ESKİŞEHİR OSMANGAZİ UNİVERSİTY AGRİCULTURE FACULTY HORTİCULTURE DEPARTMENT BACHELORS DEGREE COURSE CATALOGUE (2022-2023)

1. Year – Fall Semester										
Course Code	Course Name	Т	Р	NC	ECTS					
251311002	Botany	2	2	3	4					
251311003	Physics	3	0	3	4					
251311005	Mathematics	3	0	3	3					
251311004	Chemistry	2	2	3	4					
251311013	Introduction to Horticulture	1	0	1	3					
251311011	Career Planning	1	0	1	2					
251311012	Basic Information Technologies	1	2	2	3					
251311008	Turkish Language I	2	0	0	2					
251311009	Principles of Ataturk and Recent Turkish History I	2	0	2	2					
251311010	Foreign Language I	3	0	0	3					
Total		20	6	18	30					
1. Year –	Spring Semester									
Course Code	Course Name	Т	Р	NC	ECTS					
251312015	History of Agriculture and Deontology	2	0	2	3					
251312002	Surveying Technique	2	0	2	4					
251312011	Computer Assisted Technical Drawing	1	2	2	4					
251312012	Plant Biochemistry	1	2	2	5					
251312012	Agricultural Ecology and Climate Change	2	0	2	4					
251312013	Thermodynamics	3	0	3	3					
251312008	Turkish language II	2	0	0	2					
251312000	Principles of Ataturk and Recent Turkish History II	2	0	2	2					
251312009	Foreign Language II	3	0	0	2					
Z31312010		19	4	15	30					
10tai 2 Voor –	Fall Samastar	10	-	15	50					
2. Teal –	Fan Semester	т	D	NC	FCTS					
251212002	Statistics	2	Г 0	2						
251313002	Canatian	2	0	2	4					
251313003	A subscriptional E services	2	0	2	4					
251313004	Agricultural Economics	2	0	2	2					
251313005	Food Science and Technology		0	2	5					
251313013	General Fruit Growing	1	2	2	5					
251313024	Landscape Architecture	2	0	2	4					
251313012	Occupational health and Safety I	2	0	2	2					
251313014	Material Science	2	0	2	2					
	Social Elective Courses (1 course to be taken)	3	0	3	3					
Total		18	2	19	30					
251212015	Social Elective Course Group I (I course to be taken)	2	0	2	2					
251313015	Stress Management	3	0	3	3					
251313016	Entrepreneurship	3	0	3	3					
251313017	Leadership	3	0	3	3					
251313018	Turkish Folk Dance	3	0	3	3					
251313019	Effective Communication	3	0	3	3					
251313020	Mediation and expertise in law	3	0	3	3					
251313021	Glass Arts	3	0	3	3					
251313022	Works of Volunteering	3	0	3	3					
2. Year – S	pring Semester	-	_							
Course Code	Course Name	T	Р	NC	ECTS					
251314025	General Vegetable Growing	1	2	2	6					
251314026	Agricultural Structures and Irrigation	2	0	2	4					
251314027	Soil Science and Plant Nutrition	2	0	2	4					
251314028	Research and Experimental Methods	2	2	3	4					
251314029	Plant Protection	2	0	2	4					
251314030	Field Crops	2	0	2	3					
251314011	Occupational health and Safety II	2	0	2	2					
	Social Elective Courses (1 course to be taken)	3	0	3	3					
Total		16	4	18	30					
	Social Elective Course Group II (1 course to be taken)									
251314031	Intellectual Property Law	3	0	3	3					
251314032	IT (Informatic) Law	3	0	3	3					
251314033	State and Society	3	0	3	3					
251314034	Critical Thinking	3	0	3	3					

251314035	Music	3	0	3	3
251314036	Photography	3	0	3	3
251314037	Marbling Art	3	0	3	3
251314038	Diction	3	0	3	3
3 Vear -	Fall Semester	5	U	5	5
Course Code	Course Name	Т	р	NC	FCTS
251315015	General Viticulture	1	2	2	1
251315015	Ormamontal Diants Cultivation	1	2	2	4
251313010	Dranental Plants Cultivation	1	2	2	4
251515017	Finding Committee in the Dentation of the second se	1	2	2	4
	Elective Course within the Department 1	2	2	3	4
	Elective Course within the Department 2	2	2	3	4
	Elective Course within the Department 3	2	2	3	4
	Faculty Elective Course (1 course to be taken)	3	0	3	3
251315013	Professional Practice I	0	4	0	3
Total		12	16	18	30
	Elective Course Group I within the Department				
251315018	Organic Agriculture in Horticulture	2	2	3	4
251315019	Professional English	2	2	3	4
251315020	Sustainable Agriculture in Horticulture	2	2	3	4
251315021	Biotechnology in Horticulture	2	2	3	4
251315022	Horticultural Crops Diseases and Control	2	2	3	4
251315023	Modern Fruit Growing	2	2	3	4
201010020	Faculty Elective Course Group I (1 course to be taken)		_		
251315005	Determination of Plant Fertilizer Requirements and Fertilization	3	0	3	3
251315006	A grigulture and Environment	3	0	3	3
251315000	Packaoning	2	0	2	2
251313023	Emit and Vegetable Pressessing Technology	2	0	2	2
251315026	A single processing rechnology	2	0	3	2
251315027	Agricultural Extension, Communication and Etnic	3	0	3	3
<u> 3. Year – Sp</u>	bring Semester	m	D	NG	ПОТО
Course Code	Course Name	1	P	NC	ECIS
251316019	Horticultural Crop Breeding	1	2	2	4
251316020	Engineering Design	2	0	2	4
251316021	Physiology of Horticultural Plants	2	0	2	4
	Elective Course within the Department 1	()		· ·)	1
	Deterve course within the Department 1	2	2	3	4
	Elective Course within the Department 2	2	2	3	4
	Elective Course within the Department 2 Elective Course within the Department 3	2 2 2	2 2 2	3 3 3	4 4 4
	Elective Course within the Department 1 Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken)	2 2 2 3	2 2 2 0	3 3 3 3	4 4 4 3
251316014	Elective Course within the Department 1 Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II	$\begin{array}{c} 2 \\ 2 \\ 2 \\ 3 \\ 0 \end{array}$	2 2 2 0 4	3 3 3 0	4 4 3 3
251316014 Total	Elective Course within the Department 1 Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II	2 2 3 0 14	2 2 0 4 12	3 3 3 0 18	4 4 3 3 30
251316014 Total	Elective Course within the Department 1 Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department	2 2 3 0 14	2 2 0 4 12	3 3 3 0 18	4 4 3 3 30
251316014 Total 251316022	Elective Course within the Department 1 Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification	2 2 3 0 14 2	2 2 0 4 12 2	3 3 3 0 18 3	4 4 3 3 30 4
251316014 Total 251316022 251316023	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops	2 2 3 0 14 2 2 2 2	2 2 0 4 12 2 2 2	3 3 3 0 18 3 3	4 4 3 3 30 4 4
251316014 Total 251316022 251316023 251316024	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower	2 2 3 0 14 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2	3 3 3 0 18 3 3 3	4 4 3 3 30 4 4 4
251316014 Total 251316022 251316023 251316024 251316025	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification	2 2 3 0 14 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2	3 3 3 0 18 3 3 3 3 3 3	4 4 3 3 30 4 4 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation	2 2 3 0 14 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2	3 3 3 0 18 3 3 3 3 3 3 3 3	4 4 3 3 30 4 4 4 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique	2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 3 3 3 3 3 3 3 3	4 4 3 3 30 4 4 4 4 4 4 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture	2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 3 3 3 3 3 3 3 3 3 3 3	4 4 3 3 30 4 4 4 4 4 4 4 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316029	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control	2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	4 4 3 3 30 4 4 4 4 4 4 4 4 4 4 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316029	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group L (1 course to be taken)	2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 3 3 3 3 3 3 3 3 3 3 3 3	4 4 3 3 30 4 4 4 4 4 4 4 4 4 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316028 251316028 251316029 251316006	Elective Course within the Department 1 Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants	2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	
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251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316029 251316006 251316030 251316031 251316031	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants Agricultural Tools and Machinery Animal Production	2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3	$ \begin{array}{r} 4 \\ 4 \\ 4 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 2 \\ 7 \\ $
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316029 251316006 251316030 251316031 251316032 251316032	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants Agricultural Tools and Machinery Animal Production Agricultural Valuation and Expertise	$ \begin{array}{c} 2 \\ 2 \\ 3 \\ 0 \\ 14 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2$	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3	$ \begin{array}{r} 4 \\ 4 \\ 4 \\ 3 \\ 3 \\ 3 \\ 3 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 3 \\ $
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316029 251316030 251316031 251316032 251316033 251316033	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants Agricultural Tools and Machinery Animal Production Agricultural Valuation and Expertise Weeds	2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 <t< td=""><td>$\begin{array}{r} 4 \\ 4 \\ 4 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 3 \\$</td></t<>	$ \begin{array}{r} 4 \\ 4 \\ 4 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 3 \\ $
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251316014 Total 251316022 251316023 251316024 251316025 251316026 251316028 251316028 251316029 251316030 251316030 251316031 251316032 251316033 251316033 251316008 4. Year-1 Course Code	Elective Course within the Department 1 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants Agricultural Tools and Machinery Animal Production Agricultural Valuation and Expertise Weeds Organic Animal Growing Fall Semester Course Name	2 2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	4 4 3 3 30 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316028 251316029 251316030 251316030 251316031 251316032 251316033 251316033 251316008 4. Year- Course Code 251317027	Elective Course within the Department 1 Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants Agricultural Tools and Machinery Animal Production Agricultural Valuation and Expertise Weeds Organic Animal Growing Fall Semester Cool Season Vegetables	2 2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 <td< td=""><td>4 4 3 3 30 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4</td></td<>	4 4 3 3 30 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316029 251316030 251316030 251316031 251316033 251316033 251316008 4. Year –1 Course Code 251317027 251317028	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants Agricultural Tools and Machinery Animal Production Agricultural Valuation and Expertise Weeds Organic Animal Growing Fall Semester Cool Season Vegetables Pome and Stone Fruits	2 2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 <t< td=""><td>4 4 3 30 4 4 4 4 4 4 4 4 4 4 4 4 4</td></t<>	4 4 3 30 4 4 4 4 4 4 4 4 4 4 4 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316029 251316030 251316030 251316031 251316032 251316033 251316008 4. Year –1 Course Code 251317027 251317028 251317004	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants Agricultural Tools and Machinery Animal Production Agricultural Valuation and Expertise Weeds Organic Animal Growing Fall Semester Cool Season Vegetables Pome and Stone Fruits Storage and Marketing of Horticultural Crops	2 2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 <td< td=""><td>4 4 3 30 4 4 4 4 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 3 2 3</td></td<>	4 4 3 30 4 4 4 4 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 3 2 3
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316029 251316030 251316031 251316031 251316033 251316033 251316008 4. Year -1 Course Code 251317027 251317028 251317004	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants Agricultural Tools and Machinery Animal Production Agricultural Valuation and Expertise Weeds Organic Animal Growing Fall Semester Cool Season Vegetables Pome and Stone Fruits Storage and Marketing of Horticultural Crops Elective Course within the Department 1	2 2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 <t< td=""><td>4 4 3 3 30 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4</td></t<>	4 4 3 3 30 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316029 251316030 251316030 251316031 251316032 251316033 251316008 4. Year-1 Course Code 251317028 251317024	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants Agricultural Tools and Machinery Animal Production Agricultural Valuation and Expertise Weeds Organic Animal Growing Fall Semester Cool Season Vegetables Pome and Stone Fruits Storage and Marketing of Horticultural Crops Elective Course within the Department 1 Elective Course within the Department 2	2 2 2 3 0 14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 <t< td=""><td>4 4 3 30 4 4 4 4 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 3 2 3 4 4</td></t<>	4 4 3 30 4 4 4 4 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 3 2 3 4 4
251316014 Total 251316022 251316023 251316024 251316025 251316026 251316027 251316028 251316029 251316030 251316031 251316032 251316033 251316038 4. Year-1 Course Code 251317028 251317024	Elective Course within the Department 2 Elective Course within the Department 3 Faculty Elective Course (1 course to be taken) Professional Practice II Elective Course Group II within the Department Vegetable seed production and certification Fertilization Biology of Horticultural Crops Propagation of Seasonal Flower Seedling - Nursery Growing and Certification Outdoor Ornamental Plants Propagation Mushroom Growing Technique Pruning and Training in Horticulture Pests of Horticultural Crops and Control Faculty Elective Course Group I (1 course to be taken) Medicinal and Aromatic plants Agricultural Tools and Machinery Animal Production Agricultural Valuation and Expertise Weeds Organic Animal Growing Fall Semester Course Name Cool Season Vegetables Pome and Stone Fruits Storage and Marketing of Horticultural Crops Elective Course within the Department 1 Elective Course within the Department 2 Elective Course within the Department 3	$ \begin{array}{c} 2 \\ 2 \\ 2 \\ 3 \\ 0 \\ 14 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2$	2 2 2 0 4 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 0 18 3 <t< td=""><td>4 4 3 30 4 4 4 4 4 4 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 2 3 2 3 4 4 4 4 4</td></t<>	4 4 3 30 4 4 4 4 4 4 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 2 3 2 3 4 4 4 4 4

	Internship	0	0	0	8
Total		12	8	16	30
	Elective Course Group III within the Department				
251317029	Tropical Fruits	2	2	3	4
251317030	New Techniques on Fruit Growing	2	2	3	4
251317031	Agricultural Ethics and Entrepreneurship	2	2	3	4
251317032	Edible Wild Vegetables	2	2	3	4
251317033	Wild Fruits	2	2	3	4
251317034	Protected Cultivation of Vegetable Crops	2	2	3	4
251317035	Cut Flower Cultivation	2	2	3	4
251317036	Greenhouse fruit growing	2	2	3	4
251317037	Vinevard Plantation Technique	2	2	3	4
	Fall Semester Diploma Thesis Course Group I				
251317014	Ornamental Plants Cultivation and Applications I	0	2	1	3
251317015	Fertilization Biology Practices in Fruits I	0	2	1	3
251317016	Cultivating Vegetables and Applications I	0	2	1	3
251317017	Fruit Growing Techniques and Applications I	0	2	1	3
251317018	Minor Vegetables-1	0	2	1	3
251317022	Fruit Culture I	0	2	1	3
251317024	Minor Fruits-1	0	2	1	3
251317025	Viticulture Practices - I	0	2	1	3
251317026	Vegetable seed practices - I	0	2	1	3
251317041	Modern Orchards Management I	0	2	1	3
4. Year – Sr	nring Semester	Ŭ	-	1	5
Course Code	Course Name	Т	Р	NC	ECTS
251318023	Subtropical fruits	2	0	2	2
251318024	Warm-season vegetables	2	0	2	4
251318025	Berries	2	0	2	4
251318026	Nut Fruits	2	0	2	5
	Elective Course within the Department 1	2	2	3	4
	Elective Course within the Department 2	2	2	3	4
	Elective Course within the Department 3	2	2	3	4
251318012	Diploma Thesis II	0	2	1	3
Total		14	8	18	30
	Elective Course Group IV within the Department				
251318027	New Advances in Horticulture Breeding	2	2	3	4
251318028	Special Viticulture	2	2	3	4
251318029	Soilless Culture	2	2	3	4
251318030	Rootstock scion relationships of fruits	2	2	3	4
251318031	Intelligent agriculture	2	2	3	4
251318032	Trends and Alternative Practices in Horticulture	2	2	3	4
251318038	Postharvest Physiology of Horticultural Crops	2	2	3	4
251318033	Citrus Trees	2	2	3	4
	Spring Semester Diploma Thesis Course Group II				
251318014	Ornamental Plants Cultivation and Applications II	0	2	1	3
251318015	Fertilization Biology Practices in Fruits II	0	2	1	3
251318016	Cultivating Vegetables and Applications II	0	2	1	3
251318017	Fruit Growing Techniques II	0	2	1	3
251318018	Minor Vegetables 2	0	2	1	3
251318034	Minor Fruits II	0	2	1	3
251318022	Fruit Culture II	0	2	1	3
251318035	Viticulture Practices - II	0	2	1	3
251318036	Vegetable Seed Practices - II	0	2	1	3
251318037	Modern Orchards Management II	0	2	1	3

T: Theory P: Practice NC: National Credit ECTS: European Credit Accumulation and Transfer System



SEMESTER Fall

COURSE CODE 251311002				COURS NAMI	SE E	Botany					
SEMESTER	WE	EKLY COURS	SE PERI	OD	OD COURSE OF						
	Theory	y Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAGE			
Ι	2	0	2		3	4	COMPULSORY (X) ELECTIVE ()	Turkish			
	-		C	OURSE	E CATAG	ORY					
Basic Science	e	Basic Engine	ering	[if it	contains o	Ho conside	rticulture rable design, mark with (√)]	Social Science			
		X									
			AS	SESSMI	ENT CRI	TERIA		<u> </u>			
				Eva	aluation 1	ype	Quantity	%			
				1st Mic	1-Term		1	40			
				2nd Mi	d-1 erm						
	MID-TI	ERM		Homey	vork						
				Project	VUIK						
				Report							
				Others	()						
FINAL EXAM							1	60			
PRI	EREQUI	IEITE(S)		-							
COURSE DESCRIPTION				Description of plant cell Plant tissues Plant organs Classification of plants Photosyntesis and respiration							
COU	RSE OB.	JECTIVES		Morphological and anatomical structure of plants							
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION			 Know and recognize the properties of plant cell under the microscope Know and recognize the properties of plant tissues under the microscope Know and distinguish the differences between plant tissues and is under the microscope Know and recognize the properties of plant organs under the microscope Know and distinguish the differences between plant organs and is under the microscope Know and distinguish the differences between plant organs and is under the microscope Know and distinguish the differences between plant organs and is under the microscope Know classification of plants 								
COU	RSE OU	TCOMES			1	2					
	ТЕХТВ	OOK		Bozcuk, S. 2011. Genel Botanik, Hatipoğlu Basım ve Yayım, Ankara.							
					Akman, Yayıncıl	Y. ve C 1k.	Güney, K. 2011. Botanik-Bitki Bi	iyolojisi, Palme			

2.

3.

Projection

Yayınları, İstanbul.

Bilgiler, Fakülteler Kitabevi, İzmir.

OTHER REFERENCES

TOOLS AND EQUIPMENTS REQUIRED

Yentür, S. 2003. Bitki Anatomisi, İstanbul Üniversitesi

Vardar, Y. ve Seçmen, Ö. 1993. Bitki Morfolojisinde Temel

COURSE SYLLABUS							
WEEK	TOPICS						
1	Plant Cell Structure; call wall, protoplast, nucleus, vacuol, cell division						
2	Plant Tissues; meristematic tissues						
3	Parenchyma and Mechanic Tissue						
4	Transport System and Secretory System						
5	Plant Organs; Root; general properties, morphology, root structure in relation to function and root anatomy						
6	Plant Organs; Root; general properties, morphology, root structure in relation to function and root anatomy						
7	Stem; general properties, morphology, branching, metamorphosis and stem anatomy						
8	Leaf; general properties, morphology, parts, metamorphosis and leaf anatomy						
9	Flower, flower symmetry, inflorescence, pollination and germination						
10	Fruit, fruit types						
11	Mid-Term - Fruit, fruit types						
12	Seed; structure, ovule develepment and structure, seed types						
13	Plant Systematic and Plant Classification						
14	Photosyntesis and respiration						
15	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		



COURSE CODE		2513	311003			COURS NAMI	SE E	Physics					
						-			1				
SEMESTER	WEEKLY COURSE PERIC					OD COURSE OF							
	Theo	ory	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE				
1	3		0	C)	3 4		COMPULSORY (X) ELECTIVE ()	Turkish				
					COU	RSE CATA	GORY						
Basic Scier	ıce		Basic Engine	ering	[if	it contains	Ho conside	orticulture rable design, mark with (√)]	Social Science				
Х													
				A	SSES	SMENT CI	RITERI	A					
					<u> </u>	Evaluation []	Гуре		%				
					Ist M	IId-Term		1	40				
						viid-1eiiii							
	MID)-TE	RM		Hom	ework							
					Proie	et							
					Repo	ort							
					Othe	rs ()							
	FINA	LE	XAM					1	60				
P	RERE	QUI	EITE(S)		NONE								
COU	IRSE I	DES	CRIPTION		Mechanic Effects in Physics								
CO	URSE	OBJ	ECTIVES		learning the basic principles and concepts of physics								
ADDITIV PROFI	E OF (ESSIO	COU NAL	RSE TO AP L EDUATIO	PLY N	To use existing technology and to produce new technologies.								
CO	URSE	OU	TCOMES		To explain natural phenomena and analysis learn the science of physics, Understanding of scientific method and research skills.								
	TEX	TBO	ООК		PHYSICS For scientists& Engineers with Modern physics, Raymound A Serway.								
OT	HER R	REFI	ERENCES		PHYSICS For scientists& Engineers with Modern physics with problem solutions. Raymound A Serway.								
TOOLS AND) EQU	IPM	ENTS REQ	UIRED	Calculator								

COURSE SYLLABUS						
WEEK	TOPICS					
1	Unit systems, dimensions, measurements					
2	Vectors, Motion in one dimension					
3	Motion in two and three dimensions					
4	Dynamic					
5	Circular motion					
6	Mid term exam-Work and kinetic energy					
7	Work and kinetic energy; Potential energy and conservation of energy					
8	Impulse and linear momentum					
9	Collisions					
10	Rotational motion of rigid objects					
11	Equilibrium					
12	Law of gravity					
13	Heat and thermodynamics					
14	Technology applications and problem solving					
15,16	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			

Date:



COURSE CODE 251311005					COURSE NAME Mathematics					
WEEKLY COURSE PERI				OD COURSE OF						
SEMESTER	Theory	y Practice	Labra	tory	ory Credit ECTS		ТҮРЕ	LANGUAG E		
1	3	0	0		3	3	COMPULSORY ($$) ELECTIVE ()	Turkish		
				COUR	SE CATA	GORY				
Basic Scier	nce	Basic Engine	ering	[if it	contains	H conside	orticulture erable design, mark with (√)]	Social Science		
\checkmark										
			A	SSESSI	MENT CR	ITERI	[A			
			ŀ	Eva	aluation T	уре	Quantity	%		
				1st Mic	l-Term		1	40		
				2nd Mi	id-Term					
	MID_	TERM		Quiz						
	1,110-	/1/1/1	Ļ	Homev	vork					
			L	Project						
			Ļ	Report						
				Others	()					
	FINAL	EXAM					1	60		
	REREQ	UIEITE(S)		- Sets and	Numbers, Fu	nctions.	Limits and Contunuity. Derivation and An	plications		
	KSE DE	LSCRIPTION		Sets and Numbers, Functions, Emints and Containing, Derivation and Applications						
COU	URSE O	BJECTIVES		The main of the course is to introduce the concepts and techniques involved in the basic topics listed in this lecture and to develope skills in applying those concepts and techniques to the solution of problems						
ADDITIVI PROFF	E OF CC ESSIONA	DURSE TO AP AL EDUATIO	PLY N	to apply theoretical and practical knowledge on solving and modeling of engineering problems by using sufficient knowledge of engineering subjects related with mathematics						
COURSE OUTCOMES				 problems by using sufficient knowledge of engineering subjects related with mathematics By the end of this module students will be able to: Sufficient knowledge of engineering subjects related with mathematics, science and own branch; an ability to apply theoretical and practical knowledge on solving and modeling of engineering problems. Ability to determine, define, formulate and solve complex engineering problems; for that purpose an ability to select and use convenient analytical and experimental methods. Ability to design a complex system, a component and/or an engineering process under real life constrains or conditions, defined by environmental, economical and political problems; for that purpose an ability to apply modern design methods. Ability to develop, select and use modern methods and tools required for engineering applications; ability to effective use of information technologies. In order to investigate engineering problems; ability to set up and conduct experiments and ability to analyze and interpretation of experimental results. Ability to communicate in written and oral forms in Turkish/English; proficiency at least one foreign language. Awareness of life-long learning; ability to reach information; follow developments in science and technology and continuous self-improvement Understanding of professional and ethical issues and taking responsibility Awareness of project, risk and change management; awareness of entrepreneurship, innovativeness and sustainable development. 						
	TEXT	BOOK		Balcı, M	1., 2008. Gen	el Matem	atik I, Balcı Yayınları,416 s			
ΟΤΙ	HER RE	FERENCES		 Koçak, M., 2010. Genel Matematik, AC Kardeşler Matbaa Yayıncılık, 485 s. Cengiz, N., Tarakçı, Ö., Aktaş, M.,2006, Genel Matematik I, Pegema Yayıncılık, 472 s. 						
TOOLS AND	O EQUIP	MENTS REQ	UIRED	-						

COURSE SYLLABUS

WEEK	TOPICS
1	Numbers, Sets, Second degree equations and inequalities
2	Line and circle analytics
3	Functions, Special functions
4	Trigonometric functions
5	Exponential, Logarithmic functions
6	Mid-Term exam- Hyperbolic functions
7	Hyperbolic functions; Limit and Continuity
8	Derivative
9	Rules of differentiation
10	Differentiations of inverse functions and trigonometric functions
11	Differentiations of exponential, logarithmic and hyperbolic functions
12	High order derivatives, The geometrical meaning of the derivative
13	Max-Min problems
14	Drawing curve
15,16	Final exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			

Instructor(s):

Date:



COURSE CODE		2513	311004		COURSE Chemistry NAME						
SEMESTER	W	/EE]	KLY COURS	SE PERIO	OD COURSE OF						
SEWIESTER	Theo	ory	Practice	Labra	tory	Credit	ECTS	ТҮРЕ	LANGUAG E		
1	2		0	2		3	4	COMPULSORY (X) ELECTIVE ()	Turkish		
						SE CATA	GORY				
Basic Science Basic Engineering			eering	[if it	t contains	Social Science					
Х											
				A	SSESS	MENT CF	RITERI	A			
				-	Ev	aluation T	Гуре	Quantity	%		
				ŀ	1st Mi	d-Term		1	50		
				-	2nd M	id-Term					
	MID)-TE	RM	-	Quiz						
				-	Home	work					
				-	Projec						
				F	Report						
		TE	X7 A X #		Others)		1	50		
	FINA	LE	XAM								
P]	REREO	QUI	EITE(S)		-						
COU	JRSE D	DES	CRIPTION		Matter and mole concepts, chemical reactions, reaction sitokiometry, gases and their charactristics, periodic table, chemical connections, liquids, solids and solutions.						
CO	URSE	OBJ	IECTIVES		Prepares basic chemistry basis. 1. Chemical reaction writing and detecting its sitokiometr. 2. Structure and characteristics of Atom. 3. Periodic features and using periodic table. 4. Chemical connections and varieties. 5. Preparing solutions and varieties.						
ADDITIV PROFI	E OF C ESSIOI	COU NAL	RSE TO AP	PLY N	To gain the students the basic chemistry base.						
COURSE OUTCOMES					 To comprehend matter and integral parts. Using international naming system. Separates chemical reaction types. To be able to mak hemical reaction countings. Brings thermodynamic comment to chemical reactions. Comprehends interactions between molecules. Learns to prepare and recognise solutions. 						
	TEX	TBO	DOK		 Temel kimya (Patkins ve L. Jones) Genel kimya (Petrucci and Harwood) Modern Üniversite kimyası (Martimer) 						
OT	HER R	EFI	ERENCES		-						
TOOLS AND) EQU	IPM	IENTS REQU	UIRED	Comp	outer; proje	ction				

	COURSE SYLLABUS							
WEEK	TOPICS							
1	Basic concepts, element, molecule, ion, cation, anion							
2	Structure of atom, particle numbers (proton, electron, neutron)							
3	Periodic table, periodic features							
4	Electron knowledge, electronegativity, ioning energy, atom radius							
5	Chemical connection, its kinds, dipol moment, particular weight							
6	Mid-term exam- Writing combined formulas and naming							
7	Writing combined formulas and naming							
8	Acid base naming, mole concept							
9	Gases, kinetic theory of gases							
10	Solutions							
11	Solutions							
12	Solutions and varieties, detection of solutions							
13	Solutions and varieties, detection of solutions							
14	Resolution							
15,16	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			x
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



COURSE CODE	2	51311013		COURSE Introduction to Horticulture NAME					
	W	EEKLY CO	URSE PERI	OD			COURSE OF		
SEMESTER	Theor	ory Practice Labra		atory	Credit	ECTS	ТҮРЕ	LANGUAG E	
1	1	0	0)	1	3	COMPULSORY (X) ELECTIVE ()	Turkish	
				COUR	SE CATA	GORY			
Basic Scier	gineering	HorticultureSocial[if it contains considerable design, mark with $(\sqrt{)}$]Science							
							X		
			A	SSESS	MENT CF	RITERI	A	0 /	
					aluation 1	уре	Quantity	<u> </u>	
				1 St M1	d-lerm		1	40	
				2nd M	id-Term				
	MID	-TERM		Home	work				
				Projec	t				
				Report	+				
				Others					
	FINA	L EXAM		1				60	
Pl	REREQ	QUIEITE(S)							
COURSE DESCRIPTION				Description of Horticulture, historical, place in the country's economy, general description and classification of fruits, vegetables, grapevines and ornamentals that take part in horticulture, nutritional facts and economical importances, ecological requirements of horticulture, important physiological characteristics will be explained, important reproductive methods will be mentioned					
CO	URSE (OBJECTIVE	S	It's an entrance course to horticulture for students and horticultural production groups will be introduced. The course will give the opportunity of adaptation of students to horticulture.					
ADDITIVI PROFI	E OF C ESSION	OURSE TO NAL EDUAT	APPLY ION	Students will be informed about agriculture and horticulture from the first semester. This course could be thought as a basic lesson for further courses.					
COURSE OUTCOMES				To know important horticultural species that grown in the World and in Turkey. To know economical importance, ecological requests, biological traits, physiology, propagation, and storage and marketing of horticultural crops. It can present approaches to the problems that may be encountered with these issues.					
ТЕХТВООК				Genel Bahçe Bitkileri, Y.Sabit Ağaoğlu, Hasan Çelik, Menşure Çelik, Yılmaz Fidan, Yücel Gülşen, Atila Günay, Nilgün Halloran, İlhami Köksal, Ruhsar Yanmaz, Ankara Üniversitesi Ziraat Fakültesi Eğitim, Araştırma ve Geliştirme Vakfi Yayınları No:4, 1995.					
ΟΤΙ	HER R	EFERENCE	S	Meyve Yetiştirme İlkeleri, Arif Soylu, Uludağ Universitesi Ziraat Fakültesi, Ders Notları No: 20, Bursa, 1992.					
TOOLS AND	EQUI	PMENTS R	EQUIRED	-					

COURSE SYLLABUS						
WEEK	TOPICS					
1	Importance of horticulture and covered area in the country					
2	Economical and raw material importance of horticultural crops and nutritional facts					
3	Ecological factors of horticultural crops					
4	Biological principals of horticulture					
5	Physiological principals of horticulture					
6	Mid-term exam; Physiological principals of horticulture					
7	Generative propagation and grafting; Stool propagation, cutting and layering					
8	In vitro culture in horticulture					
9	Cultural practices and soil cultivation in horticulture					
10	Pruning and training					
11	Fertilization and irrigation					
12	Pest and disease maintenance					
13	Maturity and harvest in horticulture					
14	Storage of horticultural crops					
15	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	

Instructor(s): Ass.Prof.Dr.Kenan SÖNMEZ

Date:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	25	1311011			COURS NAMI	SE E	CAREER PLANNING		
SEMESTER	WEF	KLY COUR	SE PERIO	OD					
	Theory	Practice	Labora	atory	Credit	ECTS	ТҮРЕ	LANGUAGE	
Ι	1	0	0		1	2	COMPULSORY (X) ELECTIVE ()	Turkish	
				COUR	SE CATE	GORY			
Basic Scier	eering	[if it	contains c	Hort	ticulture able design, mark with (√)]	Social Science			
							1	Х	
			A	SSESS	MENT CF	RITERIA	A		
				Ev	aluation 7	Гуре	Quantity	%	
				1st Mi	d-Term	v 1	1	30	
				2nd M	id-Term				
	MID-T	ERM	-	Quiz					
			-	Home	work		1	20	
			_	Project	t				
				Others					
				1 50					
	FINAL F	LXAM					-		
P	REREQU	IEITE(S)		-					
COU	IRSE DES	CRIPTION		It is a course designed to create career awareness in its students and to support them in their career journeys.					
CO	URSE OB	JECTIVES		It is aimed to raise the awareness of university students about the dynamics and expectations of business life and to guide students to determine their careers by their intelligence, personality, knowledge, skills, abilities and competencies					
ADDITIV PROFE	E OF COU SSIONAL	URSE TO AP L EDUCATIO	PLY N	It contributes to the promotion of the private, public and academic fields in which students will work after graduation and what kind of vocational education should be paid attention to in these fields.					
COURSE OUTCOMES				 1-Within the scope of the Career Planning Course, students internalize career and career planning concepts; 2-Learns how to benefit from career centers; 3-They become aware of his characteristics; They recognize different sectors in which they can do internships, work voluntarily or professionally, and use the yetenekkapısı, which they can benefit as both an undergraduate student and a graduate, and thus develop themselves. 4-Learn the points that need to be considered about resume and job interviews. 					
	ТЕХТВ	OOK		Kariyer Planlama ve Geliştirme, Kemal ÖZTEMEL ,Pegem Akademi Yayıncılık					
OT	HER REF	ERENCES		https://www.yetenekkapisi.org/login					
TOOLS ANI	D EQUIPN	IENTS REQ	UIRED	Proje	ctor and co	mputer			

COURSE SYLLABUS						
WEEK	TOPICS					
1	Introduction					
2	Basic concepts about career					
3	Career Development Theories					
4	Career Planning Process					
5	Career Planning Models					
6	Creating a Career Strategy					
7	CV Preparation					
8	Preparing Cover Letter, Introduction Letter and Reference Letter					
9	Midterm Exam					
10	Job Interview and interview techniques					
11	Private Sector Presentation					
12	Public Sector Presentation					
13	Academics Presentation					
14	Entrepreneurship					
15,16	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			x
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2:Partially contribution. 3: Completely contribution.			



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	2	25131	1012	СС	DURSE NA	AME	Basic Information Technologies		
CENTERED	SEMESTER WEEKLY COURSE PERI						COURSE OF		
SEMESTER	Theor	y	Practice		Credit	ECTS	ТҮРЕ	LANGUAG E	
Ι	1		2		2	3	COMPULSORY (X) ELECTIVE (Turkish	
				COUR	SE CATA	GORY			
Basic Science Basic Engineering				[if it	contains	Ho consider	rticulture rable design, mark with (√)]	Social Science	
X				CEECO		ITEDI	•		
			A	55E551 Fv	viEN1 CF aluation 7	VNE VNE	A Quantity	0/2	
				1st Mie	d-Term	ype	1	40	
				2nd M	id-Term				
		TED		Quiz					
	MID-	-TER	M	Homew	vork				
				Project	;				
				Report					
				Others	()				
	FINAI	L EXA	AM				1	60	
P	REREQ	QUIEI	TE(S)	-			·		
COU	RSE D	ESCF	RIPTION	Windows operating system, office programs, internet tasks, web design					
CO	URSE O)BJE(CTIVES	This course aims to give the use of information about Windows Operating System, fundamentals of office programs and using internet.					
ADDITIVI PROFI	E OF CO	OURS	SE TO APPLY DUATION	This course includes all fundamentals regarding basic information technologies that should be given in each food engineering program.					
COURSE OUTCOMES				-Learns the fundamentals about information technologies -Learns the basic hardware and software knowledge -Uses spreadsheets for professional needs -Uses presentation programs for professional needs					
	ТЕХТ	ГВОС)K	Özen,	Ü., Narala	in, A., T	emel Bilgi Teknolojileri, 2007, A	Ankara	
OTI	HER RI	EFER	ENCES	Bilgisayarın Temel Uygulamaları, Naz Yayıncılık, İstanbul.					
TOOLS AND) EQUI	PME	NTS REQUIRED	Computer, office package program, HTML editor					

COURSE SYLLABUS						
WEEK	TOPICS					
1	Cell control in excel					
2	Creating a table in Excel					
3	Graphics creation in Excel					
4	Formula Operations in Excel					
5	MS Excel applications					
6	Presentation programs					
7	Presentation preparation and making					
8	Midterm					
9	Creating a data-base software					
10	Creating a data-base					
11	Data types and data operations					
12	Web page operations					
13	Making a Web page					
14	Publishing and updating web pages					
15,16	Final Examination					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		x	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			X
1:Non	e. 2:Partially contribution. 3: Completely contribution.			



COURSE CODE	COURSE CODE 251311008					COURSE NAME Turkish Language I				
SEMESTER WEEKLY COURSE PER				IOD			COURSE OF			
	Theory	Practice	Labrat	ory	Credit	ECTS	ТҮРЕ	LANGUAGE		
1	2	0	0		2	2	COMPULSORY (X) ELECTIVE ()			
		1	(COUR	SE CATA	GORY				
Basic Science Basic Engineering				[if it	t contains	Ho conside	rticulture rable design, mark with (√)]	Social Science		
								\checkmark		
			AS	SESS	MENT CF	RITERI	A			
					valuation 7	Гуре	Quantity	%		
				1st M1 2nd M	d-1erm id-Term		1	40		
		EDM		Quiz				-		
	MID-1	ERM	1	Home	work		-	-		
			1	Projec	t		-	-		
			-	Report	$\frac{t}{\sqrt{2}}$		-	-		
				Ciners	<u>,</u>		-	-		
DI	FINAL I			Final Exam 1 60						
COU	RSE DES JRSE OB	SCRIPTION		 Definition of language, Language families on earth and the place of Turkish Language among the world languages, Historical development of Turkish writing language, The ways of identifying Turkish words and phonetic cases. Bring them to write true composition skills. To show Turkish language abundance by enlighting students about Turkish Language's development and situation of today's case, to bring consciousness of a national language, to provide them to know graces of 						
ADDITIVI PROFE	E OF COL SSIONA	URSE TO AP L EDUATIO	PLY	Provide using Turkish true and better in students' daily lives, bring them skills for expressing the works done in their working life						
COURSE OUTCOMES				 Student explains language families on surface and Turkish's place among the world languages. Identify the rules of Turkish. Realizes the sound events. Apply the rules of writing Consitute Writing and Verbal composition Make us of Turkish true. 						
ТЕХТВООК				1- Turkish Language and Composition I-II, Gürer Gülsevin- Erdoğan Boz. 2- Turkish Language for universities. Muharrem Ergin						
OTHER REFERENCES				 Kaplan, M., "Culture and language", 8. printing, ,Dergah Publication, İstanbul, 1993. Fuat, M., "About Language", Adam Publication, İstanbul, 2001. Ercilasun, A. B., "Turkish Language History from begining to twentieth century", Akçağ Publication, 1. printing, Ankara, 2004. Aksan, D., "Power of Turkish", Bilgi Publisher, 4. printing, Ankara, 1997 						
TOOLS AND	EQUIPN	MENTS REQ	UIRED	Projec	tion, Board	1				

	COURSE SYLLABUS							
WEEK	TOPICS							
1	Language and its subbranch							
2	Turkish language's place among the world languages							
3	Turkish language's historical development i							
4	Turkish language's historical development ii							
5	Foreign words which are used in turkish language							
6	Alphabets of turkish used							
7	Sound events in turkish words							
8	Nouns and adjectives							
9	Pronouns, adverbs ve preposotion							
10	Verbs; words species according to meaning feature							
11	Mid term Exam- Derivational affix and word ending							
12	Derivational affix and word ending							
13	Word groups and sentence knowledge							
14	Rules of spelling							
15,16	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Х
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			x
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



COURSE CODE 251311009					COURSE NAME Principles of Ataturk and Recent Turkish Histo				
							COUDCE OF		
SEMESTER	ESTER Theory Practice Labora			OD atory	Credit	ECTS	TYPE	LANGUAG	
1	2	0	0	·	2	2	COMPULSORY (x) ELECTIVE ()	E Turkish	
1	2	Ū		COUR	ZE CATA	GORY			
Basic Scier	nce	Basic Engine	ering	[if it	contains (Ho conside	rticulture rable design, mark with (√)]	Social Science	
								X	
			Α	SSESS	MENT CF	ITERI	A		
				Eva	aluation T	уре	Quantity	%	
				1st Mic	l-Term				
				2nd Mi	d-Term		1	40	
	MID	TEDM		Quiz					
	11110-	1 1717141		Homev	vork				
				Project					
				Report					
				Others	()				
	FINAL	EXAM					1	60	
PI	REREQ	UIEITE(S)		None					
COURSE DESCRIPTION				and their activities; arrival of Mustafa Kemal to Samsur; the congresses, gathering of the last Ottoman Assembly and the proclamation of the "national oath"; opening of the Turkish Grand National Assembly; War of independence to the Victory of Sakarya; Victory of Sakarya; financial sources of the war of independence; grand counter-attack; Armistice of Mudanya; abolution of the Sultanate; Peace Conference of Lausanne. To help the students to appreciate the hard conditions under which the war of independence, under the leadership of Mustafa Kemal, was fought and how an independent					
ADDITIVI PROFI	E OF CC	DURSE TO AP	PLY N	To underline the idea that the national unity based on the principle "peace in the country peace in the world" can only be achieved through political, economic and military progress.					
COURSE OUTCOMES				At the end of this course; Students 1. Explains Principles of Atatürk and main concepts related to Revolution history. 1.1. Explains the concepts of Reform/Revolution. 1.2. Describes the concept of National Forces. 1.3. Explains the concepts of Republic/Democracy. 1.4. Recognizes the concept of Ideology. 2. Explains the main points of the period related to Turkish War of Independence and foundation of the Turkish State. 2.1. Explains the developments at Ottoman Empire before Turkish Revolution. 2.2. Describes the World War I and its results. 2.3. Explains Turkish War of Independence. 2.4. Recognizes Turkish Revolution. 2.5. Remembers the mian principles of Turkish foreign politics. 2.6. Explains the effects of the developments at Europe and World on Turkish Republic. 3.1. Explains the effects of European and World politics on Turkey and the results of them. 3.2. Describes the relations / arobiams/Empiralism on Turkey. 3.3 Explains the effects of Capitalism/Empiralism on Turkey.					
	TEXT	BOOK		Gazi Mu <i>İmparat</i> e	stafa Kemal D rluktan Ulu	Atatürk, N s Devlete	Nutuk (Söylev), C. I-II, TTK., Ank., 1986 Türk İnkılâp Tarihi, Cemil Öztürk (ed.)	5.), Ank., 2011.	
OTHER REFERENCES				Niyazi Berkes, Türkiye'de Çağdaşlaşma, İstanbul, 1978. Enver Ziya Karal, Atatürk ve Devrim (Konferanslar ve Makaleler), TTK., Ank., 1980. Enver Ziya Karal, Atatürk'ten Düşünceler, MEB. Yay., Ankara, 1981. Bernard Lewis, Modern Türkiye'nin Doğuşu, Çev.M.Kıratlı, TTK., Ank., 1970. Ahmet Mumcu, Tarih Açısından Türk Devriminin Temelleri ve Gelişimi, Ank., 1976.					
TOOLS AND) EQUIP	MENTS REQU	JIRED						

	COURSE SYLLABUS			
WE	TOPICS	1		
1	The Balkan Wars. First World War and input to war Ottoman Empire. The fronts that Ottoman Empire fighted and the results of the war.			
2	Revolution, evolution, rebellion, coup and reform. The characteristics of the Turkish Revolution. the reasons of collapse of the Ottoman Empire.			
3	Mondros Armistice Agreeement and occupations on the Ottoman Empire. National İndependence War. The occupation of Izmir and effects of this occupation. The preparation period of National Independence War	-		
4	The movement of Mustafa Kemal to Samsun and to be started the organization of Anadolu Revolution. Amasya Circular, Erzurum and Sivas Congresses, to be founded of the Deputation.			
5	Opening of the TBMM. Rebellions against the TBMM. Sevr Treaty. To be founded "Kuva-yı Milliye" and national army.			
6	Mudanya Armistice Agreement. Abolution of sultanate. Lausanne Treaty. Abolution of caliphate and lodges			
7	Constitutional developments in Turkey. Internal and external political developments in the period of Atatürk's and Inönü's.			
8	The political currents that effected Turkish revolution. Democratic law state.			
9	The political currents that effected Turkish revolution. Democratic law state.			
10	Establishment of the Turkish law and educational system			
11	MidTerm Exam - Nationalism, Etatism and Populism.	1		
12	Nationalism, Etatism and Populism.	1		
13	Securalism, Revoluationism	1		
14	General ecalutation.			
15.1	6 Final Exam			
NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X	1	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Х
	To have the information and ability on breeding horticultural crops, developing a new cultivar, and			X
7	propagation of these new varieties by different methods (seed, seedling, and sapling)			
7	propagation of these new varieties by different methods (seed, seedling, and sapling) To have the skill of using and applying biotechnology on horticulture			X
7 8 9	propagation of these new varieties by different methods (seed, seedling, and sapling) To have the skill of using and applying biotechnology on horticulture To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			x
7 8 9 10	propagation of these new varieties by different methods (seed, seedling, and sapling) To have the skill of using and applying biotechnology on horticulture To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X X X
7 8 9 10 11	propagation of these new varieties by different methods (seed, seedling, and sapling) To have the skill of using and applying biotechnology on horticulture To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		X X X
7 8 9 10 11 12	propagation of these new varieties by different methods (seed, seedling, and sapling) To have the skill of using and applying biotechnology on horticulture To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X X		X X X

Date:



SEMESTER FALL

COURSE C	ODE 2	251311010			COUR	SE NA	ME Fo	reign Language I		
SEMESTE P	WEE	KLY COUR	SE PER	IOD		1	CO	OURSE OF		
к	Theor y	Practice	Labor	atory	Credit	ECTS		ТҮРЕ	LANGUAGE	
1	3	0	0)	0	3	Compuls	ory (+) Elective ()	TURKISH	
				COURS	SE CATA	GORY				
Basic Scier	ice	Basic Engine	eering	[if i	it contain	Hor s consid	rticulture lerable de (√)]	esign, mark with	Social Science	
Х										
			A	SSESSN	AENT CI	RITERI	A			
				Eva	aluation]	Гуре		Quantity	%	
				1 st Mic	l-Term			1	40	
				2 nd Mi	d-Term					
	MID_TI	FRM		Quiz						
	WIID-11			Home	work					
				Projec	t					
				Report	t					
				Others	()					
FINAL EXA	М							1	60	
PREREQUI	EITE(S)									
COURSE DI	ESCRIPT	TION		Fundamental concepts and knowledge						
COURSE OI	BJECTIV	/ES		This lesson is programmed to give the basic vocabulary and grammar and make the students hear, understand, speak and write in English at elementary level.						
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				This course is aimed at : Using the basic grammar rules The ability to use the target language in an English setting Understanding and making dialogues The ability to understand what's read The ability to communicate with English-speaking people						
COURSE OUTCOMES				At the end of the course studends are able to : Use the basic grammar rules Understand and make dialogues Read and apprehend reading materials Communicate through writing and speaking						
ТЕХТВООК				1. E 2. E	ssential E ssential E	nglish, 1 nglish, 1	Beginner S Workbook	Student's Book, Ric , Richmond Publish	chmond Publishii iing	
OTHER REFERENCES				 Murphy, R., 2004, English Grammar in Use, Cambridge University Press, Dictionary of Contemprary English, Longman. Start Up Comprehensive English Practice, 2007, Nüans Publishing 						
TOOLS ANI REQUIRED) EQUIP	MENTS		Course	e book, wo	orkbook	, CD play	er, loudspeakers, die	ctionary.	

