AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Soilless Culture								
Course Code	ZBB602		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	6	Workload	150 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	The aim of this course is to teach to students the definition, advantages and methods of soilless farming, to have information about subject of plant nutrition in soilless farming and, to provide to be able to apply and plan to plant growing in soilless media as amateur, experimental and commercial and, to be able to find solution to encounter the problems.								
Course Content	The history of soilless farming, use of soilless farming in the World and Turkey, the reasons of become prevalent in greenhouse, definition and classification of soilless farming, techniques of soilless farming (water and substrate culture) using substrates, substrate culture in beds, bags, pots. To supply of mineral nutrition and water from plant requirements in substrate culture, stagnant water culture, running water culture, aeroponic, preparation of nutrition solution and application. Solution-media-plant analyses, advantages and								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Discussion, Project Based Study, Individual Study								
Name of Lecturer(s)	Prof. Engin ERTAN								

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

Recommended or Required Reading	
1	Sevgican, A. Örtü altı yetiştiriciliği Cilt II
2	Gül A., 2008. Topraksız Tarım. Hasad Yayıncılık, 144 s.
3	Savvas D., Passam H. (ed.), 2002. Hydroponic Production of Vegetables and Ornamentals. Embryo Pub., Greece, 463 s.
4	. Gül A., Tüzel İ.H., Okur B.,Tuncay Ö., Aykut N., Engindeniz S., 2000. Serada Topraksız Tarım Tekniği ile Hıyar Yetiştiriciliği. TÜBİTAK TARP Yayınları, 51 s.

Week	Weekly Detailed Course Contents	
1	Theoretical	the definition and history of soilless farming, using in the World and Turkey the reason of become prevalant in greenhouse growing., giving term paper .
2	Theoretical	disadvantages and advantages of soilless farming. classification and the effect on environment
3	Theoretical	substrate culture and water culture
4	Theoretical	media and features in using soilless farming
5	Theoretical	water and nutrition requirements of plants in soillesss media
6	Theoretical	plant nutrition in soilless farming, nutrition prescriptions contents and prepaation
7	Theoretical	substrate culture
8	Theoretical	midterm exam
9	Theoretical	bed culture application principles. advantages and disadvantages
10	Theoretical	bag-pot culture principles, advantages and disadvantages
11	Theoretical	water culture
12	Theoretical	water culture systems, advantages and disadvantages work principles, looking out for subject s (NFT_DFT)
13	Theoretical	water culture systems, advantages and disadvantages work principles, looking out for subject s (stagnant)
14	Theoretical	aeroponic system, advantages and disadvantages, work principles, looking out for subjects
15	Theoretical	visiting of commercial enterprise, management systems of enterprises, term paper presentations
16	Theoretical	final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	2	56
Lecture - Practice	14	2	2	56
Midterm Examination	1	17	2	19
Final Examination	1	17	2	19
			Total Workload (Hours)	150
			[Total Workload (Hours) / 25*] = **ECTS**	6
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	
2	
3	
4	
5	

Programme Outcomes *(Horticulture Doctorate)*	
1	To be able to have scientific value on the targeted area, research planning and conducting practices
2	To be able to plan, conduct, coordinate, and apply of research
3	Ability to literature search and record the obtained knowledge systematically
4	Ability to present research results and discussion
5	Ability to write a scientific article
6	Having a status to open-minded for life-long learning

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	5	4	4	4
P2	4	4	4	4	4
P3	4	4	4	5	4
P4	4	5	4	4	4
P5	5	4	4	4	4
P6	4	5	5	5	5