kliması, Akademi Kitabevi, İzmir.
6	TSE's relevant standards

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to greenhouse construction technique
2	Theoretical	Classification of greenhouses, glazing materials and features
3	Theoretical	Climatisation, irrigation and fertilisation hardwares effecting greenhouse structure
4	Theoretical	Climatisation, irrigation and fertilisation hardwares effecting greenhouse structure
5	Theoretical	Greenhouse Roof sytems
6	Theoretical	Loads effecting greenhouse structure and its elements
7	Theoretical	Introduction of SAP 2000 and SERASIM programs
8	Theoretical	Static and strength analyses of greenhouse structure and its elements
9	Intermediate Exam	MID-TERM EXAM
10	Theoretical	Static and strength analyses of greenhouse structure and its element
11	Theoretical	Static and strength analyses of greenhouse structure and its element
12	Theoretical	Static and strength analyses of greenhouse structure and its element
13	Theoretical	Finalising greenhouse project and drawing
14	Theoretical	Perform quantity takeoff
15	Theoretical	Feasibility analysis and reporting
16	Final Exam	FİNAL EXAM

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	8	3	154
Midterm Examination	1	7	2	9

Final Examination	1	10	2	12
			Total Workload (Hours)	175
			[Total Workload (Hours) / 25*] = **ECTS**	7
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Identify greenhouse types and features, structural elements and glazing materials
2	Identify incoming (snow, wind) as well as plant and structural loads on the greenhouse construction, and plan and design the greenhouse structure accordingly
3	Perform quantity takeoff and feasibility report
4	Being able to explain using technologies and growing techniques in greenhouses.
5	Being able to evaluate effects on plants of these circumstances and environmental circumstances that consist climate of greenhouse, erect of greenhouse, prepare a greenhouse project, operate of greenhouse.

Programme Outcomes *(Agricultural Structures and Irrigation Master)*	
1	Ability to use, evaluate and improve the knowledge gained from field of study at an expert level
2	Ability to reach necessary the knowledge
3	To able to conduct scientific studies (research) related to the field
4	Ability to consider academical and ethical values the studies
5	Ability to improve editing method and evaluate the results of researches
6	The studies, the ability to reach result and application, develop new approaches
7	A topic in the field of written, verbally and visually as the ability to express
8	Effective use of Turkish language and ability to communicate in a foreign language both written and verbal

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