	COURSE SYLLABUS								
WEEK	TOPICS								
1	Subject Pronouns, indefinite article, a/an, To be, NICE TO MEET YOU								
2	Verb be (am, is, are) I'M FINE THANKS								
3	Plurals, Wh questions, this, that, these, those WHAT IS THIS IN ENGLISH ?								
4	Verb be, Wh questions, Nationalities WHERE ARE YOU FROM								
5	Modals: can, can't I'M A JOURNALIST								
6	Modals: can, can't I'M A JOURNALIST								
7	Prepositions of time and place. On, in, at ALL ABOUT YOU								
8	Simple present tense. Who IN PARIS ON THURSDAY								
9	Possessive pronouns, Possessive 's HOW OLD IS HE ?								
10	Present Simple tense, questions, short answers HIS MUSIC, HER SHOW, THEIR CHARITIES								
11	Mid-Term Examination - Present simple,								
12	Present simple, DO YOU HAVE A BIG FAMILY ?								
13	Present Simple, Wh questions MEET YOUR PERFEC PARTNER								
14	Present Simple, Revision WHAT DO YOU DO AT THE WEEKEND								
15,16	Final Exam								

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			x
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			x
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Х
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			Х
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			x
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:

Signature(s):



ESOGÜ Agriculture Faculty Horticulture Department COURSE INFORMATION FORM

SEMESTER Spring

COURSE 251312001					COURS NAMI	SE E	History of Agriculture and Deontology			
SEMESTED WEEKLY COURSE PERIO					DD COURSE OF					
SEMILSTER	Theo	ry Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG E		
II	2	2 0			2	2	COMPULSORY (X) ELECTIVE (TURKISH		
	8	L.		COUF	SE CATA	GORY				
Basic Scier	nce	Basic Engi	neering	[if i	t contains (Ho conside	rticulture rable design, mark with (√)] X	Social Science		
			A	SSESS	MENT CF	RITERI	A			
				E	valuation T	Гуре	Quantity	%		
				1st M	id-Term		1	40		
				2nd N	lid-Term			10		
	MID	-TERM		Quiz	work		1	10		
				Proiec	t		1	10		
				Repor	t					
				Others ()						
	FINA	L EXAM					1	40		
P	REREQ)UIEITE(S)		None						
COU	IRSE D	ESCRIPTION	I	History of agriculture, knowledge on history of agriculture and progressions up to date along time periods starting from appearance of mankind. Effects of civilizations, wars and trade. Planned period establishments Legislations.						
CO	URSE (OBJECTIVES		Examine agricultural phases in historical development and teaching how agriculture reach current status. To learn related institution, establisments and legislations.						
ADDITIV PROFE	E OF C SSION	OURSE TO A AL EDUCATI	PPLY ON	To ga profes	in informati sional resp	ion abou onsibilit	it the emergence and developmenties, rights and progressions.	nt of agriculture,		
CO	URSE	OUTCOMES		To ha and p	ve profesion anned perio	nal profi od estab	ile, to know profesional educatior lishments, responsibilities and rig	n establishments ghts.		
ТЕХТВООК				-Eriş, Bursa	A., 2002. T	arım De	eontolojisi, U.Ü. Ziraat Fak. Ders	Notları, No:88,		
OTHER REFERENCES				 Direk, M., 2010. Tarım Tarihi ve Deontolojisi, Eğitim Kitabevi, 160 s. Özçelik, A., 2005. Tarım Tarihi ve Deontolojisi, A.Ü. Ziraat Fak. Eğitim, Araştırma ve Güçlendirme Vakfı Yayınları No:8, Ankara. 						
TOOLS AND EQUIPMENTS REQUIRED				Data Shower						

	COURSE SYLLABUS								
WEEK	TOPICS								
1	Introduction to history of agriculture and deontology, Stages in history of agriculture (primitive agriculture)								
2	Stages in history of agriculture (Turkish Agriculture in Central Asia, Agriculture in Chinese, in Mesopotamia and in Egyptian)								
3	Stages in history of agriculture (developments of agriculture in Anatolia during Selcuks and Ottoman Empire)								
4	Importance of civilizations and migration routs on agriculture								
5	Effects of industrial revolution on agriculture, international aids and their effects on agriculture								
6	Economical crisis and their effects to agriculture								
7	Agriculture Sector of Turkey in the period of Republic and institutionalisation								
8	Agriculture Sector of Turkey in the period of Republic and institutionalisation								
9	World trade organization and agricultural sector								
10	Agriculture in global world								
11	Midterm exam- Agriculture in global world								
12	Agricultural education establishments and operations								
13	Professional regulations								
14	Problem of Professional education and the way of solution								
15,16	Final Exam								

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			x
8	To have the skill of using and applying biotechnology on horticulture	X		
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instructor: Prof.Dr. Rafet ASLANTAŞ

Date:



SEMESTER Spring

COURSE CODE	RSE 251312002				COURSE NAME			Surveying Technique			
SEMESTER	W	/EEKL	Y COURS	SE PERI	OD						
	Theo	ory P	Practice	Labra	ntory	Credit	ECTS	ТҮРЕ	LANGUAGE		
2	2		0	0)	2	4	COMPULSORY (X) ELECTIVE ()	Turkish		
					COUR	SE CATA	GORY				
Basic Scier	nce	Bas	sic Engine	ering	[if it	contains	Ho conside	orticulture rable design, mark with $(\sqrt{)}$]	Social Science		
			Х								
				А	SSESSI	MENT CF	RITERI	A			
					Ev	aluation T	уре	Quantity	%		
					1st Mie	d-Term		1	40		
					2nd M	id-Term					
	MID)-TERN	М		Quiz						
					Homev	vork					
					Report						
					Others	Others ()					
	FINA	L EXA	M			60					
P	RERE	QUIEIT	TE(S)								
COU	JRSE I	DESCR	IPTION		Fundamentals of plan surveying. Units of measurement. Basic plane trigonometry, scale concept. Measurements made with simple measuring instruments. Distance Measurement. A simple measure of the methods of measuring the land. Simple measurements of the drawing work. Error theory. Area calculations. Theodolite and angle measurement. Coordinate systems and map projections. Essential coordinates computations.						
CO	URSE	OBJEC	CTIVES		Learning of basic field - map measures and coordinate systems. Calculating and drawing from the obtained measurements.						
ADDITIV PROFI	E OF C ESSIO	COURS NAL EI	SE TO AP	PLY N	Solving Unders	g of the standing of	measure Mappin	ement problems during the fiel ng and coordinate systems.	d applications.		
СО	URSE	OUTC	COMES		Unders Perforr	standing of th	of basic ree dim	e horizontal and vertical field ensional calculation and drawing	l measurement applications.		
	TEX	ТВОО	K		DİKEF	R S., Ölçm	e Bilgis	i Ders Notları			
OTHER REFERENCES				 ŞERBETCİ M., SONGU C., GÜLAL E., Ölçme Bilgisi 1-2, Birsen Yay. İst. KOÇ İ., Ölçme Bilgisi 1, YTÜ Yayınları, İst. 1998 KOÇ İ., Ölçme Bilgisi 2, YTÜ Yayınları, İst. 2003 ÖZBENLİ E., TÜDEŞ T., Ölçme Bilgisi, KTÜ, Trabzon, 1995 							
TOOLS AND) EQU	IPMEN	NTS REQU	JIRED							

	COURSE SYLLABUS
WEEK	TOPICS
1	Fundamentals of plan surveying. Units of measurement.
2	Basic plane trigonometry, scale concept, the scale and types of calculations.
3	Measurements made with simple measuring instruments.
4	Measure of length, a simple length measures, electronic length measurement, measurement of lengths Disabled
5	Meters with the application of a right angle. A simple measure of the methods of measuring the land.
6	Simple measurements of the drawing work
7	Error theory and investigate the types of errors. Length measure errors
8	Area calculations
9	Theodolite and angle measurement, sources of error and correcting theodolites
10	Coordinate systems and map projections
11	essential coordinates computations. Traverse surveys.
12	Geometric and trigonometric leveling, Instruments and errors.
13	Tacheometry and its instruments
14	Creation of cross-sections.
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER Spring

COURSE CODE	RSE DE251312011COURSE NAMEComputer							Computer Assisted Techni	cal Drawing		
	W	'EEI	KLY COURS	SE PERI	OD			COURSE OF			
SEMESTER	Theo	ry	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG		
II	1		0	2	2	2	4	COMPULSORY (X) ELECTIVE (Turkish		
					COUR	I SE CATA	GORY	,			
Basic Science Basic Engineering					[if it	Horticulture Social [if it contains considerable design, mark with (√)] Science					
			Х	٨	SSESS	MENT CE	TERL	<u>√</u> ∧			
					Ev	aluation T	Type	Quantity	%		
					1st Mi	d-Term	V I	1	40		
					2nd M	id-Term					
					Quiz						
	MID)-TE	ZRM		Homey	work					
					Project	t					
					Report						
					Others	()					
	FINA	LE	XAM					1	60		
P	REREG	QUI	EITE(S)		-						
COU	JRSE D	DES	CRIPTION		Fundamentals of AutoCad, projections of surfaces and geometrical shapes, AutoCad commands						
CO	URSE	OBJ	ECTIVES		This course aims to give the information to make projections of surfaces and geometrical shapes using technical drawing equipment						
ADDITIV PROFI	E OF C ESSIOI	COU NAL	RSE TO AP	PLY N	This course includes all fundamentals regarding basic information technologies that should be given in each food engineering program.						
COURSE OUTCOMES					Learns the principles of technical drawing software Uses AutoCad commands Learns to make projections of surfaces and geometrical shapes						
ТЕХТВООК					Muammer Nalbant, 2007. AutoCAD 2007 ile Çizim ve Tasarım. Alfa Yayınları, ISBN:975-297-809-6, İstanbul, 964s						
OTHER REFERENCES					Mehmet Şamil DEMİRYÜREK, 2011. AutoCAD 2012 & AutoLISP, KODLAB Yayıncılık, ISBN:978-605-4205-59-2, İstanbul, 488s.						
TOOLS AND EQUIPMENTS REQUIRED					Com	puter, Auto	Cad sof	tware			

COURSE SYLLABUS						
WEEK	TOPICS					
1	Basic concepts in CAD					
2	Autocad Commands (Draw)					
3	Autocad Commands (Modify: Move, Copy, Scale, Rotate, Mirror)					
4	Autocad Commands (Array, Stretch, Lenghten, Edit Polyline, Explode, Offset)					
5	Layer					
6	Plane surfaces (Basic and advanced)					
7	Isometric perspective drawing					
8	Midterm					
9	Isometric perspective drawing-continued					
10	Block Command					
11	Hatch commad and Section					
12	Dimension Commands					
13	Constitution of template					
14	Manufacturing drawings and print settings					
15,16	Final Examination					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			X
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			



SEMESTER Spring

COURSE CODE		251312004	2004 COURSE Plant Biochemistry NAME								
SEMESTED	W	EEKLY COUF	SE PERI	OD	OD COURSE OF						
SEWIESTER	Theory Practice Labra		atory Credit ECTS		ECTS	ТҮРЕ	LANGUAG E				
2	1	2	()	2	5	COMPULSORY (X) ELECTIVE (Turkish			
			1	COUR	SE CATE	GORY					
Basic Science Basic Engineering			[if it	contains	Ho conside	orticulture rable design, mark with (√)]	Social Science				
		Λ		SSESSI	MENT CE	ITER	4				
			1	Ev	aluation 7	уре	Quantity	%			
				1st Mi	d-Term	•	1	40			
		2nd M	id-Term								
		Quiz									
	MID	-TERM		Homey	work						
				Report							
				Others	()						
	FINA	L EXAM					1	60			
P]	REREC	QUIEITE(S)		NO							
COU	JRSE D	DESCRIPTION		Introduction to biochemistry, biomolecules and cell structure, water and properties of aqueous solutions, proteins, enzymes, carbohydrates, lipids, nucleic acids, vitamins, carbohydrate metabolism, lipid metabolism, metabolism of the nitrogen compounds.							
CO	URSE	OBJECTIVES		The objective of this course to recognize the molecular basis of living systems and evaluation on biological processes occurring in the living systems.							
ADDITIV PROFE	E OF C SSION	COURSE TO A	PPLY ON	To gain ability of understanding and interpreting of living chemistry to students							
COURSE OUTCOMES					 Recognizing of the macromolecules in living system. Interpreting of the life in molecular level. Recognizing and evaluating of the components of living system. Interpreting of the dynamic interaction of molecules in living system. 						
ΤΕΧΤΒΟΟΚ					on, D.L., C tion, Wort	Cox, M. h Publis	M., (2004) Lehninger Principles of shers, Wisconsin, USA.	of Biochemistry.			
OTHER REFERENCES					1. Keha, E.E. and Küfrevioğlu, İ. (2004). Biyokimya, 3 rd Edition, Aktif Yayınevi, Erzurum, Turkey.Timbrell, J., (2000) Principles of Biochemical						
TOOLS AND EQUIPMENTS REQUIRED					iter and da	ta show	device				

COURSE SYLLABUS								
WEEK	TOPICS							
1	Introduction to biochemistry, biomolecules and cell structure.							
2	Water and properties of aqueous solutions.							
3	Amino acids, peptides, proteins.							
4	Amino acids, peptides, proteins.							
5	Enzymes							
6	Midterm exam – Makro and micro molecules							
7	Carbohydrates							
8	Lipids							
9	Nucleic acids							
10	Vitamins							
11	Carbohydrate metabolism							
12	Carbohydrate metabolism							
13	Lipid metabolism							
14	Metabolsim of the nitrogen compounds							
15,16	Final exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Х
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



SEMESTER Spring COURSE COURSE Agricultural Ecology and Climate Change 251312013 CODE NAME WEEKLY COURSE PERIOD **COURSE OF** SEMESTER Credit ECTS Theory Practice LANGUAGE Laboratory TYPE COMPULSORY (X) ELECTIVE (Turkish 2 0 2 4 Π 0) **COURSE CATAGORY** Social Horticulture **Basic Science Basic Engineering** [if it contains considerable design, mark with $(\sqrt{)}$] Science Х ASSESSMENT CRITERIA **Evaluation Type** % Quantity 1st Mid-Term 1 40 2nd Mid-Term Ouiz **MID-TERM** Homework Project Report Others (Practise) FINAL EXAM 60 None **PREREQUIEITE(S)** Description of ecology and classification of ecology, fundamental principles of ecology, light, temperature, water, atmosphere, geographic **COURSE DESCRIPTION** and topographic factors, soil, fire, ecosystems, relation among organism in ecosystem, nutrient cycle in ecosystem, energy flow This course can contribute to understand the role of environmental **COURSE OBJECTIVES** factors on agricultural production. Thus, this course can be considered as a prerequested course for agronomy major. Identification of environmental factors which affect to growth and ADDITIVE OF COURSE TO APPLY development of organism. Explain the relation of of the organism **PROFESSIONAL EDUATION** surrounding environment. Explain the effects of environmental factors on agricultural production. 1.Student taken this course; can learn the role of environmental factors on agricultural production. 2. can understand more easly the course related to plant and animal prodution in the advance class. **COURSE OUTCOMES** 3. can aware environmental limist which restrict crop diversity 4. can have a sense to protect environment and livings in it. 5. can understand the importance of sustainable resource use 6. can understand the relations among organism Unpublished course notes **TEXTBOOK** Andiç, C. 2002. Tarımsal Ekoloji. Atatürk Üniv Yay. no: 106 Kılınç, M. ve H.G. Kutbay, 2004. Bitki Ekolojisi.Palme yay. **OTHER REFERENCES** Özkütük K., Hayvan Ekolojisi. Çukurova Univ. Ders Kit. no: C-79 Gliessman, S.R., 2007. Agroecology, The Ecology of Sustainable Food

> Systems: CRC Press Projector and computer

TOOLS AND EQUIPMENTS REQUIRED

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Description of ecology and fundamental principles of ecology						
2	Description of light and its related environmental factors						
3	Description of the role of light on plant and animal production						
4	Description of temperature and its related environmental factors						
5	Description of the role of temperature on plant and animal production						
6	Description of water and its related environmental factors						
7	Description of the role of water on plant and animal production						
8	Description of atmospheric factor and its role on agricultural production						
9	Description of geographic and topographic factors and theirs role on agricultural production						
10	Description of soil factors and its role on agricultural production						
11	Description of fire and its role on natural and agricultural ecosystems						
12	Description of ecosystems and principles of community ecology						
13	Description of relation among organism and theirs role in ecosystem						
14	Description of energy flow and nutrient cycle in ecosystem						
15,16	Final exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instructor(s): Prof.Dr. Yakup ÖZKAN

Date:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER Spring

COURSE CODE		251312014			COURS NAMI	COURSE Thermodynamics NAME			
SEMESTER	W	EEKLY COUR	SE PERI	OD	OD COURSE OF				
	Theo	ry Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG E	
IV	3	0	()	3	4	COMPULSORY (X) ELECTIVE ()	Turkish	
		L		COU	RSE CATA	GORY			
Basic Science Basic Engineering			[if	it contains o	Ho conside	rticulture rable design, mark with (√)]	Social Science		
		Х		GGEG		ITEDI	•		
			A	е 19969) Г	SWIENT CF	VD0	A Quantity	0/2	
				lst M	lid-Term	ype	Quantity 1	40	
					ла тенн Лid-Term		1		
				Ouiz					
MID-TERM					ework				
					ct				
				Report					
				Other	rs ()				
	FINA	L EXAM		1 60					
P]	REREC	QUIEITE(S)		-					
COU	JRSE D	ESCRIPTION		Basic concepts in thermodynamics, reversible-irreversible processes, properties of pure substances, Gibbs' law, 0 th and 1 st laws of thermodynamics, PV processes of ideal gases, 2 nd law of thermodynamics, entropy, power cycles, properties of steam, steam tables, heat engines, liquid-vapor systems					
COURSE OBJECTIVES					This course aims to introduce the basic concepts of thermodynamics and its laws, to explain the properties of pure substances, to introduce the pressure-volume-temperature relations of ideal gases, to give basic information about entropy and heat engines				
ADDITIVI PROFI	E OF C ESSION	OURSE TO AP	PLY N	This course includes all fundamentals regarding engineering thermodynamics that should be given in each plant protection program.					
COURSE OUTCOMES					-Learns the basic principles of thermodynamics -Summarizes the properties of pure substances -Interprets about the entropy and heat engines -Learns the power cycles				
TEXTBOOK					Smith, J.M., Van Ness, H.C. and Abbott, M.M. (2005) Introduction to Chemical Engineering Thermodynamics. 7th Edition, McGraw-Hill Chemical Engineering Series, Boston.				
OT	HER R	EFERENCES		Cengel, Y. and Boles, M. (2015) Thermodynamics: An Engineering Approach. 8th Edition, McGraw-Hill.					
TOOLS AND) EQUI	PMENTS REQ	UIRED	-					

COURSE SYLLABUS						
WEEK	TOPICS					
1	Introduction to the basic concepts of thermodynamics					
2	Pressure, temperature, work, energy, power, and force					
3	1 st law of thermodynamics, internal energy, enthalpy, energy balance, reversible and irreversible processes					
4	Properties of pure substances, calculations of phase change, Gibbs' law					
5	Pressure-volume-temperature relations of ideal gases, introduction to processes					
6	İsochoric, isothermal, isobaric, adiabatic and polytropic processes					
7	2 nd law of thermodynamics, Entropy and heat engines					
8	Midterm					
9	Maxwell equations and their relations					
10	Power cycles, Carnot and Rankine machines					
11	Properties of saturated and superheated steam, applications and problem solving					
12	Steam power cycles, applications and problem					
13	Properties of liquid-vapor systems in equilibrium					
14	Approaches for the estimation of vapor pressure in liquid-vapor systems					
15,16	Final Examination					

NO	PROGRAM OUTCOMES	3	2	1				
1	To have the basic information on horticulture and other agriculture engineering							
	areas, describing the required data to solve the problems, to have the ability of			Х				
	gathering data and solving the problems by using information technology							
	To have theoretical and practical (land and laboratory) information on growing and							
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			Χ				
	transfer these information accurately							
3	To have the ability of determining and evaluating the source of the ecological,							
	biological, technical and economical problems that negatively effects the sufficient							
	yield and quality of horticultural crops							
4	To have the skill of utilizing different techniques for sustainable usage and			v				
	protection of genetic resources in horticultural area and environment							
5	To have the ability of describing, classification and growing fruits, vegetables,	x						
	grapevine and ornamental plants	A						
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ				
	To have the information and ability on breeding horticultural crops, developing a			X X X X X X X X				
7	new cultivar, and propagation of these new varieties by different methods (seed,		Х					
	seedling, and sapling)							
8	To have the skill of using and applying biotechnology on horticulture			Χ				
	To have the information on good agricultural practices, and by the way, to decide							
9	the right time of cultural practices of the horticultural crops, and to have the ability	X						
	of describing the pest and diseases of horticultural plants							
10	To have the skill on observing the changes through harvest, post harvest, and			v				
10	storage of horticultural crops, and to have the information on storage conditions							
11	To have the ability of getting the data on horticultural area, and evaluation,			v				
11	recording, project creation and application skills			Λ				
12	To have the ability of working in individual, multiple and different disciplined	x						
	teams, and having the responsibility		Λ					
1:Non	e. 2 :Partially contribution. 3 : Completely contribution.							



SEMESTER Spring

COURSE CODE		251312008			COURSE NAME			Turkish language II			
SEMESTE WEEKLY COURSE PER				IOD COURSE OF			COURSE OF				
R	The	or	or Practice Labra		atory	Credit ECTS			ТҮРЕ	LANGUAG E	
2	2		0	C)	2	2	C	COMPULSORY (X) ELECTIVE ()	Turkish	
COURSE CATAGORY											
Basic Science Basic Engineering			Horticulture [if it contains considerable design, mark with (√)]					Social Science			
										\checkmark	
ASSESSMENT CRITERIA											
					Eva	aluation 7	Гуре		Quantity	%	
					1st Mid-Term				1	40	
					2nd Mid-Term				-	-	
MID_TERM					Quiz			\square	-	-	
		, 11			Homework				-	-	
					Project				-	-	
					Report				-	-	
					Others () -					-	
FINAL EXAM					Final Exam 1					60	
PREREQUIEITE(S)					Non-existence						
COURSE DESCRIPTION					Spelling, punctuation and composition. Spelling, spelling rules (spelling capitals ,writing numbers, spelling abridgment, writing quatitonsi). composition (the aim of composition, the method of writing composition). Experrison propertiesi. Ambigities. Honorifics: Verbal lecture kinds, written expression kinds .						
COURSE OBJECTIVES					To show Turkish language abundance by enlighting students about Turkish Language's development and situation of today's case, to bring consciousness of a national language, to provide them to know graces of Turkish Language and use these in their daily lives.						
ADDITIVI PROFE	PPLY N	Öğrencilerin, günlük yaşamlarında Türkçe'yi doğru ve iyi şekilde konuşup yazabilmelerini sağlar, meslek yaşamlarında kendilerini ve yaptıkları işleri en iyi şekilde ifade edebilme becerisi kazandırır.									
COURSE OUTCOMES					 Distiguish Turkish Language abundance. Identify Turkish Language rules. Distinguish sound events. Apply writing rules. Constitute writing and verbal composition. Use Turkish truely. 						
		 Turkish Language and Composition I-II, Gürer Gülsevin- Erdoğan Boz. Turkish Language for universities, Muharrem Ergin. 									
OTI TOOL	HER F	REFF D EQ	ERENCES QUIPMENT	S	 Kaplan, M., "Culture and language", 8. printing, ,Dergah Publication, İstanbul, 1993. Fuat, M., "About Language", Adam Publication, İstanbul, 2001. Ercilasun, A. B., "Turkish Language History from begining to twentieth century", Akçağ Publication, 1. printing, Ankara, 2004. Aksan, D., "Power of Turkish", Bilgi Publisher, 4. printing, Ankara, 1997. Projection, Board 						
	REC	JUI	RED								
COURSE SYLLABUS TOPICS WEEK Punctuation 1 2 Ambiguity Notify in written I 3 Notify in written II 4 Notify in written III 5 Notify in written IV 6 Notify in written V 7 Notify in written VI 8 Honorifics 9 10 Official correspondence Mid term Exam- Scientific literature; Verbal lecture 11 Scientific literature; Verbal lecture 12 Effective presentation skills 13 Sample letters 14 Final exam 15,16

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
Instru	ictor(s): Date:			



SEMESTER Spring

COURSE 251312009 CC					CO NA	URSE AME		Principles of Ataturk and Turkish History II	Recent		
	**/*			E D						COURCE OF	
SEMESTER	WI	WEEKLY COURSE P				IOD	G IV	D G T G		COURSE OF	LANGUAG
	Theo	ory	Practice	La	abra	itory	Credit	ECTS	6		E
2	2		0		0		2	2	(COMPULSORY (X) ELECTIVE ()	1 urkisn
					(COURS	SE CATA	GORY			
Basic Scien	ce	Ba	asic Enginee	ering	5	[if i	it contain	Hor s consid	rtic ler (`	culture rable design, mark with √)	Social Science
Х											
					AS	SESSN	AENT CI	RITERI	A		
					1	Eval	uation Ty	pe	+	Quantity	%
					15	t Mid-1	erm		-	<u> </u>	40
					2n	d Mid-	lerm		_		
Ν	MID-T	TERI	М			11Z	.1				
					П(Pr	oject	ĸ				
					Report						
					Ot	hers ()				
F	NAL	EXA	M)			1	60
PRE	REQU	JIEI	TE(S)		-					_	
COURS	SE DE	SCR	RIPTION		Date of foundation of Turkish Republic, Turkish historical development of the revolution, considered as a comparative chronological axis, and considers the concepts of full independence and national sovereignty; the struggle is transferred to younger individuals.						
COUR	SE OF	BJEO	CTIVES		The main aim of the course is to allow the students to be sensitive to the revolutionary principles of Atatürk and to induce them to protect the contemporary, secular and democratic values; to encourage the students to adopt the democratic values as the only way of a modern life and to incite them to defend these values						
ADDITIV APPLY I	ZE OF PRO EDUA	F CO FES TIO	URSE TO SIONAL N		To understand independence and and national sovereignty concepts at the end of personality development. In general sense, the course made additions to students on self improvement, cultural improvement, sensibility to actual life, and creativity.						
COURSE OUTCOMES			To apply knowledge on social sciences To have the ability of analyze, evaluate and designing the data To have the ability of group work To have the skill of leading an interdisciplinary team To ability of making comparisons in lifetime, to understand professional and ethic responsibility, have the good writing and speaking ability To understand and apply lifelong learning To be able to follow proffesionally actual subjects To have the skill of performing scientific researches individually or with an advisor								
ТЕХТВООК				Ga	zi Mustaf	fa Kemal At	atürk, Nut	uk	(Söylev), C. I-II, TTK., Ankara, 19	986.	
OTHER REFERENCES			Fatma Acun (Ed.), Atatürk ve Türk İnkılap Tarihi, Ankara, 2010. Niyazi Berkes, Türkiye'de Çağdaşlaşma, İstanbul, 1978. Enver Ziya Karal, Atatürk ve Devrim (Konferanslar ve Makaleler), TTK., Ankara, 1980. Enver Ziya Karal, Atatürk'ten Düşünceler, MEB. Yay., Ankara, 1981. Bernard Lewis, Modern Türkiye'nin Doğuşu, Çev. M. Kıratlı, TTK., Ankara, 1970. Ahmet Mumcu, Tarih Acısından Türk Devriminin Temelleri ve Gelisimi. Ankara, 1976								
TOOLS AND EQUIPMENTS REQUIRED				Pr	ojection l	Machine, M	ap, Histori	ical	Photograph, Graphics.		

	COURSE SYLLABUS							
WEEK	TOPICS							
1	Strategy of Turkish Revolution							
2	Sevr and Lozan Alliences							
3	Revolution movements in politics and law							
4	Terakkiperver Cumhuriyet Party							
5	Trial of starting multi party period							
6	Revolution on Turkish law							
7	Revolution movements in education, culture							
8	Revolutions on economy							
9	Revolutions on social life and health							
10	Foreign Policy of Turkish Republic							
11	Mid-term Exam- Geopolitics and geopolitical condition of Turkey							
12	Geopolitics and geopolitical condition of Turkey; Psicological operation threat through University youth							
13	Atatürk's Revolutions and threats to revolutions							
14	University reform and activities on higher education							
15,16	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	x		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

.

Date:



SEMESTER Spring

COURSE C	CODE 2	251312010		COURSE NAME Foreign Language II					
SEMESTE	WEE	KLY COUR	SE PER	IOD			COURSE OF		
R	Theor v Practice Labora		atory	Credit	ECTS	ТҮРЕ	LANGUAGE		
2	3	0	0)	0	3	Compulsory (+) Elective ()		
	8		(COURS	SE CATA	GORY			
Basic Scie	nce	Basic Engine	eering	[if i	it contain	Hor s consid	ticulture lerable design, mark with (√)]	Social Science	
X			49	SESS	AENT CH	ITERI	Δ		
			1 1	Eva	aluation	Type	Ouantity	%	
				1 st Mic	l-Term		1	40	
				2 nd Mi	d-Term				
				Quiz					
	MID-T	ERM		Home	work				
				Projec	t				
				Report					
				Others	()				
FINAL EXA	M						1	60	
PREREQUI	EITE(S)								
COURSE D	ESCRIPT	ΓΙΟΝ		Fundamental concepts and knowledge					
COURSE O	BJECTIV	VES		This lesson is programmed to give the basic vocabulary and grammar and make the students hear, understand, speak and write in English at elementary level.					
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				This course is aimed at : Using the basic grammar rules The ability to use the target language in an English setting Understanding and making dialogues The ability to understand what's read The ability to communicate with English-speaking people The ability to write in the target language					
COURSE OUTCOMES				At the end of the course studends are able to : Use the basic grammar rules Understand and make dialogues Read and apprehend reading materials Communicate through writing and speaking					
ТЕХТВООН	K			Essent Essent	ial Englis ial Englis	h, Begir h, Work	nner Student's Book, Richmos book, Richmond Publishing	nd Publishing	
OTHER REFERENCES			Murphy, R., 2004, English Grammar in Use, Cambridge University Press, Dictionary of Contemprary English, Longman. Start Up Comprehensive English Practice, 2007, Nüans Publishing						
TOOLS AND EQUIPMENTS REQUIRED					e book, wo	orkbook	, CD player, loudspeakers, die	ctionary	

	DERSİN HAFTALIK PLANI
HAFTA	İŞLENEN KONULAR
1	Can for request, Let's +verb for suggestion LET'S WATCH A DVD TONIGHT
2	Present simple positive forms with some common verbs ORDINARY PEOPLE
3	Present simple with activities DOES HE LIKE YOU ?
4	Present simple, When, It is on, at, about LOOK AT THE TIME
5	Present simple, Wh questions, Before, After, Everyday activities WHAT TIME DO YOU GET UP ?
6	Mid TermExam – Adverbs of frequency.
7	Adverbs of frequency, How many? HE ALWAYS LEAVE HOME EARLY
8	Present simple, Months, Dates, Festivals HAVE A GOOD TRIP
9	Object Pronouns, Adjectives of opinion WHEN'S YOUR BIRTHDAY ?
10	Verb+ing, Prefer, Free time activities MUSICALS, I'M SORRY, I REALLY HATE THEM
11	Verb+ing, Prefer, Free time activities MUSICALS, I'M SORRY, I REALLY HATE THEM
12	How often ?, Frequency adverbs and phrases SWIMMING IS MY FAVOURITE ACTIVITY
13	Prepositions of time, place, movement HE GOES RUNNING ONCE A WEEK
14	Revision WE HARDLY EVER GO TO BED EARLY
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			X
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			Х
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Signature(s):



COURSE 251313002					COURS NAMI					
		SE DEDIA	00			COUDSE OF				
SEMESTER	Theory	Practice	SE PERIO	atory	Credit	ECTS	TYPE	LANGUAG		
III	2	0	0	···· J	2	4	COMPULSORY (x) ELECTIVE (E Turkish		
	-	Ŭ	Ũ	COUL	 PSF CATA	CORV)			
Basia Saian		Rosio Engin	aring		SE CATA	Ho	rticulture	Social		
		Dasic Englis	, ci mg	[if i	t contains	conside	rable design, mark with $(\sqrt{)}$]	Science		
			A	SSESS	SMENT CF	RITERI	A			
				E	valuation 7	Гуре	Quantity	%		
			-	1st Mic	d-Term		1	40		
	MID TI	ГDM	-	Quiz						
	NIID-11		-	Homev	vork					
			F	Project						
			F	Others	()					
	FINAL E	EXAM					1	60		
PI	REREQU	IEITE(S)		None						
COURSE DESCRIPTION				measures and calculation, concepts of correlation and regression and calculation, classical distributions, normal distribution, binomial distribution, poisson distribution and their properties, sampling distributions and related hypothesis controls, one-sided and two-sided hypothesis controls, Type I error probability, hypothesis testing for the difference between two independent group averages, comparison of two dependent groups, hypothesis testing for ratios, hypothesis testing for correlation coefficient, chi-square analysis, control and						
COU	URSE OB	JECTIVES		It is aimed that the subject matter studied is the correct collection, summarization, processing to introduce the subject, analysis according to the known factors, determination of relations with the other data and all the operations for interpretation and generalization of the results.						
ADDITIVI PROFE	E OF COU SSIONAL	URSE TO AP L EDUCATIO	PLY N	* Gaining the concept of researcher to students, * Development of analytical thinking, * It is a simed to increase the ability to comment on different branches of cariculture						
COURSE OUTCOMES				 It is annead to increase the abovity to comment on different oraneries of agriculture Learn how difficult, laborious, costly and time-consuming it is to work with populations, and create examples for it Learn that such individuals must be chosen purely by chance. It learns that the statistics estimated from the samples are parameter estimates of the population. Learn how to create a hypothesis and experiment with it to control it, Learn how to check the hypotheses generated by the researcher. 						
ТЕХТВООК				Zahide KOCABAŞ, M. Muhip ÖZKAN ve Ensar BAŞPINAR (2013). Temel Biyometri, Ankara Üniversitesi, Ziraat Fakültesi, Yayın No: 1606, Ders Kitabi: 558. Orhan DÜZGÜNEŞ, Tahsin KESİCİ ve Fikret GÜRBÜZ (1993). İstatistik Metotları (2. Baskı), Ankara Üniversitesi, Ziraat Fakültesi yayınları: 1291, Ders Kitabi: 369. Mehmet MENDEŞ (2013). Uygulamalı Bilimler için İstatistik ve Araştırma Yöntemleri (3. Baskı), İstanbul, Kriter Yayıncılık Jerrold H. Zar (2010). Biostatistical Analysis Fifth Edition. Prentice-Hall, Inc., Englewood						
OTHER REFERENCES					Fikret GÜRBÜZ; Ensar BAŞPINAR, M. Muhip ÖZKAN, Mehmet MENDEŞ, Sıdık KESKİN ve Handan ÇAMDEVİREN (2000). İstatistik Metotları Dersi Uygulama Kılavuzu, Ankara Üniversitesi, Ziraat Fakültesi, Eğitim, Araştırma ve Geliştirme Vakfı Yayınları No:7					
TOOLS AND	EQUIPM	IENTS REQ	UIRED	Calcula	ator					

	COURSE SYLLABUS							
WEEK	TOPICS							
1	General information about the course, collection of data, summarization, frequency							
	distribution charts, graphics							
2	Introductory statistics, measures of central tendency, properties of arithmetic mean, place of							
2	median value preferred to arithmetic mean							
3	Relationships between central tendency measures and the frequency distribution table							
4	Calculation and interpretation of change measures							
5	Calculation and interpretation of change measures from the frequency distribution table							
6	Calculation and interpretation of Pearson Correlation and Linear Regression coefficient							
7	Linear Regression Equation and Relations between Correlation and Regression Coefficient							
8	Classical populations and distributions, normal and standard normal distribution							
9	Binomial distribution, Poisson distribution, calculation and interpretation of probability							
10	Sampling distributions, averages, the difference between the averages and the sampling distribution of the ratios							
11	Hypothesis control, Two and one sided hypothesis controls							
12	Midterm, Intermediate Difference and Odds Hypothesis Controls (Coefficient t-test for control of Z or t)							
12	Calculation and interpretation of confidence bounds and confidence bounds for difference							
13	between averages and averages the difference between the averages							
14	Chi-Squared Distribution, Independence check in single and double directional tables							
15,16	Final exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



COURSE CODE	251313003					COURS NAMI	SE E	Genetics		
SEMESTER WEEKLY COURSE PERIC								COURSE OF		
	Theo	ory	Practice Labra		tory	Credit	ECTS	ТҮРЕ	LANGUAGE	
3	2		0	0		2	4	COMPULSORY (X) ELECTIVE ()	Turkish	
	1	ł	1		COUI	RSE CATA	GORY			
Basic Scier	ıce]	Basic Engine	ering	[if i	t contains	Ho conside	rticulture rable design, mark with (√)]	Social Science	
Х										
				A	SSESS	SMENT CF	RITERI	A		
					Ε	valuation T	Гуре	Quantity	%	
				ŀ	1st Mi	d-Term		1	40	
	N / I P		D 14	ľ	Ouiz	id-Tellii				
	MID)-TE	RM		Home	work				
					Projec	t				
				-	Report	$\frac{1}{(1)}$				
					Others ()				60	
	FINA	LE	XAM					-		
P]	REREG	QUI	EITE(S)		None					
COU	IRSE D	DESC	CRIPTION		Genetics, heredity, variations, hybridizations, Mendel Rules, linkage, crossing over, pedigree analysis, Genom concept, structure of chromosomes, replication and transcription of DNA, genetic code and protein synthesis, specifications of genetic code, mutations.					
CO	URSE	OBJ	ECTIVES		To give basic information on genetics, heredity and variation. To review previous investigations, by the way to gain ability to make genetical investigations.					
ADDITIV PROFI	E OF C ESSIO	COU NAL	RSE TO AP	PLY N	Basic knowledge on breeding of old and new animal and plant cultivars that used in cultivation will be given, and it will be usefull throughout the career.					
COURSE OUTCOMES					Comprehend gene, chromosome and heredity terms. To gain the ability of solving problems on breeding and crossing easier by giving genetic background to students. To gain the ability of produce new projects on breeding by transfering these knowledge to practice.					
ТЕХТВООК					Varda Basın	ur, Y., Ke nevi, Borno	sercioğl va-İzmi	u, T., 1990. Genetiğe Başlar r.	rken. Bilgehan	
OTHER REFERENCES					Kumar, N., 2006. Breeding of Horticultural Crops. Jai Bharat Printing Press, Rohtash Nagar, Shahdara Delhi. Dabholkar, A.R., 2006. General Plant Breeding. Ashok Kumar Mittal Concept Publishing Company, New Delhi.					
TOOLS AND EQUIPMENTS REQUIRED					None					

	COURSE SYLLABUS							
WEEK	TOPICS							
1	Genetics science, Genetic, Heredity, Variation							
2	Hybridisations							
3	1. Rule of Mendel							
4	2. Rule of Mendel							
5	Linkage, crossing-over							
6	Heredity depending on gender							
7	Heredity depending on gender							
8	Pedigree analysis, gene interactions							
9	Genom concept, molecular structure of DNA							
10	Structure of chromosomes							
11	Replication of DNA; transcription of DNA							
12	Replication of DNA; transcription of DNA							
13	Genetic code and protein synthesis							
14	Specifications of genetic code, mutations							
15,16	Final exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		X	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			x
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instructor(s): Asst. Prof. Dr. Yasemin GEDİK

Date:



COURSE CODE	COURSE CODE251313004CC CONN				COURS NAMI	SE E					
WEEKLY COUDSE DEDI											
SEMESTER	••					G III	D G T G				
	Theo	ory	Practice	Labra	atory	Credit	ECTS	TYPE COMPLESORY (X) ELECTIVE (LANGUAGE		
3	2		0	0		2	3)	TURKİSH		
					COUR	SE CATA	GORY				
Basic Scier	ice		Basic Engine	ering	[if it	t contains	H(conside	orticulture rable design, mark with (√)]	Social Science		
									Х		
				А	SSESS	MENT CF	RITER	[A			
					Ev	aluation 7	Гуре	Quantity	%		
					lst Mi	d-Term		1	40		
					Ouiz	lia-Term					
	MID	D-TE	CRM		Home	work					
					Projec	t					
					Repor	t					
					Others	s ()					
	FINA	LE	XAM			60					
Pl	RERE	QUI	EITE(S)		-						
COU	RSE I	DES	CRIPTION		Basic principles, theories and concepts of economics and agricultural economics and their implementation on practical life.						
CO	URSE	OBJ	IECTIVES		Objective of the course to give students the basic information and basic principles of agricultural economics that they can monitor and evaluate economic developments in the world and Turkey.						
ADDITIVI PROFF	E OF C ESSIOI	COU NAL	IRSE TO AP	PLY N	Monitoring economic events, ability to apply theories and laws of agricultural economics in practical life, ability to monitor and understand agricultural policies and shaping production according to these policy developments.						
CO	URSE	OU	TCOMES		Learning the basic principles of agricultural economics and providing to apply them into practical life.						
	TEX	TBO	ЭОК		Course notes that are prepared from various scientific sources.						
OTHER REFERENCES				REHBER, E., Economics, III.Edition, Uludag University, Agricultural Faculty, Lecture Notes Nr: 21, Bursa 1995. ERKUS, A., M. BULBUL, T. KIRAL, F. ACIL ve R. DEMIRCI, 1995. Agricultural Economics, Ankara University, Agricultural Faculty, Education, Research and Development Foundation Publications Nr: 5, 298 s., Ankara.							
TOOLS AND EQUIPMENTS REQUIRED				Projec	tor						

COURSE SYLLABUS						
WEEK	TOPICS					
1	Definition and historical development of economics, economical systems					
2	The Scope of the Agricultural Economy					
3	The importance of agriculture in Turkish economy, features of agricultural activities					
4	Agricultural Production Economics					
5	The Law of Diminished Returns					
6	Substitution of Factors (Factor-Factor) and Substitution of Initiatives (Product-Product)					
7	Annual Operating Results of Agricultural Enterprises					
8	Agricultural finance					
9	Marketing Of Agricultural Products					
10	Agricultural Policy, International Relations					
11	Agricultural policy and agricultural incentives, Good Agricultural Practices, Globalgap and					
11	other international quality systems					
12	Natural Resources Economy					
13	Organising in Agriculture, Cooperatives					
14	Rural development economy					
15,16	Final exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



COURSE CODE 251313005					COURSE NAME Food Science and Technology					
SEMESTER	EMESTER WEEKLY COURSE PERIC			OD		COURSE OF				
	Theor	ry Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE		
III	2	0	0	1	2	3	COMPULSORY (X) ELECTIVE ()	Turkish		
				COUR	SE CATA	GORY				
Basic Scier	nce	Basic Engine	eering	[if it	contains	Ho conside	rticulture rable design, mark with (√)]	Social Science		
							X			
			A	SSESSI	MENT CF	RITERI	A	T		
				Ev	aluation T	уре	Quantity	%		
				1st Mic	d-Term		1	40		
				2nd Mi	ld-Term					
	MID	-TERM		Homey	vork					
				Project						
				Report						
				Others	()					
	FINA	L EXAM				1	60			
PI	REREQ	QUIEITE(S)		None						
COU	IRSE D	ESCRIPTION		Introduction to food science and technology, chemical composition of foods, microbiology, food quality control, food protection techniques, tea processing, cereal processing, meat processing, fruit and vegetable processing, milk processing, oil processing						
CO	URSE (OBJECTIVES		To give information basic concepts and techniques of foods, to increase information in processing of agricultural products						
ADDITIVI PROFE	E OF C ESSION	OURSE TO AP	PLY N	To provide strengthening of subjects in food science and technology						
CO	URSE	OUTCOMES		To aim student	increasing in relate	g of info d subjec	ormation and to improve knowled	lge and skills of		
ТЕХТВООК				Bulduk, S. 2010. Gıda Teknolojisi. Detay Yayıncılık, Ankara						
OTHER REFERENCES				Bilişli, A. Gıda Kimyası. Bilişli, A. Gıda Teknolojisi Dokuzlu, C. Gıda Analizleri						
TOOLS AND EQUIPMENTS REQUIRED										

COURSE SYLLABUS								
WEEK	TOPICS							
1	History and introduction of food science							
2	Food production							
3	Storage of foods							
4	Storage techniques of foods							
5	Dry storage of foods							
6	Midterm exam/ Canned foods and Milk processing techniques							
7	Cereal processing techniques							
8	Cereal processing techniques							
9	Meat processing techniques							
10	Freezing storage							
11	Storage by salt and species							
12	Fruit and vegetable processing techniques							
13	Fruit and vegetable processing techniques							
14	Radiation techniques and Functional foods							
15	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Х
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			x
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions	X		
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



COURSE CODE	251			COURSE NAME General Fruit Growing						
SEMESTER	WEI	EKLY COUR	SE PERI	OD	COURSE OF					
	Theory	Practice	Labra	tory	Credit	ECTS	ТҮРЕ	LANGUAGE		
3	1	2	0		2	5	COMPULSORY (X) ELECTIVE (Turkish		
_				COUD		CODV)			
				COUR	SE CATA	GORY		a i i		
Basic Scier	nce	Basic Engine	ering	lif it	t contains (Ho conside	rticulture rable design, mark with $(\sqrt{)}$	Social Science		
				L			X			
			А	SSESS	MENT CF	RITERI	A			
				Ev	aluation T	Гуре	Quantity	%		
				1st Mi	d-Term		1	20		
				2nd M	id-Term		l	20		
	MID-T	ERM		Home	work					
				Projec	t					
				Report	t					
				Others)					
	FINAL	EXAM					1	60		
Pl	REREQU	JIEITE(S)		-						
COURSE DESCRIPTION				Cultural history of fruit growing, basics of modern fruit growing, production and trade data, fruit growing in Turkey, classification of fruits, organs of fruit trees and their functions, flower and fertilization biology, growing periods of trees, periodicity and fruit fall, ecological problems, important subjects in orchard establishment will be given.						
CO	URSE OB	BJECTIVES		Basic knowledge will be given on cultivation techniques and developments in fruit growing, of fruit species. With this course, ecology, environment and soil relationships on fruit growing will be understood.						
ADDITIVI PROFI	E OF CO ESSIONA	URSE TO AP L EDUATIO	PLY N	Students will be informed about fruit growing. This course will be a basis for further intermediate courses on this subject.						
COURSE OUTCOMES			To know cultural history of fruit growing, basics of modern fruit growing, production and trade data of the world. To know fruit species, their pomology, flowering type and structure. To know pollination, fertilization, flower fall and periodicity of fruit species. To know establishment of orchard and factors effecting establishment. To learn basic knowledge on orchard establishment. To solve the problems about fruit growing. To instruct different cultural techniques to farmers, on this structure							
ТЕХТВООК				Özbek,S. 1977. Genel Meyvecilik. Ankara University Faculty of Agriculture publishments No.6.						
OTHER REFERENCES				Ağaoğlu, S. ve ark. 1995. Genel Bahçe Bitkileri. Ankara University Faculty of Agriculture, Eğitim, Araştırma ve geliştirme Vakfı Yayınları No:4. Gerçekçioğlu R., Bilginer Ş, Soylu A. 2008. Genel Meyvecilik kitabı, Nobel Publishing, 480 sayfa.						
TOOLS AND	D EQUIPI	MENTS REQ	UIRED	Comp	outer and pi	ojection	1.			

