

GREENHOUSE CONSTRUCTION TECHNIQUES

1	Course Title:	GREENHOUSE CONSTRUCTION TECHNIQUES	
2	Course Code:	GBUP223	
3	Type of Course:	Optional	
4	Level of Course:	Short Cycle	
5	Year of Study:	2	
6	Semester:	3	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	-	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Öğr.Gör. MURAT ÇETİN	
15	Course Lecturers:	-	
16	Contact information of the Course Coordinator:	arzum@uludag.edu.tr, (0224)2942387, U.Ü.Teknik Bilimler Meslek Yüksekokulu B Blok-Görükle Kampüsü/Bursa	
17	Website:		
18	Objective of the Course:	To provide information on the technological structure of agricultural greenhouse.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Greenhouse and breeding-season, the benefits of greenhouse farming, greenhouse agriculture for the world, gain information about Turkey, greenhouse cultivation and development.
		2	To understand all the factors that influence the choice of the location of the greenhouse.
		3	To understand the factors affecting the selection of types of greenhouse.
		4	To know the types of Greenhouse, the size, organization forms, skeleton structure, roof shapes and types of cover material to explain the greenhouse.
		5	Planning in terms of the greenhouse effect maintain the rigidity of the structure carrying loads and loads of structural members to explain this.
		6	The main function of the optimal growth conditions for plants in greenhouses (light, temperature, humidity, airflow, etc.). Explain.
		7	Plant breeding can be made easily, without damaging the plants in terms of greenhouse floor area, in accordance with regulation of division and comprehend information.
		8	What could be in greenhouses and irrigation systems in the use of these systems and the effects of greenhouse understand the structure of the facility.
		9	

		10		
21	Course Content:			
	Course Content:			
Week	Theoretical	Practice		
1	<ul style="list-style-type: none">Greenhouse Production Techniques course content.Giving information about the processing of the course and topics throughout the semester.History and development of greenhouse agriculture.Benefits of greenhouse cultivation.Greenhouse agriculture position in the world.Greenhouses features a cool-cold and temperate climates warm.			
2	<ul style="list-style-type: none">And development of greenhouse cultivation in Turkey.Ecological factors influence the choice of the location of the greenhouse.Factors that influence the choice of the location of the greenhouse and sun light.The location of the temperature factors of the greenhouse effect.Factors that influence the choice of the location of the greenhouse air movement.Wind breaks and field facility			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	<ul style="list-style-type: none">Orientation of greenhouses.Irrigation water supply.	14	2.00	28.00
Practicals/Labs		0	0.00	0.00
Self study	<ul style="list-style-type: none">Greenhouse.Energy.	14	3.00	42.00
Homeworks		0	0.00	0.00
Projects	<ul style="list-style-type: none">Greenhouse products, market and sales opportunities.	0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams	<ul style="list-style-type: none">Layout of the business.The purpose and need for the quantity	2	15.00	30.00
Others		0	0.00	0.00
Final Exams	<ul style="list-style-type: none">considered when selecting types.Effectiveness of the selection of	1	20.00	20.00
Total Work Load				120.00
Total work load/ 30 hr				4.00
ECTS Credit of the Course				3.00
	<ul style="list-style-type: none">Changes and developments in financial strength and future business planning.Greenhouse owner's taste.			
5	<ul style="list-style-type: none">Depending on the size of greenhouse types.Forms of organization types in the greenhouse.Skeleton structure types in the greenhouse.Types according to their greenhouse roof.Covering material types in the greenhouse.			

6	<ul style="list-style-type: none">Greenhouse construction elements (Foundations).Basic types, details of stress, some, the foundation walls.The required properties of the skeletal elements of the greenhouse.Greenhouse wall and columns.Isleleti greenhouse roof and roof parts.Roof truss, purlins, beams rafters.Wind.Gutters.	
7	<ul style="list-style-type: none">Types and properties of greenhouse covering material.Planning and characteristics of the doors.Ventilation openings and features of the planning.Greenhouse effective wind load planning.Snow load.Continuous loads and dynamic load.	
8	Lesson repeat and Midterm	
9	<ul style="list-style-type: none">Yaratılmasının importance of environmental conditions in greenhouses.Light factor.And determination of the temperature factor, and greenhouse heating requirement.Heating systems in greenhouses.	
10	<ul style="list-style-type: none">Greenhouse ventilation.Greenhouse ventilation systems.	
11	<ul style="list-style-type: none">Greenhouse cooling systems.Greenhouse energy-holders.	
12	Repeating courses and midterm exam	
13	<ul style="list-style-type: none">Greenhouse base regulation, plans.	
14	<ul style="list-style-type: none">Irrigation systems used in greenhouses.Desing stages.	
22	Textbooks, References and/or Other Materials:	<ul style="list-style-type: none">Prof. Dr. İsmet Arıcı (2006). Sera Yapım Tekniği. U.Ü. Ziraat Fak. Tarımsal Yapılar ve Sulama Bölümü. Ders Notları No:44 BURSA.Prof. Dr. Ahmet Nedim Yüksel Sera Yapım Tekniği. Hasat Yayıncılık İstanbul- 1995Nelson, D.V., 1991. Greenhouse Operation and Management, Prentice-Hall Inc. ABD.Boodley, J.W., 1981. The Commercial Greenhouse. Delmar Publishers. ABD.Aldrich R.A. ve J.W., Bartok., 1994. Greenhouse Engineering. NRAES 33. Ithaca. ABD.Zabeltitz. C.Von. 1995. Seralar (Çeviren: A.Nafi Baytorun) Ç.Ü.Zir.Fak.Genel Yay. No: 110.
23	Assesment	
TERM LEARNING ACTIVITIES		NUMBE R
Midterm Exam		2
Quiz		0
Home work-project		0
Final Exam		1
		WEIGHT
		50.00
		0.00
		0.00
		50.00

Total	3	100.00
Contribution of Term (Year) Learning Activities to Success Grade	50.00	
Contribution of Final Exam to Success Grade	50.00	
Total	100.00	
Measurement and Evaluation Techniques Used in the Course		
24	ECTS / WORK LOAD TABLE	

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	3	4	1	3	5	5	2	5	3	2	4	4	2	1	2	3
ÖK2	3	4	1	2	5	5	2	5	3	2	4	4	2	1	1	3
ÖK3	3	4	1	1	5	5	2	5	3	2	4	4	2	1	1	3
ÖK4	3	4	1	1	5	5	4	5	3	4	4	4	4	1	1	3
ÖK5	3	4	1	1	5	5	3	5	3	3	4	4	3	1	1	3
ÖK6	3	4	1	4	5	5	4	5	3	4	4	4	4	1	3	3
ÖK7	3	4	1	3	5	5	4	5	3	4	4	4	4	1	2	3
ÖK8	3	4	4	4	5	5	5	5	3	5	4	4	4	1	3	3
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low		2 low		3 Medium		4 High		5 Very High							