COURSE SYLLABUS						
WEEK	TOPICS					
1	Cultural history of fruit growing, and analysis of developments through history, production and trade data					
2	Basics of modern fruit growing and high density orchards					
3	Basics of modern fruit growing and high density orchards					
4	Fruit growing in Turkey and World					
5	Classification of fruits					
6	Mid-term Exam / Organs of fruit trees and their functions – vegetative / generative organs					
7	Flower types in fruits, pollination and fertilization					
8	Seed and fruit formation of fruit trees; Flower bud diferantiation					
9	Growing periods of fruit trees, dormancy					
10	Periodicity and fruit falls					
11	Mid-term Exam / Ecological problems of fruit growing					
12	Species, variety and rootstock selection in orchard establishment; Planting in orchard establishment					
13	Important subjects in orchard establishment					
14	Orchard management					
15,16	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		X	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	

Instructor(s): Prof.Dr. Rafet ASLANTAŞ

Date:

Prof.Dr. Yasemin EVRENOSOĞLU



SEMESTER Fall

COURSE CODE	251313024				CO NA				
							I		
SEMESTE	WE	EKLY COUR	SE PERI	IOD		-			
к	Theor y	r Practice	Labra	ntory	Credit	ECTS		ТҮРЕ	LANGU AGE
3	2	0	0		2	4	СО	MPULSORY (X) ELECTIVE	Turkish
			C	OURSE	E CATAC	GORY			
Basic Scier	ice	Basic Engine	eering	[if i	it contain	Hoi s consid	rticu dera (√)	llture ble design, mark with]	Social Science
		Х							
			ASS	SESSM	ENT CRI	ITERIA	<u> </u>	Quantita	0/
				LV:	d Torm	уре			% 0
				2nd M	id-Term		+	1	20
				Ouiz	10-10111		+	1	20
	MID-	TERM		Home	work		+		
				Projec	t				
				Report					
				Others	(
	FINAL	LEXAM						1	60
PR	REREQ	UIEITE(S)		-					
COURSE DESCRIPTION				Architecture, Landscape Art History, Leaving Material "Plants" and Functions, Grouping of Plant Material, Use of Plant Material in Landscape Architecture, Planting Principles, Gymnospermae Plants and Dendrological Properties, Angiospermae Plants and Dendrological Properties, Grassland, Landscape Planning and Landscape Planning Stages; Landscape Design and Landscape Design Stages; Landscape Construction, Urban Green Areas					
COU	RSE O	BJECTIVES		The main goals of the course are to understand what Landscape Architecture is and study areas and also to establish relations with agriculture					
ADDITIVE PROFE	COFCO SSION	OURSE TO AI AL EDUATIO	PPLY N	Students will be informed about landscape architecture and its study area					
COU	URSE (DUTCOMES		To have general knowledge about landscape architecture and its stud area To have general knowledge about plant material and its use To understand Landscape design and projects To be aware of the importance of cooperation between Landscape Architects and Agriculture Engineers and to gain ability on teamwork					
ТЕХТВООК				 Aran,S.,(1977). Peyzaj Mimarisi:Temel prensipleri, Ankara Üniversitesi Ziraat Fakültesi Yayınları; 635 Ders Kitabı; 198, Ankara, 386s. Korkut, A., Şişman, E.E., Özyavuz, M., (2010). Peyzaj Mimarlığı, Verda Yayıncılık ve Danışmanlık Hizmetleri, İstanbul. Orçun, E. (1972) Özel Bahçe Mimarisi Dendroloji Cilt I İğne Yapraklı Ağaç ve Ağaçcıklar, Ege Üniversitesi Ziraat Fakültesi Yayınları No: 196, Bornova İzmir, 383 s. Orçun, E. (1975) Peyzaj Mimarisi Dendroloji, Cilt II, Yapraklı Ağaç ve Ağaçcıkların Özellikleri ve Peyzaj Mimarisinde Kullanılışları, Ege Üniversitesi Ziraat Fakültesi Yayınları No: 266, Bornova İzmir, 298 s. Hatipoğlu, A., Gülgün, B. (1999) Tek ve Çok Yıllık Mevsimlik Çiçekler, Kent Matbaası, Yenişehir-İzmir, 205s. Güney, A., Erdem Ü., Zafer, B., Hepcan, Ş. (1996) Peyzaj Konstrüksiyonu (Donatı Elemanları), Ege Üniversitesi Ziraat Fakültesi Yayınları No: 514, Bornova İzmir, 149s. Uzun, G. (1996) Peyzaj Mimarlığında Çim ve Spor Alanları Yapımı, Çukurova 					
ОТН	IER RE	EFERENCES		Ceylan, G., (2004). Dış Mekan Süs Bitkileri ve Peyzajda Kullanımları, Flora Yayınları, İstanbul.					
TOOLS	S AND REOI	EQUIPMENT UIRED	S	-					

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Landscape concept, Historical development and Study Areas of Landscape Architecture						
2	Landscape Art History						
3	Leaving Material "Plants" and Functions, Grouping of Plant Material						
4, 5	Use of Plant Material in Landscape Architecture, Planting Principles,						
6	Landscape Design and Landscape Design Stages						
7	Landscape Planning and Landscape Planning Stages						
8	Gymnospermae Plants and Dendrological Properties						
9	Gymnospermae Plants and Dendrological Properties						
10	Midterm Exam - Angiospermae Plants and Dendrological Properties;						
11	Angiospermae Plants and Dendrological Properties						
12	Grassland,						
13	Landscape Construction						
14	Urban Green Areas						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		x	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		X	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		Χ	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		x	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:

Instructor(s): Assoc. Prof. Dr. Sibel SARIÇAM



SEMESTER FALL

COURSE CODE 251313012					COURSE NAME Occupational health and Safety I				
SEMESTE WEEKLY COURSE PERI								COURSE OF	
R	Theor	Practice	Labor	atory	Credit	ECTS		ТҮРЕ	LANGUAGE
3	2	0	0		0	2	Com	pulsory (+) Elective ()	TURKISH
				COURS	Е САТА	GORY			
Basic Scier	nce	Faculty (Agricultu	of ire	[if i	t contain	Hor s consic	rticult lerabl (√)]	ure e design, mark with	Social Science
20		20					30		30
			AS	SSESSM	IENT CH	RITERI	[A		
				Eva	luation]	Гуре		Quantity	%
				l st Mid	-Term			l	40
				2 nd M10	l-Term				
	MID-T	TERM		Quiz	1				
				Homew	vork				
				Project					
				Others	()				
				Others	()			1	60
FINAL EXA				N				1	
PREREQUIEITE(S)				Definition of occupational safety, occupational accidents, occupational diseases, occupational safety in workplaces and ergonomics					
COURSE O	BJECTI	VES		Teach method of prevention of occupational accidents and occupational diseases, to make the risk analysis of the student, to be able to foresee and take precautions.					
ADDITIVE (PROFESSIC	OF COU DNAL EI	JRSE TO API DUATION	PLY	To protect the human health and increase the labor productivity by knowing the measures against work accidents and occupational diseases in the workplaces and to learn the regulations and related basic rights in this respect.					
COURSE OUTCOMES				 1.To improve the physical conditions of the workplace, develop alternative solutions and solving 2.Design of the workplace conditions(noise, heat, dusti etc.) taking measurements, analyzing the results and interpretation. 3.Potential risks in the workplace, assessment and development of solutions to protect human health. 4. Learn the importance of ergonomics. 					
ТЕХТВООК				Kahya,	E. 2014,	İş Güve	enliği,	ESOGÜ Yayın No:246	, Eskişehir
OTHER REFERENCES				Yiğit,A., İş Güvenliği, 2013, Dora Basım-Yayın Dağıtım Ltd. Şti, Bursa Bayır, M ve Ergül, M., 2006, İş güvenliği ve Risk Değerlendirme Uygulamaları, Bursa Dizdar, E.N., 2008, İş Güvenliği, 4. Baskı, Murathan Yayınevi, Trabzon Esin, A., 2006, Yeni Mevzuatın Işığında İş Sağlığı ve Güvenliği, TMMO MMO Yayın No: MMO/363/2 Ankara					
TOOLS ANI REQUIRED	D EQUII	PMENTS		Explan	ation of t	opics wi	ith the	help of visuals.	

	COURSE SYLLABUS						
WEEK	ΓΟΡΙCS						
1	Course scope, execution, evaluation, occupational safety						
2	Occupational health and Safety; importance, definition, purpose						
3	Occupational safety culture and ergonomics						
4	Institutions and organizations responsible for occupational health and safety						
5	Work accidents (factors, types, performance measures)						
6	Work accidents (causes, formation theories, statistics)						
7	Mid-term exam - Work accidents (cost, investigations, measurement)						
8	Prevention of work accidents, basic methods						
9	Occupational diseases						
10	Risk assessment						
11	Basic safety precautions in workplaces						
12	Basic safety precautions in workplaces						
13	Basic safety precautions in workplaces						
14	General evaluation and suggestions						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:

.

Signature(s):



SEMESTER Autumn

COURSE CODE	COURSE 251313014			COURSE NAME		SE E	Material Science		
	SE DEDI	00			COUPSE OF				
SEMESTER						БСТС			
	Ineor	y Practice	Labra	tory	Credit	ECIS		LANGUAGE	
3	2	0	0		2	2	COMPULSORY (x) ELECTIVE ()	TUIKISII	
				COUR	SE CATA	GORY			
Basic Scien	ice	Basic Engine	eering	[if it	t contains	Ho consider	rticulture rable design, mark with (√)]	Social Science	
							Х		
			A	SSESS	MENT CF	RITERL	A		
				Eval	luation Ty	ре	Quantity	%	
			1 st	Mid-T	erm		1	40	
			2n	d M1d-'l	l'erm				
	MID-T	ERM	Qu	l1Z	1.				
			Pro	omewor viect	К				
			Re	port					
			Ot	hers ()				
F	FINAL I	EXAM			, ,		1	60	
PRI	EREQU	IEITE(S)	-						
COURSE DESCRIPTION			dan me con Th the obt	 damage, diffusion and phase diagrams, phase transformations, obtaining metal, polymer, ceramic and composite materials, electrical, magnetic and corrosive properties are covered. The aim of the course is to teach the atomic and crystal structures of materials, their mechanical properties, internal structure changes with the effect of heat, obtaining and using metal, polymer, ceramic and composite materials, and 					
			cho	choosing the appropriate material according to the application area.					
ADDITIVE (PROFES	OF CO SIONA	URSE TO APP L EDUATION	LY Th	They understand the structures of the tools and equipment they will encounter in their professional lives.					
COURSE OUTCOMES			1.1 2. app sel 3.1 hea 4.0 (PY 5.1 6.1 7.1 8.1	 Knows the atomic and crystal structures of materials (PY-1). Understands the mechanical properties of materials and chooses the appropriate material. selects (PY-7). Determines the internal structure changes of the materials with the effect of heat (PY-7). Classifies materials according to their properties and usage areas (PY-1, PY-2). Knows the acquisition and use of metals and alloys (PY-2), Knows the production and use of ceramics and glasses (PY-2), Knows the acquisition and use of composite materials (PY-2), 					
ТЕХТВООК			• N No Ma 200 Pu	 Malzeme Bilimi ve Mühendisliği, W. D. Callister, D. G. Rethwisch, 8. Ed., Nobel Yayınları. Önerilen Kaynaklar: Malzeme Bilimi ve Mühendislik Malzemeleri Cilt 1 (Çeviri), M. Erdoğan, Nobel Yayınları. Foundations of Materials Science and Engineering, William F. Smith, 4. Ed., New York, 2004. The Science and Engineering of Materials, D. R. Askeland, PWS Publishing Co., 3. Ed., 1994. 					
ОТНІ	ER REF	FERENCES							

TOOL	LS AND EQUIPMENTS REQUIRED	Projection						
	COURSE SYLLABUS							
WEEK	TOPICS							
1	Introduction to Materials Scient	nce						
2	Atomic Structure and Interator	mic Bond						
3	Crystal Structure and Crystal S	Structure Defects						
4	Mechanical Properties	Mechanical Properties						
5	Damage	Damage						
6	Midterm /							
7	Broadcasting							
8	Phase Diagrams							
9	Phase Transformations							
10	Metals and Alloys							
11	Manufacturing Methods and H	Ieat Treatments of Metals						
12	polymers	polymers						
13	ceramics							
14	Composites; Electrical, Magne	etic and Corrosive Properties						
15,16	Semester final exam							

	THE DEGREE OF RELATIONSHIP BETWEEN COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (5: Very high, 4: High, 3: Medium, 2: Low, 1: Very low)						
NO	PROGRAM OUTCOMES	5	4	3	2	1	
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X				
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X					
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X				
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X			
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		x				
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		X				
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X			
8	To have the skill of using and applying biotechnology on horticulture					X	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants				X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions				X		
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X			
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			x			

Date:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	COURSE 251313015			COURS NAMI	SE E	Stress Management				
SEMESTED WEEKLY COURSE PERIC					OD	OD COURSE OF				
SEVIESTER	Theo	ory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG E	
III	3		0	C)	3	3	COMPULSORY () ELECTIVE (X)	Turkish	
	<u>n</u>		1		COU	RSE CATA	GORY			
Basic Scier	nce]	Basic Engine	ering	[if	it contains	Ho conside	rticulture rable design, mark with (√)]	Social Science	
									\checkmark	
				A	SSES	SMENT CF	RITERI	A	A (
					1-4 N	Evaluation 1	Гуре		%	
					2nd I	Mid-Term		1	40	
					Ouiz					
	MID)-TE	RM		Hom	ework				
					Proje					
					Repo					
					Othe	rs ()				
	FINA	LEX	XAM		1				60	
P	RERE	QUII	EITE(S)		-					
COL	JRSE I	DESC	CRIPTION		Nature of stress and adaptation, adjustment disorders, stress management techniques, posttraumatic growth					
COURSE OBJECTIVES					The aim of this course is to provide awareness about stress, stress coping and management including nature of stress and adaptation, their impact on organization, various critical variables on these processes and several events such as emotion and their regulation, grief process and posttraumatic growth in which adaptation can be easily observed					
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				This course includes all fundamentals regarding stress management that should be necessary for every person who are interested in this field.						
COURSE OUTCOMES			 Describes stress, coping and adaptation Discusses stress resources, ways of coping and their impact on individual Applies different stress management techniques to various conditions Expresses stress and adaptation disorders Explains adaptation processes to different stress resources 				pact on ous conditions ces			
	TEX	твс	OOK		Aldy Guilf	win, C. M. (ford Press	2007). S	Stress, Coping and Development.	New York:	
OT	HER R	REFE	CRENCES		Smith, J., C. (2002). Stress Management: A Comprehensive Handbook of Techniques and Strategies. New York: Springer Publishing Company					
TOOLS AND EQUIPMENTS REQUIRED				-						

	COURSE SYLLABUS						
WEEK	ΓΟΡΙCS						
1	Introduction of the course, definitions of stress and adaptation						
2	Stress reactions and stress pyhsiology						
3	Critical variables in stress: Control appraisal						
4	Personality traits and social support						
5	Ways of stress assessment						
6	Assessment of coping with stress						
7	Stress management techniques						
8	Attachment and emotions						
9	Emotion regulation						
10	Adjustment disorders						
11	Disaster management						
12	Posttraumatic growth						
13	Grief process and adaptation to chronic illlnesses						
14	Immigration						
15,16	Final Exam.						

NO	PROGRAM OUTCOMES	3	2	1
	To have the basic information on horticulture and other agriculture engineering			X
1	areas, describing the required data to solve the problems, to have the ability of			
	gathering data and solving the problems by using information technology			
	To have theoretical and practical (land and laboratory) information on growing and			X
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			
	transfer these information accurately			
	To have the ability of determining and evaluating the source of the ecological,			Х
3	biological, technical and economical problems that negatively effects the sufficient			
	yield and quality of horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and			X
т	protection of genetic resources in horticultural area and environment			
5	To have the ability of describing, classification and growing fruits, vegetables,			X
5	grapevine and ornamental plants			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
	To have the information and ability on breeding horticultural crops, developing a			Χ
7	new cultivar, and propagation of these new varieties by different methods (seed,			
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			X
	To have the information on good agricultural practices, and by the way, to decide			Χ
9	the right time of cultural practices of the horticultural crops, and to have the ability			
	of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and			Χ
10	storage of horticultural crops, and to have the information on storage conditions			
11	To have the ability of getting the data on horticultural area, and evaluation,			X
11	recording, project creation and application skills			
12	To have the ability of working in individual, multiple and different disciplined		Χ	
12	teams, and having the responsibility			
1:Non	e. 2:Partially contribution. 3: Completely contribution.			



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	2	251313016		COURS NAMI	SE E				
	W	FERINCOUD	SE DEDIOD			COUDSE OF			
SEMESTER	Theor	y Practice	Labratory	Credit	ECTS	ТҮРЕ	LANGUAG		
III	3	0	0	3	3	COMPULSORY() ELECTIVE (X)	E Turkish		
			COL	JRSE CATA	GORY				
Basic Scier	nce	Basic Engine	ering [i	f it contains (Ho conside	rticulture rable design, mark with (√)]	Social Science		
							\checkmark		
			ASSE	SSMENT CF	RITERI	A			
			Ev	aluation Typ	e	Quantity	%		
			1st Mid-	ſerm		1	40		
			2nd Mid-	Term					
	MID-TI	ERM	Quiz						
			Homewo	rk					
			Project						
			Report						
			Others (.	Others ()					
F	INAL E	CXAM				1	00		
PRF	REQUI	IEITE(S)	-	-					
COUR	SE DES	CRIPTION	Feasibilit growth	Feasibility analysis , financial planning , strategies for firm growth , developing an effective business model					
COURSE OBJECTIVES			 Introdu Discus Exami creating a Discus Exami Exami Introdu 	 Introduce students to the process of venture creation Discuss core issues in creating a successful business. Examine the major strategic decisions that entrepreneurs must make when creating a business. Discuss operational and organizational challenges during the start-up phase Examine the key elements of business planning. Introduce students to the main issues when managing a new firm 					
ADDITIVE (PROFES	OF COU SIONAI	JRSE TO APPI L EDUATION	Y This cour be necess	This course includes all fundamentals regarding entrepreneurship that should be necessary for every person who are interested in this field.					
COURSE OUTCOMES			- Explain - Discuss - Examin creating a - Discuss phase - Explain - Discuss	 Explains the process of venture creation Discusses core issues in creating a successful business. Examines the major strategic decisions that entrepreneurs must make when creating a business. Discusses operational and organizational challenges during the start-up phase Explains the key elements of business planning. Discusses the main issues when managing a new firm 					
	ГЕХТВ	ООК	Entreprei & R. Dua	neurship: Suc ane Ireland, F	cessfully ifth Edit	y Launching New Ventures, Bruc tion, Global Edition, Pearson, 20	e R. Barringer 16.		
отни	CR REF	ERENCES	-	-					
TOOLS	AND EO REQUI	QUIPMENTS RED	-						

COURSE SYLLABUS							
WEEK	TOPICS						
1	Course Introduction and Introduction to Entrepreneurship						
2	Recognizing opportunities and generating ideas						
3	Feasibility analysis						
4	Developing an effective business model						
5	Industry and competitor analysis						
6	Industry and competitor analysis-continued						
7	Writing a business plan						
8	Writing a business plan-continued						
9	Preparing the proper ethical and legal foundation						
10	Building a new venture team						
11	Financial Planning						
12	Preparing for and evaluating the challenges of growth						
13	Strategies for firm growth						
14	Strategies for firm growth-continued						
15,16	Final Exam.						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2:Partially contribution. 3: Completely contribution.			



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	2	251313017			COURS NAMI	SE E	Leadership			
SEMESTED WEEKLY COURSE PERIC					OD COURSE OF					
SEMESTER	vv Theo	ry Practice	Labor	atory	Credit ECTS		ТҮРЕ	LANGUAG		
III	3	0	0)	3	3	COMPULSORY () ELECTIVE (X)	Turkish		
			l	COUR	SE CATE	GORY				
Basic Scie	nce	Basic Engin	eering	[if it	contains	Plant consider	t Protection rable design, mark with (√)]	Social Science		
								Х		
			A	SSESS	MENT CF	RITERI	A			
				Ev	aluation 7	Гуре	Quantity	<u>%</u>		
				1st Mi	d-Term		1	40		
				2nd M	1d-1 erm					
	MID	-TERM		Homes	work					
				Project	t					
				Report						
				Others						
	FINA	L EXAM			60					
P	REREC	QUIEITE(S)					-			
COL	JRSE D	DESCRIPTION		Leadership theories, leadership change and innovation, motivation theories						
CO	URSE	OBJECTIVES		To inform students about leadership and motivation.						
ADDITIV PROFE	E OF C SSION	COURSE TO AP	PPLY DN	To contribute to plant protection students in leadership and management throughout their academic and business life.						
COURSE OUTCOMES				 It effectively uses new leadership approaches. Know the relationship between leader behavior, motivation and performance. Team management is implemented effectively. Explain the leader behavior and performance relation in organizations Can comment and criticize the historical development process of leadership concept 						
ТЕХТВООК				Related articles and lesson documents						
OT	HER R	EFERENCES		-						
TOOLS ANI	TOOLS AND EQUIPMENTS REQUIRED				puter and p	rojector				

		COURSE SYLLABUS							
WE	EK	TOPICS							
1	1 Concept of Leadership and Features of Leadership								
2	2	Behavioral Forms of Leaders							
3	3	Acquisition and Development of Leadership Skills							
4	ŀ	Features Approach, Behavioral and Situational Leadership Approach							
5	5	Charismatic Leadership, Transformational Leadership, Transactional Leadership							
6	5	Strategic Leadership							
7	7	Team Spirit Concept, Team Management and the Preface							
8	3	Leadership and Team Management, Leader's Role in Team Management							
9)	Midterm Exam							
1	0	Leadership in team management, coaching (mentoring)							
1	1	Variables affecting leadership, Leadership Models							
12	2	Motivation and Leadership, Motivation and Performance							
1.	3	Leader, Power and Politics in the performance of triplets							
14	4	General review and discussion							
15,	15,16 Final Exam								
NO	DDC		2		1				
NO		JGRAM OUTCOMES	3	Z					
	Toh	ave the basic information on horticulture and other agriculture engineering		X					
1	areas	s, describing the required data to solve the problems, to have the ability of							
	gath	ering data and solving the problems by using information technology							
	To h	ave theoretical and practical (land and laboratory) information on growing and			X				
2	bree	ding of fruits, vegetables, grapevine and ornamental plants, and to use and							
	trans	fer these information accurately							
	To h	ave the ability of determining and evaluating the source of the ecological,			Х				
3	biolo	ogical, technical and economical problems that negatively effects the sufficient							
	yield	l and quality of horticultural crops							
4	To h	ave the skill of utilizing different techniques for sustainable usage and			X				
4	prote	protection of genetic resources in horticultural area and environment							
5	To h	ave the ability of describing, classification and growing fruits, vegetables,			Χ				
2	grap	evine and ornamental plants							
6	Toh	ave the skill of establishing and operating orchards, greenhouses and vinevards			X				

To have the information and ability on breeding horticultural crops, developing a
new cultivar, and propagation of these new varieties by different methods (seed,
seedling, and sapling)
To have the skill of using and applying biotechnology on horticulture
To have the information on good agricultural practices, and by the way, to decide
the right time of cultural practices of the horticultural crops, and to have the ability
of describing the pest and diseases of horticultural plants
To have the skill on observing the changes through harvest, post harvest, and
storage of horticultural crops, and to have the information on storage conditions
To have the ability of getting the data on horticultural area, and evaluation,
recording, project creation and application skills
To have the ability of working in individual, multiple and different disciplined

To have the information and ability on breeding horticultural crops, developing a

teams, and having the responsibility 1:None. 2:Partially contribution. 3: Completely contribution.

Instructor(s):

Signature:

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COURSE CODE 251313018			COURSE	NAME	Turkish Folk Dance					
						1				
SEMESTER	W	/EEI	KLY COUR	SE PER	IOD			COURSE OF		
SEMESTER	Theo	ory	Practice	Labor	atory	Credit	ECTS	TYPE	LANGUAGE	
III	3		0	()	3	3	COMPULSORY () ELECTIVE (X)	Turkish	
				С	OURSI	E CATEGO	ORY			
Basic Scien	ce]	Basic Engine	ering	[if it	t contains c	Hortic onsidera (√	ulture able design, mark with)]	Social Science	
									Х	
				ASS	SESSM	ENT CRIT	ERIA			
					Ev	valuation T	уре	Quantity	%	
					1st Mi	id-Term		1	40	
					2nd M	lid-Term				
	MID	-TE	RM		Quiz					
					Home	work				
					Projec	t .				
					Other	$\frac{t}{2}$				
			7 4 3 7		1				<i>(</i>)	
	FINA	LEX	XAM		1				60	
PR	EREQ	QUII	EITE(S)		-					
COUI	RSE D	ESC	CRIPTION		Folk Dance Art and music, music communication, instrument communication, nuances, understanding sensing and recognition of folk dance.					
COU	RSE (OBJ	ECTIVES		Students will obtain information about Turkish Folk Dance culture					
ADDITIVE PROFE	OF C SSION	OUI NAL	RSE TO AP EDUATION	PLY N	For three hours in a week, students will deal with a subject out of their major subject. This may help students to be more efficient in their major subject.					
COU	JRSE	OUI	FCOMES		Suden art.	t recognize	s importa	ance and benefits of Turkis	sh folk dance	
ТЕХТВООК				-						
OTHER REFERENCES				-						
TOOLS AND EQUIPMENTS REQUIRED				Dance	e hall, sports	swear and	d sneakers, towel			

COURSE SYLLABUS						
WEEK	TOPICS					
1	Introduction of Anatolian culture and local structuring, teaching of the first dance steps					
2	Artvin region dances (Atabarı, Döne, Düz Horon)					
3	Artvin region dances (Hemşin, Cilveloy, Teşi)					
4	Artvin region dances (Vazriya Horonu, Coşkun Çoruh)					
5	Artvin region dances (Teşi, Deli Horon)					
6	İzmir Zeybek region dances (Harmandalı)					
7	İzmir Zeybek region dances (Al Basma Zeybeği, Gündoğdu Zeybeği)					
8	Mid-term Exam					
9	İzmir Zeybek region dances (Kız Harmandalısı, Bergama Zeybeği)					
10	İzmir Zeybek region dances (Ötme Bülbül, Kırmızı Buğday)					
11	Learned Artvin and Izmir region of the stage made arrangements dance					
12	Eskişehir region dances (Kırka Zeybeği, Yoğurdum var, Mendil)					
13	Eskişehir region dances (Eskişehir Zeybeği, Kalkı da Vermiş Martinimin Galeyi, Kırka Kadın Zeybeği)					
14	Eskişehir region dances (Düz Oyun, Ters Oyun, Kahveyi Kavururlar, Halkalı Şeker, Koca Öküz)					
15,16	Final Exam / Learned Eskişehir and Izmir region of the stage made arrangements dance					

NO	PROGRAM OUTCOMES	3	2	1
	To have the basic information on horticulture and other agriculture engineering			
1	areas, describing the required data to solve the problems, to have the ability of			Х
	gathering data and solving the problems by using information technology			
	To have theoretical and practical (land and laboratory) information on growing and			
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			Х
	transfer these information accurately			
	To have the ability of determining and evaluating the source of the ecological,			
3	biological, technical and economical problems that negatively effects the sufficient		X	
	yield and quality of horticultural crops			
Δ	To have the skill of utilizing different techniques for sustainable usage and			v
-	protection of genetic resources in horticultural area and environment			Δ
5	To have the ability of describing, classification and growing fruits, vegetables,			v
5	grapevine and ornamental plants			Δ
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
	To have the information and ability on breeding horticultural crops, developing a			
7	new cultivar, and propagation of these new varieties by different methods (seed,			Х
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			Χ
	To have the information on good agricultural practices, and by the way, to decide			
9	the right time of cultural practices of the horticultural crops, and to have the ability			Χ
	of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and			v
10	storage of horticultural crops, and to have the information on storage conditions			Δ
11	To have the ability of getting the data on horticultural area, and evaluation,			v
11	recording, project creation and application skills			Δ
12	To have the ability of working in individual, multiple and different disciplined		x	
12	teams, and having the responsibility		1	
1:Nor	e. 2:Partially contribution. 3: Completely contribution.			

Instructor:



SEMESTER Fall

 COURSE CODE
 251313019
 COURSE NAME
 Effective Communication

SEMESTER WEEKLY COURSE PER		IOD			COURSE OF					
	Theory	Practice	Labora	atory	Credit	ECTS	ТҮРЕ	LANGUAGE		
III	3	0	0		3	3	COMPULSORY () ELECTIVE (X)	Turkish		
				COU	RSE CA	ГEGOR	Y			
Basic Scien	ce l	Basic Engin	eering	[if it	contains	Plant conside	Protection rable design, mark with √)]	Social Science		
								Х		
			I	ASSES	SMENT	CRITE	RIA			
				Eva	aluation	Гуре	Quantity	%		
				1st M	id-Term		1	30		
				2nd M	fid-Term					
	MID-TE	RM		Quiz						
				Home	work			20		
				Projec	et .		1	30		
				Other	1)				
				Others	\$ ()	1	40		
]	FINAL EX	XAM						40		
PR	EREQUI	EITE(S)		-						
COUF	RSE DESC	CRIPTION		Communication, the basic components of communication, communication models, communication types, communication barriers, conflict resolution, empathy, effective presentation techniques, communication applications.						
COU	RSE OBJ	ECTIVES		The aim of this course is to acquire to students the basic knowledge and skills that will allow to communicate effectively with themselves and their environment.						
ADDITIVE PROFES	OF COU SSIONAL	RSE TO AP EDUATIO	PPLY N	With this course, students can experience the increase of effectiveness and satisfaction for professional life by learning how to establish healthy communication with other individuals they encounter in working life.						
COURSE OUTCOMES				 To make a definition of communication To know the basic components of communication To compare the similarities and differences between communication models To identify communication barriers To design applications demonstrating oral, written and verbal communication skills To use effective presentation techniques 						
	ТЕХТВООК				Baltaş, A. ve Baltaş, Z. (2015). <i>Bedenin dili</i> . İstanbul: Remzi. Harvard Business Review . (2008). <i>Etkin iletişim</i> . İstanbul: Optimist. İzgören, A. Ş. (2016). <i>Dikkat vücudunuz konuşuyor</i> . Ankara: Elma.					
OTHER REFERENCES				Dökmen, Ü. (2016). Sanatta ve günlük yaşamda iletişim çatışmaları ve empati. İstanbul: Remzi.						
TOOLS AND EQUIPMENTS REQUIRED				Projec	ctor, comp	outer				

COURSE SYLLABUS					
WEEK	TOPICS				
1	Information about the course content and student responsibilities				
2	Communication and the basic components				
3	Communication models				
4	Communication types (oral, written and verbal communication)				
5	Communication types (oral, written and verbal communication)				
6	Communication barriers				
7	Communication barriers				
8	Mid-term Exam				
9	Problem solving in interpersonal communication				
10	Problem solving in interpersonal communication				
11	effective presentation techniques				
12	effective presentation techniques				
13	Project presentation and evaluation				
14	Project presentation and evaluation				
15, 16	Final Exam				

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Nor	e. 2:Partially contribution. 3: Completely contribution.			

Instructor:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	251313020	COURSE NAME	Mediation and expertise in law

GEMEGTED	W	EEKLY CO	URSE PER	IOD COURSE OF						
SEMIESTER	Theor	ry Practio	ce Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAG E		
III	3	0	()	3	3	COMPULSORY () ELECTIVE (X)	Turkish		
				COUR	SE CATE	GORY				
Basic Scier	ıce	Basic En	gineering			Но	rticulture	Social		
			8 8	[if it	contains o	consider	able design, mark with (γ)	Science		
								X		
			A	SSESS	MENT CH	TERL	A	0 /		
					aluation 1	уре	Quantity	%		
				1st Mic	1-1 erm		1	40		
				2nd Mi	d-lerm					
	MID	-TERM		Quiz	1.					
				Homev	vork					
				Project						
				Others	(
	FINAI	FYAM		Others	()		1	60		
P	REREO	DUIEITE(S)					-	00		
COU	RSE D	ESCRIPTIO	ON	To hav	e informat	ion abou	it the expert agency			
CO				To exa	mine the n	nethods	of alternative solutions in Turkis	h domestic law		
CO	COURSE OBJECTIVES				research th	eir effec	ctiveness.			
ADDITIV	E OF C	OURSE TO	APPLY	To pro-	vide inforr	nation a	bout the expertise institution to j	plant protection		
PROFE	SSION	AL EDUCA	TION	student	s.					
COURSE OUTCOMES				 1- To have knowledge about the development of the ADK concept in the domestic legal system; 2-To learn the development and place of the concept of arbitration in the domestic legal system; 3- To be able to examine the regulations on the concept of Arbitration in the domestic legal system; 4- To learn the regulations on Mediation in the domestic legal system; 5- To be able to analyze the development of Mediation in the domestic legal system; 6- To be able to see the place of Mediation in the criminal justice system in the domestic legal system; 7- To be able to examine the mediation institution in TCK and CMK; 8- To be able to have information about the institution of expertise in the domestic legal system To be able to have information about the institution of expertise in the domestic legal system 						
ТЕХТВООК					domestic legal system; 10- To be able to have information about the problems faced by the expert witness institution; Özbek, M. (2016). Alternatif Uyuşmazlık Çözümü, 4.Baskı.Ankara: Yetkin Yayınları.Tanrıver S. (2002). Bilirkişinin hukukî statüsü, yükümlülükleri,					
OT	HER RI	EFERENCE	ES	yeikinen ve sorunnunugu. Ankara: reikin Yayınları.						
TOOLS AND) EOUI	PMENTS R	EQUIRED	Comp	uter and p	rojector				
	(~ 1	. = 11		-F	F	5 -				

COURSE SYLLABUS					
WEE	TOPICS				
K					
1	The concept of Arbitration in general				
2	Differences between the concept of arbitration and similar concepts				
3	Mediation - Arbitration distinction				
4	Short trial - Arbitration distinction				
5	The distinction between referee and expert				
6	Arbitration in domestic law				
7	Arbitration regulations in domestic law				
8	Development of Mediation concept in domestic law				
9	Midterm Exam				
10	Studies on Mediation in Domestic Law				
11	The effect of mediation in domestic law on the Turkish criminal justice				
12	The place of mediation in the criminal justice system				
13	Conciliation in TCK and CMK				
14	Expertise concept in domestic law				
15,16	Final Exam				

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			X
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE		251313021			COURS NAMI	SE E	Glass Arts		
SEMESTED	W	EEKLY C	COURSE I	PERIOD			COURSE OF		
SEWIESTER	Theo	ry Prac	tice I	Labratory	Credit	ECTS	ТҮРЕ	LANGUAG E	
III	3	0)	0	3	3	COMPULSORY () ELECTIVE (X)	Turkish	
				COL	RSE CATA	GORY			
Basic Scier	nce	Basic F	Engineerir	ng [if	f it contains	Ho conside	orticulture rable design, mark with (√)]	Social Science	
								\checkmark	
				ASSES	SSMENT CH	RITERI	ΙΑ		
					Evaluation 7	Гуре	Quantity	%	
				1st I	Mid-Term		1	40	
				2nd	Mid-Term				
	MID	-TERM		Quiz	Z				
				Hon	Homework				
				Proj	ect				
				Rep	Conternation (Conternation)				
				Othe	Others ()			60	
	FINA	L EXAM						00	
P	REREC	QUIEITE(S	S)	-					
COU	JRSE D	DESCRIPT	ION	Oxio diffe and	Oxides used in silicate-based glasses and their overall properties, different types of glasses, glass production methods, physical, chemical and mechanical properties of glasses				
CO	URSE (OBJECTIV	VES	To g type mec	To give basic knowledge about glass occurrence mechanisms, different types of glasses, glass production methods and physical, chemical and mechanical properties of glass				
ADDITIV PROFI	E OF C ESSION	COURSE T NAL EDUA	TO APPLY ATION	This nece	This course includes all fundamentals regarding glass arts that should be necessary for every person who are interested in this field.				
COURSE OUTCOMES				- Kn - Cla - Lis - An	 Knows and classifies glass materials Classifies glass production methods Lists glass properties Analyzes the advantages of novel technologies in glass field. 				
ТЕХТВООК				Mus Glas	Musgraves, J. D., Hu, J., & Calvez, L. (2019). Springer Handbook of Glass: Springer International Publishing.				
OT	HER R	EFERENC	CES	-					
TOOLS AND EQUIPMENTS REQUIRED									

COURSE SYLLABUS					
WEEK	TOPICS				
1	Glass definition, structure and glass theories				
2	Glass oxides				
3	Glass raw materials				
4	Glass production methods				
5	Glass coloring				
6	Glass defects and characterization				
7	Physical properties of glasses				
8	Chemical properties of glasses				
9	Mechanical properties of glasses				
10	Different types of glasses: pure silica glass, alkali-silicate glasses				
11	Soda-lime-silica glasses, lead-based glasses				
12	Boron-silicate glasses, alumina-silicate glasses, phosphate-based glasses				
13	Glass batch calculations				
14	Glass batch calculations-continued				
15,16					

NO	PROGRAM OUTCOMES	3	2	1
	To have the basic information on horticulture and other agriculture engineering			
1	areas, describing the required data to solve the problems, to have the ability of			X
	gathering data and solving the problems by using information technology			
	To have theoretical and practical (land and laboratory) information on growing and			
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			X
	transfer these information accurately			
	To have the ability of determining and evaluating the source of the ecological,			
3	biological, technical and economical problems that negatively effects the sufficient			X
	yield and quality of horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and			X
· ·	protection of genetic resources in horticultural area and environment			
5	To have the ability of describing, classification and growing fruits, vegetables,			X
	grapevine and ornamental plants			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
	To have the information and ability on breeding horticultural crops, developing a			
7	new cultivar, and propagation of these new varieties by different methods (seed,			X
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			X
	To have the information on good agricultural practices, and by the way, to decide			
9	the right time of cultural practices of the horticultural crops, and to have the ability			Х
	of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and			x
10	storage of horticultural crops, and to have the information on storage conditions			
11	To have the ability of getting the data on horticultural area, and evaluation,			x
	recording, project creation and application skills			
12	To have the ability of working in individual, multiple and different disciplined			x
12	teams, and having the responsibility			- 1
1:Non	e. 2:Partially contribution. 3: Completely contribution.			



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	OURSE 251313022 CODE				COURS NAMI	SE E	Works of Volunteering	
SEMESTER	WEEKLY COURSE PERIOD			OD COURSE OF				
SHULL I ER	Theory	Practice	Labora	atory	Credit	ECTS	ТҮРЕ	LANGUAG E
III.	3	0	0		3	3	COMPULSORY () ELECTIVE (X)	Turkish
				COUR	SE CATE	GORY		
Basic Science Basic Engineering					contains o	Ho conside	rticulture rable design, mark with (√)]	Social Science
								X
			A	SSESS	MENT CF	RITERI	Α	
			_	Ev	aluation T	Гуре	Quantity	%
			-	1st Mi 2nd M	d-Term id-Term		1	40
	MID-TI	ERM	_	Quiz				
			-	Home	work			
			-	Projec	t			
			-	Report Others (
	FINAL E	CXAM		omens			1	60
P	REREQU	IEITE(S)					-	
COURSE DESCRIPTION				In the course, they will briefly see the working procedures and principles of non-governmental organizations in today's world, especially volunteering studies and civil society studies, their activities, and their strategies to explain themselves to the society in the context of publicity and public relations. In addition to these, there will be experience sharing where various non-governmental organizations convey their activities				
COURSE OBJECTIVES				The aim of this course is to provide students with conceptual competence in Civil Society and Volunteering and the strategic knowledge they will follow in order to be more productive as an NGO professional or volunteer. Besides the work of civil society organizations in the developing world and in Turkey will be discussed.				
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION				With this lesson, the student; Will have sufficient conceptual knowledge about Volunteering Studies, Become aware of the activities and practices of non-governmental organizations, Learn the contributions of civil society studies within the social structure of a country, and be able to analyze these issues.				
COURSE OUTCOMES					With this lesson, the student; He / she will have sufficient conceptual knowledge about Volunteering Studies, become knowledgeable about Civil Society practices, learn the relationship and effects between Civil Society Studies and Society of a country, and be able to analyze these issues.			
	TEXTB	OOK		Currer	nt reports o	f interna	ational and national organizations	5
OTHER REFERENCES				-				
TOOLS AND EQUIPMENTS REQUIRED				Com	puter and p	rojector		
	COURSE SYLLABUS							
-------	--	--	--	--	--	--	--	--
WEEK	OPICS							
1	Introduction in the context of Subject and Content							
2	The Concept of Civil Society and NGOs							
3	State and Civil Society in Turkey							
4	Volunteering in Civil Society Organizations, Volunteer Management							
5	Social Responsibility and Social Entrepreneurship							
6	Communication, Campaign Execution and Public Relations Practices in NGOs							
7	NGO reviews							
8	NGO reviews							
9	Midterm Exam							
10	NGO reviews							
11	NGO reviews							
12	NGO reviews							
13	NGO reviews							
14	NGO reviews							
15,16	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			X
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			x
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			x
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			



ESOGÜ Horticulture Department Course Information Form

COURSE CODE	COURSE COURSE General Vegetable Growing CODE NAME										
	I										
SEMESTER	W	EEKLY COURS	SE PERI	OD	DD COURSE OF						
	Theor	y Practice	Labra	ntory	Credit	ECTS	ТҮРЕ	LANGUAGE			
4	1	2	0	1	2	6	COMPULSORY (X) ELECTIVE (Turkish			
				COUR	SE CATA	GORY					
Basic Scier	ering	[if it	contains	Ho conside	rticulture rable design, mark with (√)]	Social Science					
							X				
			A	SSESS	MENT CF	ATTERI	A One of the	0/			
				Lot Mir	aluation 1	уре		<u> </u>			
		2nd Mi	id - Term		1	2.5					
				Ouiz							
	MID	-TERM		Homev	vork						
				Project							
				Report							
						Others (Practice)					
	FINA	L EXAM					1	50			
Pl	REREQ	QUIEITE(S)		-							
COU	IRSE D	ESCRIPTION		Defining of the term of vegetable, classification of vegetables botanical and according to various characters, flowers in vegetables, propagation methods, important growth factors in vegetable, nursery production, soil preparation, planting, fertilizing and watering.							
CO	URSE (DBJECTIVES		This course aimed to increase the knowledge and abilities of students in basic principles of vegetable production							
ADDITIVI PROFI	E OF C ESSION	OURSE TO AP	PLY N	Theoretical and practical information of vegetables production which has an important place in the horticultural crops is given in this course.							
CO		At the end of this course, the student will have the necessary knowledge on current situation problems of vegetable cultivation botanical classification according to the characteristics of vegetables, flower biology, reproduction of vegetables, important environmental conditions in vegetable crops production, growing of seedless, cultural practices such as soil preparation planting fertilization and irrigation									
ТЕХТВООК					Genel Sebze Yetiştiriciliği Cilt I. A. GÜNAY, A. Ü. Z.F. Bahçe Bit. Böl. 1992. Ankara.						
OT	HER RI	EFERENCES		Sebzecilik (Genel Teknikler Özel Uygulamalar) H. Kaygısız. Hasad Yay							
TOOLS AND) EQUI	PMENTS REQU	JIRED	Projec	tion device	e and pc					

	COURSE SYLLABUS
WEEK	TOPICS
1	Description of vegetables, differences from other products, importance in nutrition and human health
2	Botanical classification of vegetables, the most important families in terms of production and consumption and their important species
3	classification of vegetables according to biology of flowers, edible parts, processing methods, cultivation seasons, duration of life etc.
4	Vegetable business operating characteristics
5	Important factors (climate; light, temperature, precipitation, humidity, wind and soil characteristics; depth, PH, salinity, etc.) that affect the choice of the place of vegetables business.
6	1. Midterm exam, Important factors (climate; light, temperature, precipitation, humidity, wind and soil characteristics; depth, PH, salinity, etc.) that affect the choice of the place of vegetables business.
7	Reasons and importance factors to be considered for rotation
8	Vegetable reproduction methods. Vegetative and generative propagation methods, their advantages and disadvantages
9	Ttypes of vegetable seed (Open pollinated, hybrid, clone and synthetic cultivars. Germination of seeds, and some treatments of pregermination
10	Preparation of vegetable cultivation place; Calculate the amount seeds or seedlings per unit area. Sowing or planting depth
11	2. Midterm exam, Preparation of vegetable cultivation place; Calculate the amount seeds or seedlings per unit area. Sowing or planting depth
12	Irrigation methods in vegetable crops cultivation, drip irrigation, surface irrigation, sprinkler irrigation and other methods, and their advantages and disadvantages
13	Application of fertilizer on vegetable, type of fertilizer at the time of giving, the way of giving, and the annual nursery
14	Course evaluation
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	Х		
8	To have the skill of using and applying biotechnology on horticulture			
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	

Instructor(s): Asst. Prof.Dr. Kenan SÖNMEZ

Date:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	,	251313006			COURSE Agricultural Structures and Irrigation NAME Provide the structure of the str					
	w	FFKLV COUR	SE PERI	OD			COURSE OF			
SEMESTER	Theor	ry Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE		
IV	2	0	0)	2	4	COMPULSORY (X) ELECTIVE (Turkish		
		COUR	SE CATA	GORY						
Basic Science Basic Engineering			ering	[if it	contains c	Ho conside	orticulture rable design, mark with (√)]	Social Science		
			A	SSESSI	MENT CF	RITERI	A	A (
						уре		%		
							1	50		
		Ouiz								
		Homey	vork							
						Project				
				Report						
				Others	()					
	FINA	L EXAM					1	50		
P]	REREC	QUIEITE(S)		-						
COU	JRSE D	ESCRIPTION		Agricultural structures, hydrology, soil-plant-water relations,						
CO	URSE (DBJECTIVES		The main aim of the course is to provide knowledge about agricultural						
ADDITIV PROFI	E OF C ESSION	OURSE TO AP	PLY N	Learns the plain of agricultural structures and irrigation and drainage.						
COURSE OUTCOMES				 Learning general planning feature of agricultural structures Learning of business center and regulation Learning examination of irrigation and drainage subject Learning drainage methods Learning irrigation water quality 						
	TEXT	гвоок		Güngör, Y., Erözel, Z., Yıldırım, O. Sulama, Ankara Üniversitesi Ziraat Fakültesi Yayın No:1540, ders kitabı:493				niversitesi		
OT	HER R	EFERENCES		-						
TOOLS AND EQUIPMENTS REQUIRED				-						

	COURSE SYLLABUS					
WEEK	TOPICS					
1	Soil-plant-water ralations					
2	Water intake rate of soil					
3	Evapotranspration					
4	Plant coeffecient					
5	Irrigation yield					
6	6 Midterm Exam, Need of irrigation water					
7	Irrigation time planing					
8	Irrigation methods (surface irrigation)					
9	Irrigation methods (compressed irrigation)					
10	Agricultural drainage					
11	Irrigation water quality and salinity					
12	Irrigation water quality and salinity					
13	Agricultural structure					
14	Agricultural structure					
15,16	Final exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			x
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER Fall

COURSE CODE	,	25131	14027			COURS NAMI	SE E	Soil Science and Plant Nutrition			
SEMESTED	W	/EEK	LY COURS	SE PERI	OD			COURSE OF			
SEWIESTER	Theo	ory	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE		
IV	3		0	0)	3	3	COMPULSORY () ELECTIVE (X)	Turkish		
			COURS	SE CATA	GORY						
Basic Science Basic Engineering					[if it	contains	Ho conside	orticulture rable design, mark with (√)]	Social Science		
	Х										
				A	SSESSI	MENT CF	RITERI	A	۵ <i>(</i>		
					Ev:	aluation 1	ype		%		
MID-TERM					2nd Mi	i-Term		1	40		
					Ouiz						
					Homev	vork					
					Project						
					Report						
					Others	()					
	FINA	L EX	KAM				60				
P	REREG	QUIE	EITE(S)		-						
COU	RSE D	DESC	RIPTION		Diagnosing nutrient disorders of plants						
CO	URSE	OBJI	ECTIVES		Determine for fertilizer needs while diagnosing nutrient disorders in growing crops include plant tissue analysis and visual symptoms of nutrient deficiency and toxicity.						
ADDITIVI PROFE	E OF C ESSIOI	COUF NAL	RSE TO AP EDUATION	PLY N	To fertilize considering deficiency of plant nutrition.						
CO	URSE	OUT	COMES		Diagnosing nutrient disorders and to determine which form of fertilizer needs by plants.						
ТЕХТВООК					Gübrel Katkat.	er ve Gübr	eleme]	Fekniği (2009). Prof. Dr. B. Kaca	r ve Prof. Dr. V.		
OTHER REFERENCES				Bitki Beslemenin Esasları ve Bitkilerde Beslenme Bozukluğu Belirtileri (2008). Prof. Dr. Nesrin Yıldız. Bitkilerde Beslenme Bozuklukları (2005). Prof. Dr. Mehmet Aktaş ve Mehmet Ateş.				kluğu Belirtileri ehmet Aktaş ve			
TOOLS AND	EQU	IPMI	ENTS REQU	UIRED	-						

	COURSE SYLLABUS
WEEK	TOPICS
1	Utilization of visual deficiency symptoms of plants
2	Plant analysis; tissue and total plant analysis methods
3	Interpretation of plant analysis; adequacy groups, critical concentration, ratio among plant nutritions, Kenworthy standard values
4	Soil Fertility Laws
5	Interpretation of soil testing; biological and field methods
6	Mid Term Exam- Interpretation of soil testing; biological and field methods
7	Greenhouse, Mitsherlich, Jenny, Neubauer, microbiological and isotopic methods; Knowledge of chemical analysis of soil
8	Total analysis and extraction methods of soil
9	Interpretation of plant analysis and soil testing
10	Calculation of fertilizer values
11	Mid Term Exam- Calculation of fertilizer values
12	Determination of suitable soil testing for region; Calibration of soil testing; critical value of soil testing
13	Economical use of fertilizer
14	Writing of Interpretation of soil testing
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



ESOGU Horticulture Department Course Information Form

SEMESTER Spring **COURSE CODE** 251314003 **COURSE NAME** Research and Experimental Methods SEMESTE WEEKLY COURSE PERIOD **COURSE OF** R ECTS Theory Practice Laboratory Credit ТҮРЕ LANGUAGE COMPULSORY (X) ELECTIVE () Turkish 2 2 3 5 4 0 **COURSE CATAGORY** Horticulture Social **Basic Science Basic Engineering** [if it contains considerable design, mark with $(\sqrt{)}$] Science Х ASSESSMENT CRITERIA **Evaluation Type** % Quantity 1st Mid-Term 40 2nd Mid-Term Quiz **MID-TERM** Homework Project Report Others (.....) FINAL EXAM 1 60 **PREREQUIEITE(S)** None Planning of the experiments, Basic principles in designing an experiment, Experimental error, Concept of Replication and Parallel, Comparison of two independent groups, F distribution and variance analysis (ANOVA) technique, Completely Randomized Design, sample problem solutions and interpretation of results. Multiple comparison methods, Little Significant Difference method, Duncan test, sample problem solutions and interpretation of results. Relation of F = t2. Assumptions of ANOVA, homogeneity control **COURSE DESCRIPTION** of variances, sample problem solutions and interpretation of results. Randomized Block Design, Latin Square design, Relative Efficiency, Factorial Experiments, Factorial Experiments in Completely Randomized Design, The concept of interaction, Simple and main effects, Factorial Experiments in Randomized Block Design, Split-plots in randomized block design, Repeated measurements experiments, One Factor experiments with Repeated Measurements, Two Factor experiments with Repeated Measurements In theResearch and Experiment Methods course, which is the second stage after the statistics course, different experimental designs are explained with examples and analysis of the obtained data and interpretation of the results are explained. **COURSE OBJECTIVES** -To get the researcher's mission to the students,

- Development of analytical thinking,

experiments,

Kitabı: 295

Kılavuzu: 244. Calculator

İstanbul, Kriter Yayıncılık

University John Wiley & Sons, Inc

* To get the researcher's mission to the students, * Development of analytical thinking,

experimental material and variable being studied

experiments carried out in different experimental designs

ADDITIVE OF COURSE TO

APPLY PROFESSIONAL

EDUATION

COURSE OUTCOMES

TEXTBOOK

OTHER REFERENCES

TOOLS AND EQUIPMENTS REQUIRED - It is aimed to increase the ability to comment on different branches of the agricultural

* It is aimed to increase the ability to comment on different branches of the agricultural

To learn that information on the subject being studied can be obtained by carrying out experiments,
 To learn that basic principles which are to be taken into consideration while carrying out an

3) To learn that the most appropriate experimental design depends on the amount of homogeneous

4) To learn to choose the most appropriate statistical method to analyze the collected data from

Orhan DÜZGÜNEŞ, Tahsin KESİCİ, Orhan KAVUNCU ve Fikret GÜRBÜZ (1987). Araştırma ve Deneme Metodları (istatistik Metodları-II). Ankara Üniversitesi, Ziraat fakültesi Yayınları:1021, Ders

Mehmet MENDEŞ (2013). Uygulamalı Bilimler için İstatistik ve Araştırma Yöntemleri (3. Baskı),

Douglas C. MONTGOMERY, Design and Analysis of Experiments, Fifth Edition (2001). Arizona State

Fikret GÜRBÜZ, Ensar BASPINAR ve Zahide KOCABAS (1995). Arastırma ve Deneme Metodları

Uygulama Kılavuzu (II. Baskı). Ankara Üniversitesi, Ziraat fakültesi, Yayın No: 1431, Uygulama

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Planning of the experiments, Basic principles in designing an experiment, Experimental error, Concept of Replication and Parallel, Comparison of two independent groups,						
2	F distribution and variance analysis (ANOVA) technique, Completely Randomized Design, sample problem solutions and interpretation of results.						
3	Multiple comparison methods, Little Significant Difference method, Duncan test, sample problem solutions and interpretation of results.						
4	Relation of $F = t2$. Assumptions of ANOVA, homogeneity control of variances, sample problem solutions and interpretation of results.						
5	Completely Block Design, Latin Square Design, Relative Efficiency, Missing observations, sample problem solutions and interpretation of results.						
6	Factorial Experiments, Factorial Experiments in Completely Randomized Design, sample problem solutions and interpretation of results.						
7	The concept of interaction, Simple and main effects, sample problem solutions and interpretation of results.						
8	Completely Block Factorial Experiments Design, sample problem solutions and interpretation of results.						
9	Split-plots in Completely Randomized Design, sample problem solutions and interpretation of results.						
10	Split-plots in Completely Block Design, sample problem solutions and interpretation of results.						
11	Repeated measurements experiments, sample problem solutions and interpretation of results.						
12	Repeated measurements experiments, sample problem solutions and interpretation of results.						
13	One Factor experiments with Repeated Measurements, sample problem solutions and interpretation of results.						
14	Two Factor experiments with Repeated Measurements, sample problem solutions and interpretation of results.						
15,16	Final exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Signature:

Date:



ESOGÜ Horticulture Department Course Information Form

COURSE CODE	25	1314029		COURSE NAME			Plant Protection			
SEMESTED WEEKLY COURSE PERIO							COURSE OF			
SEWIESTER	Theory	Practice	Labra	tory	Credit	ECTS	ТҮРЕ	LANGUAGE		
IV	2	0	0		2	4	COMPULSORY (X) ELECTIVE ()	Turkish		
		-		COUR	I SE CATA	GORY				
Basic Scien	ice	Basic Engine	ering	[if i	t contains	Ho	orticulture erable design, mark with (√)	Social Science		
							\checkmark			
			Α	SSESS	MENT CF	RITERI	A			
				Ev	aluation T	уре	Quantity	%		
				1st Mi	d-Term		1	40		
			-	2nd M	1d-Term					
	MID_TI	FDM		Quiz	work					
	MID-II			Project	t					
				Report	t					
				Others	(Lab					
				assign	ments)					
	FINAL E	EXAM					1	60		
PI	REREQUI	IEITE(S)		None						
COU	RSE DES	CRIPTION		General information about insects and their importance, insect morphology and physiology, reproduction biology, insect ecology, plant diseases, symptoms, abiotic and biotic factors of diseases, and agricultural management techniques will be given.						
COL	URSE OB.	JECTIVES		The general information about plant diseases and pests will be given.						
ADDITIVI PROFE	E OF COU ESSIONAI	JRSE TO AP L EDUATIO	PLY N	Learn to pest and disease factors affecting the yield and quality of plants.						
COURSE OUTCOMES				 1)They will be able to explain the concept of plant disease and symptoms 2) They will be able to find out the relationship between plant diseases, abiotic and biotic factors 3) They will be able to apply knowledge of basic agricultural pest management 4) Students will be able to express what plant pest insects and diseases 5) They will be able to apply knowledge of general entomology such as insect morphology, physiology, reproduction biology and insect ecology. 						
	TEXTB	OOK		1. Tarımsal Savaşım Yöntem ve İlaçları. 1993. Delen, N. Ege Üniversitesi Ziraat Fakültesi Ofset Başımevi. İzmir.						
OTHER REFERENCES					 Agricultural Chemicals. 1991. Thomson, W. T. Book IV-Fungicides, Thomson Puplication, California. Agricultural Chemicals. 1991. Thomson, W. T. Book III-Miscellaneous Agricultural Chemicals, Thomson Puplication, California. Agricultural Chemicals. 1991. Thomson, W. T. Book I-Insecticides, Thomson Puplication, California. The Pesticide Manual. 1995. Tomlin, C. Incorporating the Agrochemicals Handbook, Crop Protection Publication, U.K. Tarımsal Zararlılarla Savaş Yöntem ve İlaçları. 1993. Öncüer, C. Ege Üniversitesi Basımevi, İzmir. Tarımda İlaçlı Mücadelenin Temel Prensipleri. 1996. Kaygısız, H. Hasad Yayıncılık LTD. ŞTİ. Rebel Ofset, İstanbul. Bitki Koruma El Kitabı. 2002. Anonymous. T.C. tarım ve Köyişleri Bakanlığı İzmir İl Müdürlüğü Yayınları No:352. 					
TOOLS AND	EQUIPM	IENTS REQ	UIRED	Compu	ter and proje	ection.				

COURSE SYLLABUS								
WEEK	TOPICS							
1	Introduction to concept of agricultural fight and the methods used in agricultural fight							
2	Cultural precautions used against to plant disease							
3	Biologic fight methods used against to plant disease							
4	Domestic and foreign quarantine precautions used against to plant disease.							
5	Chemical fight methods used against to plant pathogens.							
6	Mid-Term Exam - Chemical fight methods used against to plant pathogens.							
7	Field work; Properties of fungucides used in chemical fight							
8	Cultural precautions using against agricultural pests							
9	Field and laboratory work							
10	Domestic and foreign quarantine precautions used against to pests.							
11	Domestic and foreign quarantine precautions used against to pests							
12	Biotechnique methods used against to pests.							
13	Biologic and all fight methods used against to pests.							
14	Chemical fight used against to pests and properties of pesticide.							
15,16	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	x		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		x	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



ESOGÜ Horticulture Department Course Information Form

COURSE CODE	SE251313008COURSE NAMEField Crops											
SEMESTER	W	'EEI	KLY COUR	SE PERI	OD	OD COURSE OF						
	Theo	ry	Practice	Labra	atory	Credit	ECTS	б ТҮРЕ	LANGUAGE			
4	2		0	()	2	3	COMPULSORY (X) ELECTIVE ()	Turkish			
					COUR	SE CATA	GORY	7				
Basic Scier	ice]	Basic Engine	ering	[if it	contains	Ho conside	orticulture erable design, mark with (√)]	Social Science			
			Х		SSESSI	MENT OF	TED	τ				
				A	тээгээ] Гээгээ]	aluation 7		IA Opentity	0/_			
					1st Mi	d-Term	ype		40			
					2nd M	id-Term		1	10			
		-	D 14		Quiz							
	MID)-TE	RM		Homey	work						
					Project							
					Report							
					Others							
	FINA	LE	XAM						60			
Pl	REREG	QUI	EITE(S)		None							
COU	RSE D)ES(CRIPTION		Presentation of field crops, Cultivation of field crops							
CO	JRSE (OBJ	ECTIVES		To provide information the introduction and cultivation of field crops.							
ADDITIVI PROFI	E OF C ESSION	COU NAL	RSE TO AP	PLY N	To learn enought information about cultivation technological techniques in field crops.							
CO	URSE	OU	TCOMES		Understanding and use of arable crops farming in practice to gain the ability to field practicable technologic.							
ТЕХТВООК					Gökkuş, A., Kantar, F., Karadoğan, T., Koç, A. 2008. Tarla Bitkileri. Atatürk Üniv. Ziraat Fak. Ders yayınları, 190 s. Erzurum.							
OTHER REFERENCES				Geçit, H. H., Çifçi, C. Y., Kolsarıcı, Ö., Ekiz, H. Tarla Bitkileri. Ankara Üniv. Ders Kitabı Ceylan, A. Tarla Tarımı								
TOOLS AND EQUIPMENTS REQUIRED												

COURSE SYLLABUS								
WEEK	ΓΟΡΙCS							
1	Field crop farming and historical development							
2	The structure of agricultural statement in the world and our country							
3	Agricultural production in the world and our country							
4	Classification of field crops							
5	Field farming systems							
6	Purpose of soil tillage							
7	Soil tillage in dry farming							
8	Soil tillage in irrigated farming and moist farming							
9	Fallow							
10	Sowing (Sowing date, plant density and methods)							
11	Crop rotation							
12	Fertilization in field crops							
13	Irrigation of field crops							
14	Harvest for grain and forages							
15,16	Final exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instructor(s): Prof.Dr. Mehmet Demir KAYA,

Date:

Assoc.Prof.Dr. Nihal KAYAN



ESOGÜ Horticulture Department Course Information Form

COURSE C	51314011		COURSE NAME Occupational health and Safety II							
SEMESTE WEEKLV COURSE PERI								COUDSE OF		
SEMESTE R	Theor Practice Laborat					COURSE OF				
			atory	Credit	ECTS	ТҮРЕ	LANGUAGE			
4	2		0	0		2	2	Compulsory (+) Elective ()	Turkish	
					COURS	SE CATA	GORY			
Basic Scier	nce		Agricultu	re	[if i	it contain	Hor s consid	ticulture lerable design, mark with (√)]	Social Science	
20			20					30	30	
				A	SSESSN	MENT CI	RITERI	A		
					Eva	aluation]	Гуре	Quantity	%	
					1 st M10	d-Term			40	
					2 nd M1	d-Term				
	MID	-TE	RM		Quiz	manle				
					Projec	work +				
					Report	ι				
					Others	<u>د</u> در ۲				
FINAL EXA	м				0 111010	()	,		60	
		0)) T					
PREREQUI	ETTE(;	S)			None					
COURSE DI	ESCRI	[PT]	ION		Occupational health and safety organization, occupational health and safety law no. 6311, agricultural issues					
COURSE O	BJECT	ΓIV	ES		To teach how to prevent work accidents and occupational diseases in the workplace and solve possible problems.					
ADDITIVE PROFESSIO	OF CC DNAL)UR EDI	SE TO API	PLY						
COURSE OUTCOMES					 1.To improve the physical conditions of the workplace, develop alternative solutions and solving also improve existing physical conditions in the workplace 2.Design of the workplace conditions(noise, heat, dusti etc.) taking measurements, analyzing the results and interpretation. 3.Potential risks in the workplace, assessment and development of solutions to protect human health. 					
TEXTBOOK	K				Kahya	, E. 2014,	İş Güve	enliği, ESOGÜ Yayın No:246,	Eskişehir	
OTHER REFERENCES				Yiğit, A., Iş Güvenliği, 2013, Dora Basım-Yayın Dağıtım Ltd. Şti, Bursa Bayır, M ve Ergül, M., 2006, İş güvenliği ve Risk Değerlendirme Uygulamaları, Bursa Dizdar, E.N., 2008, İş Güvenliği, 4. Baskı, Murathan Yayınevi, Trabzon Esin, A., 2006, Yeni Mevzuatın Işığında İş Sağlığı ve Güvenliği, TMMO MMO Yayın No: MMO/363/2. Ankara.						
TOOLS AND EQUIPMENTS REQUIRED					Explanation of topics with the help of visuals.					

COURSE SYLLABUS								
WEEK	TOPİCS							
1	The importance of occupational health and safety							
2	Scope of work health and safety law numbered 6331 and its content							
3	Strategies in natural disasters and business accidents							
4	Safety of electrical and electrical equipment							
5	Personal safeguards and usage policy							
6	Obligations arising from work accidents and occupational diseases							
7	Obligations arising from work accidents and occupational diseases							
8	Midterm exam - Examination of occupational risks							
9	Harmful factors in the workplace (physical, chemical, biological and psychological factors)							
10	Harmful factors in the workplace (physical, chemical, biological and psychological factors)							
11	Work related diseases and occupational diseases, mobbing							
12	Work related diseases and occupational diseases, mobbing							
13	Special groups in working life (child workers, female workers, seasonal agricultural workers)							
14	Occupational and environmental health problems arising from industrial activities, protection and measures.							
15,16	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	COURSE CODE 251314031					JRSE ME	Intellectual Property Law		
SEMESTED	WEEF	KLY COURSE	E PERIOI	COURSE OF					
SEWIESTER	Theory Practice Laborato				Credit	ECTS	ТҮРЕ	LANGUAG E	
IV	3	0	0		3	3	COMPULSORY () ELECTIVE (X)	Turkish	
				COUF	RSE CA	TAGORY			
Basic Scier	nce	Basic Engine	eering	[if i	t contai	Ho ns conside	orticulture rable design, mark with (√)]	Social Science	
								Х	
			A	SSESS	SMENT	CRITERI		A (
l			ŀ	Lot M	valuatio	n Type		%	
l			-	Ouiz	ia-Term		1	40	
	MID-T	TERM	-	Home	work				
				Projec	et				
			-	Repor	t				
				Other	s ()	1	60	
	FINAL	EXAM					1	00	
P	REREQU	JIEITE(S)					-		
COURSE DESCRIPTION					Intellectual rights, distinctive signs, work, owner of the work, rights of the owner of the work, contracts related to the work, violations and lawsuits, Trademark law; concept, registration, protection and scope, the trademark being the subject of proceedings, the invalidity of the trademark, violations and lawsuits; Patent law; concept, inventor and right, granting a patent, rights arising from patents, invalidity of patent, violations and lawsuits, Industrial design law; concept, right to design, subject of design right to legal proceedings, invalidity of design right violations				
CO	URSE OI	BJECTIVES		It is aimed to teach students the basic concepts of Intellectual Property Law					
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION					Within the scope of the course, they will have information about intellectual property related issues that they will encounter within the scope of their profession				
COURSE OUTCOMES					Understands the basic concepts of Intellectual Property Law. Gains information about national and international regulations and practices related to the subject. Learns the work, types of work, the rights of the owner of the work and ways of protection. Understands industrial property rights (such as trademark, patent, utility model, geographical indication).				
	TEXTI	воок		Lecture notes					
OT	HER RE	FERENCES		-					
TOOLS AND EQUIPMENTS REQUIRED					ctor, con	nputer			

	COURSE SYLLABUS						
WEEK	OPICS						
1	Intellectual Property Law in General						
2	Basic Principles						
3	Main Elements of Intellectual Property System						
4	Intellectual and Artistic Works						
5	Spiritual Rights						
6	Other Rights						
7	Brands						
8	Midterm Exam						
9	Patents						
10	Utility Models						
11	Designs						
12	Trade Names-Business Names-Trade Secrets- Know-how						
13	New Plant Varieties-Integrated Circuit Topographies						
14	Common Provisions Regarding Industrial Rights						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
	To have the basic information on horticulture and other agriculture engineering			X
1	areas, describing the required data to solve the problems, to have the ability of			
	gathering data and solving the problems by using information technology			
	To have theoretical and practical (land and laboratory) information on growing and			X
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			
	transfer these information accurately			
	To have the ability of determining and evaluating the source of the ecological,			X
3	biological, technical and economical problems that negatively effects the sufficient			
	yield and quality of horticultural crops			
Δ	To have the skill of utilizing different techniques for sustainable usage and			X
7	protection of genetic resources in horticultural area and environment			
5	To have the ability of describing, classification and growing fruits, vegetables,			X
5	grapevine and ornamental plants			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
	To have the information and ability on breeding horticultural crops, developing a			Х
7	new cultivar, and propagation of these new varieties by different methods (seed,			
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			Χ
	To have the information on good agricultural practices, and by the way, to decide			Х
9	the right time of cultural practices of the horticultural crops, and to have the ability			
	of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and			X
10	storage of horticultural crops, and to have the information on storage conditions			
11	To have the ability of getting the data on horticultural area, and evaluation,			Х
11	recording, project creation and application skills			
12	To have the ability of working in individual, multiple and different disciplined			X
12	teams, and having the responsibility			
1:Nor	e. 2:Partially contribution. 3: Completely contribution.			



ESOGÜ HorticultureDepartment COURSE INFORMATION FORM

COURSE CODE	2	251314032			COU NA	RSE ME	IT (Informatic) Law		
SEMESTER	WEI	EKLY COURSI	E PERIO	D			COURSE OF	LANGUAG	
	Theor	ry Practice	Laborat	ory	Credit	ECTS	ТҮРЕ	LANGUAG E	
IV	3	0	0		3	3	COMPULSORY () ELECTIVE (X)	Turkish	
				COL	JRSE CAT	FAGORY			
Basic Scier	nce	Basic Engin	eering	[it	f it contair	Ho 1s conside	rticulture rable design, mark with (√)]	Social Science	
								Х	
			A	SSES	SSMENT	CRITERI	A		
					Evaluation	n Type	Quantity	<u>%</u>	
				Ist I	Mid-Term		l	40	
	MID	-TERM		Hon	z nework				
				Proj	ect				
					ort				
					ers (.)			
	FINA	L EXAM					1	60	
Pl	REREC	QUIEITE(S)					-		
COU	IRSE D	DESCRIPTION		Forensic Information Technology, Information Systems Management, Freedom of Expression Debates on the Internet and Digital Activism, Information and Communication Technologies Law Practices, Information Security Law, Dangers Over the Internet and Their Effects on Our Social Life Law and Technology Data Protection Law					
CO	URSE (OBJECTIVES		In the informatics law course, it is aimed to examine the legal problems brought by information technologies and to seek solutions to the basic internet and legal problems					
ADDITIVI PROFE	E OF C SSION	COURSE TO AF AL EDUCATIO	PPLY DN	Within the scope of the course, he/she will have information about the subjects related to informatics law that he/she will encounter within the scope of his/her profession.					
COURSE OUTCOMES				Has the power to synthesize the relationship between information technologies and law. Have basic information about IT Law resources and how to reach them. Learns to define and analyze the problems related to IT law.					
ТЕХТВООК					ture notes				
ΟΤΙ	HER R	EFERENCES							
TOOLS AND	EQUI	IPMENTS REQ	UIRED	Proj	ector, com	puter			

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Information Technology						
2	E-Commerce						
3	Intellectual Property Law						
4	Cyber Crimes and Case Studies						
5	Surveillance and Listening Technologies						
6	Informatics and Ethics						
7	Forensic Informatics						
8	Midterm Exam						
9	Internet and Internet Technologies						
10	Protection of Personal Data						
11	Investigation and Prosecution Legal Procedures						
12	International Legislation						
13	Court Orders						
14	Telecommunications Law						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
	To have the basic information on horticulture and other agriculture engineering			
1	areas, describing the required data to solve the problems, to have the ability of			X
	gathering data and solving the problems by using information technology			
	To have theoretical and practical (land and laboratory) information on growing and			
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			X
	transfer these information accurately			
	To have the ability of determining and evaluating the source of the ecological,			
3	biological, technical and economical problems that negatively effects the sufficient			X
	yield and quality of horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and			x
	protection of genetic resources in horticultural area and environment			**
5	To have the ability of describing, classification and growing fruits, vegetables,			x
	grapevine and ornamental plants			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
	To have the information and ability on breeding horticultural crops, developing a			
7	new cultivar, and propagation of these new varieties by different methods (seed,			Х
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			X
	To have the information on good agricultural practices, and by the way, to decide			
9	the right time of cultural practices of the horticultural crops, and to have the ability			Х
	of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and			v
10	storage of horticultural crops, and to have the information on storage conditions			Λ
11	To have the ability of getting the data on horticultural area, and evaluation,			v
11	recording, project creation and application skills			Λ
12	To have the ability of working in individual, multiple and different disciplined		v	
12	teams, and having the responsibility		Λ	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	2	251314033			COU NA	JRSE ME	State and Society			
CEMPOTED	WE	EKLY COURS	E PERIOI	D COURSE OF						
SEMIESTER	Theo	ry Practice	Laborate	ory C	redit	ECTS	ТҮРЕ	LANGUAG E		
IV	3	0	0		3	3	COMPULSORY() ELECTIVE(X)	Turkish		
				COUR	SE CA	TAGORY				
Basic Scier	nce	Basic Engin	eering	[if it	contai	Ho ns conside	rticulture rable design, mark with (√)]	Social Science		
								Х		
			A	SSESSI	MENT	CRITERI	A			
				Ev	<u>aluatio</u>	n Type	Quantity	%		
				1st Mie	d-Term		1	40		
	MID	TFRM		Homes	work					
	MID			Project	t					
				Report						
)				
	FINA	L EXAM					1	60		
P	REREC	QUIEITE(S)					-			
COU	JRSE D	DESCRIPTION		The characteristics of state administration and social life in Turks will be introduced under different headings						
CO	URSE (OBJECTIVES		It is aimed to explain the characteristics of state administration and social life in Turks and to teach their reflections to the present day.						
ADDITIV PROFE	E OF C SSION	COURSE TO AL	PPLY ON	Having the knowledge and skills to comment on social issues will enable her to be more successful in her profession						
COURSE OUTCOMES				Learns the characteristics of the Ottoman state administration, especially in the Turks, by taking into account the historical development. Gains knowledge about the understanding of sovereignty from the first Turkish states to the Ottomans. Have knowledge about the way of establishing provincial and central government in Turks. Gains knowledge about social groups and religious groups in Turkish society						
	TEX	твоок		Abdull Pub.	lah Sağ	lam, Osma	nlı Medeniyeti Tarihi, İstanbul,	2014, Kitapevi		
OT	HER R	EFERENCES		İbrahim Kafesoğlu, Türk Milli Kültürü Osman Turan, Türk Cihan Hakimiyeti Mefkuresi Tarihi, Bahaeddin Ögel, Türk Kültürünün Gelişme Çağları						
TOOLS AND) EQUI	IPMENTS REQ	UIRED	Projector, computer						

	COURSE SYLLABUS							
WEEK	TOPICS							
1	State Understanding in Turks							
2	Country and Nation Concept							
3	Fundamentals of Understanding of Domination (Concepts of Justice and Security)							
4	Central Management							
5	Country Management							
6	Municipality Services							
7	Settlement Policy							
8	Midterm Exam							
9	Urbanites, Villagers, Konar-Nomads							
10	Religious Groups							
11	Social Institutions							
12	Family Life							
13	Culture Life							
14	Educational System							
15,16	Final Exam							
NO PR	OGRAM OUTCOMES	3	2	1				
1 To	I To have the basic information on horticulture and other agriculture engineering							

1	areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X
8	To have the skill of using and applying biotechnology on horticulture	X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions	X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X
1:Non	e. 2:Partially contribution. 3: Completely contribution.	



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	COURSE 251314034				COURS NAMI	SE E	Critical Thinking			
SEMESTER WEEKLY COURSE PERIC					OD					
SEMILSTER	Theo	ory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG E	
IV	3		0	C)	3	3	COMPULSORY () ELECTIVE (X)	Turkish	
					COU	RSE CATA	GORY			
Basic Scier	nce	Ba	asic Engine	ering	[if i	t contains	Ho conside	orticulture rable design, mark with (√)]	Social Science	
									\checkmark	
				A	SSESS	SMENT CF	RITERI	A		
1					E	valuation 7	Гуре	Quantity	%	
					1st M	id-Term		1	40	
					2nd N	1id-Term				
	MID	-TER	M		Quiz					
					Home	ework				
					Proje					
					Other	n n ()				
	ETNI A	I DY			Other	s ()	60			
	FINA	LEX	AM							
P	REREG	QUIEI	ITE(S)		-					
COU	IRSE D	DESCI	RIPTION		Critical Thinking, Analytical Thinking, The importance of critical and analytical thinking, Basic features of critical and analytical thinking					
CO	URSE	OBJE	CTIVES		To gain basic knowledge about critical and analytical thinking and to gain habit of critical and analytical thinking					
ADDITIV PROFI	E OF C ESSION	COUR NAL F	SE TO AP	PLY N	This course includes all fundamentals regarding critical thinking that should be necessary for every person who are interested in this field.					
COURSE OUTCOMES				 Defines the basic concepts of critical and analytical thinking Expresses the stages of critical and analytical thinking Discusses the factors affecting critical and analytical thinking Applies critical and analytical thinking in real life 						
ТЕХТВООК					Nosic düşür	h, M. N. (2 me rehberi	012). El (. Aybe	eştirel düşünme ve disiplinlerara k, Çev.). Ankara: Anı.	sı eleştirel	
OTHER REFERENCES				 Kurnaz, A. (2011). Eleştirel düşünme öğretimi etkinlikleri (İkinci Baskı). Konya: Eğitim Akademi. Ruggiero, V. R. (2017). Eleştirel Düşünme İçin Bir Rehber. İstanbul: Alfa. 						
TOOLS AND EQUIPMENTS REQUIRED					-					

COURSE SYLLABUS						
WEEK	TOPICS					
1	Introduction, basic concepts					
2	Brain as thinking organ, grouping of thinking styles and thinking					
3	Involuntary thinking and features					
4	Voluntary thinking and characteristics; methods of voluntary thinking					
5	Critical and analytical thinking; basic characteristics and criteria of critical and analytical thinking					
6	Stages of critical and analytical thinking					
7	Factors affecting critical and analytical thinking					
8	Factors affecting critical and analytical thinking-continued					
9	Scope of critical and analytical thinking					
10	Critical and analytical reading					
11	Critical and analytical reading-continued					
12	Critical and analytical listening					
13	Critical and analytical listening-continued					
14	Critical and analytic speaking					
15,16	Final Exam.					

			1	
NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering			Χ
	areas, describing the required data to solve the problems, to have the ability of			
	gathering data and solving the problems by using information technology			
2	To have theoretical and practical (land and laboratory) information on growing and			Χ
	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			
	transfer these information accurately			
3	To have the ability of determining and evaluating the source of the ecological,			Χ
	biological, technical and economical problems that negatively effects the sufficient			
	yield and quality of horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and			Χ
	protection of genetic resources in horticultural area and environment			
5	To have the ability of describing, classification and growing fruits, vegetables,			Χ
	grapevine and ornamental plants			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a			Χ
	new cultivar, and propagation of these new varieties by different methods (seed,			
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide			Χ
-	the right time of cultural practices of the horticultural crops, and to have the ability			
	of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and			Χ
	storage of horticultural crops, and to have the information on storage conditions			
11	To have the ability of getting the data on horticultural area, and evaluation,			Χ
	recording, project creation and application skills			
12	To have the ability of working in individual, multiple and different disciplined		Χ	
	teams, and having the responsibility			
1:Non	e. 2:Partially contribution. 3: Completely contribution.			



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	251314035	COURSE NAME	Music

	WE	EKLY COUR	SE PERI	OD			COURSE OF		
SEMESTER	Theory	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAG E	
IV	3	0	0		3	3	COMPULSORY () ELECTIVE (X)	Turkish	
				COURS	SE CATE	GORY			
Basia Saia		Posio Engina	orina			Ног	rticulture	Social	
Dasic Scier	ice	Dasic Engine	ering	[if it	contains	consider	able design, mark with $()$]	Science	
								Х	
			А	SSESSN	MENT CF	RITERIA	A	•	
				Eva	aluation T	уре	Quantity	%	
				1st Mic	l-Term		1	40	
				2nd Mi	d-Term				
	MID-T	FERM		Quiz					
				Homew	vork				
				Project					
				Report					
				Others	()				
	FINAL	EXAM					1	60	
P	REREQU	JIEITE(S)					-		
COURSE DESCRIPTION				instrument knowledge, Music types and forms in Turkey and in the world, Transition from traditional to contemporary music. Basic harmony, polyphony, The role of music in education, Musical hearing for the improvement of creativity.					
CO	URSE OF	BJECTIVES		To teach the general music rules in order to increase the student's perception of music and to gain aesthetic, dynamic, innovative music understanding and behavior at the end of this process.					
ADDITIV	E OF CO	URSE TO AP	PLY	It enables students to increase their musical perceptions and acquire					
PROFE	SSIONA	L EDUCATIO	N	hobbies.					
COURSE OUTCOMES				 Knows the basic components of music, basic music knowledge; note, pitch, interval, scale, rhythm and etc. concepts. Knows the concept of the correct sound (detuned, tonal, atonal, intonation etc.). Knows the types and forms of music in Turkey and in the world. Understands and analyses the transition from traditional to contemporary music. Understands the importance of the human voice and musical instruments in orchestration. knows and explains the importance of musical hearing for the improvement of the role of music in education and for the improvement of creativity. 					
	TEXTI	BOOK			· /	2	<u>1</u>	-	
				Sun, M. (1998). Temel Müzik Eğitimi. Yurt Renkleri Yayınevi, Ankara.					
ΟΤ	HER RE	FERENCES		_					
TOOLS AND EQUIPMENTS REQUIRED				Computer and projector					

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Definitions (music, sound, history)						
2	Basic information (porte, notes, articulation, openers, tone, range, rhythm, etc.)						
3	The sounds of nature, sounds of music						
4	Musical hearing						
5	Three elements of music; rhythm, melody, harmony.						
6	Universal and traditional voice systems						
7	Music Formats						
8	Solo Singing and Choral formations,						
9	Midterm Exam						
10	Instruments						
11	Orchestral Instruments, Musical Instrument Communities,						
12	In turkey, the traditional music						
13	Famous Composers and their Works						
14	Evaluation						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1		
	To have the basic information on horticulture and other agriculture engineering					
1	areas, describing the required data to solve the problems, to have the ability of			Χ		
	gathering data and solving the problems by using information technology					
	To have theoretical and practical (land and laboratory) information on growing and					
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			Χ		
	transfer these information accurately					
	To have the ability of determining and evaluating the source of the ecological,					
3	biological, technical and economical problems that negatively effects the sufficient			Χ		
	yield and quality of horticultural crops					
Λ	To have the skill of utilizing different techniques for sustainable usage and			v		
-	⁴ protection of genetic resources in horticultural area and environment					
5	To have the ability of describing, classification and growing fruits, vegetables,					
5	grapevine and ornamental plants					
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ		
	To have the information and ability on breeding horticultural crops, developing a					
7	new cultivar, and propagation of these new varieties by different methods (seed,			Χ		
	seedling, and sapling)					
8	To have the skill of using and applying biotechnology on horticulture			Χ		
	To have the information on good agricultural practices, and by the way, to decide					
9	the right time of cultural practices of the horticultural crops, and to have the ability			Χ		
	of describing the pest and diseases of horticultural plants					
10	To have the skill on observing the changes through harvest, post harvest, and			v		
10	storage of horticultural crops, and to have the information on storage conditions			Λ		
11	To have the ability of getting the data on horticultural area, and evaluation,			v		
11	recording, project creation and application skills			Λ		
12	To have the ability of working in individual, multiple and different disciplined		v			
12	teams, and having the responsibility		Λ			
1:Non	e. 2:Partially contribution. 3: Completely contribution.					



ESOGÜ Horticulture Course Information Form

COURSE CODE 251314036				COURSE	NAME	Photography				
SEMESTER WEEKLY COURSE PER				SE PER	IOD			COURSE OF		
	The	ory	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LA	NGUAG E
IV	3	;	0	C)	3	3	COMPULSORY () ELECTIVE (X)	Turkish	
				С	OURSE	CATEGO	ORY			
Basic Scien	ce	B	asic Engine	ering	[if it	contains c	Hoi consider:	rticulture able design, mark with (√]	Social Science
										X
				ASS	SESSMI	ENT CRIT	TERIA	1		
					Ev	aluation T	уре	Quantity		%
					1st Mie 2nd Mi	d-Term id-Term		1		30
	MID	-TEF	RM		Quiz			1		20
					Project	HOIK		1		20
					Report					
					Others ()					
FINAL EXAM				1			50			
PR	EREC	QUIE	LITE(S)		-					
COU	RSE D	DESC	RIPTION		Photograph machines, snapshot values, objectives, kinds of light sources, light effects, expose, ASA/ISO values, clarifying systems, diaphragm values, film/sensor sizes will be discussed.					
COU	RSE (OBJE	ECTIVES		Basic photography knowledge and abilities will be gain to students by informing about photograph machines and objectives.					
ADDITIVE PROFE	OF C SSIOI	COUF NAL	RSE TO AP EDUATION	PLY N	To learn to use fotograph machines and taking a picture in factory and field conditions.					
COURSE OUTCOMES				To choose fotograph machines through purpose To choose objectives through purpose To detect source and direction of the light To take picture by automatic adjustments To take picture by manuel (by hand) adjustments						
	TEX	TBO	ОК		Doble, 978975	R.G., 20 55096841,	11, He Arkadaş	r Yönüyle Dijital Fotoğ Yayınevi, 336 sayfa.	gratçıl	ik, ISBN:
OTHER REFERENCES				Bayar, Ö.M., Bayar, A., 2012, Dijital Fotoğrafçılık, Kodlab Yayınları, 248 sayfa. Freeman, M., 2012, Fotoğrafta Pozlama Teknikleri ve Yaratıcılık, Say Yayınları, 192 sayfa.						
TOOLS AND	EQUI	PMF	ENTS REQU	JIRED	Camera	a, projector	r			

COURSE SYLLABUS							
WEEK	TOPICS						
1	Photograph machines						
2	Film/sensor sizes						
3	Objectives I						
4	Objectives II						
5	Kinds of light sources						
6	Analyzing of effects of light						
7	Mid-term Exam / Using of automatic program modes						
8	Handling and carrying machine						
9	Semi automatic expose modes						
10	Expose control						
11	Effects of ASA/ISO values to photograph						
12	Clarifying systems in photograph machines						
13	Effects of diaphragm values to photograph						
14	Effects of snapshot values to photograph						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
	To have the basic information on horticulture and other agriculture engineering			
1	areas, describing the required data to solve the problems, to have the ability of			Х
	gathering data and solving the problems by using information technology			
	To have theoretical and practical (land and laboratory) information on growing and			
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			Х
	transfer these information accurately			
	To have the ability of determining and evaluating the source of the ecological,			
3	biological, technical and economical problems that negatively effects the sufficient			Х
	yield and quality of horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and			
т	protection of genetic resources in horticultural area and environment			
5	To have the ability of describing, classification and growing fruits, vegetables,			v
5	grapevine and ornamental plants			Λ
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			
	To have the information and ability on breeding horticultural crops, developing a			
7	new cultivar, and propagation of these new varieties by different methods (seed,			Х
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			Χ
	To have the information on good agricultural practices, and by the way, to decide			
9	the right time of cultural practices of the horticultural crops, and to have the ability			Χ
	of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and			v
10	storage of horticultural crops, and to have the information on storage conditions			Δ
11	To have the ability of getting the data on horticultural area, and evaluation,			v
11	recording, project creation and application skills			Λ
12	To have the ability of working in individual, multiple and different disciplined		x	
12	teams, and having the responsibility		1	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor:



ESOGÜ Horticulture Department Course Information Form

COURSE CODE		2513	314037			COURSE	NAME	Marbling Art	
SEMESTER	W	/EEK	LY COUR	SE PER	IOD			COURSE OF	
	The	ory	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE
IV	3		0	C		3	3	COMPULSORY () ELECTIVE (X)	Turkish
					COURS	SE CATEO	GORY		
Basic Scien	ce	B	asic Engine	ering	[if it	t contains o	Hortic consider (√	ulture able design, mark with)]	Social Science
									Х
				A	SSESSN	AENT CR	ITERIA		
					Ev	aluation T	уре	Quantity	%
					1st Mi	d-Term		1	30
					2nd M	id-lerm			
	MID	-TEF	RM		Homes	work		1	20
					Project	t		1	20
					Report	t			
					Others	()			
	FINA	L EX	AM					1	50
PR	EREQ	QUIE	ITE(S)		-				
COUI	RSE D	ESC	RIPTION		Historical development of Turkish marbling art, using areas, earth dye processing, preparing of bile, application of different marbles, marbling trials on different materials like ceramic biscuit, and fabric, will be discussed.				
COU	RSE (OBJE	CTIVES		To introduce Turkish marbling art and to be gained knowledge and abilities on marbling applications.				
ADDITIVE PROFE	OF C SSION	OUF	RSE TO AP EDUATION	PLY N	-				
COURSE OUTCOMES				To reco To hav	ognize the ve informat	marbling ion on m	g art arbling applications		
ТЕХТВООК				Dere, Ö.F., 2011, Ebru Sanatı, İsmek Yayınları, ISBN: 978-9944-100- 30-4, 193 sayfa.					
OTHER REFERENCES				Sönmez, N., 2001, Ebru, Verlag Anadolu yayınları.					
TOOLS AND	EQUI	PMF	ENTS REQU	JIRED	Project	tor, marblir	ng tools		

COURSE SYLLABUS

WEEK	TOPICS
1	What is marbling
2	History of marbling
3	Tye vat and thickener kinds
4	Bile
5	Paint and brush, paper and other material
6	Mid-term Exam
7	Marbling application
8	Marbling forms
9	Flower marbles
10	Akkase marbles
11	Wavy marbles
12	Application of marble to fabric
13	Application problems and solutions
14	Marbling trials on different materials like ceramic biscuit, and fabric
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			X
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			X
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor:

I



ESOGÜ Horticulture Department Course Information Form

COURSE CO	ODE 2	51314038		(COURSE	NAME	Diction			
	-									
SEMESTER	WE	EKLY COUR	SE PERI	OD			COURSE OF			
	Theory	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE		
IV	3	0	0		3	3	COMPULSORY () ELECTIVE (X)	Turkish		
				COUR	SE CATE	GORY				
Basic Scier	ice	Basic Engine	ering	[if it c	contains co	Horti onsidera	iculture ble design, mark with(√)]	Social Science		
				COECO			A	Х		
			A	2255221			A	A (
					aluation 1	ype		% 0		
				1 st Mic	1-lerm		l	30		
				2nd Mi	ld-Term					
	MID-T	TERM		Homey	vork		1	20		
				Project	, voik		1	20		
				Report						
				Others	()					
	FINAL	EXAM			`````		1	50		
P	REREQU	JIEITE(S)		-						
COU	COURSE DESCRIPTION				Correct breathing techniques, adjustment of voice, clear and accurate pronunciation, correct emphasizing of syllables and making sentence, using voice effectively, controling excitement, effective and fluent speech techniques, will be discussed					
CO	URSE OI	BJECTIVES		It was aimed to get knowledge and ability on some subjects like correct emphasizing of syllables, making sentence, adjustment of voice, and effective speech.						
ADDITIV PROFI	E OF CO ESSIONA	URSE TO AP	PLY N	To have speech ability in front of community.						
COURSE OUTCOMES				To learn basic knowledge on diction. To gain the ability of making speech in front of crowd To be able to speak in front of people without lack of concentration To be able to speak unprepared To know the rules of effective speaking To be able to express feelings and thoughts fluently, comfortably and properly. To use of gestures and mimics consiciously. Providing an effective conversation knowing intonation, emphasis,						
	ТЕХТВООК				Şenbay, N., 2012, Söz ve Diksiyon Sanatı, Yapı Kredi Yayınları, ISBN:9753630146, 147 sayfa.					
OTHER REFERENCES				Taşer, S., 2012, Konuşma Eğitimi, Pegasus Yayınları, ISBN:6054263202, 376 sayfa.						
TOOLS AND EQUIPMENTS REQUIRED				Project	or					

COURSE SYLLABUS							
WEEK	TOPICS						
1	Correct breathing techniques						
2	Breathing through diaphragm						
3	Adjustment of voice						
4	Clear and accurate pronunciation						
5	Brightness						
6	Diction						
7	Mid-term Exam / Correct emphasizing of syllables and making sentence						
8	Speech mistakes						
9	Using voice effectively I						
10	Using voice effectively II						
11	Controling excitement						
12	Effective and fluent speech techniques						
13	Rhetoric forms						
14	Keeping attention alive						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			X
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			X
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor:



ESOGÜ Horticulture Department Course Information Form

SEMESTER Fall

COURSE CODE	25	1315015			COURS NAMI	SE E	General Viticulture		
SEMESTER	WEEKLY COURSE PERI			OD		-	COURSE OF		
	Theory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAGE	
5	1	2	0)	2	4	COMPULSORY(X) ELECTIVE ()	Turkish	
				COUR	SE CATA	GORY			
Devis Caise		Der's Frederic	•			Ho	rticulture	Social	
Basic Scien	ice	Basic Engine	ering	[if it	t contains	conside	rable design, mark with $(\sqrt{)}$]	Science	
							Х		
			A	SSESS	MENT CF	RITERI	A		
				Ev	valuation T	уре	Quantity	%	
				1st Mi	d-Term		1	40	
				2nd M	lid-Term				
	MID-T	ERM		Quiz					
				Home	work				
				Projec	t				
				Others	<u>s ()</u>				
	FINAL F	EXAM					1	60	
PI	REREQU	IEITE(S)		-					
COURSE DESCRIPTION				To describe viticulture culture and concepts, explain Turkey's and the world's viticulture potential, explain the differences between old and new viticultural practices, discuss the ecological demands of grapevines, evaluate the morphological organs of grapevines, discuss detailed breeding methods in viticulture, teach vineyard plantation techniques, winter pruning, and summer pruning, introduce goble and trellis systems, explain grape evaluation methods and grape harvest criteria, to describe					
COU	URSE OB	JECTIVES		The purpose of this course is to provide students with a better understanding of general viticulture.					
ADDITIVI PROFE	E OF COU	URSE TO AP L EDUATIO	PLY N	It aims to teach all basic knowledge in viticulture and to enable students to use theoretical and practical knowledge in their own professional life.					
COURSE OUTCOMES				To gain an understanding of the history and development of viticulture, knowledge of viticulture in the world and Turkey, an understanding of the vine's morphological structure and ecological requirements, to gain information on viticulture reproduction techniques, the establishment of a new vineyard, pruning systems, grape evaluation methods and determining harvest criteria, and knowledge of viticulture cultural practices.					
ΤΕΧΤΒΟΟΚ				Ağaoğlu,Y.S. 1999 Bilimsel ve Uygulamalı Bağcılık. Kavaklıdere Eğitim Yayınları. No: 1, 205 s Ankara Çelik, H., Ağaoğlu, Y.S., Fidan Y., Marasalı, B., Söylemezoğlu, G. 1998. Genel Bağcılık Sunfidan Mesleki Kitaplar Serisi:1, 253 s, Ankara.					
OTHER REFERENCES				Çelik, S. 1998. Bağcılık (Ampeloloji) Cilt-1. 426 s, Tekirdağ. Weaver, R.J., 1976. Grape Growing. John Wiley and Jons, 371 s. Coombe, B.G. and Dryı, P.R.1992 Viticulture (Vol.1,2) Winetitles, Adelaide.					
TOOLS AND	EQUIPN	MENTS REQ	UIRED	Projec	ction and p	c.			

COURSE SYLLABUS								
WEEK	TOPICS							
1	The Origin of the Vine, the history of viticulture, vine systematics							
2	Viticulture in the world and Turkey, evaluation of viticulture Areas in Turkey, classification of grapes							
3	Ecological requirements of vine (climate and soil requirements)							
4	Morphological structure and characteristics of vines							
5	Grapevine physiology (phenology, bloom, pollination and berry set)							
6	Grapevine physiology (berry development and maturity)							
7	Midterm							
8	Vine propagation techniques – I (cuttings, grafting, rootstocks and sapling production)							
9	Vineyard site technique and winter pruning in viticulture (shape-product pruning)							
10	Winter pruning (shape-product pruning) and trellis systems in viticulture							
11	Summer pruning in viticulture (canopy management, tip removal, shoot orientation, cluster manipulations, cane girdling)							
12	Grape evaluation and harvest criteria							
13	Cultural practices and post-harvest process in viticulture (tillage, irrigation, fertilization, disease and pest control)							
14	Cultural practices and post-harvest process in viticulture (tillage, irrigation, fertilization, disease and pest control)							
15, 16	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1		
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of	x				
	gathering data and solving the problems by using information technology					
	To have theoretical and practical (land and laboratory) information on growing and					
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and	X				
	transfer these information accurately					
	To have the ability of determining and evaluating the source of the ecological,					
3	biological, technical and economical problems that negatively effects the sufficient		X			
	yield and quality of horticultural crops					
4	I o have the skill of utilizing different techniques for sustainable usage and		X			
	The here the elistic resources in norticultural area and environment					
5	To have the ability of describing, classification and growing fruits, vegetables,		х			
6	To have the skill of establishing and operating orchards, greenhouses and vinewards	v				
0	To have the skill of establishing and operating of chards, greenhouses and vineyards	х				
7	now cultiver, and propagation of these new variation by different methods (seed	v				
/	seedling and sanling)	А				
8	To have the skill of using and applying biotechnology on horticulture			v		
0	To have the skill of using and apprying bloccenhology on horicenture			A		
0	right time of cultural practices of the horticultural crops, and to have the ability of			v		
,	describing the pest and diseases of horticultural plants			А		
	To have the skill on observing the changes through harvest, post harvest, and storage					
10	of horticultural crops, and to have the information on storage conditions			X		
11	To have the ability of getting the data on horticultural area, and evaluation,					
11	recording, project creation and application skills			X		
12	To have the ability of working in individual, multiple and different disciplined			v		
12	teams, and having the responsibility			А		
1:Non	1:None. 2:Partially contribution. 3: Completely contribution.					

Instructor(s): Assistant Prof. Dr. Turcan TEKER

Date:



ESOGÜ Horticulture Department Course Information Form

SEMESTER Fall

COURSE CODE	251	315016			COURSE NAME		Ornamental Plants Cultivation			
SEMESTED	WEF	EKLY COUR	SE PERIO	OD COURSE OF						
SEMILSTER	Theory	Practice	Practice Labra		Credit ECTS		ТҮРЕ	LANGUAG E		
5	1	2	0		2	4	COMPULSORY (X) ELECTIVE ()	Turkish		
				COURSE CATAGORY						
Basic Science Basic Engineering					Horticulture [if it contains considerable design, mark with (√)]					
				x						
			A	59F991	MENI CF	LI EKL	A Quantity	9/		
				Let Mi	d Term	уре	Quantity	%0		
				1st Mid-1erm 2nd Mid-Term 1				40		
	MID-T	ERM	-	Quiz				10		
			_	Home	work		1	10		
			_	Project	t					
				Report						
				Others ()			1	(0)		
	FINAL F	EXAM					l	60		
P]	REREQU	IEITE(S)		-						
COURSE DESCRIPTION				The historical development and socio-economic importance of ornamental plantations, definition and classification of ornamental plants, general information and propagation of cut flowers, landscape plants, indoor plants and bulbous plants						
COURSE OBJECTIVES					It aims to get to know the Ornamental Plants sector, to have information about the cut flowers, landscape plants, indoor plants and bulbous plants, which are the branches of the sector, and to have information about the propagation methods.					
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION					It will enable students to have information about the ornamental plants sector and its branches					
COURSE OUTCOMES					They will learn the place of the ornamental plants sector in the country's economy and will have general information about the branches in this sector and the cultivation of the products in these branches.					
TEXTBOOK					Mengüç,A1996. Süs Bitkileri Anadolu Üniversitesi, <i>Açıköğretim Fakültesi Yayınları</i> ,Eskişehir. Tanrıverdi, F. 1993. Çiçek Üretim Tekniği, Sera ve Açık Alanlarda Saksı, Kesme ve Bahçe Çiçeği Yetiştirme İlkeleri Ders Kitabı, İnkilap Kitabevi, İstanbul.					
OTHER REFERENCES					Altan, S., 1989. Süs Bitkileri Üretim Tekniği. <i>Çukurova Üniversitesi</i> Ziraat Fakültesi Ders Kitapları Yayını, No. 9, Adana. Korkut A., 1993. Seralarda Çiçek Yetiştiriciliği, Sera Üreticisinin El Kitabı, Yayın Yeri: Hasad Yayıncılık.					
TOOLS AND) EQUIPN	MENTS REQ	UIRED	-						

COURSE SYLLABUS								
WEEK	TOPICS							
1	Socio-economic importance and historical development of ornamental plants propagation							
2	Ornamental Plants Sector in the World and Turkey							
3	Classification of Ornamental Plants							
4	Propagation media, Irrigation and Fertilization in Ornamental Plants							
5	Propagation Methods in Ornamental Plants							
6	Cut Flowers							
7	Propagation of Cut Flowers							
8	Midterm Exam							
9	İndoor Plants							
10	Propagation of Indoor Plants							
11	Landscape Plants							
12	Propagation of Landscape Plants							
13	Bulbous Plants							
14	Propagation of Bulbous Plants							
15	Final							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Х
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assoc. Prof. Dr. Sibel SARIÇAM



ESOGÜ Horticulture Department Course Information Form

SEMESTER Fall

COURSE CODE	COURSE 251315017			COURSE NAME		SE E	Propagation Techniques of Horticulture		
		- EEL			0.0			COURSE OF	
SEMESTER	WEEKLY COURSE PERI			OD			COURSE OF		
	Theo	ry	Practice	Labra	atory	Credit	ECTS	TYPE	LANGUAGE
5	1		2	0	2 4		4)	TUTKISI
					COUR	SE CATA	GORY		
Basic Science Basic Engineering					[if it	Social Science			
								X	
				A	SSESSI	MENT CF	RITERI	A Onertita	0/
					LV 1st Mi	d-Term	ype		% 40
					2nd M	id-Term		1	10
	MID)-TEF	RM		Quiz				
		111			Homework				
					Project Report				
					Others ()				
	FINA	L EX	KAM					1	60
P	RERE	QUIE	CITE(S)		-				
COURSE DESCRIPTION				This course covers generative and vegetative propagation methods of horticultural crops, and propagation methods for fruits, vegetables, vineyards and ornamental plants.					
CO	URSE (OBJE	ECTIVES		To give detailed information about the methods and principles of propagation of horticultural crops.				
ADDITIV PROFI	E OF C ESSION	COUR NAL	RSE TO AP EDUATION	PLY N	-				
COURSE OUTCOMES					 to be learn knowledge about the methods used in the propagation of Horticultural crops to be learn methods for propagation according to the type of fruit species to be learn methods for propagation of vegetables, grapes and ornamental plants 				
ΤΕΧΤΒΟΟΚ					M. Yılmaz, Bahçe Bitkileri Yetiştirme Tekniği Hartmann, H.T., Kester, D.E., Davies, Jr.F., Geneve, R.L., 1997. Plant Propagation Principles and Practies. Sixth Edition, Prentice Hall, New Jersey Özbek, S., 1978. Genel Meyvecilik (Kışın Yaprağını Döken Meyve Türleri). Çukurova Üniversitesi Ziraat Fakültesi Yayınları No. 128. Ders Kitabı 11				
ΟΤ	HER R	EFE	RENCES		-				
TOOLS AND EQUIPMENTS REQUIRED					Projec	tion			
COURSE SYLLABUS									
-----------------	--	--	--	--	--	--			
WEEK	TOPICS								
1	Propagation methods in horticulture								
2	Generative propagation method								
3	Vegetative propagation methods								
4	Propagation with layering								
5	Propagation with cuttings and practice								
6	I.Midterm Exam - Propagation with cuttings								
7	Propagation with grafting								
8	Rootstocks used in Horticulture								
9	Bud graftings and practice								
10	Cleft and tongue graftings and practice								
11	II.Midterm Exam - Cleft and tongue graftings								
12	Propagation by specialized vegetative structures								
13	Propagation by tissue culture								
14	Propagation by tissue culture								
15,16	Final Exam								

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assoc.Prof.Dr. Volkan OKATAN

Date:



ESOGÜ Horticulture Department Course Information Form

COURSE CODE		2513	15013			COURS NAMI	SE E	Professional Practice I	
	1								
SEMESTER	W	/EEK	KLY COURS	SE PERI	OD		I	COURSE OF	
	Theo	ory	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE
5	0		4	C)	0	3	COMPULSORY (X) ELECTIVE (Turkish
					COU	RSE CATA	GORY		
Basic Scier	ıce	B	Basic Engine	ering	[if	it contains	Ho conside	rticulture rable design, mark with (√)]	Social Science
								Х	
				A	SSES	SMENT CF	RITERI	A One-stitu	0/
					lst M	Id-Term	ype	<u>Quantity</u>	% 0 50
					2nd M	Mid-Term		1	50
	MID) TFI	DM		Quiz				
	IVIIL	-111			Hom	ework			
					Proje				
					Other	rs ()			
	FINA	L EX	KAM					1	50
Pl	RERE	QUIE	EITE(S)		-				
COU	IRSE I	DESC	CRIPTION		Department of land and to make practical training courses in laboratory. Improve the knowledge by technical tours.				
CO	URSE	OBJI	ECTIVES		The practice ability sophisticating and making technical tours to students about all lessons.				
ADDITIVI PROFI	E OF C ESSIOI	COUF NAL	RSE TO AP EDUATION	PLY N	To make progress on using theoretical knowledge in practice.				
COURSE OUTCOMES				 acquired some practical knowledge about vegetable crops acquired some practical knowledge about fruit cultivation acquired some practical knowledge about vineyard cultivation acquired some practical knowledge about the cultivation of ornamental plants Future projection composes by technical tours to institutions and establishments 					
ТЕХТВООК				-					
OT	HER R	REFE	RENCES		-				
TOOLS AND	D EQU	IPMI	ENTS REQU	UIRED	-				

COURSE SYLLABUS						
WEEK	TOPICS					
1	Seed sowing					
2	Nursery growing					
3	Tecnical tour					
4	Pruning					
5	Pruning					
6	Tecnical tour					
7	Sapling supplying and planting					
8	Midterm exam / Sapling supplying and planting					
9	Setting up a garden					
10	Setting up a garden					
11	Setting up a garden					
12	Garden management					
13	Garden management					
14	Tecnical tour					
15	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		X	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions	X		
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instructor(s): All Teaching Members

Date:



ESOGÜ Horticulture Department Course Information Form

COURSE CODE	DURSE 251315018			COURS NAMI	SE E	Organic Agriculture in Horticulture			
SEMESTER WEEKLY COURSE PER							COURSE OF		
	Theory	Practice	Labra	tory	Credit	ECTS	ТҮРЕ	LANGUAGE	
5	2	0	0		2	3	COMPULSORY () ELECTIVE (X)	Turkish	
	0			COUR	SE CATA	GORY	I		
Basic Scier	nce	Basic Engine	eering	[if it	t contains	Ho consider	rticulture rable design, mark with (√)]	Social Science	
							Х		
			A	SSESS	MENT CF	RITERI	A		
			_		aluation 7	уре	Quantity	<u>%</u>	
	MID TI	FDM	-	2nd M Quiz	d-Term id-Term			40	
	WIID-11		-	Home	work				
			-	Projec	t				
			-	Others	$\frac{t}{t}$				
	EINAL E	VAM		Others)		1	60	
							1	00	
P	REREQU	IETTE(S)		-					
COU	IRSE DES	CRIPTION		Organic agriculture and general principles, law and instruction of organic agriculture, sertification system, production methods of organic fruit and vegetable growing and organic viticulture					
CO	URSE OB.	JECTIVES		Teaching the general principles of organic agriculture that it's healty production methods for environment and human, sertification systems, low and instruction of organic agriculture, faced problems and analysis methods in organically production systems					
ADDITIV PROFI	E OF COU ESSIONAI	JRSE TO AP L EDUATIO	PLY N	Students will be informed about organic agriculture in horticulture.					
COURSE OUTCOMES				Knows organic agriculture and basic principles Knows evolution proses of organic agriculture Knows law and instruction of organic agriculture Knows organic agriculture sertification system Knows organic fruit, vegetable growing methods and organic viticulture, faced problems and analysis methods					
TEXTBOOK				Zengin,M. (2007). Organik Tarım, Hasad Yayıncılık, 136s. İlbaş, A.İ. (2009). Organik Tarım İlkeler ve Ulusal Mevzuat, Efil Yayınevi, 267s. Anonim (2010). Organik Tarım Araştırma Sonuçları 2005-2010, (Ed. Ayşen Alay Vural), Tarımsal Araştırmalar Genel Müdürlüğü, Ankara, 362s.					
OT	HER REF	ERENCES		Agriculture, Environment and Food Security (2002) (Edited: N. Scialabba and C. Hattam), Environment and Natural Resources Series No:4, FAO, Rome, 258 p.					
TOOLS AND) EQUIPM	IENTS REQ	UIRED	Projec	tion				

	COURSE SYLLABUS						
WEEK	TOPICS						
1	General basis of organic agriculture						
2	Developing prosess of organic agriculture in the World and Turkey						
3	Low and instruction of organic agriculture						
4	Sertification system of organic agriculture						
5	Inrease of soil productivity in organic agriculture						
6	Alternative systems in production of organic horticultural crops						
7	Green manuring and effects						
8	Soil process in organic agriculture; planting rotation in organic agriculture						
9	Principles of organic fruit growing						
10	Principles of organic vegetable growing						
11	Midterm exam / Organic horticultural production areas and special locations						
12	Principles of organic viticulture; Plant protection basis in organic agriculture						
13	Economic analysis in organic agriculture						
14	Faced problems and analysis methods in organic agriculture						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions	X		
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



COURSE CODE	2	251315019			COURS NAMI	SE D	Professional English		
							COURSE OF		
SEMESTER	W.	EEKLY COUR	SE PERIO	DD			COURSE OF		
	Theor	ry Practice	Labrat	tory	Credit	ECTS	ТҮРЕ	LANGUAGE	
5	2	2	0		3	4	COMPULSORY (X) ELECTIVE ()	English	
			(COUR	SE CATA	GORY			
Basic Scier	nce	Basic Engine	ering	[if it	contains	Ho conside	orticulture rable design, mark with (√)]	Social Science	
							Х		
			AS	SESSI	MENT CR	ITERI	A		
			L	Eva	aluation T	уре	Quantity	%	
			_	1st Mic	l-Term		1	40	
			_	2nd Mi	id-Term				
	MID	-TERM	_	Quiz	. 1.				
				Homev Draigat	VOrK				
				Project					
			-	Others	()				
	FINA	LEXAM		1				60	
P	REREC	QUIEITE(S)		-					
COU	IRSE D	ESCRIPTION		To teach words and patterns required in programs, help to express oneself and prepare to career in future.					
CO	URSE (OBJECTIVES		To give information about proffesional terminology in foreing language and to give ability to use proffesional terminology					
ADDITIV PROFI	E OF C ESSION	OURSE TO AP	PLY N	Students will be informed about proffesional terminology in foreign language				ogy in foreign	
со	COURSE OUTCOMES				To have general knowlegde about proffesional terminology in foreing language Understands proffesional terminology while reading, speaking, listening and writing Understands the importance of international communication				
	TEXTBOOK				Akdeniz Üniversitesi Ziraat Fakültesi Bahçe Bitkileri Bölümü, İngilizce- Türkçe Bahçe Terimleri Sözlüğü, Vocabulary Of Horticulture, http://bahce.ziraat.akdeniz.edu.tr/ dinamik/10/212.pdf				
OTHER REFERENCES				Eser, D., Tarımsal Ekoloji Terimler Sözlüğü II.Baskı Ankara Üniversitesi Ziraat Fakültesi Yayınları Ebcioğlu, N., Bitki Adları Sözlüğü, İnkılap kitabevi					
TOOLS AND) EQUI	PMENTS REQ	UIRED	Dictio	nary				

COURSE SYLLABUS						
WEEK	TOPICS					
1	Turkish Translations exercise in documents about Fruit Propagation					
2	Turkish Translations exercise in documents about Fruit Propagation					
3	Turkish Translations exercise in documents about Fruit Propagation					
4	Turkish Translations exercise in documents about Fruit Propagation					
5	Turkish Translations exercise in documents about Vegetable Propagation					
6	Turkish Translations exercise in documents about Vegetable Propagation					
7	Turkish Translations exercise in documents about Vegetable Propagation					
8	Turkish Translations exercise in documents about Vegetable Propagation					
9	Midterm Exam- Turkish Translations exercise in documents about Ornamental Plants Propagation					
10	Turkish Translations exercise in documents about Ornamental Plants Propagation					
11	Turkish Translations exercise in documents about Ornamental Plants Propagation					
12	Turkish Translations exercise in documents about Viticulture					
13	Turkish Translations exercise in documents about Viticulture					
14	Turkish Translations exercise in documents about Viticulture					
15,16	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of	X		
	gathering data and solving the problems by using information technology			
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use			x
2	and transfer these information accurately			
	To have the ability of determining and evaluating the source of the ecological,			
3	biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural graps		X	
	To have the skill of utilizing different techniques for sustainable usage and			
4	protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables,		x	
Ũ	grapevine and ornamental plants			
6	To have the skill of establishing and operating orchards, greenhouses and		X	
-	To have the information and ability on breeding horticultural crops, developing a			
1	new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			Х
8	To have the skill of using and applying biotechnology on horticulture			X
0	To have the information on good agricultural practices, and by the way to decide			
9	the right time of cultural practices of the horticultural crops, and to have the		X	
-	ability of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and		v	
10	storage of horticultural crops, and to have the information on storage conditions		Λ	
11	To have the ability of getting the data on horticultural area, and evaluation,		x	
11	recording, project creation and application skills			
12	To have the ability of working in individual, multiple and different disciplined	X		
	teams, and having the responsibility			
1:None.	2 :Partially contribution. 3 : Completely contribution.			

Instructor(s): Signature:

Date:



COURSE CODE	25	51315020			COURS NAMI	SE E	Sustainable Agriculture in Horti	iculture	
SEMESTED	WE	EKLY COUR	SE PERI	OD			COURSE OF		
SEWIESTER	Theory	Practice	Labora	atory	Credit	ECTS	ТҮРЕ	LANGUAG E	
5	2	2	0		3	4	COMPULSORY() ELECTIVE(X)	Turkish	
		÷		COUR	SE CATA	GORY			
Basic Scie	nce	Basic Engine	eering	[if it	contains	Ho conside	orticulture rable design, mark with (√)]	Social Science	
			Α	SSESSI	MENT CH	RITERI	A		
				Ev	aluation 7	Гуре	Quantity	%	
1				1st Mi	d-Term		1	50	
				2nd M	id-Term				
	MID-1	FERM		Quiz					
				Home	work				
				Project	t				
				Report					
	FINAT	EVAM		Oulers	()		1	50	
	FINAL	EXAM					1		
P	REREQU	JIEITE(S)							
COU	RSE DE	SCRIPTION	ſ	Definition of sustainable agriculture, reasons, application principles, organic agriculture, good agricultural practices (Good Agricultural Practices, GAP), The GLOBALGAP Protocol as a agriculture and production standard, Examples of sustainable agricultural practices in horticulture.					
COL	JRSE OI	BJECTIVES		It is aimed to teach the students the definition, aims, principles, sustainable agriculture systems in horticultural crops. Learn the importance and practices of environment and consumer friendly production methods.					
ADDITIVE PROFE	E OF CO SSIONA	URSE TO A AL EDUATIO	PPLY DN	In recent days when environmentally friendly production methods have gained importance, students will be able to learn and apply these techniques in terms of horticultural crops.					
COURSE OUTCOMES				To learn reason and principles of sustainable agriculture. To have knowledge on organic agriculture that one of sustainable agriculture methods. To have knowledge on good agricultural practices. To have information on GLOBALGAP protocol.					
ТЕХТВООК				Ekolojik Tarım (Ekolojik Tarım Eğitimi Ders Notları) ETO Tarım ve Köyişleri Bakanlığı. 1999. Er, C., Başalma, D., 2008, Organik Tarımdaki Gelişmeler, Seçkin Yayıncılık, 308 sayfa.					
OTH	IER RE	FERENCES							
TOOL	S AND H REQU	EQUIPMENT TRED	TS						

COURSE SYLLABUS								
WEEK	TOPICS							
1	Determination and reason of sustainable agriculture							
2	Beginning, stages, advantages and disadvantages of sustainable agriculture in the World and in our country							
3	Principles of sustainable agriculture							
4	Protection of soil, water, air and environment and positive and negative factors affected these							
5	Organic agriculture and it's principles							
6	I. Mid-term exam, Organic agriculture and it's principles							
7	Good Agricultural Practices (GAP)							
8	Good Agricultural Practices (GAP)							
9	Good Agricultural Practices (GAP)							
10	GLOBALGAP Protocol							
11	Samples of sustainable agriculture in horticulture							
12	Samples of sustainable agriculture in horticulture							
13	Sustainable use of agricultural resources							
14	Sustainable use of agricultural resources							
15,16	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions	X		
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Nuray ÇÖMLEKÇİOĞLU

Date:



COURSE CODE 251315021					COURS NAMI	SE E	Biotechnology in Horticulture	
SEMESTED WEEKLY COURSE PERIO							COURSE OF	
SEMESTER	Theor	y Practice	Labora	atory Credit ECTS		ECTS	ТҮРЕ	LANGUAG
5	2	2	0		3	4	COMPULSORY () ELECTIVE (X)	Turkish
				COUF	RSE CATA	GORY		
Basic Scier	nce	Basic Engine	ering	[if i	t contains (Ho consider	rticulture rable design, mark with (√)]	Social Science
							Х	
			A	SSESS	SMENT CF	RITERI	A	
			_	E	valuation T	уре	Quantity	%
			_	1st M	id-Term		1	25
			_	2nd M	lid-Term		1	25
	MID	TEDM	_	Quiz				
	NIID-			Home	work			
				Projec	et			
				Repor	t			
				Other	s ()			
	FINAL	L EXAM					1	50
P	REREQ	UIEITE(S)						
COURSE DESCRIPTION				Basic nutrient media and culture conditions in plant tissue culture, plant regeneration through organogenesis and embryogenesis, protoplast culture and somatic hybridization, haploid plant production and its use in plant breeding, production of virus-free plants by tissue culture, micro- propagation, gene transfer techniques, production of transgenic horticultural crops				
COU	IRSE O	BJECTIVES		To teach plant tissue culture techniques utilized in practice. Application of biotechnological methods to crops. Students are be able to know basic principles in biotechnology.				
ADDITIVE PROFE	C OF CO SSION	OURSE TO A AL EDUATIO	PPLY DN	Recent applications of plant biotechnology to improve the quality and yield of horticultural crops will be acquired				
COURSE OUTCOMES				 Learn plant tissue culture techniques used in practice. Learn how to establish a plant tissue culture laboratory Learn ingredients of plan tissue culture medium and practice how to prepare it. Learn sources of explants for plant tissue culture and how to prepare explants Understand importance of plant tissue culture for plant breading conserve genetic recourses gene transfer principles. 				
ΤΕΧΤΒΟΟΚ				Bitki Biyoteknolojisi I Doku Kültürü ve Uygulamaları 2004 Editörler: S. Özcan, E. Gürel ve M. Babaoğlu Bitki Biyoteknolojisi II Genetik Mühendisliği ve Uygulamaları 2004 Editörler: S. Özcan, E. Gürel ve M. Babaoğlu				
OTH	IER RE	EFERENCES						
TOOL	S AND REQU	EQUIPMENT UIRED	TS .	_		_		

COURSE SYLLABUS							
WEEK	TOPICS						
1	Introduction to biotechnology						
2	Principles of <i>in-vitro</i> culture						
3	Culture conditions and factors effecting tissue culture						
4	Plant regeneration by organogenesis and embryogenesis						
5	I. Midterm exam, Haploidy						
6	Haploid plant production and its use in plant breeding						
7	Protoplast culture and somatic hybridization						
8	Micro-propagation						
9	In vitro germplasm conservation						
10	Gen transfer						
11	II. Midterm, transgenic plants						
12	Gen transfer methods						
13	Reasont development in transgenic plants						
14	Development of transgenic plants						
15,16	Final exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			X
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture	Χ		
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Nuray ÇÖMLEKÇİOĞLU



COURSE CODE			COURS NAMI	SE E	Horticultural Crops Diseases and Control					
SEMESTER	WEF	CKLY COUR	SE PERIC)D	D COURSE OF					
	Theory Practice Labora			tory	Credit	ECTS	ТҮРЕ	LANGUAGE		
5	2	2	0	v	3	4	COMPULSORY () ELECTIVE (X)	Turkish		
		1	(COUR	SE CATE	GORY				
Basic Scier	nce	Basic Engine	eering	[if it	contains o	Hor consider	ticulture rable design, mark with (√)]	Social Science		
							X			
			AS	SSESS	MENT CF	RITERI	A			
			_	Ev	valuation 7	Гуре	Quantity	%		
			-	1st Mi	d-Term		1	30		
			_	2nd M	lid-lerm					
1	MID-T	ERM		Quiz Homo	work		1	20		
			-	Projec	t work		1	20		
			_	Repor	t					
				Others	s ()					
	FINAL H	EXAM			()		1	50		
PI	REREQU	IEITE(S)					-			
COU	IRSE DES	SCRIPTION		Introduction of fungal-borne diseases that cause problems in horticultural crops and methods of control.						
COU	URSE OB	JECTIVES		To inform about the economic importance and spread of pathogenic fungus species, hosts, symptoms, biology and control methods against them in Horticulture.						
ADDITIVI PROFE	E OF COU SSIONAL	URSE TO AP L EDUCATIO	PLY DN	Graduates by learning the economic importance and distribution of pathogenic fungi species in horticulture, their hosts, symptoms, biology and the control methods applied against them.						
COURSE OUTCOMES				 Knows the fungus species that cause disease in horticultural plants. Knows which disease symptoms occur in horticultural plants. Knows the biology of the disease agent fungus. Knows the economic importance and spreading conditions of the disease. Knows which methods to use in control diseases. 						
ТЕХТВООК					Agrios, G. N., 2005. Plant Pathology, Fourth Edition. Academic Press. USA. Jones, J.B., Jones, P.J., Stall, R.E. and Zitter, T.A., 1991. Compendium of Tomato Diseases. APS Press. USA. Schwartz, H.F. and Mohan, S. K., 1999. Compendium of Onion and Garlic Disease. Third Edition APS Press. USA. Sherf, A. F and Macnab, A.A., 1986. Vegetable Diseases and Their Control Second Edition. John Wiley & Sons. Inc., USA Zitter, T.A., Hopkins, D.L. and Thomas, C.E., 1986. Compendium of Cucurbit Diseases. APS Press. USA.					
ΟΤΙ	HER REF	ERENCES		Kurt Ş. 2020. Bitki Fungal Hastalıkları, Akademisyen Kitabevi, Ankara.						
TOOLS AND) EQUIPN	IENTS REQ	UIRED	Proje	ector and co	omputer				

	COURSE SYLLABUS							
WEEK	TOPICS							
1-3	Solanaceae family diseases							
4	Onion and garlic diseases							
5	Cucurbits diseases							
6-7	Crucifers diseases							
8	Midterm Exam							
9	Edible vegetables diseases							
10-11	Legume diseases							
12-13	Fungal diseases of annual ornamental plants							
14-15	Fungal diseases in perennial park and ornamental plants							
16	Grapevine diseases							
17	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1			
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X				
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X			
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X			
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X			
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ			
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X			
8	To have the skill of using and applying biotechnology on horticulture			Χ			
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X			
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X			
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X			
12	2 To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility						
1:Non	e. 2:Partially contribution. 3: Completely contribution.						



SEMESTER FALL

COURSE CODE		251	315023			COU NA	RS MH	SE E	Modern Fruit Growing	
SEMESTED WEEKLY COURSE PERIC									COURSE OF	
SEMESTER	The	ory	Practice	Labra	atory	Cred	it	ECTS	ТҮРЕ	LANGUAG
5	2	2	2	-		3		4	COMPULSORY () ELECTIVE (X	Turkish
					COU	RSE CA'	ГА	GORY	,	
Basic Scier	ice		Basic Engine	ering	[if	Agricu it contai	ltu 1s c	re Engi conside	neering Profession rable design, mark with (√)]	Social Science
					SSES	SMENT	CD	DITEDI	A	
				A	199F9	SWIEN I	с F n Т	TILKI Tuno	A	0/
					1st M	fid-Term	11 1	ype	Qualitity 1	30
					2nd I	Mid-Term	1		1	
					Quiz		-		1	10
	MI	D-TE	ERM		Hom	ework				
					Proje	ect				
					Report					
					Others ()					
	FINA	AL E	XAM						1	60
Pl	RERE	QUI	EITE(S)							
COURSE DESCRIPTION					The subject of modern fruit growing covers stunted, compacted and intensive fruit growing. All inputs such as sapling, fertilizers, pesticides and supplements used in the garden are used more and more intensively than in classical and traditional fruit growing. It differs greatly from cultural treatments, especially pruning and training					
COU	RSE	OBJ	JECTIVES		Differences in practices such as irrigation, fertilization, pruning, training, support systems and rootstocks used in dwarf fruit trees due to the inputs used more intensively compared to classical cultivation are emphasized and it is aimed that the student who takes the course acquire management skills in a modern orchard.					
ADDITIVE PROFE	OF SSIO	COU NAI	JRSE TO AL L EDUATIO	PPLY DN	Thanks to this course, the person who takes the course will learn the practices related to modern orchards in the world by doing it personally.					urse will learn d by doing it
COU	JRSE	C OU	TCOMES		The It is prace	concept learned tices affe	of by ect	modern experi- the phy	a fruit growing is clearly settle encing how dwarf trees and visiology and yield status of tree	ed in the mind. dense planting ees.
TEXTBOOK					Book title; Intensive Orchard Management, Author; Dr. Bruce H. Barritt, Publication Year; 1992, ISBN;0-9630659-1-2, List price; \$30				; Dr. Bruce H. -2, List price;	
OTH	IER I	REF	ERENCES		General Fruiting, Editors; R. Gerçekçioğlu et al., Chapter 12. Pruning of Fruit Trees. Pages 385-449.					
TOOLS	5 AN RE	D E(QUI	QUIPMENT RED	TS .	Pruning saw and pruning shears					

	COURSE SYLLABUS
WEEK	TOPICS
1	What is modern fruit growing? What areas of fruit growing does it cover?
2	Discussion of inter-row and on-row planting spacing in dwarf orchards.
3	Characteristics of the orchard location suitable for modern fruit growing.
4	Design of support systems, poles, rods and wires in dwarf orchards
5	Determining the suitability of concrete, iron and wood materials used in support systems for the orchard system and facilitating cultural processes
6	Preparation of fruit sapling places and mulching operations in dwarf orchards
7	Vegetative power levels, classification and effects on crown development of rootstocks used in dwarf fruit growing
8	Placement of drip irrigation pipes and design of tanks and apparatus used for irrigation and fertilization purposes
9	The use of Spur and standard apple, pear, cherry and peach varieties in dwarf orchards
10	Discussion of weekly irrigation and fertilization regimens in dwarf orchards
11	Creation and pruning of super spindle and slender spindle systems applied in dwarf apple orchards
12	Creation and pruning of UFO, Kim Green Bush, Tall Spindle ax and super spindle systems applied in dwarf sweet cherry orchards
13	Creation and pruning of vertical cordon, Y palmette and super spindle systems in dwarf pear orchards
14	Spraying operations against diseases and pests such as black spot and internal worms in dwarf orchards
15,16	

NO	PROGRAM OUTCOMES	3	2	1
1	Adequate knowledge of Agricultural Engineering and fruit growing in particular; the ability to apply theoretical and applied knowledge in these fields to model and solve problems related to modern fruit growing	X		
2	Ability to identify, define, formulate and solve problems related to Agricultural Engineering and modern orchard management by selecting and applying appropriate analysis and modeling methods	X		
3	The ability to design a complex system by applying garden design and production models in line with a determined goal.	x		
4	Ability to learn, develop, select and use modern techniques and tools required for Agricultural Engineering practices and to make effective use of information technologies		x	
5	Ability to design, experiment, collect data, analyze and interpret results, to design a garden setup for the study of Agricultural Engineering and Horticulture problems	X		
6	Ability to work individually and in interdisciplinary and interdisciplinary teams		x	
7	Ability to communicate effectively in Turkish orally and in writing, and the ability to use/develop foreign language knowledge about modern fruit growing	x		
8	Ability to communicate effectively in Turkish orally and in writing, and the ability to use/develop foreign language knowledge about modern fruit growing		x	
9	Professional and ethical responsibility awareness		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Yakup ÖZKAN



COURSE CODE	COURSE 251315005					COURS NAMI	SE E	Determination of Plant Fertilizer Requirements and Fertilization		
SEMESTED	W	EE!	KLY COUR	SE PERI	OD			COURSE OF		
SEMESTER	Theo	ory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG E	
V	3		0	0)	3	3	COMPULSORY () ELECTIVE (X)	Turkish	
					COU	RSE CATA	GORY			
Basic Scier	ice		Basic Engine	ering	[if	it contains	Ho conside	rticulture rable design, mark with (√)] X	Social Science	
				A	SSES	SMENT CH	RITERI	A		
					E	valuation 7	Гуре	Quantity	%	
					1st M	id-Term		1	40	
					2nd N	/lid-Term				
	MIL)-TF	RM		Quiz					
					Home	ework				
					Proje	ct				
					Repo	rt				
					Other	's ()		1	60	
	FINA	LE	XAM					00		
Pl	RERE	QUI	EITE(S)		-					
COU	RSE I	DES	CRIPTION		Introducing horticulture crops, explaining effects of factors to fertilization, learning of fertilization timing, application form of fertilizers to horticultural plants.					
CO	URSE	OBJ	IECTIVES		Learning of fertilization timing, application form of fertilizers to fruit and vegetable plants.					
ADDITIVI PROFE	E OF C ESSIO	COU NAI	RSE TO AP L EDUATION	PLY N	Identification of basic principles on fertilization programs and application the programs in selected plants					
CO	URSE	OU	TCOMES		 -Learning Application forms, timing, and amount of fetilization, and gaining ability on application of fertilization of plants. - Preperation of specific fertilization program for horticultural plants. 					
ТЕХТВООК					Kacar B. ve Katkat A.V. 2011. Gübreler ve Gübreleme Tekniği, 4. Basım, ISBN: 978-605-5426-20-0, Nobel yayıncılık Kızılay, Ankara.					
OTHER REFERENCES					Anaç D. 2010. Önemli Kültür Bitkilerinin Gübrelenmesi. Bornova –İzmir. Zengin M. ve Özbahçe A. 2010. Bitkilerin iklim ve toprak istekleri. Atlas akademi Yayınları.					
TOOLS AND) EQU	IPM	IENTS REQ	UIRED	-					

	COURSE SYLLABUS
WEEK	TOPICS
1	Classification of horticultural plants according to fruit characteristics and climate conditions
2	Factors effecting fertilization and fertigation method and fertilization in leaves
3	Type of organic matters for application to soils, type of chemical fertilizers, slow release fertilizers, time and methods of fertilization
4	Nutrition elements level in plants, essentials elements for plants and their uptake forms, symptoms of their deficiency and excess
5	Basic principle of fertilization program, timing of fertilization in horticultural plants
6	Mid-term Exam - Fertilization and nutrition of most common fruits
7	Fertilization and nutrition of most common fruits
8	Fertilization and nutrition of most common fruits
9	Fertilization and nutrition of most common fruits
10	Effective factors in fertilization of vegetables such as economical and environmental
11	Fertilization and nutrition of most common vegetables
12	Fertilization and nutrition of most common vegetables
13	Fertilization and nutrition of most common vegetables
14	Fertilization and nutrition of most common vegetables
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		X	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Date:



ESOGÜ Horticulture Department Course Information Form

COURSE CODE	COURSE 251315006		COURSE NAME			Agriculture and Environment				
	1					1				
SEMESTER WEEKLY COURSE PERIO			OD			COURSE OF				
	Theo	ory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAGE	
5	3		0	C)	3	3	COMPULSORY () ELECTIVE (X)	Turkish	
					COUR	I SE CATA	GORY			
Basic Scier	nce]	Basic Engine	ering	[if it	contains	Ho conside	rticulture rable design, mark with (√)]	Social Science	
			Х							
				A	SSESS	MENT CF	RITERI	A		
					Ev	aluation 1	Гуре	Quantity	<u>%</u>	
					1st Mi	d-Term			20	
					2nd M	id-Term		1	20	
	MID)-TE	RM		Quiz					
					Homey	work				
					Project	t				
					Report					
					Others	()				
	FINA	LE	XAM					1	60	
P	REREC	QUI	EITE(S)		-					
COL	IRSE D	DESC	CRIPTION		Agricultural practices and environment					
CO	URSE	OBJ	ECTIVES		Protection of environment in relation to agricultural practices					
ADDITIV PROFI	E OF C ESSION	COU NAL	RSE TO AP	PLY N	Awareness in agricultural applications					
CO	COURSE OUTCOMES				To make ecologically sensible agricultural production To have the ability of utilizing agricultural and industrial waste in agricultural production					
ТЕХТВООК				Unpublished lecture notes						
OTHER REFERENCES				Organic Agriculture and Environment (Prof. Dr. S. Kırımhan, Uğurer Publishing, 2005)						
TOOLS ANI	D EQUI	IPM	ENTS REQU	JIRED	-					

	COURSE SYLLABUS
WEEK	TOPICS
1	Definitions of agriculture and environment, and their importance in life
2	Environmental problems
3	Sources of environmental pollution, industrial and agricultural
4	Stubble burning affects and protection
5	Animal and plant wastes and residues
6	Midterm exam- Plant nutrients, chemical fertilizers and environment; Pesticides
7	Plant nutrients, chemical fertilizers and environment; Pesticides
8	Biogas production from animal wastes
9	Water pollution and use of treated waters in agriculture
10	Management of sewage sludge in agricultural applications
11	Midterm exam – Waste Management
12	Management of distillary waste of alcohol production from sugar beet, in agriculture; Soil losses in relation of sugar beet harvest
13	Environmental problems of olive-oil wastes and use in agriculture
14	Environmental affects of Murgul Smelter and geothermal energy production in B. Menderes basin
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	x		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



COURSE CODE 251315025				COURSE NAME		Beekeeping			
	XX/	FERI V COUD	SE DEDI				COUDSE OF		
SEMESTER	Theo	or Practice	SE FERI Labra	torv	Credit ECTS		TYPE	LANGUAG	
5	y 3	0	0	<u> </u>	3	3	COMPULSORY (x) ELECTIVE ()	E Turkish	
				COUR	I SE CATA	GORY			
Basic Scien	ice	Basic Engine	ering			Ho	rticulture	Social Science	
				COROCI			X		
			A	SSESSI Ev	<u>MENT CF</u> aluation T	VDE	A Quantity	0/2	
			-	1st Mic	d-Term	ype	Qualitity	40	
			-	2nd Mi	id-Term			+0	
			-						
	MID	-TERM	-	Homen	vork				
			-	Project	VUIK				
			-	Report					
			-	Others	()				
	FINA	L EXAM		Others	()		1	60	
PF	REREC	DUIEITE(S)		None			I	00	
COU	RSE D	DESCRIPTION		Giving teorical and practical experiences on bee breeding					
COL	JRSE (OBJECTIVES		General aspects on breeding and rearing of honeybee					
ADDITIVE PROFES	E OF C SSION	COURSE TO AP IAL EDUCATIO	PPLY DN	Information will be given in the form of detecting problems in beekeeping and correcting them, choosing the right applications for high efficiency.					
COURSE OUTCOMES				 Basic and applied information about beekeeping, sufficient information about application methods in bee management. The ability to identify problems related to beekeeping and develop solutions, the ability to choose and apply appropriate methods for this purpose. Ability to collect data, prepare projects and conduct research on beekeeping Ability to follow scientific and technological developments related to beekeeping, develop strategies and transfer them to animal production To act in accordance with professional and ethical values in the field of beekeeping, to act accordingly and to have a sense of 					
TEXTBOOK				1.Bal Arısı Biyolojisi ve Yetiştiriciliği. Doç.Dr. Sibel Silici, Elif Yayınevi Yayınları					
OTHER REFERENCES				 Sönmez, R. Altan, Ö. 1992. Teknik Arıcılık. E.Ü. Basınevi, Bornova- İzmir 2. Doğaroğlu, M.1999. Modern Arıcılık Teknikleri, Anadolu Matbaa, İstanbul. Grout, R.A. 1992. The Hive and the Honeybee, Dadant & Sons, Inc. II USA 					
TOOL	S AND REQ	DEQUIPMENTS DUIRED	8						

	COURSE SYLLABUS					
WEEK	TOPICS					
1	Beekeeping history; beekeeping in the World and Turkey					
2	Anatomy of honeybees and bee races					
3	Specifications of honey bees in the colony					
4	Life cycles in honey bees					
5	Hormones and pheromones in honey bees					
6	Tools and equipments of beekeeping					
7	Technical beekeeping and land experience					
8	Seasonal works in beekeeping					
9	Midterm exam					
10	Nectar and pollen sources					
11	Queen rearing					
12	Production of honey and other bee products					
13	Apitherapy					
14	Honey bee diseases and pests					
15	Final exam					

NO	PROGRAM OUTCOMES	3	2	1
	To have the basic information on horticulture and other agriculture engineering	-	Χ	
1	areas, describing the required data to solve the problems, to have the ability of			
	gathering data and solving the problems by using information technology			
	To have theoretical and practical (land and laboratory) information on growing and			Χ
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			
	transfer these information accurately			
	To have the ability of determining and evaluating the source of the ecological,			Χ
3	biological, technical and economical problems that negatively effects the sufficient			
	yield and quality of horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and			X
	protection of genetic resources in horticultural area and environment			
5	To have the ability of describing, classification and growing fruits, vegetables,			X
	grapevine and ornamental plants			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			
-	To have the information and ability on breeding horticultural crops, developing a			X
1	new cultivar, and propagation of these new varieties by different methods (seed,			
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			Χ
0	To have the information on good agricultural practices, and by the way, to decide			X
9	the right time of cultural practices of the horticultural crops, and to have the ability			
	of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and			X
	storage of horticultural crops, and to have the information on storage conditions			
11	To have the ability of getting the data on horticultural area, and evaluation,			X
	recording, project creation and application skills			N
12	To have the ability of working in individual, multiple and different disciplined			Х
1.NT	teams, and naving the responsibility			
1:INC	ne. 2: Partially contribution. 3: Completely contribution.			

Instructor(s): Date:



COURSE	COURSE 251315026				COURSE		Fruit and Vegetable Processing						
CODE					NA	ME	Technology						
SEMESTER WEEKLY COURSE PERIO						D COURSE OF							
SEMESTER W		orv	Practice	Labrat	orv	Credit	ECTS	Түре	LANGUAGE				
V	3	v	0	0	5	3	3	COMPULSORY () ELECTIVE (X)	TURKİSH				
•	5		0	Ŷ	COI	IRSE CA	LAGOR	V					
Dania Cain			Dasia Fraina			F	ood Engi	neering Profession	Social				
Dasic Sciel	lice		Dasic Lingine	ering	[if	it contain	s conside	erable design, mark with $(\sqrt{)}$]	Science				
					COLO	SCMENT	CDITED	X					
				P	199F5	SNEN I Evaluation	<u>CRITER</u> 1 Tvne	Ouantity	%				
					1st N	Mid-Term	rjpe	1	40				
					2nd	Mid-Term							
					Quiz	Z							
	MII	D-TE	CRM		Hom	nework							
					Proj	ect							
					Repo	ort							
					Othe	ers (.)						
	FINA	LE	XAM					1	60				
P	RERE	QUI	EITE(S)		Non	e		f finit iniona masters and drink me	agazing of tomata				
COL	COURSE DESCRIPTION				products, especially paste processing, concentration techniques of fruit and vegetable juices, calculation of pasteurization and sterilization conditions in heat processing, production of special canned foods, processing of jam and marmelade, principle of cold and frozen storage, freezing and thawing techniques, basic								
CO	URSE	OBJ	ECTIVES		To explain the fruit and vegetable processing technologies and laboratory controls and analysis methods of the processed fruit and vegetable products.								
ADDITIV PROFI	E OF (ESSIO	COU NAL	RSE TO AP L EDUATIO	PLY N	To gain knowledge of the composition and processing technologies of fruit and vegetable products, which are major foods.								
COURSE OUTCOMES				 1.To understand the importance of fruit and vegetables contents and structure on fruit and vegatable. 2.To learn about industrial fruit and vegetables processes. 3.To understand last product evaluation economically during process application production of high quality fruit and vegetable processing. 4.To learn the basic steps of a process. 5.To learn about safe fruit and vegetable products production. 6.To learn about technological process basics. 7.Able to solve problems at important production points for product quality 8. Able to solve problems at important production points for product quality 									
ΤΕΧΤΒΟΟΚ				 Cemeroğlu, B., Yemenicioğlu, A., Özkan, M., "Meyve ve Sebzelerin Bileşimi ve Soğukta Depolanmaları", Gıda Teknolojisi Derneği, (2001). Cemeroğlu, B., Karadeniz, F., "Meyve Suyu Teknolojisi", Gıda Teknolojisi Derneği, (2001). Cemeroğlu, B., Karadeniz, F., Özkan, M., "Meyve ve Sebze İşleme Teknolojisi", Gıda Teknolojisi Derneği, (2001). 									
ΟΤ	HER F	REFI	ERENCES		 1.Cemeroğlu, B., (ed). 'Gıda Mühendisliğinde Temel İşlemler' Gıda Teknolojisi Derneği, (2005). 2 Lopez, A. A complete course in canning and related processes (1987). 								
TOOLS ANI	TOOLS AND EQUIPMENTS REQUIRED						PC Data Projector						

	COURSE SYLLABUS
WEEK	TOPICS
1	Fruit and vegetable content and structure
2	Fruit and vegetable content and structure
3	Freezing technology
4	Canning Technology
5	Pasteurization and sterilization values and calculations during thermal process
6	Tomato products
7	Tomato paste production technology
8	Midterm exam
9	Equipments in concentrated product
10	Fruit juice production (Clear)
11	Fruit juice production (Pulp)
12	Drying Technology
13	Jam and Marmelade Production Technology
14	Valorization of fruit and vegetable wastes
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	They shell gains the ability to have sufficient background in mathematics, science and engineering subjects and to apply knowledge in these fields to food engineering problems.	X		
2	They shell gain the ability to select and apply appropriate analytical methods and modeling techniques in order to identify, define, formulate and solve food engineering problems.	X		
3	They shell gain the ability to analyze a system or process and apply modern design methods to meet the desired requirements.		X	
4	They shell gain management skills, analytical thinking and problem-solving, knowledge about project management and business practices, awareness of entrepreneurship, innovation and sustainability.		X	
5	They shell gain R&D capability with the ability to design experiments / projects, conduct experiments, collect data, analyze and interpret results.		X	
6	They shell gain the ability to communicate effectively in oral and written communication in human relations.			X
7	They shell gain the skills to work effectively and take responsibility in individual or multi- disciplinary teams.			X
8	They shell gain the ability to choose and use modern techniques and tools required for food engineering applications and to have adequate and current technical knowledge about food legislation.	X		
9	They shell gain awareness of respecting and observance of protecting professional, academic and scientific ethical values.		X	
10	They shell gain awareness of food engineering and food safety practices, evaluation of nutrition, health and environmental interactions and the legal dimensions of these practices.		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Signature:

Date:



ESOGÜ Horticulture Department Course Information Form

SEMESTER Spring

COURSE 251315027			COURSE NAME			Agricultural Extension, Communication and Et				
CODE					INA.					
SEMESTED	WE	EKLY COUR	SE PERI	OD	DD COURSE OF					
SEMESIEK	Theor v	Practice	Labra	tory	Credit	ECTS	ТҮРЕ	LANGUAG E		
5	3	0	0		3	3	COMPULSORY () ELECTIVE (X)	Turkish		
				COURS	SE CATA	GORY				
Basic Scier	nce	Basic Engine	eering	[if it	contains	Hor conside	ticulture able design, mark with (√)]	Social Science		
		Х					-			
			AS	SSESSN	MENT CH	RITERI	A			
				Eva	aluation 7	Гуре	Quantity	%		
				1st Mi	d-Term		1	20		
				2nd M	id-Term		1	20		
				Quiz						
	MID-1	TERM		Homew	work					
				Project	t					
				Report						
				Others ()						
	FINAL	EXAM		1 60						
PF	REREQU	UIEITE(S)		-						
COU	RSE DE	SCRIPTION		Definition of agricultural extension, effects to rural development, organization schedule of Ministry of Agriculture and related corporations, group methods in agricultural extension, applications in extension education and its effects, agricultural extension process and applications in the World and in our country, discrepancy and moderation will be discussed						
COL	JRSE OI	BJECTIVES		Importance of agricultural extension and communication will be explained, methods in agricultural extension will be informed.						
ADDITIVE PROFE	E OF CO SSIONA	DURSE TO AF AL EDUATIO	PPLY N	Importance of agricultural extension and communication will be comprehended by students, to know how and which method to use in applications, to give the basic knowledge to make effective extension work.						
CO	URSE O	UTCOMES		To have the ability of planning and application of agricultural extension methods that will be used through career.						
	ТЕХТВООК				 Anonim, 2006. Eskişehir İl Tarım Müdürlüğü Verileri. Anonim, 2006. Tarım ve Köyişleri Bakanlığı Verileri. Ceylan, C.İ., Köksal, Ö., Akın, A. GAP Bölgesinde Tarımsal Üretim Sürecinde Bilgi İhtiyaçlarının Karşılanmasında Tarım Danışmanlarının Yeri. Ceylan, C. Tarımsal Yayım İletisimi Ders Notu (2006/2007 Güz). 					
OTH		 Ceylan, C., 2005. Yayımcı Rehberi, TKB Yayım Dairesi Başkanlığı, Tarımsal Yayım Serisi, 2005/1. Gümüşçü, A., 2004. Çiftçi Eğitim ve Tarımsal Yayım. T.E.A.E. Bakış, Sayı6, Eylül 2004. Özkaya, T., 1996. Tarımsal Yayım ve Haberleşme. Ege Üniversitesi, Ziraat Fakültesi Yayınları, Yayın No: 520, Bornova,İzmir. Değirmenci, Y., Manyaz, İ., Güzelaydın, I., Erkuş, E., Koçak, F., Arı, B., 2008. Tarımsal Yayım ve Danışmanlık, Ankara. 								
TOOL	S AND I REQU	EQUIPMENT JIRED	S	Project	tion					

	COURSE SYLLABUS							
WEEK	TOPICS							
1	Definition of agricultural extension, and effects to rural development							
2	Organization schedule of Ministry of Agriculture, related corporations, extension services and regulations							
3	Agricultural extension process and applications in the World and in our country							
4	Characteristics of extension education, school educationi and comparisons							
5	Applications in extension education and its effects							
6	Methods in agricultural extension							
7	Individual methods, general look to group methods in agricultural extension							
8	Semtinizing of group methods in agricultural extension							
9	Communication techniques and using body language							
10	What is motivation, how it's used, and it's techniques							
11	Discrepancy and moderation							
12	Making extension illustration together with students							
13	General look to agricultural extension and communication, effects of extension							
14	Preparation to exam, revision of the units							
15,16	Final exam.							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Date:



SEMESTER Spring

COURSE CODE	2513	16019			COUR NAM	SE E	Horticultural Crop Breeding				
SEMESTER	WEF	EKLY COUR	SE PERI	OD			COURSE OF				
	Theor y	Practice	Labrat	tory	Credi t	ECTS	ТҮРЕ	LANGUA GE			
6	1	2	0		2	4	COMPULSORY (X) ELECTIVE ()	Turkish			
			COU	URSE (CATAG	ORY		1			
Basic Science	Basic Science Basic Engineer			[if it o	contains	Ho conside	orticulture erable design, mark with (√)]	Social Science			
					Х						
			ASSE	SSME	NT CRI	TERIA		0/			
			1.4 M	Evalua	tion Typ	be	Quantity	%0 25			
MID-TERM			Ist M	1d-Tern	n		1	25			
				11u-1 ei	111		1	23			
			Home	work							
			Projec	Project							
			Repor	Report							
			Other	Others ()							
FINA	L EXA	М		1 50							
PRERE	QUIEIT	TE(S)	-	-							
COURSE DESCRIPTION			Introd Heter Forma techni intera fertile haplo breed breed cultiv biotec	Heterosis, parent selection, plant introductions and genetic variability, Formation of populations via hybridization, artificial hybridization techniques, interspecies hybridization, genotip and environment interactions, mutation breeding, Bulk method, mass selection in self- fertile plants, Pedigree method, obtaining homozygous lines from doubled haploids, backcross hybridization, open pollinated cultivars from cross breeding plants, synthetic cultivars, hybrid cultivars, F1, F2 cultivars), breeding of self pollinating plants, Hyride breeding, breeding of synthetic cultivars, Hybrid seed production, marker assistat selection, biotechnology in plant breeding							
COURSE	OBJEC	TIVES	To te impro	To teach plant breeding methods and how these methods are used to improve plant characteristics							
ADDITIVE OF PROFESSIO	COURS	E TO APPLY DUATION	Learn	s the br	reeding o	of hortic	ultural plants.				
COURSE OUTCOMES			1) Un 2) Un 3) Bei 4) Un	 Understanding and practicing horticultural plant breeding methods Understanding nad practicing molecular breeding methods Being able to improve plant characteristics using breeding methods Understanding biotechnological applications of breeding methods 							
ТЕХ	KTBOOI	K	Jack Black	Jack Brown, Peter Caligari, 2008. An Introduction to Plant Breeding, Blackwell Publishing							
OTHER I	REFERI	ENCES									
TOOLS AN	D EQUI OUIREI	PMENTS)	Proje	Projection							

COURSE SYLLABUS							
WEEK	TOPICS						
1	Introduction to breeding, plant reproduction models, sources of variation						
2	Inbreeding, Heterosis, parent selection						
3	Plant introductions and genetic variability, Formation of populations via hybridization						
4	Hybridization techniques, interspecies hybridization						
5	Recurrent selection, genetic sterilities, genetic progress						
6	Midterm Exam, mutation breeding						
7	Genotip and environment interactions, mutation breeding						
8	Breeding for disease and insect resistance, Bulk method, Single seed descent method						
9	Mass selection in self-fertile plants, Pedigree method, early progeny tests, obtaining homozygous lines from doubled haploids, backcross hybridization,						
10	Breeding of clonally propagated plants, breeding of self pollinating plants						
11	Midterm Exam, Hybrid breeding						
12	Hybrid breeding, Hybrid seed production, marketing and distribution of new cultivars, national germplasm systems, plant conservation, certification and patenting						
13	MAS (marker assisted selection)						
14	Haploid plants. Anther and pollen culture, biotechnology in breeding,						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	x		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		X	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture		Χ	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:None.	2:Partially contribution. 3: Completely contribution.			

Date:



SEMESTER Spring

COURSE CODE		2513	316020			COURSE NAME Engineering Design					
	W	VEE	KLY COUR	SE PERI	OD	OD COURSE OF					
SEMESTER	Theory Practice Lab				tory	Credit	ECTS	ТҮРЕ	LANGUAG E		
VI	2	2 2 ()	3	6	COMPULSORY (X) ELECTIVE (Turkish			
			COUF	RSE CATA	GORY						
Basic Scier	nce		Basic Engine	ering	[if i	t contains (Ho conside	rticulture rable design, mark with (√)]	Social Science		
			Х								
				Α	SSESS	MENT CF	RITERI	A			
					$\frac{E}{1 + M}$	valuation 7	Гуре		%		
								l	40		
						lid-lerm					
	MII)-TE	CRM		Quiz	monte					
					Projec						
					Repor	л +					
					Other						
	FINAL EVAM				oulei	3 ()		1	60		
P	RERE	QUI	EITE(S)		-						
COURSE DESCRIPTION					Fundamentals of the design of Product, Production and Service Processes, concept development and innovation, determination of design input parameters, review of the basic information (Modelling, Operations Research, Statistical Analysis, Information Systems, Literature research) to be used in the realization of the design, design and cost (economic) analysis. performance analysis, preparation of the design report, preparation and effective presentation of the design presentation (Powernoint) and defense of the produced design						
COURSE OBJECTIVES				The aim of the Engineering Design course is to design and report a product, process and/or system for a desired purpose, based on the knowledge that students have received from different courses. Within the scope of this course, in order for students to use the knowledge and skills they have acquired in various courses, to interpret and evaluate data, to define problems and to analyze; It is desired to have innovative designs based on research and scientific evidence, and in accordance with the demands of the profession. First of all, the undergraduate students of our department are to teach the concept of engineering design and its elements, in this context, to introduce and apply the design process, design activities and design development processes in general, and also to be able to develop a design, group work, oral and poster presentations about the profession of each Horticulture department candidate. It is also aimed to gain the ability, knowledge and skills of							
ADDITIV PROFI	E OF (ESSIO	COU NAI	RSE TO AP	PLY N	This c	ourse include in each Horti	es all fun culture r	lamentals regarding engineering desi rogram.	gn that should be		
PROFESSIONAL EDUATION COURSE OUTCOMES					Students solve real life problems related to Horticulture by using acquired basic science and basic engineering knowledge. The student can design to meet the desired requirements. The student can identify, formulate and solve engineering problems. Students can integrate their individual creativity with teamwork. The student gains awareness of professional and ethical responsibility. The student can write a report and present it in writing and orally. The student can plan and schedule a design, and show continuity in discussions with the consultant. Student can make cost analysis, compare alternatives and compare their strengths and weaknesses, and use modern engineering methods.						

ТЕХТВООК	Distance Education, Horticulture department textbooks, lecture notes and online resources
OTHER REFERENCES	-
TOOLS AND EQUIPMENTS REQUIRED	Computer and projector

	COURSE SYLLABUS
WEEK	TOPICS
1	Basic concepts of engineering and design (Engineering Ethics and responsibilities)
2	Basic concepts of engineering and design (Engineering Ethics and responsibilities)
3	Stages of design (Identification, analysis, evaluation and synthesis of the problem)
4	Stages of design (Identification, analysis, evaluation and synthesis of the problem)
5	Determination and definition of tools, techniques, methods, services etc. used in Horticulture Department
6	Understanding and using modern engineering methods, studies
7	Design and optimization of process steps for tools, techniques, methods, services, etc. used in the
/	Horticulture Department
8	Midterm Examination
9	Report preparation principles
10	A report preparation study of the case design study
11	Preparation and evaluation of the report of the design work
12	Preparation and evaluation of the report of the design work
13	Preparation and evaluation of the report of the design work
14	Preparation and evaluation of the report of the design work
15	Preparation and evaluation of the report of the design work
16	Final Examination

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			X
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:None.	2:Partially contribution. 3: Completely contribution.			



SEMESTER Spring

COURSE CODE	251	316021			COURS NAMI	SE E	Physiology of Horticultural Plar	nts		
SEMESTED	WEE	KLY COUR	SE PERI	OD	DD COURSE OF					
SEMESTER	Theory	Practice	Labra	ntory	Credit	ECTS	ТҮРЕ	LANGUAG E		
6	2	0	0		2	4	COMPULSORY (X) ELECTIVE ()	Turkish		
	-			COUR	SE CATA	GORY				
Basic Scie	nce	Basic Engine	ering	[if it	contains	Ho conside	rticulture rable design, mark with (√)]	Social Science		
							Х			
			Α	SSESS	MENT CF	RITERI	A			
				Ev	aluation 7	Гуре	Quantity	%		
				1st Mi	d-Term		1	40		
				2nd M	id-Term					
	MID-TERM									
				Home	work					
		Otherra								
				Others	()		1	60		
	FINAL E	XAM					1	00		
Р	REREQUI	EITE(S)								
COU	RSE DES	CRIPTION		Concepts in plant growth and development of horticultural crops, factors affecting growth and development, growth and some important physiological processes in development, plant resistance to various environmental conditions, effects of ecological factors and exterior applications on physiology and their usage in horticultural crops.						
COU	JRSE OB	JECTIVES		The course aims to explain physiological processes and the factors affecting these processes in horticultural crops and to show the ways for yield and quality control in horticultural crops by interfering the physiological processes						
ADDITIVH PROFE	E OF COU SSIONAI	JRSE TO A L EDUATIO	PPLY DN	Physiological events that occur in plants illustrate the recognition of known and required by the plant breeding, farming, affecting the driving factors such as productivity and quality issues so learned.						
COURSE OUTCOMES					 -Understands the importance of physiological events in horticultural crop cultivation, analyzes the physiological problems; develops solutions -Knows the fundamentals of growth and development of horticultural crops; and transfer to practice. -Knows the effective internal and external factors of growth and development; learns the application of control and management techniques and transfer these techniques to practice. -Controls and manages the abiotic stress conditions in horticultural crops. 					
	TEXTB	OOK		-						
OTHER REFERENCES					 Bitki Fizyolojisi (Burhan Kacar, A. Vahap Katkat, Şule Öztürk), 4. Baskı, Nobel Yayınları Bitki Fizyolojisi (Taiz&Zeiger, Çeviri Editörü: İsmail Türkan, Palme Yayıncılık). Plant Physiology (Salisbury&Ross, Wadsworth Publishing) Bahçe Bitkileri Fizyolojisi (Atilla Eriş, Uludağ Üniversitesi Ziraat Fakültesi Yayınları) 					
TOOL	S AND EC	QUIPMENT	ſS	Compu	ter and proj	ection.				
	REQUI	RED								

	COURSE SYLLABUS							
WEEK	TOPICS							
1	Structure and functions of plant cells and organelles- Cell division, structural elements, enzymes and processes							
2	Water and cell relation, taking and transporting water, dehydration							
3	Plant nutrient intake, transport and deficiencies							
4	Factors affecting photosynthesis and photosynthesis							
5	Factors affecting the respiratory and respiratory							
6	The effects of ecological factors on growth, development and maturation							
7	Midterm exam -The effects of internal factors on growth and development-Plant hormones							
8	Germination, spouting and rooting							
9	Apical dominancy, flowering, photoperiodicity,							
10	Dormancy and its mechanism							
11	Flower and fruit drop, Maturity, Aging							
12	Sterility and incompatibility, parthenocarpy and apomixes in horticultural crops							
13	Tropisms, Vernalisation, thermoperiodism and regeneration							
14	Abiotic Stresses							
15,16	Final exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of	X		
	gathering data and solving the problems by using information technology			
	To have theoretical and practical (land and laboratory) information on growing and			
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			X
	To have the ability of determining and evaluating the source of the coological			
3	biological technical and economical problems that negatively effects the sufficient	x		
5	yield and quality of horticultural crops	1		
1	To have the skill of utilizing different techniques for sustainable usage and			v
4	protection of genetic resources in horticultural area and environment			Λ
5	To have the ability of describing, classification and growing fruits, vegetables,			x
	grapevine and ornamental plants			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
_	To have the information and ability on breeding horticultural crops, developing a			
7	new cultivar, and propagation of these new varieties by different methods (seed,		X	
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			X
0	To have the information on good agricultural practices, and by the way, to decide			
9	the right time of cultural practices of the horticultural crops, and to have the ability			X
	of describing the pest and diseases of norticultural plants			-
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		Х	
	To have the ability of getting the data on horticultural area, and evaluation.			
11	recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined			v
12	teams, and having the responsibility			Λ
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assist. Prof. Dr. Cenap YILMAZ



SEMESTER Spring,

COURSI CODE	COURSE CODE 251316022			COURSE NAME		RSE ME	Vegetable seed production and certification			
SEMESTER WEEKLY COURSE PER			IOD			COURSE OF				
	Theory Practice Labor		atory	Credit	ECTS	ТҮРЕ	LANGUAGE			
5	2	2	0)	3	4	COMPULSORY () ELECTIVE (X)	Turkish		
				COUR	SE CAT	AGORY	I	-		
Basic Science Basic Engineering			ieering	[if it	Horticulture [if it contains considerable design, mark with (√)]					
				ASSESS	MENT C	RITER	ΙΑ			
				ABSESS Eva	aluation 7	Type	Ouantity	%		
			ľ	1st Mid-	Term		1	40		
			F	2nd Mid	-Term			1		
			ľ	Quiz						
	MID-T	ERM	F	Homewo	ork			1		
			F	Project						
			ľ	Report						
			ľ	Others ()						
	FINAL I	EXAM					1	60		
PR	REREQU	IEITE(S)		To have p	bassed the	General V	/egetables course			
COURSE DESCRIPTION			1	development, ecological properties of seed production and seed production, protection and isolation, seed producer's declarations, drying seeds, seed storage, the stages of the seed certification system, seed registration, hybrit seed, seed gene banks The aim of the course is to produce, use, trade and standardize vegetative organs used as seeds, to produce seeds, to register them, to carry out the necessary technical and bureaucratic procedures for certification, to determine their compliance with field and laboratory standards, to teach the rules and standards theoretically and						
ADDITIVE OF COURSE TO APPLY PROFESSIONAL FDUATION				The significance of seed on plant production and certification system of seed production will be taught.						
COURSE OUTCOMES				To be able to explain the seed concept, seed classes, and importance of the seed on the plant production To be able to explain the principles of registration of vegetable species To be able to explain the process of seed certification system To be able to state the importance of field controls on seed certification process To be able to state the importance of laboratory tests on seed certification process To be able to discuss the problems of seed production sector To have the ability and knowledge in case of making certificated seed production						
TEXTBOOK OTHER REFERENCES				 Şehirali, S. 1997. Tohumluk ve Teknolojisi, Fakülteler Matbaası, İstanbul. 2-Tohum, Tohumculuk ve Teknolojileri, 2019.Bitki Islahçıları Alt Birliği 4-cilt 3-Er, C., Başalma, D. 2020.Tohumculuk ve Tohumluk, Temel ilkeler ve teknoloji, Nobel Akademik Yayıncılık. 1-Copeland, LO., McDonald, MB. 1995. Seed Science and Technology, Kluwer Academic Publishers, Boston/Dordrecht/London. 						
TOOLS	AND E REQU	QUIPMEN' IRED	ГS	Internatio	onal, Oxfor	dshire, U	nited Kingdom.			

	COURSE SYLLABUS
WEEK	TOPICS
1	The situation and development of vegetable seeds in our country
2	Flower structure, seed formation, seed and seed concept, seeds used in vegetable species
3	Morphology and physiology of vegetable seeds
4	Seed germination physiology and dormancy classes
5	Principles of registration of vegetable species
6	Principles of registration of vegetable species
7	Methods of obtaining seeds from vegetables and preparation for the market
8	Effects of biotic and abiotic factors on vegetable seed production
9	Required isolation distances in seed production, necessary conditions in seed producing organization
10	Drying and storage of seeds
11	Mid-term exam / Seed gene banks
12	Seed control and certification steps, field control, packaging of seeds, labeling sampling procedures and marking of seed lots
13	Laboratory analysis of seed lots (sampling, purity)
14	Laboratory analysis of seed lots (germination)
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Dr. Ögr. Üyesi Sıtkı ERMİŞ



SEMESTER Spring

COURSE CODE	RSE 251316023 DE				COURSE NAME		Fertilization Biology of Horticultural Crops				
SEMESTER	WEEKLY COURSE PERI				OD	OD COURSE OF					
	Theo	ory	Practice Labra		atory	Credit	ECTS	ТҮРЕ	LANGUAGE		
6	2		2	C)	3	4	COMPULSORY () ELECTIVE (X)	Turkish		
					COURSE CATAGORY						
Basic Science Basic Engineering			[if	it contains	H(conside	orticulture rable design, mark with (√)]	Social Science				
					COTO		ITEDI	X			
				P	E.	valuation 7	vne	A Ouantity	%		
					1st M	id-Term	JPC	1	25		
					2nd N	/lid-Term		1	25		
	MID	-TF	PM		Quiz						
	MID	-12			Home	ework					
					Projec	ct					
					Other	rt					
	FINA	LE	XAM		Other	<u>s (</u>)		1	50		
PI	REREC	OUI	EITE(S)		-						
COURSE DESCRIPTION				Pollination, floral structures, pollen structure, quality and quantity, characteristics of stigma and stilus, horticultural groups through fertilization biology, pollinator insects, cleistogamie, artificial pollination, fertilization, germination of pollen, vigor of egg cell, infertilities, apomixis, parthenocarpy, incompatibility, fertilizer cultivars, controlled hybridization and emasculation will be discussed.							
COL	URSE	OBJ	ECTIVES		It was aimed to give information on pollination and fertilization of horticultural plant species to students.						
ADDITIVI PROFE	E OF C ESSIO	COU NAL	RSE TO AP	PLY N	Basic knowledge will be given about breeding on species basis. The course will be usefull on orchard and garden establishment in choosing varieties and fertilizer varieties.						
COURSE OUTCOMES				Understanding pollination and fertilization of horticultural plant species. To gain the ability of practicing breeding techniques. To choose proper varieties and fertilizers on orchard establishment. To gain the ability of detecting problems in pollination, fertilization, fruit set and to develop solutions.							
	ТЕХТВООК				Özçağıran, R., 2000. Bahçe Bitkilerinde Döllenme Biyolojisi (Ders notları). Ege Universitesi Ziraat Fakültesi, Bahçe Bitkileri Bölümü.						
OTHER REFERENCES				 Janick, J., Moore, J. N., 1975. Advances in Fruit Breeding. Purdue University Press, West Lafayette, Indiana. Moore, J.N., Janick, J., 1983. Methods in Fruit Breeding. Purdue University Press, West Lafayette, Indiana. Hörandl, E., 2010. The evolution of self-fertility in apomictic plants. Sexual Plant Reproduction 23:1, 73-86. Owens, S.J., Miller, R., 2009. Cross- and self-fertilization of plants â Darwin's experiments and what we know now. Botanical Journal of the Linnean Society 161:4, 357-395. Friedman, J., Barrett., S.C.H., 2009 The consequences of monoecy and protogyny for mating in wind-pollinated Carex. New Phytologist 181:2, 489-497. 							
TOOLS AND	EQU	IPM	ENTS REQU	JIRED	Projec	ction					

COURSE SYLLABUS							
WEEK	TOPICS						
1	Pollination and flower structures, infloressens – rasemoz-kimos						
2	Flower structures of fruits and vegetables						
3	Pollen and embryo sac formation						
4	Self sterility and dicogamy						
5	Pollination of some fruit species, controlled hybridization and emasculation						
6	Mid-term exam / Controlled hybridization and emasculation						
7	Pollen cariers (Wind, insects, water, birds); Factors effecting pollination						
8	Fertilization						
9	Germination of pollen and factors effecting pollen development						
10	Incompatibility; Fertilization of some fruit species and fertilizer varieties						
11	Mid-term exam / Incompatibility						
12	Fertilization of vegetables						
13	Abnormalities in generatif reproduction of plants, apomixis, parthenocarpy, parthenospermy, stenosphermocarpy, poliploidy						
14	Seed and fruit development, kseni-metakseni, fruit falls						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		X	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			x
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:None.	2:Partially contribution. 3: Completely contribution.			

Date:



ESOGÜ Horticulture Department Course Information Form

SEMESTER Spring

COURSE CODE	251316024				COURSE NAME		Propagation of Seasonal Flower			
SEMESTED	WEEKLY COURSE PERIOD				D COURSE OF					
SEWIESTER	Theory	Practice	ctice Labrato		Credit	ECTS	ТҮРЕ	LANGUAG E		
6	2	2 2 0)	3	4	COMPULSORY () ELECTIVE (X)	Turkish		
				COUR	SE CATA	GORY				
Basic Science Basic Engineering			eering	[if it	contains	Ho consider	rticulture rable design, mark with (√)]	Social Science		
							Х			
			А	SSESS	MENT CF	RITERI	A			
				Ev	aluation T	уре	Quantity	%		
				Ist Mi	d-lerm		1	40		
				2nd M	id-1erm		1	40		
	MID-T	ERM		Homes	vork		1	10		
				Project	t		1			
				Report						
				Others						
	FINAL I	EXAM					1	50		
P	REREQU	IEITE(S)		To have passed the Ornamental Plants Cultivation course						
COURSE DESCRIPTION				To teach the basic principle of seasonal flowers cultivation, the place and the importance of them among ornamental plants, the knowledge belonging to the group, family, botanical name, morphological features, ecological demands, production techniques and care recommendations of the seasonal flowers grown annual, bi-annual and perennial.						
CO	URSE OB	JECTIVES		Annual, biannual and perennial seasonal flowers will be explained and propogation methods of these flowers will be teached.						
ADDITIV PROFI	E OF CO ESSIONA	URSE TO AP L EDUATIO	PLY N	To have knowledge about seosonal flower and their propogation methods.						
COURSE OUTCOMES				 To have recognize seosonal flowers To have general knowledge about seasonal flowers that is grown annual, bi-annual and perennial To have learn ecological demands and propogation methods of them 						
ТЕХТВООК				Hatipoğlu, A., Gülgün, B. (). Tek ve Çok Yıllık Mevsimlik Çiçekler, Kent Matbaası, İzmir, 208s. Orçun, E. (1968). Süs Bitkileri Cilt II, İlkbahar ve Yaz Çiçekleri, Ege Üniversitesi Matbaası, İzmir, 173s. Oğuz, G., Yayıntaş, a. (1987). Park ve Bahçelerimizin Süs Bitkileri, Ege Üniversitesi Fen Fakültesi Baskı İsleri, İzmir, 207.				simlik çekleri, Ege is Bitkileri, Ege		
OT	HER REF	ERENCES		_						
TOOLS AND EQUIPMENTS REQUIRED				Comp	uter, proje	ction				
	COURSE SYLLABUS									
------	---									
WEEK	TOPICS									
1	The importance of seasonal flowers and their dendrological features									
2	The production of seasonal flowers, the features and preparation and maintenance of seosonal flowers									
3	Some seasonal flowers. The production use growing demands and care of Achille, Ageratum, Althea, Alyssum, Amaranthus, Antirrhinum, üretimi, kullanımı, yetiştirme istekleri ve bakımı									
4	The production use growing demands and care of Aster, Astilbe, Bellis, Brassica, Calendula, Campanula									
5	The production use growing demands and care of Capsicum annum, Catharanthus, Celosia Centaurea, Erysimum cheiri, Cerastium									
6	The production use growing demands and care of Chrysanthemum, Coleus, Cosmos, Coreopsis Delphinium, Dianthus									
7	The production use growing demands and care of Eschsolzia, Exacum, Gazania, Gomphera, Godetia, Impatiens									
8	The production use growing demands and care of Impatiens hawkeri, Ipomea, Lathyrus, Lobelia, Mathiola, Mesembrianthemum									
9	Midterm Exam									
10	The production use growing demands and care of Nigella, Petunia, Phlox, Portulaca, Salvia, Tagates,									
11	The production use growing demands and care of Verbena, Zinnia, Rudbeckia, Cineraria, Viola, Primula									
12	The production use growing demands and care of Pelargonium, Papaver, Armeria, Amberboa imperialis, Cleome, Datura									
13	The production use growing demands and care of Erigeron, Gentiana, Gypsophila, Aquilegia, Saxifraga, Silene,									
14	Visiting seasonal flower production area									
15	Final									

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	

Instructor(s): Assoc.Prof.Dr. Sibel SARIÇAM



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE	251316025				COURSE		Seedling - Nursery Growing and Certification		
					NAM	<u>.</u>			
SEMESTER	WF	EEKLY COUR	SE PERI	OD			COURSE OF		
	Theor	y Practice	Labra	ntory	Credit	ECTS	ТҮРЕ	LANGUAGE	
6	2	2	0		3	4	COMPULSORY () ELECTIVE (X)	Turkish	
				COU	RSE CATA	GORY			
Basic Scien	ice	Basic Engine	ering			Н	orticulture	Social	
					it contains	conside	erable design, mark with (v)	Science	
			4	SSES	SMENT CI	TFDI	х Х		
			П	F	valuation 7	Type	Ouantity	0/0	
				1st M	lid-Term	ype	1	2.5	
				2nd N	/lid-Term		1	25	
	MID	TEDM		Quiz					
	MID-	IEKM		Home	ework				
			Proje	ct					
				Repo	rt				
	FINAT	EVAM		Other	rs ()		1	50	
PI	FINAL REREO	LIFITE(S)		_			1	30	
COURSE DESCRIPTION				Vegetable ans seasonal ornamental seedling propagation techniques and growing mediums, seedling propagation units, propagation techniques of fruit trees, specifications of saplings, establishment of nursery and required applications, nursery parcelling, specifications of rootstock and scion base materials, standardization and longitude, transport and storage. To get information about production of vegetable seedling and nursery					
ADDITIVI PROFF	E OF CO	OURSE TO AP	PLY N	Students will be informed about production of vegetable seedling and nursery production					
CO	PROFESSIONAL EDUATION COURSE OUTCOMES			To learn the principles of seedling production To use general propagation methods where needed. To learn nursery production methods and share these information to the producers To make sectoral analysis.					
ΤΕΧΤΒΟΟΚ				 Soylu, A. (2000). Meyve Yetiştirme Tekniği, Uludağ Üniversitesi Ziraat Fakültesi Yayınları, No: Bursa Soylu, A. (2006). Meyve Ağaçlarında Budama ve Aşılama, Hasad Yayıncılık, 144s. M. Babaoğlu, E. Gürel, S. Özcan eds.(2002). Bitki Biyoteknolojisi I, Doku Kültürü ve Uygulamaları, Selçuk Üniversitesi Basımevi Hartman, H.T. (1974). Bahçe Bitkileri Yetiştirme Tekniği (Çev. Muhsin Yılmaz), Çukurova Üniversitesi Ziraat Fakültesi Yayınları, 601s. 					
ΟΤΙ	HER RE	EFERENCES		Yılmaz, S., Çelik, H., Zengin, S., Fırat, A.F., . (2009). Tohum, fide ve çesit seçimi. Örtüaltı Biber Yetistiriciliği. 4. Bölüm.49-58s. Batı Akdeniz Tarımsal Aras. Enst., Antalya.					
TOOLS AND	EQUI	PMENTS REQ	UIRED	Proje	ection and p	c.			

COURSE SYLLABUS							
WEEK	ΓΟΡΙCS						
1	Seedling production of traditional methods						
2	Seedling production on seedbed						
3	Seedling production on plastic tunnels						
4	Potted seedling production						
5	Seedling production of modern techniques						
6	Midterm exam / Potted seedling production						
7	Grafted vegetable seedling production; Planning and establishing tree nursery						
8	Nursery production methods						
9	Grafting and maintenance works after grafting						
10	Propagation with cuttings						
11	Midterm exam / Sectoral analysis						
12	Layering and other propagation methods; The quality properties of fruit scions						
13	Rootstocks and their properties that used in nursery						
14	Certification processes						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		x	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		X	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture		Χ	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:None	2:Partially contribution. 3: Completely contribution.			

Instructor(s):

Date:



COURSE CODE	251	251316026			COURSE Outdoor Ornamental Plan NAME			pogation
SFMFSTFR	WEE	KLY COURS	SE PERI	OD			COURSE OF	
SEMILSTER	Theory	Practice	Labra	ntory	Credit	ECTS	ТҮРЕ	LANGUAG E
6	2	2	0		3	4	COMPULSORY () ELECTIVE (X)	Turkish
				COUR	SE CATA	GORY		
Basic Scier	nce	Basic Engine	ering	[if it	contains o	Ho: consider	rticulture rable design, mark with (√)]	Social Science
							X	
			A	SSESSI	MENT CF	RITERL	A O III	0/
				Let Mi	aluation 1	ype	Quantity	%0
				2nd M	id-Term		1	40
	MID-TI	ERM		Homey	work		1	10
			Project	t				
				Report				
				Others	()			
	FINAL E	CXAM					1	50
P	REREQU	IEITE(S)		To have passed the Ornamental Plants Cultivation course				
COU	IRSE DES	CRIPTION		Propogation of woody plants such as tree and shrub for landscape application				
CO	URSE OB	JECTIVES		The main goals of the course are to learn outdoor woody plants and propagation methods of these plants				
ADDITIV PROFI	E OF COU ESSIONAI	JRSE TO AP L EDUATION	PLY N	Students will be informed about woody ornamental plants, its ecolological conditions and propogation methods of these plants.				
CO	URSE OU	TCOMES		To set up greenhouse for ornamental plants and to achieve maintenance of woody plants, to solve problems, To have recognize woody ornamental plants, To have general knowledge about woody ornamental plants, To have knowledge about propogation of woody ornamental plants.				
ТЕХТВООК				Orçun, E. (1972) Dendroloji Cilt I İğne Yapraklı Ağaç ve Ağaçcıklar, <i>Ege Üniversitesi Matbaası</i> , Bornova-İzmir, 383s. Orçun, E. (1975) Dendroloji Cilt II Yapraklı Ağaç ve Ağaçcıkların Özellikleri ve Peyzaj Mimarisinde Kullanılışları, <i>Ege Üniversitesi</i> <i>Matbaası</i> , Bornova-İzmir, 298 s. Yaltırık, F. (1988)ç Dendroloji Ders Kitabı II Angiospermae Bölüm I, İstanbul Üniversitesi Orman Fakültesi Yayınları, İstanbul, 255s. Zencirkıran, M. (2013). Peyzaj Bitkileri 1 (Açık Tohumlu Bitkiler- Gymnospermae), Nobel Akademik Yayıncılık, ISBN: 9786051335070, 475s.				
OT	HER REF	ERENCES		Mamıkoğlu, N.G. (2007). Türkiye'nin Ağaçları ve Çalıları, NTV Yayınları, İstanbul, 727s.				
TOOLS AND) EQUIPM	IENTS REQU	UIRED	Comp	uter, proje	ction		

COURSE SYLLABUS						
WEEK	TOPICS					
1	The situation of outdoor ornamental plants in world and Turkey and the place of these plants in the country economy					
2	Propogation of outdoor ornamental plants					
3	General information about Gymnospermae plants					
4	Gymnospermae outdoor plants (Trees)					
5	Gymnospermae outdoor plants (Trees)					
6	Gymnospermae outdoor plants (Trees)					
7	Gymnospermae outdoor plants (Shrubs)					
8	General information about Angiospermae plants					
9	Midterm exam					
10	Angiospermae outdoor plants (Trees)					
11	Angiospermae outdoor plants (Trees)					
12	Angiospermae outdoor plants (Trees)					
13	Angiospermae outdoor plants (Shrubs)					
14	Angiospermae outdoor plants (Shrubs)					
15	Final					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	

Instructor(s): Assoc. Prof. Dr. Sibel SARIÇAM



ESOGÜ Horticulture Department COURSE INFORMATION FORM

COURSE CODE	OURSE 251316027				COURSE Mushroom Growing Technique NAME				
OFMECTED.	WEE	KLY COUR	SE PERI	OD			COURSE OF		
SEMESTER	Theory	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAG E	
6	2	2	0)	3	4	COMPULSORY () ELECTIVE (X)	Turkish	
	1			COU	RSE CATA	GORY	L		
Basic Scier	nce	Basic Engine	eering	[if i	t contains (Ho conside	rticulture rable design, mark with (√)]	Social Science	
				SCEC		TEDI	•		
			А	.99F95	WIENT Cr		A	0/_	
				1st M	id-Term	ype	1	50	
				2nd N	lid-Term		1		
				Quiz					
	MID-T	ERM		Home	work				
				Projec	et				
				Repo	t				
				Other					
	FINAL B	EXAM					1	50	
P	REREQU	IEITE(S)							
COU	RSE DES	CRIPTION	[Mushroom production in Turkey and in the world, nutritional value of mushroom, production techniques, compost requirements, environmental conditions necessary for production will be given.					
COU	RSE OB	JECTIVES		The aim of this course is to teach the basic principles of cultivation of the mushroom to the students.					
ADDITIVE PROFE	C OF COI SSIONA	URSE TO A L EDUATI(PPLY DN	This is the main course that informed about It is a course that introduces the mushroom, which has an important place in the field of horticultural crops, and gives principles theoretical and applied information about cultivation techniques and commercial production of mushroom.				important place theoretical and ad commercial	
COURSE OUTCOMES				At the end of this course, student will have the necessary information about 1.Production of mushroom mycelium, 2.Compost preparation 3.Sterilization 4.Ecological needs at different stages of development 5.Cultivation of common mushrooms 6 Harvest and Packaging					
ТЕХТВООК				 Kültür Mantarı Yetiştiriciliği, Erkel, İ. TAV yayınları, Yalova, 1993. Mantar Yetiştirme. Günay, A., Abak, K., Koçyiğit, A.E. Saypa Kitap ve Yayınevi, Ankara, 1992. Kültür Mantarı üretim Teknikleri, Aksu, Ş. Hasad Yayıncılık, 2006 					
OTH	IER REF	ERENCES		* Mai ve Ya	ıtar Yetiştir yınevi, Anl	me. Gür ara, 199	nay, A., Abak, K., Koçyiğit, A.E. 22.	Saypa Kitap	
TOOLS	S AND E REQUI	QUIPMENT RED	T S						

COURSE SYLLABUS						
WEEK	TOPICS					
1	Taxonomy and nutritional value of common mushroom, mushroom production in Turkey and in the world					
2	Mushroom production places; preparation for growing					
3	Classification of mushrooms according to their growing characteristics					
4	Cultivation techniques and preparation of climate-controlled indor cultivation place					
5	Steps to commercial cultivation					
6	I. Mid-term exam, starting mushroom mycelium					
7	Materials used in making compost, formulations and preparation of compost; Pasteurization and disinfection of compost					
8	Cultivation of mycelium, irrigation and temperature					
9	İrrigation and temperature at harvest time					
10	Classification and packaging					
11	II. Mid-term Exam,					
12	Mushroom Pest and Disease					
13	Mushroom use and preservation methods					
14	Storage and Marketing					
15,16	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Nuray ÇÖMLEKÇİOĞLU



COURSE CODE 251316028				COURS NAMI	SE E	Pruning and Training in Horticu	llture			
SEMESTED	WEF	KLY COUR	SE PERI	OD	DD COURSE OF					
SENIESIEK	Theory	Practice	Labora	atory	Credit	ECTS	ТҮРЕ	LANGUAG E		
6	2	2	0		3	4	COMPULSORY() ELECTIVE (X)	Turkish		
		1		COUR	SE CATA	GORY				
Basic Scien	ice	Basic Engine	eering	[if i	t contains	Ho consider	rticulture rable design, mark with (√)]	Social Science		
							X			
			A	SSESS	MENT CF	RITERL	A	۵/		
				Let M	aluation	ype	Quantity	% 0		
				2nd M	ld-Term		1	0		
				Ouiz	nu-renn					
	MID-T	ERM		Home	work					
				Projec	:t					
				Repor	t					
					s ()					
	FINAL B	EXAM					1	60		
PI	REREQU	IEITE(S)		-			·			
COU	RSE DES	CRIPTION		In this course Fruit trees pruning and training techniques used are discussed as theoretical and practical						
COU	URSE OB	JECTIVES		To gain experiences and get information about pruning fruit trees and training systems.						
ADDITIVI PROFF	E OF COU ESSIONA	URSE TO AP L EDUATIO	PLY N							
COURSE OUTCOMES				 Get to know pruning, aims and can comprehend the effects. To be able to learn pruning times. To put into practice the training forms that applied to fruit trees. To be able to learn technical operations that applied in pruning. To know pruning and training forms that applied to different fruit species. To learn pruning methods that applied in different age periods of trees. To get information about pruning tools and machinery. 						
ТЕХТВООК				Budama Tekniği (Arif Soylu , Rahmi Türk). Meyve Ağaçlarında Budama (Muhsin Yılmaz). Meyve Ağaçlarında Budama ve Aşılama (Arif Soylu). Yılmaz, M., 1995. " Budama ". Çukurova Üniversitesi Ziraat Fakültesi Yayını, Adana						
OTHER REFERENCES				<i>Training and Pruning Apple and Pear Trees (C.G.Forshey, D.C.Elfving, R. L. Stebbins).</i> <i>Pruning Fruit and Nut Trees (Leaflet 21171, University of California).</i> <i>Pruning & Training. A Fully Illustrated Plant by Plant Manual (C. Brickell, D. Joyce)</i>						
TOOLS AND	EQUIPN	IENTS REQ	UIRED	-						

COURSE SYLLABUS						
WEEK	TOPICS					
1	Definition and objectives of pruning					
2	Various organs of fruit trees and their functions					
3	Various organs of fruit trees and their functions					
4	Physiological principles of pruning					
5	Pruning times					
6	Mid-term exam - Cautions during pruning					
7	Cautions during pruning					
8	Training systems in fruit trees					
9	Training systems in fruit trees					
10	Training systems in fruit trees					
11	Mid-term exam - Training systems in fruit trees					
12	Training systems in fruit trees					
13	Pruning of yielded trees					
14	Rejuvenation pruning					
15	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas describing the required data to solve the problems, to have the ability of	x		
1	gathering data and solving the problems by using information technology	2		
	To have theoretical and practical (land and laboratory) information on growing and			
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and		Х	
3	To have the ability of determining and evaluating the source of the ecological, biological technical and economical problems that negatively effects the sufficient	v		
5	yield and quality of horticultural crops	Λ		
1	To have the skill of utilizing different techniques for sustainable usage and	v		
4	protection of genetic resources in horticultural area and environment	Λ		
5	To have the ability of describing, classification and growing fruits, vegetables,		x	
	grapevine and ornamental plants		2	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
_	To have the information and ability on breeding horticultural crops, developing a			
7	new cultivar, and propagation of these new varieties by different methods (seed,	Х		
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			X
	To have the information on good agricultural practices, and by the way, to decide			
9	the right time of cultural practices of the horticultural crops, and to have the ability		X	
	of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and			x
10	storage of horticultural crops, and to have the information on storage conditions			
11	To have the ability of getting the data on horticultural area, and evaluation,		X	
	recording, project creation and application skills			
12	To have the ability of working in individual, multiple and different disciplined	Х		
	teams, and having the responsibility			
1:Non	e. 2 :Partially contribution. 3 : Completely contribution.			

Instructor(s): Prof.Dr. Yakup ÖZKAN

Signature:

Date:



COURSE CODE	25	1316029			COURS NAMI	COURSE Pests of Horticultural Crops and Cont NAME					
SEMESTED	WEF	KLY COUR	SE PERI	OD			COURSE OF				
SEWIESTER	Theory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAGE			
6	2	2	C)	3	4	COMPULSORY () ELECTIVE (X)	Turkish			
	• · · · ·					GORY	1				
Basic Scier	nce	Basic Engine	ering	[if i	t contains (Ho conside	orticulture rable design, mark with (√)]	Social Science			
							Х				
						RITERI	A				
					valuation 7	Гуре	Quantity	%			
					id-Term		<u>l</u>	40			
	MID-T	ERM		Quiz	1-						
					work						
					ו ל						
					$\frac{1}{2}$						
	FINAL FXAM					1					
Р	REREOU	IEITE(S)		-			1				
COL	URSE DES	SCRIPTION		Description, biology, damage and their control of important pests in vegetable, fruit, vineyard and ornament plants.							
CO	URSE OB	JECTIVES		Objective of this course, description, biology, damage and their control of important pests in fruit, vegetable, vineyard and ornament plants in Turkey are teach.							
ADDITIV PROFI	E OF CO ESSIONA	URSE TO AP L EDUATIO	PLY N	To know pests of horticultural plants.							
CO	URSE OU	JTCOMES		Knowledge about description, biology, damage and their control of important pests in vegetable, fruit, vineyard and ornament plants are learning understand, improve. Knowledge about description, biology, damage and their control of important pests in vegetable, fruit, vineyard and ornament plants in to procedures can be transfer.							
ТЕХТВООК			Özbek, H., Ş. Güçlü, R. Hayat and E. Yildirim, 1998. Pests of Fruit, Vineyard and Some Ornament Plants. Second Edition. Atatürk University, Agriculture Faculty Press, No: 72, Erzurum, 357 p. (Turkish). Tarım ve Orman Bakanlığı Bahçe bitkileri ve sebze zararlıları ilgili teknik talimatlar, 2017.								
OTHER REFERENCES				- Anonymous, 2008. Zirai Mücadele Teknik Talimatları, Cilt 1. T. C. Tarım ve Köyişleri Bakanlığı, Tarımsal Araştırmalar Genel Müdürlüğü, Ankara, 283 s. Anonymous, 2008. Zirai Mücadele Teknik Talimatları, Cilt 2. T. C. Tarım ve Köyişleri Bakanlığı, Tarımsal Araştırmalar Genel Müdürlüğü, Ankara, 260 s. Anonymous, 2008. Zirai Mücadele Teknik Talimatları, Cilt 4. T. C. Tarım ve Köyişleri Bakanlığı, Tarımsal Araştırmalar Genel Müdürlüğü, Ankara, 388 s. Anonymous, 2008. Zirai Mücadele Teknik Talimatları, Cilt 4. T. C. Tarım ve Köyişleri Bakanlığı, Tarımsal Araştırmalar Genel Müdürlüğü, Ankara, 388 s. Anonymous, 2008. Zirai Mücadele Teknik Talimatları, Cilt 5. T. C. Tarım ve Köyişleri Bakanlığı, Tarımsal Araştırmalar Genel Müdürlüğü, Ankara, 301 s. Anonymous, 2008. Zirai Mücadele Teknik Talimatları, Cilt 6. T. C. Tarım ve Köyişleri Bakanlığı, Tarımsal Araştırmalar Genel Müdürlüğü, Ankara, 286 s. Anonymous, 2009. Fauna Europaea Version 2.1, http://www.faunaeur.org Hill, D. S., 1994. Agricultural Entomology. Timber Press, Portland, Oregon, 634pp							
TOOLS ANI) EQUIPN	IENTS REQ	UIRED	Project	10n						

	COURSE SYLLABUS							
WEEK	TOPICS							
1	Chordata, Mollusca, Nematoda							
2	Arthropoda, Arachnida,							
3	Arthropoda, Insecta, Hemiptera							
4	Thysanoptera,							
5	Hemiptera							
6	Hemiptera							
7	Midterm							
8	Coleoptera							
9	Coleoptera							
10	Coleoptera							
11	Diptera							
12	Hymenoptera							
13	Lepidoptera							
14	Lepidoptera,							
15	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology			x
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			X

Instructor(s): Assoc.Prof.Dr. Refik BOZBUĞA

Date:



COURSE CODE251316006COURSE NAMEMedicinal and Nedicinal and NAME	nd Aromatic plants
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SEMESTER	WEE	KLY COUR	SE PERI	OD COURSE OF							
	Theory	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE			
6	3	0	0	0		3	COMPULSORY () ELECTIVE (X)	Turkish			
				COURSE CATAGORY							
Basic Scier	nce	Basic Engine	eering	[if it	Horticulture [if it contains considerable design, mark with (√)]						
		Х									
			A	SSESS	MENT CF	RITERI	A				
				Eva	aluation T	уре	Quantity	%			
				1st Mic	l-Term		1	30			
				2nd Mi	d-Term						
	MID_T	FDM		Quiz							
	10110-11			Homev	vork						
				Project							
					(practice)	1	20				
	FINAL EXAM						1	50			
P	PREREQUIEITE(S)										
COU	JRSE DES	SCRIPTION		History, importance, ecology, agronomy, harvesting, storage, chemical composition of medicinal and aromatic plants							
CO	URSE OB	JECTIVES		Comprehension of the importance of medicinal and aromatic plants in Turkey and World, teaching medicinal and aromatic plants and their agronomic practices in Turkey							
ADDITIV PROFI	E OF COU ESSIONA	URSE TO AP L EDUATIO	PLY N	Applicability of knowledge gained with production projects							
COURSE OUTCOMES				 Comprehension of importance of medicinal and aromatic plants. Learning cultivation of important in medicinal and aromatic plants Learning general information in medicinal and aromatic plants Processing, storage and drying of seeds in these crops Giving information to about these plants for production, proceeding and marketing plan 							
	ТЕХТВ	ООК		Ceylan	, A. 1995.	Tıbbi B	Bitkiler, Ege Üni. Zir. Fak. Yayın	ları, 312, İzmir			
OTHER REFERENCES				Baydar, H. 2005. Tıbbi Aromatik ve Keyf Bitkileri, SDÜ Zir. Fak. Yayınları, 51, Isparta Koç, H. 1999. İlaç baharat bitkileri, GOÜ Zir. Fak. Yayınları, 40. Tokat.							
TOOLS AND EQUIPMENTS REQUIRED											

	COURSE SYLLABUS
WEEK	TOPICS
1	Introduction, history of medicinal plants, importance, basic concepts, classifications
2	Secondary metabolites of drugs (Primery metabolits, sekondeyr metabolits: alkaloids, glikosides, essential oils)
3	Spices, harvesting, drying, sterilization, storing priciples of drugs
4	Essential oils, Perfumery, Aromatherapy, Distillation, Extraction Methods.
5	Traditional Drug Preparation and Uses
6	Apiaceae family
7	Apiaceae family
8	Lamiaceae family
9	Lamiaceae family
10	Asteraceae family
11	Asteraceae family
12	Chenopodiaceae family
13	Solaneceae family
14	Other families
15,16	Final exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			x
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			x
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instructor(s):

Date:



COURSE CODE 251316)	COURSE NAME Agricu			Agricultural Tools and Ma	cultural Tools and Machinery			
SEMESTER	WEE	KLY COU	RSE PEF	RIOD			COURSE OF				
	Theory	Practice	Labo	ratory	Credit	ECTS	ТҮРЕ	LANGUAGE			
Ι	3	0		0	3 3 COMPULSORY () ELECTIVE (X)		COMPULSORY () ELECTIVE (X)	Turkish			
				COURS	E CATEC	GORY					
Basic Scien	ce	Basic Engin	eering	HorticultureSocial[if it contains considerable design, mark with $(\sqrt{)}$]Social							
		Х									
			A	SSESSM	ENT CR	ITERIA	\				
				Eva	aluation 7	Гуре	Quantity	%			
				1st Mid-	Term		1	30			
	MID-TE	RM		Quiz							
				Homewo	ork		1	20			
				Project							
				Report							
				Others (
FINAL EXAM						1	50				
PR	PREREQUIEITE(S)			-							
COU	RSE DESC	CRIPTION		Basic concepts of agricultural machinery, introduction, classification, construction features and working principles of agricultural force and construction machinery.							
COU	RSE OBJ	ECTIVES		Development of mechanization in agriculture; energy and agriculture; engines; tractors; tillage tools and machinery; To inform students about sowing, planting, fertilizing and maintenance machines, irrigation machines, agricultural war machines, harvesting-threshing machines, mechanization in livestock, farm mechanization, agricultural machinery management.							
ADDITIVE PROFES	OF COU SSIONAL	RSE TO AP 2 EDUATIO	PPLY N	The participant will gain basic information about the selection, adjustment, use of agricultural machinery related to her field and increasing the success of the machine.							
COURSE OUTCOMES				 Defines mechanization, explains Turkey's agricultural mechanization level Knows and explains the concepts of work efficiency, workability, timeliness Classes, compares and explains the features of engines and tractors Classifies soil tillage machines, distinguishes them and explains their effects on soil Definitions, features, working principles of sowing, planting, maintenance and fertilizing machines Explains plant protection machines and working principles Explains irrigation machines and systems Explains the harvesting machines and reveals their varieties and types and their related features. Explains transport and transmission machinery 							
	TEXTBO	OOK		1.							
OTH	ER REFF	ERENCES		1.							
TOOLS AND EQUIPMENTS REQUIRED				Information laboratory, Projection							

COURSE SYLLABUS						
WEEK	TOPICS					
1	Agriculture Overview and Basic Concepts					
2	Energy and Agriculture					
3	Motors					
4	Tractors					
5	Tillage Tools - Machinery					
6	Tillage Tools - Machinery					
7	Sowing Machines					
8	MIDTERM					
9	Planting Machines					
10	Fertilizing Machines					
11	Spraying Machines					
12	Hoeing machines					
13	Irrigation Machines					
14	Harvest - Threshing Machines					
15	Agricultural Machinery Management					
16	FINAL EXAM					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			x
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	

Instructor:



COURSE CODE	251	316031		COURSE NAME		SE E	Animal Production			
	1				1					
SEMESTER	WEEKLY COURSE PERI			DD COURSE OF						
	Theory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGU AGE		
3	3	0	0)	3	3	COMPULSORY (X) ELECTIVE ()	Turkish		
			(COURS	E CATAG	ORY				
Basic Scier	nce	Basic Engine	eering	[if it	Horticulture Department ProfessionSocial[if it contains considerable design, mark with $(\sqrt{)}$]Science					
		Х								
			AS	SESSM	ENT CRI	TERIA				
				Ev	aluation T	Гуре	Quantity	%		
				1st Mic	l-Term		1	40		
	_			2na Mi Quiz	u-1erm					
	MID-T	ERM		Homew	vork					
				Project						
				Report						
				Others	()		1	(0		
D	FINAL I	LAM IFITE(S)		No			1	60		
COURSE DESCRIPTION			Requirements for profitable animal husbandry; Some concepts in animal breeding; Requirements for profitable animal husbandry; Some economically important yields; Reproduction in livestocks; Breeding methods; Concepts of species and breed; Characteristics of cattle, buffalo, sheep and goat breeds raised in Turkey, care and management of livestocks; Broiler and laying chicken husbandry; Animal shelters: Feeds used in animal nutrition, nutrients, digestion and absorption, classification of feeds.							
CO	URSE OB	JECTIVES		The objective of the course is to provide basic information on animal husbandry, animal breeds, reproduction, nutritonal, and basic knowledge of a sustainable and profitable animal production.						
ADDITIV PROFE	E OF CO SSIONAI	URSE TO AP L EDUCATIO	PLY N	To provide practical information related to livestock husbandry as well as knowledge of animal breeding beneficial during persons professional life.						
COURSE OUTCOMES			Knowing what animal husbandry activities are as agricultural activities and what they cover. Understanding the terms such as breed and species in animal production, knowing the important livestock breeds and their characteristics in Turkey and in the world. To gain the ability to prepare the infrastructure for the maintenance and feeding of livestock, herd management and to solve the problems that may be encountered in the field.							
	ТЕХТВ	OOK		Course	notes	<u> </u>	<u>0</u> ,	0		
Z007 Aytek 71), C Aydın OTHER REFERENCES Daire Taşkı Ltd. Ş Türka					ZOOTEKNİYE GİRİŞ DERS NOTLARI 2009 (Prof. Dr. Saim Boztepe, Arş. Gör. İbrahim Aytekin, Arş. Gör. Selçuk Kaplan)Hayvan Yetiştirme (U.Ü. Ziraat Fak. Ders Notları No: 71), Genel Zootekni Ders Notları (Yrd Doç Dr Ali Rıza Aksoy, 1994, Kars). Aydın, Refiye, 2001. Koyun ve Keçi Yetiştiriciliği. Tarım ve Köyişleri Bakanlığı Yayın Dairesi Başkanlığı Matbaası, Kavaklıdere/ANKARA. Taşkın, T., Özdoğan, M., Önenç, S., 2010. Keçi Yetiştirme ve Besleme. Hasd Yayıncılık Ltd. Şti., Ümraniye/İSTANBUL. Türkoğlu, M., Sarıca, M., 2009. Tavukçuluk Bilimi. Bey Ofset Matbaacılık, ANKARA.					
TOOLS AND) EOUIP	MENTS REAL	UIRED	No spe	cial tool its	needed				
TOOLS ANL	, EQUIT	VILLA I S KEV	UINED	THO spe		needed.				

	COURSE SYLLABUS							
WEEK	TOPICS							
1	An Introduction to animal breeding							
2	The importance of livestock in world and Turkish agriculture, domesticization process of animals, concept of species and race.							
3	Definition and scope of important concepts in animal production							
4	Reproduction, birth, practical breeding operations in farm animals							
5	Cattle breeding, care and management of important cattle breeds, calves, heifers and cows							
6	Estrus and breeding, pregnancy, birth, prenatal and postnatal care in cows							
7	Breeding cattle selection							
8	Small ruminant husbandry							
9	Chicken coops, breeding chicken for meat and egg, hatching, slaughtering.							
10	Poultry in Turkey and in the world, poultry breeds, poultry breeding.							
11	Concepts of animal breeding, inheritance and selection.							
12	Nutrients, digestion and absorption, digestive system types.							
13	Factors affecting the nutritional value of feeds, feed classification.							
14	Calculation for yield and maintanence, ration preparation.							
15,16	Final exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			x
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			x
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Х
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			x
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instractor:

Date:



COURSE CODE 251316032				COUR	SE NAI	ME	Agricultural Valuation Expertise	and		
SEMESTE	WI	EEKLY COURS	OD	OD COURSE OF						
R	Theor	y Practice	Labra	atory Credit		ECTS		ТҮРЕ	LANGU AGE	
VI	3	0	(3 3 COMPULSORY () ELECTIVE (X)		Turkish				
			С	OURSE	CATAG	ORY				
Basic Science Basic Engineering				[if it	contains	Hoi consider	rticult able d	ure lesign, mark with (√)]	Social Science	
	X					TERIA				
					aluation T	vpe		Ouantity	%	
				1st Mic	l-Term	J I [*] -		1	40	
				2nd Mi	d-Term					
	MID TEDM			Quiz						
	WIID-			Homew	vork					
				Project						
				Report						
				Others	()		_			
	FINAL	LEXAM						1	60	
P	REREQ	UIEITE(S)		-						
COL	IRSE DI	ESCRIPTION		Concept of farm appraisal, farm appraisal methods and expertise						
CO	URSE O	BJECTIVES		To teach concepts regarding farm appraisal, farm appraisal methods and preparation of expert reports concerning with farm appraisal						
ADDITIV PROFI	E OF CO ESSION	OURSE TO AP AL EDUATION	PLY N	To learn the farm appraisal methods when the students expertise on agricitural issues						
COURSE OUTCOMES				Recognize concepts of farm appraisal methods, Concerning farm appraisal methods Prepare expert reports regarding farm appraisal Data analysis and evaluation						
ТЕХТВООК				Rehber E, 2008. Tarımsal kıymet Takdiri (değerleme) ve Bilirkişilik. Ekin Kitabevi, 162s.						
OT	HER RE	EFERENCES								
TOOLS AND EQUIPMENTS REQUIRED			Compu	iter						

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Concept and history of farm appraisal						
2	Farm appraisal methods						
3	Market method						
4	Market method						
5	Cost method						
6	Cost method						
7	Cost method						
8	Income method						
9	Income method						
10	Income method						
11	Income method						
12	Farm appraisal applications and expertise						
13	Farm appraisal applications and expertise						
14	Farm appraisal applications and expertise						
15,16	Final exam.						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	x		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			x
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			X
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			x
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instructor(s):



COURSE CODE	251	316033			COURS NAME	E C	Weeds			
SEMESTER	WEE	KLY COUR	SE PERI	OD			COURSE OF			
	Theory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAGE		
6	3	0	0)	3	3	COMPULSORY() ELECTIVE (X)	Turkish		
				COUR	SE CATA	GORY				
Basic Scier	Basic Science Basic Engineering				t contains	Ho conside	orticulture rable design, mark with (√)]	Social Science		
							Х			
			A	SSESS	MENT CR	ITERIA	<u> </u>			
				Ev	aluation T	уре	Quantity	%		
				1st Mic	d-Term		1	40		
				2nd Mi	d-Term					
	MID-TH	ERM		Quiz	vork					
				Project	VOIK					
				Report						
				Others						
	FINAL EXAM			1				60		
PI	REREQUI	EITE(S)		-						
COU	RSE DES	CRIPTION		Weed biologies, ecological requirements, economic values, and different herbicides in crops and weeds is to make information on methods of control.						
COL	URSE OBJ	IECTIVES		Development of weed science and culture in all aspects of its relations with the introduction of plants are aimed.						
ADDITIVI PROFE	E OF COU ESSIONAI	URSE TO AP L EDUATION	PLY N	Students will be informed about weeds that faced through horticultural growing, their management and control.						
COURSE OUTCOMES			To learn the general information about herbology science To know the economic significance, direct and indirect effects of weeds To know the damages of weeds for cultivated plant To know the development stages of weeds To learn the reproduction and dissemination of weeds To learn and use different control methods for weed control theorically and practically To know the classification of herbicides and herbicides registered in Turkey							
ΤΕΧΤΒΟΟΚ				Özer, Z., Kadıoğlu, İ., Önen, H., ve Tursun, N., 2001. Herboloji (Yabancı Ot Bilimi) Gaziosmanpaşa Üniversitesi Ziraat Fakültesi Yayınları No:20 Kitap Serisi No:10, 3. Baskı, Tokat						
ΟΤΙ	HER REF	ERENCES		Güncan, A., 2009. Yabancı Otlar ve Mücadele Prensipleri. Selçuk Üniversitesi, Ziraat Fakültesi, 4. Baskı, Konya						
TOOLS AND	EQUIPM	IENTS REQ	UIRED	Projection						

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Introduction, history, basic concepts, differences between wild herb and weed.						
2	Systematic and taxonomy						
3	Generative reproduction, seed development, germination						
4	The seed number of weeds, life and distribution of seeds						
5	Vegetative reproduction of weeds; Apical dominancy and vegetative propagation						
6	Mid-term exam Vegetative reproduction of weeds; Apical dominancy and vegetative propagation						
7	Development stages of grass weeds						
8	Development stages of broad leaved weeds						
9	Ecology, biotic and abiotic factors						
10	Allelopathy						
11	Allelopathy						
12	Population dynamics of weeds; Selectivity of herbicides						
13	The mode of action of herbicides						
14	Weed control as cultural managements, mechanical, biological, and chemical control						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
	To have the basic information on horticulture and other agriculture engineering			Χ
1	areas, describing the required data to solve the problems, to have the ability of			
	gathering data and solving the problems by using information technology			
	To have theoretical and practical (land and laboratory) information on growing and			Χ
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and			
	transfer these information accurately			
	To have the ability of determining and evaluating the source of the ecological,		Х	
3	biological, technical and economical problems that negatively effects the sufficient			
	yield and quality of horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and		Χ	
	protection of genetic resources in horticultural area and environment			
5	To have the ability of describing, classification and growing fruits, vegetables,			X
	grapevine and ornamental plants			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
	To have the information and ability on breeding horticultural crops, developing a			Χ
7	new cultivar, and propagation of these new varieties by different methods (seed,			
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			Χ
	To have the information on good agricultural practices, and by the way, to decide the		Χ	
9	right time of cultural practices of the horticultural crops, and to have the ability of			
	describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and storage			Χ
NO PROGRAM OUTCOMES 1 1 To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology 2 To have the cortical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately 1 3 biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops 1 4 protection of genetic resources in horticultural area and environment 1 5 To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants 1 6 To have the skill of establishing and operating orchards, greenhouses and vineyards 1 7 new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling) 1 8 To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills				
11	To have the ability of getting the data on horticultural area, and evaluation,			Χ
11	recording, project creation and application skills			
12	To have the ability of working in individual, multiple and different disciplined		Χ	
12	teams, and having the responsibility			
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assoc.Prof.Dr. Filiz ÜNAL

Date:



COURSE CODE	25	1316008		COURSE Organic Animal Growing NAME							
SEMESTER WEEKLY COURSE		SE PERIO	D	COURSE OF							
SEWIESIEK	Theory	Practice	Labrat	ory	Credit	ECTS	ТҮРЕ	LANGUAG E			
6	3	0	0		3	3	COMPULSORY () ELECTIVE (X)	Turkish			
			C	COUR	SE CATA	GORY					
Basic Scie	nce	Basic Engine	ering	[if it	Horticu t contains (lture D consider	epartment Profession rable design, mark with (√)]	Social Science			
		Х									
			AS	SESS	MENT CF	RITERL	A	0 (
			_	Ev	aluation 1	уре		<u>%</u>			
				l st M1	d-Term			20			
			2	$\frac{2nd}{2}$ M	lid-Term		<u> </u>	20			
	MID-T	TERM	(Quiz							
			1	Home	work						
			1	Projec	t						
				Report	t						
	EINIAT	EVAM		Juners	s ()		1	60			
D	FINAL	LAANI HEITE(S)									
COURSE DESCRIPTION			C H H S	Organic farming, comparison of conventional and organic livestock production, reasons for organic animal husbandry, organic animal husbandry and production policies, legal regulations, problems and solutions of organic livestock production.							
CO	URSE OF	BJECTIVES		To teach students; similarities and differences between organic and conventional farming, production of organic animal products according to legal regulations, and economy of organic animal production.							
ADDITIV PROFE	E OF CO SSIONA	URSE TO AP L EDUCATIO	PLY H DN a	Principles of organic animal husbandry, animal branch organic farming, and legal requirements in this area will be learned.							
COURSE OUTCOMES				Understanding the differences between organic and conventional farming. Knowledge of the causes of the emergence of organic livestock production. Perform follow-up and economic analysis of the organic livestock market. Legislation in this area and knowledge of the principles of organic animal husbandry.							
	TEXTI	BOOK		Organ Yayım <u>www.</u> 1	ik Tarımın ılandığı Re tarim.gov.tı	Esasları smi Gaz <u>:</u>	ve Uygulanmasına İlişkin Yöne etenin Tarihi: 18 Ağustos, Sayı:	tmelik (2010) 27676.			
www.tarim.gov.trBirinci Uluslararası Organik Hayvansal Üretim ve Gıda Güve Kongresi, Tebliğler Kitabı, 28 Nisan-1 Mayıs 2004, Kuşadası. Petek, M., Üstüner, H., 2004. Organik Hayvancılık, Geçmişe duy özlem mi? Geleceğe yatırım mı? 1. Veteriner Zootekni Kongresi Tebl kitabı, Elazığ. Ergün, A., Tuncer, Ş.D., 2001. Yemler, yem hijyeni ve teknol Medisan Yayınevi, Ankara. Petek, M., 2010. Organik Hayvancılık. Türkiye IV. Organik tarım Sempozyumu, Erzurum.							Gıda Güvenliği dası. eçmişe duyulan ngresi Tebliğler ve teknolojisi. ik tarım				

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Definition of organic livestock production, overview.						
2	Organic animal production in the world and in Turkey,						
3	Establishment of organic animal production enterprises and principles (animal selection and transition time)						
4	Principles of organic animal husbandry (breeding, hosting, maintenance, transport and slaughter)						
5	Principles of organic animal feed (and feed water quality, quantity, and method of administration)						
6	Midterm Exam - Organic milk production						
7	Organic milk production, maintenance and management; Organic red meat production and slaughter of animals						
8	Organic eggs and chicken meat production, maintenance and management						
9	Organic goat-sheep's milk and meat production						
10	The importance of nutrition in organic livestock production						
11	Midterm Exam- Certification						
12	Certified organic concentrate feed and hay production; Certification, logo and certification institution						
13	Regulation on implementation of organic livestock production in Turkey						
14	Regulation on implementation of organic livestock production in Turkey						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	x		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately			X
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			x
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)			x
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
ract	Dor: Date:			



COURSE CODE		251316014		COURS NAMI	SE E	Professional Practice II						
SEMESTER	W	EEKLY COUR	SE PERI	OD	DD COURSE OF							
	Theo	ry Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE				
6	0	4	C)	0	3	COMPULSORY (X) ELECTIVE (Turkish				
				COUR	SE CATA	GORY						
Basic Scier	nce	Basic Engine	ering	[if it	contains	Ho consider	rticulture ∙able design, mark with (√)]	Social Science				
				SSESSI	MENT CI	DITEDI	X					
			A	Ev	aluation 7	vpe	Ouantity	%				
				1st Mic	d-Term	. F -	1	50				
				2nd Mi	id-Term							
	MID	-TERM		Quiz	. 1							
				Project	VOrk							
				Report								
				Others								
	FINA	L EXAM			50							
P	REREC	QUIEITE(S)		-								
COU	IRSE D	ESCRIPTION		Department of land and to make practical training courses in laboratory. Improve the knowledge by technical tours.								
CO	URSE (OBJECTIVES		The practice ability sophisticating and making technical tours to students about all lessons.								
ADDITIV PROFI	E OF C ESSION	OURSE TO AP	PLY N	To make progress on using theoretical knowledge in practice.								
COURSE OUTCOMES				 acquired some practical knowledge about vegetable crops acquired some practical knowledge about fruit cultivation acquired some practical knowledge about vineyard cultivation acquired some practical knowledge about the cultivation of ornamental plants Future projection composes by technical tours to institutions and establishments 								
ТЕХТВООК					-							
OT	HER R	EFERENCES		-								
TOOLS AND EQUIPMENTS REQUIRED												

COURSE SYLLABUS							
WEEK	TOPICS						
1	Seed sowing						
2	Nursery growing						
3	Tecnical tour						
4	Pruning						
5	Pruning						
6	Tecnical tour						
7	Sapling supplying and planting						
8	Midterm exam / Sapling supplying and planting						
9	Setting up a garden						
10	Setting up a garden						
11	Setting up a garden						
12	Garden management						
13	Garden management						
14	Tecnical tour						
15	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		X	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions	X		
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instructor(s): All Teaching Members

Date:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER FALL

COURSE CODE	251317027				COURS NAMI	SE E	Cool Season Vegetables				
	WEE		SE DEDI	00			COUDSE OF				
SEMESTER WEEKLY COURSE PERIO				atorv	Credit	ECTS	Түре	LANGUAG			
7	2	0	0	J	2	2	COMPULSORY (X) ELECTIVE (E Turkish			
				COUR	SE CATA	GORY	,				
Basic Scier	nce	Basic Engine	ering	[if i	t contains (Ho conside	rticulture rable design, mark with (√)]	Social Science			
			Α	SSESS	MENT CF	RITERI	A				
				E	valuation T	Гуре	Quantity	<u>%</u>			
				lst M	id-Term		1	25			
				2nd M	lıd-Term		<u>l</u>	25			
	MID-TI	ERM		Quiz	1						
				Home	work						
				Projec	÷t						
				Othor	$\frac{1}{2}$						
				Others ()				50			
	FINAL E	CXAM					1	50			
P	REREQU	IEITE(S)		To have passed the General Vegetables course							
COURSE DESCRIPTION				The cultivation of economically important vegetable species in our country, which requires a cool climate, is explained. Production areas and quantities of each species in the world and in our country, the botanical characteristics of the plant, its ecological requirements, cultivation techniques and cultural treatments are explained.							
COURSE OBJECTIVES				It is aimed to give detailed information and to teach cultivation of the economic importance, morphological characteristics, ecological requirements, cultivation method, soil preparation, sowing, planting, care treatments of winter-grown vegetables (onion, garlic, leek, asparagus, lettuce-salad, cabbage, cauliflower, broccoli, radish, spinach, carrot).							
ADDITIVE PROFE	C OF COU SSIONA	URSE TO A L EDUATIO	PPLY DN	It is a course in which theoretical and practical information is given about the cultivation and cultural treatments of vegetables, which have an important place in the field of horticultural crops.							
COURSE OUTCOMES				At the end of this course, the student will have the necessary knowledge about; 1- Climate and soil requirements of winter vegetables 2- Reproduction forms of winter vegetables, 3- Growing techniques of winter vegetables 4- Morphological characteristics of winter vegetables 5- Cultural treatments such as soil preparation, sowing, planting, fertilization and irritation							
ТЕХТВООК					 Kültür Sebzeleri (Sebze Yetiştirme) Vural, H., Eşiyok, D., Duman, İ. Ege Üniv. Ziraat Fak. Bahçe Bitkileri Bölümü, İzmir,. 2005 Özel Sebzecilik. Şalk, A., Arın, L., Deveci M., Polat S. 2008. Onur Grafik Matbaa ve Reklam Hizmetleri İst. 						
OTH	IER REF	ERENCES									
TOOLS AND EQUIPMENTS REQUIRED											

	COURSE SYLLABUS							
WEE	TOPICS							
K								
1	Onion Cultivation							
2	Onion Cultivation							
3	Garlic Cultivation							
4	Leek Cultivation							
5	Lettuce-Salad Cultivation							
6	I. Midterm exam, Lettuce-salad cultivation							
7	Cabbage Cultivation							
8	Cabbage Cultivation							
9	Cauliflower- Broccoli Cultivation							
10	Cauliflower- Broccoli Cultivation							
11	II. Midterm, Pea cultivation							
12	Radish Cultivation							
13	Carrot Cultivation							
14	Spinach Cultivation							
15,16	Semester final exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Nuray ÇÖMLEKÇİOĞLU

Signature:

Date:



SEMESTER Fall

COURSE CODE 251317028						COURSE Pome and Stone NAME Pome and Stone			tone Fruits			
SEMESTER	WE	EKI	LY COUF	SE PER	IOD		COURSE OF					
	Theo	ry	Practice	Labra	atory	Credi t	ECTS	ТҮРЕ		LANGUAGE		
7	2		0	()	2	3	COMPULSOR ELECTIVE	Y (X)	Turkish		
				CO	URSE	CATAG	ORY					
Basic Science		B٤	asic Engin	eering	[if i	t contain	Hor s consid	ticulture lerable design, ma (√)]	rk with	Social Science		
				4 6 6 1	FEEME		FEDIA	Х				
				ASSI	Evoluot	ion Type	I ENIA	Quantit		0/_		
				∎ 1st Mid	Term	ion Type			.y	25		
				2nd Mid	-Term			1		25		
				Ouiz								
MID-7	ГERM			Homew	ork							
				Project								
				Report								
				Others ()						
FINAL	EXAM	1						1		50		
PREREQ	UIEITE	E(S)		-								
COURSE DE	CSCRIP	PTIC	DN	pomological characteristics, fertilization biology, ecological requirements, propagation, plantation, maintenance and production, trade, and politics of pome and stone fruits species will be discussed.								
COURSE O	BJECT	TVE	2S	The purpose of this course is to give the students knowledge on growing of pome and stone fruit species.								
ADDITIVE OI APPLY PRO EDUA	F COUI FESSIO TION	RSE ONA	TO AL	Students will be informed about growing and maintenance of pome and stone fruits that intensively grown in our country.								
COURSE OUTCOMES			To learn the growing and breeding techniques, varieties, harvesting and marketing of apple, pear, quince, persimmon, peach, nectarin, apricot, plum, cherry- sourcherry. To recognize the morphologic and pomologic characteristics of these species. To know the ecologic characteristics of the species and advise the appropriate species and cultivars to the growers and different areas. To recognize the possible problems in growing period of these species and develop solution advisories.									
ТЕХТВООК				Özçağıran, R., Ünal, A., Özeker, E., İsfendiyaroğlu, M., 2005, Ilıman İklim Meyve Türleri, Sert Çekirdekli Meyveler, Cilt I, Ege Üniversitesi Ziraat Fakültesi Yayınları No: 553, Ege Üniversitesi Basımevi, Bornova-İzmir, 229 sayfa. Özçağıran, R., Ünal, A., Özeker, E., İsfendiyaroğlu, M., 2005, Ilıman İklim Meyve Türleri, Sert Kabuklu Meyveler, Cilt III, Ege Üniversitesi Ziraat Fakültesi Yayınları No: 566, Ege Üniversitesi Basımevi, Bornova-İzmir, 308 sayfa. Özbek, S., 1978, Özel Mevvecilik - Kısın Yaprağını Döken Mevve Türleri.								
OTHER REFERENCES				Elma Kültürü, 2011, Eğirdir Bahçe Kültürleri Araştırma Enstitüsü Yayınları. Modern fruit Science (N.F. Childers) 1983. Hort. Publ., 3906; NW 31 Place Gainesville, Florida 32606, 582 p								
TOOLS AND EQUIPMENTS REQUIRED				Projection								

COURSE SYLLABUS							
WEEK	TOPICS						
1	Classification of fruits						
2	Apple growing						
3	Apple growing						
4	Pear growing						
5	Pear growing						
6	Mid-term exam / Quince growing						
7	Persimmon growing						
8	Peach growing						
9	Apricot growing						
10	Apricot growing						
11	Mid-term exam / Plum growing						
12	Plum growing						
13	Cherry-sourcherry growing						
14	Cherry-sourcherry growing						
15, 16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	x		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	x		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			x
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions	X		
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:None. 2:	Partially contribution. 3 : Completely contribution.			

Instructor(s):

Date:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER Fall

COURSE C	ODE			COURSE NAME Storage and Marketing of Horticultural Cro							
	W	EEKLY COUR	SE PER	IOD				COURSE OF			
SEMESTER	Theor	v Practice	Labra	atorv	Credit	ECTS		TYPE	LANGUAGE		
7	2	0	()	2	2	Cor	npulsory (X) Elective ()	Turkish		
				COUR	SE CATA	AGORY	7				
Basic Scier	100	Basic Engir	aaring			Но	ortic	ulture	Social		
Dasie Sciel		Dasie Eligi	leering	[if it	contains	conside	rabl	le design, mark with $(\sqrt{)}$]	Science		
				ASSESS	MENTC	DITED	TA	X			
				ASSESS Eve	aluation 7	NIIEK Vne	IA	Quantity	0/0		
			ŀ	1st Mid-	Term	ype		Quantity	40		
			F	2nd Mid	-Term			1	10		
			F		Term						
	MID-	ГERM	F	Homewo	ork						
			F	Project							
			ŀ	Report							
			ŀ	Others (Practice)						
	FINAL	EXAM		others ((Tuetlee)			1	60		
PR	EREO	UIEITE(S)		-				1	00		
COURSE DESCRIPTION				Basic physiological information, different storage methods and effects of storage components on post-harvest quality in order to store horticultural products with minimum quality loss in the post-harvest period.							
COU	RSE O	BJECTIVES		The aim of the course is to convey theoretical and practical information about the development physiology, biochemical structure and change, harvesting and cold storage of horticultural products.							
ADDITIVE PROFE	COFCC SSION	DURSE TO AF AL EDUATIO	PPLY N	Students will have information about the importance of preservation, harvest and post-harvest and marketing of the product.							
COURSE OUTCOMES				To be able to determine the right harvest time in garden products, To be able to take measures against quality losses in garden products due to structural changes, To be able to make different applications in order to prevent quality losses, Ability to preserve different garden products, To be able to create projects for modern preservation methods and It is to detect the deterioration of the products during storage							
	TEXT	BOOK		Karaçalı, İ, 2011, Bahçe Ürünlerinin Muhafaza ve Pazarlanması, 7. Baskı, Ege Üniversitesi Ziraat Fakültesi Yayınları, Bornova-İzmir. Karaçalı, İ, Meyve Sebze Değerlendirme, Teksir, Ege Üniversitesi Ziraat Fakültesi							
				Commerce Universit	y of Califor	g of Fruit mia, Oak	s, Ve land,	getables, and Flowers, James F , 2002.	. Thompson et al.,		
ОТН	OTHED DEFEDENCIES			Postharve Scientific	est Diseases , 1990.	s&Disorc	lers o	of Fruits&Vegetables, Anna L.	Snowdon, Wolfe		
				Postharve California	est Techno a, 1992.	logy of	Hort	icultural Crops, Adel A. Kad	ler, University of		
				Controlle Publishin	d Atmosph g, New Yo	ere Stora rk, 1998.	age o	of Fruits and Vegetables, A.K.	Thompson, CABI		
TOOLS	S AND I REQU	EQUIPMENT JIRED	S	Compute	r and Proje	etion					

COURSE SYLLABUS							
WEEK	TOPICS						
1	Definition, history and importance of postharvest storage						
2	Biochemical structure and change of horticultural products						
3	Factors affecting development in the pre-harvest period						
4	Basic principles for the preservation of garden products						
5	Effective environmental factors in the post-harvest period						
6	Factors affecting postharvest quality						
7	Midterm Exam						
8	Storage damage and Physiological disorders						
9	Harvest, sorting and packaging principles						
10	Modern Conservation Methods						
11	Postharvest Storage of Fruit Species						
12	Postharvest Storage of Vegetable Species						
13	Postharvest Storage of Production Materials and Genetic Resources						
14	Postharvest Storage of Ornamental Plants						
15,16	Final						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			Х
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions	X		
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Rafet ASLANTAŞ



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER Fall

COURSE CODE		251317029			COURSE NAME		Tropical Fruits			
	SE PERI	OD			COURSE OF					
SEMESTER	Theor	ry Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG		
7	7 2 2		()	3	4	COMPULSORY() ELECTIVE (X)	E Turkish		
				COUR	SE CATA	GORY				
Basic Science Basic Engineering			eering	[if it	HorticultureSocial[if it contains considerable design, mark with (√)]Science					
			Δ	SSESSI	MENT CE	ITERI	X			
			1	Ev	aluation T	Type	Quantity	%		
				1st Mie	d-Term		1	50		
				2nd M	id-Term					
				Quiz						
	MID	-TERM		Homew	work					
				Project	ţ					
				Report						
				Others						
	FINA	L EXAM					1	50		
P	RERE(QUIEITE(S)								
COURSE DESCRIPTION				Classification, history, distribution, economical importance, morphological and pomological characteristics, fertilization biology, ecological requirements, propagation, plantation and maintenance of ananas, mango, cherimoya, lichi, guava, pithaya, papaya, passion fruit and star fruit species will be discussed.						
COU	IRSE (OBJECTIVES		The purpose of this course is to give the students knowledge on growing of ananas, mango, cherimoya, lichi, guava, pithaya, papaya, passion fruit and star fruit species.						
	OF C	OURSE TO A	PPLY	Students will be informed about growing and maintenance of tropical fruits growing						
COURSE OUTCOMES				 To learn the growing and breeding techniques, varieties, harvesting and marketing ananas, mango, cherimoya, lichi, guava, pithaya, papaya, passion fruit and star fruit To recognize the morphologic and pomologic characteristics of these species. To know the ecologic characteristics of the species and advise the appropriate species and cultivars to the growers and different areas. To recognize the possible problems in growing period of these species and davisories. 						
	TEX	ГВООК		-	·					
OTHER REFERENCES				Paul, R.E., 2010. Tropical Fruits V.I. Cabi publication, 408 Pages, ISBN:9781845936723						
TOOLS AND EQUIPMENTS REQUIRED				Computer and projection.						

COURSE SYLLABUS							
WEEK	TOPICS						
1	Introduction of tropical fruits						
2	Economy of tropical fruits						
3	Tropical climate types and characteristics						
4	Ananas growing						
5	Ananas growing						
6	Mango growing						
7	Mid-term exam - Mango growing						
8	Pithaya growing						
9	Cherimoya growing						
10	Litchi growing						
11	Guava growing						
12	Papaya growing						
13	Passion fruit growing						
14	Starfruit growing						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		x	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			X
1:Non				

Instructor(s): Assist. Prof. Dr. Cenap YILMAZ



SEMESTER Fall

COURSE CODE	251317030				COURSE NAME		New Techniques on Fruit Growing				
SEMESTER WEEKLY COURSE PERI				OD		COURSE OF					
	Theory Practice Labor		Labora	atory	Credit	ECTS	ТҮРЕ	LANGUAGE			
7	2	2	0		3	4	COMPULSORY () ELECTIVE (X)	Turkish			
				COUR	SE CATA	GORY					
Basic Science Basic Engineering			ering	[if it	Social Science						
				GERGE			-				
				SSESSI	MENT CR	TERI		0/			
			-	LV 1st Mid	aluation i 1-Term	уре		% 0			
			-	2nd Mi	id-Term		1	50			
	MID	TEDM	-	Quiz							
	MID-	IERM		Homev	vork						
				Project	,						
				Report							
				Others							
	FINAL	L EXAM					1	50			
Pl	REREQ	UIEITE(S)		-							
COU	RSE DI	ESCRIPTION		In this course, new techniques and developments on fruit growing will be discussed theoretically and practically.							
COL	URSE O	BJECTIVES		To gain knowledge on subjects on new orchard plantations, training and pruning systems, cultural techniques and harvest methods.							
ADDITIVI PROFE	E OF CO	DURSE TO AP AL EDUATIO	PLY N	To comprehend new orchard plantations, training and pruning systems, cultural techniques and harvest methods theoretically and practically.							
COURSE OUTCOMES				To learn fruit cultivars and rootstocks. To learn current orchard plantations. To recognise new training and pruning systems. To learn new cultural techniques and harvest methods. To teach different cultural techniques to growers.							
	ТЕХТВООК					Yılmaz, M. 1994. Bahçe Bitkileri Yetiştirme Tekniği. Çukurova Üniversitesi Basımevi, Adana.					
OTHER REFERENCES				Hartmann, H.T., Kester, D.E., Davies, Jr.F., Geneve, R.L., 1997. Plant Propagation Principles and Practies. Sixth Edition, Prentice Hall, New Jersey Özbek, S., 1978. Genel Meyvecilik (Kışın Yaprağını Döken Meyve Türleri). Çukurova Üniversitesi Ziraat Fakültesi Yayınları No. 128. Ders Kitabı 11							
TOOLS AND EQUIPMENTS REQUIRED				Computer and projector							

	COURSE SYLLABUS							
WEEK	TOPICS							
1	New fruit cultivars and rootstocks							
2	Orchard design							
3	High density orchard plantations							
4	High density orchard plantations							
5	Current training and pruning systems							
6	Current training and pruning systems							
7	Mid-term exam							
8	Current training and pruning systems							
9	Soil cultivation methods							
10	Soil cultivation methods							
11	New cultural techniques in orchards							
12	New cultural techniques in orchards							
13	Harvest systems							
14	Harvest systems							
15, 16	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	x		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	x		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions	X		
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:None. 2:F	Partially contribution. 3: Completely contribution.		•	•

Instructor(s):

Signature:

Date:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER Fall

COURSE CODE		251317031			C	COURSE	preneurship			
WEEKLY COURSE PERIO			F DEDIO	n						
SEMESTER	WE		OURS	E PERIO	U	Caradit	ECTS			LANCHACE
VII	VII 2 2 0				ory	<u>Credit</u>			COMPULSORY () ELECTIVE (X)	Turkish
V II	2		2	0	COL	IRSE CA	TAGOR'	v		
Basic Science Basic Engineerin		eering	Hortic [if it contains considerat			rt Prt	iculture ble design, mark with (√)] X	Social Science		
				Α	SSES	SSMENT	CRITER	RI /	A	
]	Evaluatio	n Type		Quantity	%
				ľ	1st N	Mid-Term	•		1	25
					2nd	Mid-Term	1			
	MID	TFDM			Quiz	Z				
	MID				Hon	nework				
					Proj	ect			1	25
					Rep	ort				
					Othe	ers (.)			
	FINA	L EXAM	[1	50
P	PREREC	QUIEITE	(S)		NOT! produ	E: The obli action and es	gation of y pecially hor	you rtic	r department to take the courses rultural production and the Agricultu	related to agricultural ral Economics course
CO	URSE D	DESCRIP	ΓΙΟΝ		Entrepreneurship and innovation concepts and features, business idea development, creativity exercises and business modeling, business plan concept and elements and applications for development, business model and business plan preparation, effective communication and presentation, marketing management and innovation management, and experience sharing with exemplary entrepreneurs.					
COURSE OBJECTIVES				To introduce students to the importance and role of successful entrepreneurship and entrepreneurship in the field of horticultural crops and to prepare them for practice by teaching the basic concepts of entrepreneurship, entrepreneurial characteristics and the importance of entrepreneurship in agriculture; To promote the culture of entrepreneurship among students, to introduce entrepreneur candidates to the concept of business plan and to contribute to increasing the level of						
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION			ŻLY	Agricultural engineers will be able to successfully apply their expertise in agricultural production methods and technologies, if they acquire the basic management and entrepreneurship knowledge necessary for them to exist in business life in today's intense competitive conditions. The course will contribute to the success of students in their professional lives by providing these basic information.						
COURSE OUTCOMES					 To be able to comprehend the techniques and stages of establishing a business To be able to comprehend the techniques and stages of establishing a business To be able to discuss the conditions and possibilities of agricultural entrepreneurship To be able to analyze the decision-making process and economic results in agricultural entrepreneurship To be able to apply the principles of agricultural entrepreneurship 					
	TEX	твоок			KOSGEB Girişimcilik El Kitabi, 2019 (Editor: Prof. Dr. B. Zater ERDOGAN). https://www.kosgeb.gov.tr/Content/Upload/Dosya/Bagimsiz/GEK.pdf Dersi veren öğretim üyeşi tarafından hazırılanan PowerPoint Sunumu					df 1.
OTHER REFERENCES					Girişimcilik (3. Baskı). Beta, İstanbul Luecke, R. (2008) Girişimcinin El Kitabı, İş Bankası Kültür Yayınları, İstanbul Akın, H.B. (2010) Temel İşletme: Girişimcilik, İş Kurma ve Yönetim, Adres Yayınları, Ank. Küçük, O. (2009). Girişimcilik ve Küçük İşletme Yönetimi, Seçkin Yayınları, Ankara Hisrich, R. D., Peters, M.P. ve Shepherd, D.A. (2008). Entrepreneurship, Boston : McGraw Katz, J.A. ve Green, R.P. (2009). Entrepreneurial Small Business, Boston : McGraw-Hill Alexander Osterwalder, Yves Pigneur, 2012. İş Modeli Üretimi. Optimist Yayın Dağıtım Gürüz, D. ve Eğinli, A.T. (2013). Etkili Sunum Teknikleri, Detay Yayıncılık, Ankara Karaca, T. (2013). Girişimciler İçin Kolay ve Hızlı İş Planı Hazırlama. Sinemis Yayınları. Kotler, P., Keller, K. L., Ancarani, F., and Costabile, M. (2014) https://www.kosgeb.gov.tr/Content/Upload/Dosya/Girisimciligi%20Gelistirme%20Destek %20Programi/4- FRM.15.02.02%20(00)%20Yeni%20Giris%CC%A7imci%20Program%C4%B1%20I%C C%%7s%cC%A7%20Modeli%20Formu-Copy1.pdf					
	COURSE STELADOS									
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WEEK	TOPICS									
1	Course content, plan, presentations, project assignment, learning methods, assessment, implementation of the entrepreneurial tendency questionnaire Testing the concepts of entrepreneurship and innovation, entrepreneurial characteristics and the foundations of entrepreneurship									
2	Entrepreneurship, innovation and entrepreneurship concepts									
3	Creative thinking and idea generation methods									
4	Business plan concept and elements (market research, marketing plan, production plan, management plan, financial plan)									
5	Business plan concept and its elements (market research, marketing plan, production plan, management plan, financial plan) applications									
6	Effective communication methods for entrepreneurship Considerations in Preparing and Presenting a Business Plan									
7	Midterm									
8	Considerations in Preparing and Presenting a Marketing Management Business Plan									
9	Management, Production, Marketing and Finance in Small Businesses									
10	Sharing experience with exemplary entrepreneurs, mentoring practice and Issues to be Considered in Preparing and Presenting a Business Plan-I									
11	Sharing experience with exemplary entrepreneurs, mentoring practice and Considerations in Preparing and Presenting a Business Plan-II									
12	An exemplary entrepreneurial business visit in the field of agricultural production									
13	Project presentations									
14	Project presentations									
15,16	Final Exam									

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas,			
I	describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology.	X		
	To have theoretical and practical (land and laboratory) information on growing and			
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer			х
	these information accurately			
	To have the ability of determining and evaluating the source of the ecological, biological,			
3	technical and economical problems that negatively effects the sufficient yield and quality of		X	
	horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and protection of			x
	To have the ability of describing allogification and growing fruits vegetables, groupsving			-
5	and ornamental plants			x
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
	To have the information and ability on breeding horticultural crops, developing a new			
7	cultivar, and propagation of these new varieties by different methods (seed, seedling, and			x
	sapling)			
8	To have the skill of using and applying biotechnology on horticulture			X
0	To have the information on good agricultural practices, and by the way, to decide the right			
9	time of cultural practices of the horticultural crops, and to have the ability of describing the		X	
	To have the skill on observing the shanges through harvest nest herwest and storage of			
10	horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording,	v		
11	project creation and application skills	А		
12	To have the ability of working in individual, multiple and different disciplined teams, and	x		
	having the responsibility			
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

COURSE SYLLABUS

Instructor(s):



COURSE CODE	RSE 251317032 DE			COURSE NAME		Edible Wild Vegetables				
									1	
SEMESTER	W	/EEI	KLY COURS	SE PERI	OD			COURSE OF		
	Theo	ory	y Practice Labra		atory	Credit	ECTS	ТҮРЕ	LANGUAG E	
VII	2		2			3	4	COMPULSORY() ELECTIVE()	Turkish	
					COUR	SE CATA	GORY			
Basic Scier	ice]	Basic Engine	ering	[if it	contains	Ho conside	orticulture rable design, mark with (√)]	Social Science	
								Х		
				A	SSESS	MENT CF	RITERI	ΙΑ		
					Ev	aluation T	Гуре	Quantity	%	
					1st Mi	d-Term		1	40	
					2nd M	id-Term				
	MID) тб	DM		Quiz					
	WIID)-1E			Homey	work				
					Project	t				
					Report	t				
					Others)				
	FINA	LE	ХАМ		1				60	
P	RERE	QUI	EITE(S)							
COU	RSE D	DES	CRIPTION		Recognition of uncultivated plants collected from nature and consumed as vegetables.					
COU	RSE	OBJ	ECTIVES		Learning of the plants that are not cultured but consumed, albeit a little, which field and period they develop, their properties in terms of health and nutrition, and their functional features, if any.					
ADDITIVE PROFE	COFC	COU NAL	RSE TO A L EDUATIO	PPLY DN	Learns the plants grown in nature and collected by consumers theoretically and practically.					
COL	JRSE	O U'	TCOMES		Recogn Learns Learns	nizes wild the condit the effects	plants th ions in s in tern	hat can be consumed. which wild plants grow. ns of health.		
ТЕХТВООК				Herkes Derya	s için yenel Engin, 200	bilir yat)4, 1. bs	oani bitkiler ve yararlı otlar. Jim N	Aeuninck,		
OTHER REFERENCES				Yaprağı Yenen Sebzeler, Halil Demir. 2007. Hasad Yayıncılık						
TOOLS AND EQUIPMENTS REQUIRED				Computer, projector						

COURSE SYLLABUS						
WEEK	TOPICS					
1	General description and classification of plants.					
2	Determining the developmental stages of wild plants					
3	Determination of consumed parts of plants collected from nature					
4	Positive aspects of wild plants in terms of health					
5	Negative aspects of wild plants in terms of health					
6	Reproduction methods of wild plants					
7	Reproduction methods of wild plants					
8	Midterm Exam, Researching the possibilities of growing wild plants.					
9	Investigation of the possibilities of growing wild plants.					
10	Detection of wild plants in nature					
11	Detection of wild plants in nature					
12	Detection of wild plants in nature					
13	Methods of conservation of wild plants					
14	Discussion of the course and topics					
15,16						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer this information accurately		x	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	x		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants			X
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture	Х		
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assistant prof. Kenan SÖNMEZ



ESOGÜ Horticulture Department Course Information Form

COURSE CODE	251	317033			COURS NAMI	SE E	Wild Fruits		
SEMESTER	WEE	KLY COUR	SE PER	IOD			COURSE OF		
	Theory	Practice	Lab	atory	Credit	ECTS	ТҮРЕ	LANGUAGE	
7	2	2		0	3	4	COMPULSORY () ELECTIVE (X)	Turkish	
				COUR	SE CATA	GORY			
Basic Scier	nce	Basic Engine	eering	[if it	contains	Ho conside	orticulture rable design, mark with (√)]	Social Science	
							X		
			· · ·	ASSESS	MENT CH	RITERI	A	<u>م</u> ر	
					luation Ty	ре	Quantity	% 0	
				st Mid-1 nd Mid-7	erm		1	40	
				na wna-i miz					
	MID-TEF	RM	ŀ	Iomewor	k				
			P	roject					
			F	leport					
			C	Others ()				
]	FINAL EX	AM					1	60	
PR	EREQUIE	ITE(S)	-					1	
COURSE DESCRIPTION			p v a p r e	pomological characteristics of cranberry, hawthorn, rosehip, berberis vulgaris, medlar, mountain strawberry, blackberry, wild strawberry, wild apple, pear and plum species in plant system, distribution, morphological and pomological characteristics, fertilization biology, ecological demands, reproduction, garden establishment and Annual maintenance will be explained					
COU	RSE OBJE	ECTIVES	V a c d	Wild fruit species, which have an important place in today's human nutrition, are the main subject of the course. The natural growing areas, plant characteristics and nutritional values of these fruit species will be covered during the course period.					
ADDITIVE PROFES	OF COUR SSIONAL 1	RSE TO APP EDUATION	LY	Collection, selection and evaluation of wild fruit species will be covered.					
COURSE OUTCOMES				Learns the collection, processing methods, breeding, varieties, harvesting and preparation of wild apple, pear and plum species in wild form. Recognize the morphological and pomological features of these fruit species. Knows the ecological characteristics of fruit species within the scope of the course and can suggest suitable species and varieties for different regions. Develops solutions by knowing the problems that may arise during the cultivation of these species.					
TEXTBOOK				Internet printouts Lecture Notes					
ОТН	ER REFEI	RENCES	I: L	Internet printouts Lecture Notes					
TOOLS	AND EQU REQUIR	UIPMENTS ED]	Projection	1				

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Description of wild fruits						
2	Importance of wild fruits in terms of health and their place in economy						
3	Example of wild fruit species: Cranberry						
4	Example of wild fruit species: Hawthorn						
5	Example of wild fruit species: Rosehip						
6	Example of wild fruit species: Berberis vulgaris (Female saltpeter)						
7	Midterm /						
8	Example of wild fruit species: Medlar						
9	Example of wild fruit species: Rowan						
10	Example of wild fruit species: Blackberry						
11	Example of wild fruit species: Mountain Strawberry						
12	Example of wild fruit types: wild apple						
13	Example of wild fruit species: wild pear						
14	Example of wild fruit species: wild plum						
15,16	Semester final exam						

NO	PROGRAM OUTCOMES	3	2	1
	To have the basic information on horticulture and other agriculture engineering			
1	areas, describing the required data to solve the problems, to have the ability of	X		
	gathering data and solving the problems by using information technology			
	To have theoretical and practical (land and laboratory) information on growing and			
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and		X	
	transfer these information accurately			
_	To have the ability of determining and evaluating the source of the ecological,			
3	biological, technical and economical problems that negatively effects the sufficient		X	
	yield and quality of horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and	X		
	protection of genetic resources in horticultural area and environment			
5	To have the ability of describing, classification and growing fruits, vegetables,	X		
	grapevine and ornamental plants			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
	To have the information and ability on breeding horticultural crops, developing a			
7	new cultivar, and propagation of these new varieties by different methods (seed,	X		
	seedling, and sapling)			
8	To have the skill of using and applying biotechnology on horticulture			X
	To have the information on good agricultural practices, and by the way, to decide			
9	the right time of cultural practices of the horticultural crops, and to have the ability	Х		
	of describing the pest and diseases of horticultural plants			
10	To have the skill on observing the changes through harvest, post harvest, and	v		
10	storage of horticultural crops, and to have the information on storage conditions	Λ		
11	To have the ability of getting the data on horticultural area, and evaluation,	v		
11	recording, project creation and application skills	Λ		
12	To have the ability of working in individual, multiple and different disciplined	x		
12	teams, and having the responsibility	Λ		
1:Non	e. 2 :Partially contribution. 3 : Completely contribution.			

Instructor(s): Assoc. Prof. Volkan OKATAN

Date:



ESOGÜ Horticulture Department Course Information Form

COURSE CODE	25	1317034			COURS NAMI	SE E	Protected Cultivation of Vegetabl	le Crops	
SEMESTER WEEKLY COURSE PERIO					D COURSE OF				
	Theory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAGE	
7	2	2	0)	3	4	COMPULSORY () ELECTIVE (X)	Turkish	
	1			COU	RSE CATA	GORY		1	
Basic Scier	nce	Basic Engine	eering	[if	it contains	H conside	orticulture erable design, mark with (√)]	Social Science	
							Х		
			A	SSESS	SMENT CF	RITER		0. <i>i</i>	
l				Lot M	valuation 'I	ype		% 25	
				2nd N	/id-Term		1	23	
				Quiz					
MID-TERM				Home	ework				
				Proje	ct				
				Report					
				Others (Practice)				25	
	FINAL	EXAM					1	50	
P	REREQU	JIEITE(S)		-					
COL	JRSE DE	SCRIPTION		Information on reasons for using protected cultivation, terms of greenhouse and tunnel, properties of greenhouse covering materials used in the agriculture, and acclimatization of greenhouse, practice of protected cultivation of vegetable crops will be discussed.					
CO	URSE OI	BJECTIVES		To give basic knowledge and abilities on Description of protected cultivation, information about protected cultivation in Turkey and the world. Systems referred to as greenhouse cultivation, cover types and their characteristics. Equipments used in greenhouse and alternative practice.					
ADDITIV PROFI	E OF CO ESSIONA	URSE TO AP	PLY N	This is the main course that informed about protected cultivation and information is given theoratically and practically on protected cultivation					
COURSE OUTCOMES				The student knows the definition, importance, priority and economics of protected cultivation of vegetable. Usage possibilities of tunnels and greenhouses in protected cultivation of vegetable, equipment used protected cultivation of vegetable. Cultures such as soil or perlite, rock wool, cocopeat, peat etc. preparation of growing media, planting, fertilization and irrigation will have the necessary knowledge.					
	TEXT	BOOK		Örtüa Borno	ltı Sebzecil ova-Izmir, 2	iği, Sev 002.	gican, A., Ege Univ. Ziraat Fak. Y	Yayın No. 528,	
OT	HER RE	FERENCES		-					
TOOLS ANI) EQUIP	MENTS REQ	UIRED	Projection and pc.					

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Introduction of protected cultivation, history, economy, greenhouse cultivation in Turkey and in the world						
2	Protected cultivation structures classification and characteristics						
3	Greenhouse construction elements and their properties, covering materials and their properties, environmental control of greenhouse						
4	Irrigation systems and cultivation techniques in greenhouses,						
5	Soil preparation and struggle with weed in greenhouse						
6	Midterm exam, Soil preparation and struggle with weed in greenhouse						
7	Cultural practices in protected cultivation						
8	Soilless culture possibilities in greenhouse cultivation						
9	Planting systems, and timing in protected cultivation						
10	Characteristics of substrates used in protected cultivation						
11	Midterm exam, Characteristics of substrates used in protected cultivation						
12	Characteristics of cultivars which are suitable for greenhouse cultivation; Plant growth regulators used in the greenhouse						
13	Preparation greenhouses or tunnels for the next year						
14	Course evaluation						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Х		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture		X	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instructor(s): Asst.Prof.Dr. Kenan SÖNMEZ

Date:



ESOGÜ Horticulture Department

Course Information Form

COURSE CODE	25	51317035			COURS NAMI	SE E	Cut Flower Cultivation		
SEMESTED	WE	EKLY COURS	SE PERIC	OD			COURSE OF		
SENIESTER	Theory	y Practice	Labra	tory	Credit	ECTS	ТҮРЕ	LANGUAG E	
7	2	2	0		3	4	COMPULSORY () ELECTIVE (X)	Turkish	
				COU	RSE CATA	GORY			
Basic Scier	nce	Basic Engine	eering	[if i	t contains	Ho conside	rticulture rable design, mark with (√)]	Social Science	
							Х		
			AS	SSESS	SMENT CF	RITERI	A		
			ŀ	<u>E</u>	valuation 7	Гуре	Quantity	%	
			F	1st M	id-Term		1	40	
			F	Ouiz	nu-renn		1		
	MID-	TERM	ŀ	Home	work		1	10	
				Proje	et				
				Repor					
				Other					
	FINAL	EXAM					1	50	
P	REREQ	UIEITE(S)		To have passed the Ornamental Plants Cultivation course					
COU	JRSE DE	ESCRIPTION		Introduction of the cut flower industry and important cut flower species and cultivation					
CO	URSE O	BJECTIVES		Introducing important cut flower species and teaching production methods					
ADDITIV PROFI	E OF CO ESSIONA	DURSE TO AP AL EDUATION	PLY N	It will enable them to have information about important cut flower species, general growing conditions and production methods.					
COURSE OUTCOMES TEXTBOOK				Recognizing and cultivating cut flower types; To apply propagation and production techniques suitable for the plant. Selecting the type and variety suitable for the sector demands and production periods; Solving problems encountered in production;					
				Tanrıverdi, F. 1993. Çiçek Üretim Tekniği, Sera ve Açık Alanlarda Saksı, Kesme ve Bahçe Çiçeği Yetiştirme İlkeleri Ders Kitabı, İnkilap Kitabevi, İstanbul. Tissier et al. (1989). Seralarda Kesme Çiçek Yetiştiriciliği, Çukurova Üni. Ziraat Fakültesi Yardımcı Ders Kitabı No.23 Adana					
OT	HER RE	FERENCES		Özzambak, E., Zeybekoğlu, E. (2004). Serada Topraksız Gerbera Yetiştiricliği, İzmir Ticaret Odası Yayın No: 140 Altan, s. (1992). Süs Bitkileri Üretim Tekniği, Çukurova Üni. Ziraat Fak. Ders Kitabı No:104, Adana					
TOOLS AND) EQUIP	MENTS REQU	UIRED	Com	outer, proje	ction			

COURSE SYLLABUS							
WEEK	TOPICS						
1	Status and expectations of the cut flower industry, classification of cut flower types						
2	Reproduction methods of cut flower species						
3	Rose Propagation						
4	Carnation Propagation						
5	Chriysanthemum Propagation						
6	Gerbera Propagation						
7	Anthurium Propagation						
8	Alstroemeria Propagation						
9	Midterm exam						
10	Gladiol Propagation						
11	Orchids Propagation						
12	Daffodil Propagation						
13	Tulip Propagation						
14	Lilium Propagation						
15	Final						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment			X
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	x		
8	To have the skill of using and applying biotechnology on horticulture			
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	

Instructor(s): Assoc. Prof. Dr. Sibel SARIÇAM



ESOGÜ Horticulture Department Course Information Form

COURSE CODE	25	1317036			COURS NAME	SE E	Greenhouse fruit growing			
SEMESTER	EMESTER WEEKLY COURSE PERI					1	COURSE OF			
	Theory	Practice	Laborate	ory	Credit	ECTS	ТҮРЕ	LANGUAGE		
7	2	2	0		3	4	COMPULSORY () ELECTIVE (X)	Turkish		
			С	OURS	SE CATA	GORY				
Basic Scier	nce	Basic Engine	ering	[if it	contains o	Ho conside	orticulture rable design, mark with (√)]	Social Science		
			ASS	SESSN	AENT CR	RITERI	Α			
				Eva	luation T	уре	Quantity	%		
			1	st Mid	-Term		1	40		
			21	nd Mi	d-Term					
	MID-1	TERM	Q	uiz	lr					
			Р	roject	OIK					
			R	eport						
			О	Others ()						
	FINAL	EXAM					1	60		
Pl	REREQU	UIEITE(S)	-	-						
COU	IRSE DE	SCRIPTION	T ir ir	This course includes the general principles of fruit growing, the importance of greenhouse fruit growing, fruit production and foreign trade in our country, and general principles of fruit growing under cover.						
CO	URSE OI	BJECTIVES	T th cl	The aim of this course is to teach the fruit production of our country and the world, the importance of greenhouse fruit growing and how temperate climate fruits can be grown under cover.				our country and I how temperate		
ADDITIVI PROFF	E OF CO ESSIONA	OURSE TO AP AL EDUATION	PLY N N co	New greenhouse system garden installations, new cultivation and pruning systems, tillage, maintenance and harvesting methods will be comprehended theoretically and practically.				ion and pruning hods will be		
CO	E D E It	Emphasizes the importance of fruit growing Explains the situation of fruit growing in our country. Defines greenhouse fruit growing Explain the reasons and advantages of greenhouse fruit growing It teaches the cultivation of greenhouse fruits in some berry types practically.								
	-									
OTI	HER RE	FERENCES	С	ourse	notes					
TOOLS AND	EQUIP	MENTS REQ	UIRED	Compu	iter and pr	ojector				

	COURSE SYLLABUS							
WEEK	TOPICS							
1	Definition and general principles of fruit growing							
2	Fruit production of our country and its place in the world							
3	Our country's fruit trade and its place in the world							
4	Why greenhouse fruit growing and its advantages							
5	General principles of greenhouse fruit growing							
6	General principles of greenhouse fruit growing							
7	Midterm - Current pruning and training systems							
8	fruit growing systems							
9	Dressing systems used under cover							
10	Pruning							
11	Other cultural processes used in greenhouse fruit growing							
12	An applied example in greenhouse fruit cultivation: Strawberry cultivation under cover							
13	An applied example in greenhouse fruit cultivation: Blackberry cultivation under cover							
14	An applied example in greenhouse fruit cultivation: Blueberry cultivation under cover							
15, 16	Semester final exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assoc. Prof. Dr. Volkan OKATAN

Date:



COURSE CODE	25	1317037			COURS NAMI	SE E	Vineyard Plantation Technique		
CEMECTED	WEF	KLY COUR	SE PERI	OD			COURSE OF		
SEMESTER	EMESTER Theory Practice Labra		tory	Credit	ECTS	ТҮРЕ	LANGUAG E		
7	2	2	-		3	4	COMPULSORY () ELECTIVE (X)	Turkish	
				COUF	RSE CATA	GORY	L	I	
Basic Scier	nce	Basic Engine	eering	[if i	t contains (Ho consider	rticulture rable design, mark with (小)]	Social Science	
			Δ	SSESS	MENT CE	TEBI	A		
			Α	E E	valuation 7	vne	Ouantity	%	
				1st M	id-Term	jpe	1	40	
				2nd N	lid-Term				
				Quiz					
	MID-T	ERM		Home	work				
				Projec	et				
				Repor	t				
				Other					
	FINAL H	EXAM					1	60	
P	REREQU	IEITE(S)		To have a passing grade in the General Viticulture course.					
COURSE DESCRIPTION				Ecological and economic factors in selecting the vineyard sites, land selection, soil types and factors, selection of vine rootstock and grape variety, plant planning, supply of planting materials, maintenance activities after plantation training and pruning, determination of the choice of trellis and systems					
COU	RSE OB	JECTIVES		To determine assessing the suitability of areas for vineyard planting, to know subjects such as land preparation, to teach the vineyard establishment plan and the annual maintenance of an established vineyard.					
ADDITIVE PROFE	OF COU SSIONA	URSE TO A L EDUATIO	PPLY DN	As a result of learning detailed information about vineyard plantation techniques, the individual develops a decision-making mechanism for the work that needs to be done and gains the ability to plan the vineyard site.					
COURSE OUTCOMES				 Knows the ecological and economic factors to be considered in the vineyard establishment, Learns the planning of planting, Gains pre-facility planning skills, Gains experience in soil types, factors, and analysis, Knows the correct rootstock and variety selection, Creates an action plan for the preparation of the vineyard area, Knows the post-planting maintenance procedures and learns the wire finishing system preference correctly. 					
	TEXTB	OOK		Çelik, 1998.	H., Ağaoğ Genel Bağo	lu, Y.S., cılık, Su	Fidan, Y., Marasalı, B., Söylem nfidan Mesleki Kitaplar Serisi:1,	ezoğlu G., Ankara	
OTH	IER REF	ERENCES		Winkler, A.J.ve ark.1974. General Viticulture. Univ.Calif.Press, 710 s, Berkeley Keller, M., 2015. The Science of Grapevines. Second Edt. USA					
TOOL	S AND E REQUI	QUIPMENT RED	TS .	Comp	uter, projec	tor			

	COURSE SYLLABUS							
WEEK	TOPICS							
1	Ecological Factors to Consider in the Selection of Vineyard Sites							
2	Considerations in Land Selection							
3	Soil Factors and Grapevine Rootstock Selection							
4	Soil Factors and Grapevine Rootstock Selection							
5	Considerations in Selection of Grape Variety							
6	Vine Plantation (Determination of Site Plantation and Requirements)							
7	Midterm							
8	Supply of Planting Materials (Sapling Use)							
9	Preparation of the Vineyard Site for Planting							
10	Vine Planting							
11	Maintenance Activities After Plantation							
12	Training and Pruning							
13	Determination of the Choice of Trellis Systems							
14	Economical Factors to Consider in the Selection of Vineyard Sites							
15,16	Final Exam							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	x		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		x	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	x		
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			x
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			X
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assistant Prof. Dr. Turcan TEKER



ESOGÜ Horticulture Department Course Information Form

COURSE CODE		251	317012			COURS NAMI	SE E	Diploma Thesis I			
		245151			OD	1		COUDCE OF			
SEMESTER	SEMESTER WEEKLY COURSE PERIO				OD		1	COURSE OF			
	Theo	ory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAGE		
7	0		2	C)	1	3	COMPULSORY (X) ELECTIVE (Turkish		
					COUF	RSE CATA	GORY				
Basic Scier	nce		Basic Engine	ering	[if i	t contains o	Ho conside	rticulture rable design, mark with (√)]	Social Science		
								X .			
				A	SSESS	MENT CF	ATTERI	A			
					E Lat M	valuation 'I	уре	Quantity	%		
					2nd M	fid Term					
	MII	D-TE	CRM		Home	work					
					Projec	zt					
					Repor	t					
					Other	s (Graduate	Thesis)	1	50		
	FINA	LE	XAM		(Presentation of Thesis) 1				50		
P	RERE	QUI	EITE(S)		-						
COU	IRSE I	DES	CRIPTION		Making research, preparing project and presentation of conclusions as thesis on a subject on related disciple of choosen lecturer.						
CO	URSE	OBJ	IECTIVES		Making research and application, preparing project, evaluating values and presenting the consequences by the students on a subject on horticulture will be provided.						
ADDITIV PROFI	E OF (ESSIO	COU NAL	RSE TO AP	PLY N	To add the ability of research, application and presentation on particular subject.						
CO	COURSE OUTCOMES					To gain the ability of making research, application and presentation on a subject on horticulture. To gain the ability of preparing a project, and presenting the consequences successfully on a professional subject.					
	ТЕХТВООК					ed documen	its and v	veb source			
OTHER REFERENCES					Related documents and web source						
TOOLS AND) EQU	IPM	IENTS REQ	UIRED	Projection						

	COURSE SYLLABUS								
WEEK	TOPICS								
1	Studying on selected subject with choosen lecturer								
2	Studying on selected subject with choosen lecturer								
3	Studying on selected subject with choosen lecturer								
4	Studying on selected subject with choosen lecturer								
5	Studying on selected subject with choosen lecturer								
6	Studying on selected subject with choosen lecturer								
7	Studying on selected subject with choosen lecturer								
8	Studying on selected subject with choosen lecturer								
9	Studying on selected subject with choosen lecturer								
10	Control of preparations								
11	Control of preparations								
12	Presentation of graduate thesis								
13	Presentation of graduate thesis								
14	Presentation of graduate thesis								
15									

THE DEGREE OF RELATIONSHIP BETWEEN COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (5: Very high, 4: High, 3: Medium, 2: Low, 1: Very low)

NO	PROGRAM OUTCOMES	5	4	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X			
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately				X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops				X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X			
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X				
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X			
8	To have the skill of using and applying biotechnology on horticulture					Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X			
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X				

Instructor(s): All teaching members

Date:



COURSE CODE 251317014						COURSE NAME Ornamental Plants Cultivation Applications I				on and
SEMESTER	W	EEK	LY COURS	SE PERI	OD			COURSE O	F	
SLITESTER	Theor	ry	Practice	Labra	atory	Credit	ECTS	ТҮРЕ		LANGUAG E
VII	0		2	C		1	3	Compulsory (X) Elect	ıve ()	Turkish
					COUR	SE CATA	GORY			
Basic Scier	nce	B	Basic Engine	ering	[if it	contains	Ho consider	rticulture able design, mark v	vith (√)]	Social Science
					GGEGG			X		
				A	SSESSI	MENI CH		A Overtite		0/
					LV 1st Mi	d-Term	уре	Quantity	y	%
					2nd M	id-Term				
	MID	TEI			Quiz					
	MID	-1 E f	KM		Homew	work				
					Project	t		1		100
					Report					
					Others	(Practice)		1		100
	FINA	L EX	XAM					1		100
P	REREQ	QUIE	CITE(S)		To have passed the Ornamental Plants Cultivation course					
COL	JRSE D	ESC	RIPTION		Making applications about ornamental plants growing technique, researching resources, preparing and presenting projects					
CO	URSE (OBJE	ECTIVES		To enable them to research a subject about ornamental plants in detail, to carry out its application, to make a report and to present this subject they have prepared.					
ADDITIV PROFI	E OF C ESSION	OUF	RSE TO API EDUATION	PLY N	To gain theoretical and practical information about ornamental plants as well as general information about their applications.					
CO	URSE	OUT	COMES		They have knowledge and skills about growing ornamental plants.					
ТЕХТВООК					Orçun, E. (1972). Özel Bahçe Mimarisi Dendroloji, İğne Yapraklı Ağaç ve Ağaçcıklar, Cilt I, İzmir. Orçun, E. (1972Peyzaj Mimarisi Dendroloji, Yapraklı Ağaç- Ağaçcıkların Özellikleri ve Peyzaj Mimarisinde Kullanılışları, Cilt II, İzmir. Ceylan, G. (2004). Dış Mekan Süs Bitkileri ve Payzajda Kullanımları, Flora Yayınları, İstanbul.					
ΟΤ	HER R	EFE]	RENCES							
TOOLS ANI) EQUI	PMF	ENTS REQU	JIRED						

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Ornamental Plants Cultivation and research of the thesis topic						
2	Determination of the thesis topic						
3	Literature review on the thesis topic						
4	Literature review on the thesis topic						
5	Literature review on the thesis topic						
6	Literature review on the thesis topic						
7	Literature review on the thesis topic						
8	Literature review on the thesis topic						
9	Literature review on the thesis topic						
10	Literature review on the thesis topic						
11	First evaluation (Control of the study program, presentation to the consultant,						
11	continuation of the study in line with the suggestions						
12	Collection of missing data and corrections						
13	Corrections						
14	Corrections						
15,16	Presentation						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		Χ	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assoc. Prof. Dr. Sibel SARIÇAM



COURSE CO	DDE 2	251317015			COURSE	NAME	Fertilization Biology Practic	ces in Fruits I	
							COURCE OF		
SEMESTER	WEF	EKLY COUR	OD		COURSE OF	LANCHAC			
	Theory	Practice	Labra	atory	Credit	ECTS	TYPE	LANGUAG E	
VII	0	2	0)	1	3	COMPULSORY (X) ELECTIVE ()	Turkish	
	-			COUR	SE CATA	GORY		•	
Basic Scier	nce	Basic Engine	ering	[if it	contains	Hoı consider	rticulture able design, mark with (√)]	Social Science	
							Х		
			A	SSESS	MENT CF	RITERIA	4	1	
					aluation 7	уре	Quantity	%	
				1st Mi	d-lerm		1	20	
				Ouiz	iu-renni				
	MID-T	ERM		Homey	work				
				Project	t				
				Report	;				
				Others	(Practice)		1	40	
	FINAL I	EXAM		(Proje	40				
P	REREQU	IEITE(S)		NONE					
COU	IRSE DES	SCRIPTION		Literature screening, project preparation and presentation the topic on fertilization biology of fruits.					
CO	URSE OB	BJECTIVES		The aims of the course are to study the topic on fruits of horticultural crops research during the training period, to prepare the results as a project and to present the subject to community.					
ADDITIV PROFI	E OF CO ESSIONA	URSE TO AP L EDUATION	PLY N						
COURSE OUTCOMES				To learn searching literature, To learn summary the literature, To learn evaluating th results of literature, Understanding and interpretation of the results, Reporting the results of the researches, Presenting the project Ability to use the information obtained from the course in lifetime				course in	
	TEXTB	BOOK		Diffe	erent liter	atures (on the subject		
OT	HER REF	FERENCES							
TOOLS AND	EQUIPN	MENTS REQU	UIRED						

COURSE SYLLABUS							
WEEK	ΓΟΡΙCS						
1	Determination of the project topic						
2	Searching the literature about the topic						
3	Searching the literature about the topic						
4	Summary of the literature						
5	Summary of the literature						
6	Midterm exam						
7	Evaluating the literature						
8	Writing the results						
9	Writing the results						
10	Preparing the results as a report						
11	Preparing the results as a report						
12	Evaluating the report						
13	Presentation of the project						
14	Presentation of the project						
15,16	Evaluation of the project						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		Х	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assoc.Prof. Yasemin EVRENOSOĞLU



SEMESTER FALL

COURSE CODE	E 251317016				COURSE NAME				Cultivating Vegetables and Aj	pplications I
	Ī									
SEMESTER	W	/EEI	KLY COUR	SE PERI	OD				COURSE OF	
	Theo	ory	Practice	Labor	atory		Credit	ECTS	ТҮРЕ	LANGUAG E
7	0		2	C)		1	3	COMPULSORY (X) ELECTIVE ()	Turkish
					COU	RSF	E CATA	GORY		
Basic Scier	nce]	Basic Engine	ering	[if	it co	ontains c	Hoi consider	ticulture able design, mark with (√)]	Social Science
									Х	
				A	SSES	SM	ENT CR	RITERIA	A	
					l at N	Eval	uation 1	ype	Quantity	%
					2nd I	Mid	Term			
					Ouiz	,	-10111			
	MIE)-TE	CRM		Homework					
					Project				1	100
					Report					
					Others ()					
	FINA	LE	XAM							
P	RERE	QUI	EITE(S)							
COU	RSE I	DES	CRIPTION		Literature search, project preparation, presentation and implementation on the cultivation of vegetables					
COU	IRSE	OBJ	IECTIVES		It is aimed that students search a research topic related to vegetable growing and special applications in detail, write and present a project related to the subject, conduct it and write a project report.					
ADDITIVE PROFE	COF C SSIO	COU NAL	IRSE TO A	PPLY DN	The ability to have theoretical and applied knowledge about vegetable growing and to use this knowledge.					
COURSE OUTCOMES				Learning to literature search Learning to sense, summarize and evaluate the literature Project preparation and practice Submit a project report The ability to use the results obtained						
ТЕХТВООК										
OTH	IER R	EFI	ERENCES							
TOOL	S AN <mark>I</mark> REQ) EQ QUII	QUIPMENT RED	TS						

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Determining the research topic						
2	Literature search and evaluation						
3	Literature search and evaluation						
4	Literature summary and evaluation						
5	Writing a project						
6	Writing a project						
7	Writing a project						
8	Practice of the project						
9	Practice of the project						
10	Practice of the project						
11	Evaluation of data						
12	Writing a results report						
13	Writing a results report						
14	Writing a results report						
15.16	Presentation of the project report						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		X	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture		Χ	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Nor	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Nuray ÇÖMLEKÇİOĞLU



COURSE CODE 251317017					COURSE	NAME	Fruit Growing Techniques a	and Applications		
SEMESTED WEEKLY COURSE PERIO					OD COURSE OF					
SEMESTER	Theory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG E		
VII	0	2	0		1	3	COMPULSORY (X) ELECTIVE ()	Turkish		
				COURS	SE CATA	GORY				
Basic Scier	ice	Basic Engine	ering	[if it	contains o	Hor consider	rticulture able design, mark with (√)]	Social Science		
				SSESSI	AENT OF	ITEDI	X			
			A	SSESSN Eve	aluation T	vne	A Ouantity	%		
				1st Mic	l-Term	jpe	Quantity	/0		
				2nd Mi	d-Term					
	MID-TI	ERM		Quiz						
				Homew	vork					
				Project						
				Others						
	FINAL E	EXAM		(Projec	et)		1	100		
PI	PREREQUIEITE(S)				NONE					
COU	RSE DES	CRIPTION		Literature screening, project preparation and presentation the						
				topic on fruit growing.						
COL	URSE OB	JECTIVES		horticultural crops research during the training period, to prepare the results as a project and to present the subject to community.						
ADDITIVI PROFE	E OF COU ESSIONAL	URSE TO AP L EDUATION	PLY N							
COURSE OUTCOMES				To learn searching literature, To learn summary the literature, To learn evaluating th results of literature, Understanding and interpretation of the results, Reporting the results of the researches, Presenting the project Ability to use the information obtained from the course in lifetime						
ΤΕΧΤΒΟΟΚ				Diffe	rent liter	atures	on the subject			
ΟΤΙ	HER REF	ERENCES								
TOOLS AND	EQUIPM	IENTS REQU	UIRED							

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Determination of the project topic						
2	Searching the literature about the topic						
3	Searching the literature about the topic						
4	Summary of the literature						
5	Summary of the literature						
6	Midterm exam						
7	Evaluating the literature						
8	Writing the results						
9	Writing the results						
10	Preparing the results as a report						
11	Preparing the results as a report						
12	Evaluating the report						
13	Presentation of the project						
14	Presentation of the project						
15,16	Evaluation of the project						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		Χ	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Nor	ne. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assist.Prof. Cenap YILMAZ

Signature:

Date: 22.0.2022



COURSE CODE	2	251317018		COURSE NAME			MINOR VEGETABLES	- I
					8			
SEMESTER	W	EEKLY COU	RSE PEF	IOD			COURSE OF	
	Theo	ry Practice	Labr	atory	Credit	ECTS	ТҮРЕ	LANGUAGE
7	0	2		-	1	3	COMPULSORY (X) ELECTIVE ()	Turkish
				COUR	SE CATA	AGORY	7	
Basic Scier	ıce	Basic Engi	neering	[if it	contains	Ho conside	orticulture rable design, mark with (√)]	Social Science
				ASSESS	MENT C	RITER	IA	
				Eva	aluation T	Гуре	Quantity	%
				1st Mid-	Term			
				2nd Mid	-Term			
	MID	TFPM		Quiz				
	MID			Homewo	ork			
				Project				
				Report				
				Others (I	Diploma T	Thesis)	1	50
	FINA	L EXAM		Presentation of Thesis				50
PR	REREQ	QUIEITE(S)						
COUF	RSE D	ESCRIPTIO	N	Conducting research, preparing, and presenting projects on the subjects within the relevant department, as suggested by the faculty member chosen within the scope of the relevant course.				
COU	RSE C)BJECTIVES	5	The research will be conducted on any topic related to minor vegetables, and a research project will be designed to evaluate and successfully transfer the results.				
ADDIT APPL	IVE O Y PRO EDU	DF COURSE T DFESSIONA ATION	ГО L	Develop the ability to research and practice on the determined subject.				
COURSE OUTCOMES				Students subject r professio	will be g elated to onal subje	iven the minor v ct and su	ability to conduct research and egetables. The ability to create a accessfully convey the results wil	practice on any a project on any l be gained.
	TEXT	ГВООК		Research	ned, releva	ant docu	ments and resources on the subje	ct.
ОТН	ER RI	EFERENCES	6	Researched, relevant documents and resources on the subject.				
TOOLS	AND REQ	EQUIPMEN UIRED	TS	Compute	er, project	or		

	COURSE SYLLABUS					
WEEK	TOPICS					
1	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
2	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
3	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
4	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
5	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
6	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
7	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
8	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
9	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
10	Presentation of the project					
11	Presentation of the project					
12	Presentation of the project					
13	Presentation of the project					
14	Presentation of the project					
15,16	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		x	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	x		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	x		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	x		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			x
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	x		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Nor	ne. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assistant Prof. Dr. Kenan SÖNMEZ



SEMESTER WEEKLY COURSE PERIOD COURSE OF Theory Practice Labratory Credit ECTS TYPE 7 0 2 0 1 3 Compulsory (X) Elective () COURSE CATAGORY Basic Engineering Horticulture [if it contains considerable design, mark with (Y) X ASSESSMENT CRITERIA	LANGUAGE				
SEMESTER COURSE OF Theory Practice Labratory Credit ECTS TYPE 7 0 2 0 1 3 Compulsory (X) Elective () COURSE CATAGORY Basic Engineering Horticulture [if it contains considerable design, mark with (Y) X ASSESSMENT CRITERIA	LANGUAGE				
Theory Practice Labratory Credit ECTS TYPE 7 0 2 0 1 3 Compulsory (X) Elective () COURSE CATAGORY Basic Science Basic Engineering Horticulture [if it contains considerable design, mark with (v) X ASSESSMENT CRITERIA	LANGUAGE				
7 0 2 0 1 3 Compulsory (X) Elective () COURSE CATAGORY Basic Science Horticulture [if it contains considerable design, mark with (v X X ASSESSMENT CRITERIA					
COURSE CATAGORY Basic Science Basic Engineering Horticulture [if it contains considerable design, mark with (variable d	Turkish				
Basic Science Basic Engineering Horticulture [if it contains considerable design, mark with (' X X X ASSESSMENT CRITERIA	·				
ASSESSMENT CRITERIA	Social ∮] Science				
ASSESSMENT CRITERIA					
Evaluation Type Quantity	%				
1st Mid-Term 1	40				
2nd Mid-Term					
MID-TERM Quiz					
Homework					
Project					
Report					
Others (Practice)	50				
FINAL EXAM	50				
PREREQUIEITE(S)					
COURSE DESCRIPTION Within the scope of the related course, respectively preparation and presentation of the results in the of the advisor faculty member and the faculty	Within the scope of the related course, researching, project preparation and presentation of the results in the form of a thesis of the advisor faculty member and the faculty member				
COURSE OBJECTIVES Students will be able to do research and practi related to Horticulture, to evaluate the resu project and to transfer them successfully.	Students will be able to do research and practice on any subject related to Horticulture, to evaluate the results by creating a project and to transfer them successfully.				
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION It will add the ability to research, practice and preser subject.	It will add the ability to research, practice and present on the determined subject.				
COURSE OUTCOMESStudents will be provided with the ability to c and practice on any subject related to Horticul present it. The ability to create a project on any profession successfully transfer the results will be gained	Students will be provided with the ability to conduct research and practice on any subject related to Horticulture and to present it. The ability to create a project on any professional subject and successfully transfer the results will be gained.				
TEXTBOOK Related documents and internet resources					
OTHER REFERENCES Related documents and internet resources	Related documents and internet resources				
TOOLS AND EQUIPMENTS REQUIRED Computer and Projection					

	COURSE SYLLABUS
WEEK	TOPICS
1	Determination of thesis topics within the scope of the relevant course
2	Determination of thesis topics within the scope of the relevant course
3	Determination of thesis topics within the scope of the relevant course
4	Determination of thesis topics within the scope of the relevant course
5	Conducting literature research on thesis topics determined within the scope of the relevant course
6	Conducting literature research on thesis topics determined within the scope of the relevant course
7	Conducting literature research on thesis topics determined within the scope of the relevant course
8	Conducting literature research on thesis topics determined within the scope of the relevant course
9	Conducting literature research on thesis topics determined within the scope of the relevant course
10	Conducting literature research on thesis topics determined within the scope of the relevant course
11	Control of preparations
12	Control of preparations
13	Control of preparations
14	Control of preparations
15,16	

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Х	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture		Х	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2 :Partially contribution. 3 : Completely contribution.			

Instructor(s): Prof. Dr. Rafet ASLANTAŞ

Signature:

Date:



COURSE CODE 251317024				COURS NAMI	SE E	MINOR FRUITS - I		
GEMEGTED	WI	EEKLY COUR	SE PERI	OD COURSE OF				
SEMESTER	Theor	y Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG
7	0	2	-		1	3	COMPULSORY (X) ELECTIVE (Turkish
		COUR	SE CATA	GORY				
Basic Scier	nce	Basic Engine	ering	[if it	contains	Ho conside	rticulture rable design, mark with (√)]	Social Science
			A	SSESS	MENT CF	RITERI	A	
				Ev 1st Mie 2nd M	aluation T d-Term id-Term	Гуре	Quantity	%
	MID-	TERM		Quiz				
				Project	vork			
				Others (Diploma Thesis) 1				50
	FINAL	LEXAM		Presentation of Thesis 1				50
P	REREQ	UIEITE(S)						
COU	RSE DI	ESCRIPTION		Conducting research, preparing, and presenting projects on the subjects within the relevant department, as suggested by the faculty member chosen within the scope of the relevant course.				
COU	IRSE O	BJECTIVES		The research will be conducted on any topic related to minor fruits, and a research project will be designed to evaluate and successfully transfer the results.				
ADDITIVE PROFE	C OF CO SSION	OURSE TO A AL EDUATIO	PPLY DN	Develo	op the abili	ty to res	search and practice on the determ	ined subject.
COURSE OUTCOMES				Students will be given the ability to conduct research and practice on any subject related to minor fruits. The ability to create a project on any professional subject and successfully convey the results will be gained.				
ТЕХТВООК				Resear	ched, relev	ant doc	uments and resources on the subj	ect.
OTH	IER RF	EFERENCES		Researched, relevant documents and resources on the subject.				
TOOL	S AND REQU	EQUIPMENT UIRED	TS	Compu	iter, projec	tor		

	COURSE SYLLABUS					
WEEK	TOPICS					
1	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
2	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
3	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
4	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
5	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
6	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
7	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
8	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
9	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
10	Presentation of the project					
11	Presentation of the project					
12	Presentation of the project					
13	Presentation of the project					
14	Presentation of the project					
15,16	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	x		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	x		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			х
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			x
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	x		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		x	
1:Nor	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assoc. Prof. Dr. Volkan OKATAN



COURSE CODE	COURSE 251317025					COURS NAMI	SE E	Viticulture Practices - I	
SEMESTED	SEMESTER WEEKLY COURSE PER				OD	OD COURSE OF			
SEWIESTER	Theo	ry	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG E
7	0		2	-		1	3	COMPULSORY (X) ELECTIVE (Turkish
					COUR	SE CATA	GORY		
Basic Scier	nce]	Basic Engine	ering	[if it	contains	Ho consider	rticulture rable design, mark with (√)]	Social Science
	1			A	SSESSI	MENT CF	RITERI	A	
					Ev 1st Mie	aluation T d-Term	Гуре	Quantity	%
	MID	-TF	RM		2nd M Quiz	id-Term			
				Homey	vork				
					Report				
					Others	(Diploma	Thesis)	1	50
	FINA	L E	XAM		Presentation of Thesis 1				50
P]	REREC	QUI	EITE(S)						
COU	RSE D	ES	CRIPTION		Conducting research, preparing, and presenting projects on the subjects within the relevant department, as suggested by the faculty member chosen within the scope of the relevant course.				
COU	RSE (OBJ	ECTIVES		The research will be conducted on any topic related to viticulture, and a research project will be designed to evaluate and successfully transfer the results.				
ADDITIVE PROFE	C OF C SSION	XOU NAL	RSE TO A L EDUATIO	PPLY DN	Develop the ability to research and practice on the determined subject.				
COURSE OUTCOMES				Students will be given the ability to conduct research and practice on any subject related to viticulture. The ability to create a project on any professional subject and successfully convey the results will be gained.					
ТЕХТВООК				Resear	ched, relev	ant doc	uments and resources on the subj	ect.	
ОТН	IER R	EFI	ERENCES		Researched, relevant documents and resources on the subject.				
TOOL	S AND REQ	E UII	QUIPMENT RED	TS	Compu	iter, projec	tor		

	COURSE SYLLABUS					
WEEK	TOPICS					
1	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
2	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
3	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
4	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
5	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
6	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
7	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
8	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
9	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.					
10	Presentation of the project					
11	Presentation of the project					
12	Presentation of the project					
13	Presentation of the project					
14	Presentation of the project					
15,16	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	x		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			x
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Nor	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assistant Prof. Dr. Turcan TEKER



COURSE CODE	COURSE CODE 251317026				COURSE NAMEVegetable seed practices - I			Ι	
SEMESTER WEEKLY COURSE PERIO					OD COURSE OF				
SEMIESTER	Theor	ry Practice	tice Labra		Credit	ECTS	ТҮРЕ	LANGUAG E	
7	0	2	-		1	3	COMPULSORY (X) ELECTIVE (Turkish	
				COUR	SE CATA	GORY		1	
Basic Scier	nce	Basic Engine	ering	[if it	contains (Ho conside	rticulture rable design, mark with $(\sqrt{)}$]	Social Science	
			A	SSESS	MENT CF	RITERI	Α		
				Ev	aluation T	уре	Quantity	%	
				1st Mi	d-Term				
				2nd M	id-lerm				
	MID-TERM				work				
					t				
					Ţ				
				Others (Diploma Thesis)			1	50	
	FINA	L EXAM		Presentation of Thesis 1			1	50	
P	REREQ	QUIEITE(S)							
COU	RSE D	ESCRIPTION		Conducting research, preparing, and presenting projects on the subjects within the relevant department, as suggested by the faculty member chosen within the scope of the relevant course.					
COU	RSE C)BJECTIVES		The research will be conducted on any topic related to Vegetable seed practices, and a research project will be designed to evaluate and successfully transfer the results.					
ADDITIVE PROFE	COFC SSION	OURSE TO A AL EDUATIO	PPLY DN	Develop the ability to research and practice on the determined subject.					
COURSE OUTCOMES				Students will be given the ability to conduct research and practice on any subject related to Vegetable seed practices. The ability to create a project on any professional subject and successfully convey the results will be gained.					
ТЕХТВООК				Resear	ched, relev	ant doc	uments and resources on the subj	ect.	
OTHER REFERENCES				Researched, relevant documents and resources on the subject.					
TOOL	S AND REQ	EQUIPMENT UIRED	TS	Computer, projector					

COURSE SYLLABUS					
WEEK	TOPICS				
1	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.				
2	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.				
3	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.				
4	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.				
5	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.				
6	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.				
7	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.				
8	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.				
9	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.				
10	Presentation of the project				
11	Presentation of the project				
12	Presentation of the project				
13	Presentation of the project				
14	Presentation of the project				
15,16	Final Exam				

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	x		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			x
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		x	
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			x
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non				

Instructor(s): Assistant Prof. Dr. Sıtkı ERMİŞ



SEMESTER FALL

COURSE	SE 251317041			COURS	SE	MODERN ORCHARDS			
CEMECTED	WEE	KLY COUR	SE PERI	OD			COURSE OF		
SEMILSIEK	Theory	Practice	Practice Labrate		Credit ECTS		ТҮРЕ	LANGUAG E	
7	-	2	-		1	3	COMPULSORY (X) ELECTIVE (Türkçe	
				COUF	RSE CATA	GORY			
Basic Science Basic Engineering			eering	[if i	Agricu t contains (ngineering Profession rable design, mark with (√)]	Social Science		
			•	GGEGG	MENT CI	TEDI	•		
			A	<u>55E55</u> F	<u>INENT CE</u> Valuation '	KI I EKI Tvne	A Ouantity	%	
			ľ	1st M	id-Term	1 ypc		-	
			ľ	2nd M	lid-Term				
	MID TI			Quiz			-	-	
	MID-II	LKM		Home	work				
				Projec	et				
				Repor	t				
				Other	s (Graduati	on thesis	s) <u>1</u>	50	
	FINAL E	XAM		Thesis presentation 1 50					
Р	REREQUI	IEITE(S)							
COURSE DESCRIPTION				predetermined subject by using the knowledge and skills he has acquired so far. The topics to be chosen here should be more about modern orchard management. These topics are; In the dwarf apple, amulet, cherry, or peach orchards, there should be topics that include the cultural practices of modern gardens such as irrigation, fertilization, disease and pest control, and tree treatment and pruning systems					
COURSE OBJECTIVES				In this course, the student who takes the course on the management of a modern garden from A to Z, taking into account irrigation, fertilization, pruning, training, support systems, rootstocks and varieties used in dwarf orchards, gains skills or theoretically prepares a thesis on this subject.					
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Thanks to this course, the person who takes the course gains theoretical or applied skills on issues related to modern orchards in the world.					
CO	URSE OU	TCOMES	T	Gains practi	s equivale	ent kno world.	wledge of modern orchard	management	
	ТЕХТВ	ООК		Book title; Intensive Orchard Management, Author; Dr. Bruce H. Barritt, Publication Year; 1992, ISBN;0-9630659-1-2, List price; \$30					
OTH	IER REF	ERENCES		General Fruiting, Editors; R. Gerçekçioğlu et al., Chapter 12. Pruning of Fruit Trees. Pages 385-449.					
TOOLS AND EQUIPMENTS REOUIRED					les and pre	esentatio	ons on the subject		

COURSE SYLLABUS							
NO PROGRAM OUTCOMES	3	2	1				
Adequate knowledge of Agricultural Engineering and fruit growing in particular; t	1e						
1 ability to apply theoretical and applied knowledge in these fields to model and sol	ve x						
2 problems related to modern fruit growing	ve rows	in mo	dern				
Ability to identify, define, formulate and solve problems related to Agricultur	al						
-2^{-3} Engineering and modern orchard management by selecting and applying appropria	te x						
4 analysis and modeling methods	warf of	chard	vary				
The ability to design a complex system by applying garden design and production	on –						
5 models in line with a determined goal.	ort¥syst	ems fo	r the				
Ability to learn, develop, select and use modern techniques and tools required f	or						
4 6 Agricultural Engineering practices and to make effective use of information	on cherry	and p	each				
technologies	-						
7 Ability to design, experiment, collect data, analyze and interpret results, to design	a's on cr	own					
5 garden setup for the study of Agricultural Engineering and Horticulture problems	ards.						
Placement of drip irrigation pipes and design of tertilizer tanks and apparat	is used fo	r irriga	ation				
Ability to work individually and in interdisciplinary and interdisciplinary teams							
⁶ Determination of the developmental status of Spur and standard apple, pear	, cherry a	n ð pea	ch				
Ability to communicate effectively in Turkish orally and in writing, and the abili	ty						
¹ 10 to use/develop foreign language knowledge about modern fruit growing	phenol	gical					
Ability to communicate effectively in Turkish orally and in writing, and the ability	ty		-				
⁸ 1 to use/develop foreign language knowledge about modern fruit growing	moderr	o ľ cha	rds				
9 12 Professional and ethical responsibility awareness	JFO, K	im _x Gre	en				
1:None. 2:Partially contribution. 5: Completely contribution.							
13 Formation and pruning of vertical cordon, Y palmette, single-armed horizo	ntal cordo	on, V					
system and super spindle systems in dwarf pear orchards							
14 The use of natural methods in the fight against diseases and pests in modern orchards							
15,16							

Instructor(s): Prof. Dr. Yakup ÖZKAN

Signature:

Date: 20.06.2022



ESOGU Horticulture Department

Course Information Form

SEMESTER

COURSE CODE	COURSE NAME	Internship
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SEMESTER	WEEKLY COURSE PERIOD			OD	COURSE OF			
	Theor	y Practice	Labra	Labratory		ECTS	ТҮРЕ	LANGUAGE
							COMPULSORY (X)	Turkish
							ELECTIVE ()	
· · · ·			COURS	SE CATA	GORY			
Basic Science Basic Engineering			Horticulture Department Profession [if it contains considerable design, mark with ($$)]			Social Science		
Х								
			Α	SSESSN	MENT CH	RITERIA	Ν	
				Eva	aluation T	Гуре	Quantity	%
MID-TERM				1st Mid-	-Term		1	40
				2nd Mic	l-Term			
				Quiz				

		Homework						
		Project						
		Report						
		Others ()			~ ~			
	FINAL EXAM		1		60			
	PREREQUIEITE(S)	No	1' '11 1 0 00	1. 1	1			
CC	DURSE DESCRIPTION	As a part of this course internships will done for 30 working days in a lump at the end of the 6th semester. Students do their internship in institutions which found by their own, related to the field (can be private or government institutions), with the permission of the related commission. Students who did not complete the 30 working days required internship even if they fulfill the necessary of the requirements for graduation. After completing their internship, students submit the reports and data sheets to commission. After the checking of all materials, students which are eligible to enter the internship exam, subjected to exam and evaluated as successful or unsuccessful.						
C	OURSE OBJECTIVES	The purposes of the practice study are; to consolidate the students' theoretical knowledge and experience gained over their bachelor period, to contribute to the skills and experience they will have acquired in in-class and lab applications, to identify the responsibilities, relationships, the organization steps, manufacturing process and technologies about their practice-work field. Besides, the aims of this course are; to demonstrate the students' capabilities by attending the R&D activities and project works, to help improve their perceptions about the solutions of engineering problems, to contribute for identifying their areas of interest, to gain an experience about the business life and to enable the recognition of the functioning of the institutions.						
ADDITI PROF	VE OF COURSE TO APPLY FESSIONAL EDUCATION	Students will gain theoretical and practical professional knowledge in the institutions where they do internship.						
C	COURSE OUTCOMES	Students will gain theoretical and practical professional knowledge in the institutions where they do internship.						
	ТЕХТВООК							
0	THER REFERENCES							
TOOLS AN	ND EQUIPMENTS REQUIRED							
	C	OURSE SYLLABUS						
WEEK	TOPICS							
1	Gathering of the required materia	ls from the students						
2	Gathering of the required materia	ls from the students						
3	Gathering of the required materials from the students							
4	Gathering of the required materials from the students							
5	Gathering of the required materials from the students							
6	Gathering of the required materia	Gathering of the required materials from the students						
7	Breeding cattle selection	Breeding cattle selection						
8	Evaluation of the intern materials							
9	Evaluation of the intern materials							
10	Evaluation of the intern materials							
11	Evaluation of the intern materials							
12	Final Exam							
13	Evaluation of the final exam							
14	Preparation of examination note 1	ists						
15,16	Final exam							
NO PRO	OGRAM OUTCOMES			3 2	1			
	have the basis information on bortis	ulture and other equipultur	· · · ·					

describing the required data to solve the problems, to have the ability of gathering data

and solving the problems by using information technology

1

Х
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		x	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		X	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instractor:

Date:



COURSE CODE	COURSE CODE 251318023				COURS NAMI	SE E	Subtropical fruits					
	w	/EEF	KLY COURS	SE PERI	OD	OD COURSE OF						
SEMESTER	Theo	ory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG			
8	2	-	0	0)	2	2	COMPULSORY (X) ELECTIVE (E Turkish			
					COUR	SE CATA	GORY					
Basic Scier	nce	ł	Basic Engine	ering	[if it	contains (Ho conside	orticulture rable design, mark with (√)]	Social Science			
					SSESS	MENT CE	TFDI	X				
				A	Ev	valuation 7	True True	Ouantity	%			
					1st Mi	d-Term	<u>jpe</u>	1	40			
					2nd M	id-Term						
					Quiz							
	MID)-TE	RM		Home	work						
					Projec	t						
					Report	ţ						
					Others)						
	FINA	LEX	XAM			60						
P	RERE	QUII	EITE(S)									
COU	RSE D	DESC	CRIPTION		Classification, history, distribution, economical importance, morphological and pomological characteristics, fertilization biology, ecological requirements, propagation, plantation and maintenance of olive, pomegranate, fig, loquat and tea will be discussed.							
COL	JRSE (OBJ	ECTIVES		The purpose of this course is to give the students knowledge on growing of olive, pomegranate, fig, loquat and tea species.							
ADDITIVE PROFE	E OF C SSION	COU NAL	RSE TO A L'EDUATIO	PPLY DN	Students will be informed about growing and maintenance of subtropical fruits growing							
COURSE OUTCOMES				To learn the growing and breeding techniques, varieties, harvesting and marketing olive, pomegranate, fig, loquat and tea. To recognize the morphologic and pomologic characteristics of these species. To know the ecologic characteristics of the species and advise the appropriate species and cultivars to the growers and different areas. To recognize the possible problems in growing period of these species and develop solution advisories.								
	TEX	TBC	DOK		Subtro Fak. D	pik İklim M Ders Notları	Meyvele , İzmir,	eri, K. Mendilcioğlu, Ege Üniver 2000.	sitesi, Ziraat			
OTH	IER R	EFF	ERENCES		Yılmaz, C., 2007. Nar. Hasad yayıncılık, 276 s.							
TOOLS AND EQUIPMENTS REQUIRED				Compu	ter and proj	ection.						

COURSE SYLLABUS						
WEEK	TOPICS					
1	Olive growing					
2	Olive growing					
3	Olive growing					
4	Pomegranate growing					
5	Pomegranate growing					
6	Pomegranate growing					
7	Mid-term exam - Fig growing					
8	Fig growing					
9	Fig growing					
10	Loquat growing					
11	Mid-term exam - Loquat growing					
12	Loquat growing					
13	Tea growing					
14	Tea growing					
15,16	Final Exam					

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			X
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assist. Prof. Dr. Cenap YILMAZ



COURSE CODE	COURSE CODE 251318024				COURS NAMI	SE E	Warm-season vegetables			
GEMEGTED	WEF	KLY COUR	SE PERIC	D			COURSE OF			
SEMESIER	IESTER Theory Practice Laborat		tory	Credit	ECTS	ТҮРЕ	LANGUA GE			
8	2	0	0		2	4	COMPULSORY (X) ELECTIVE ()	Turkish		
			С	COURS	SE CATA	GORY				
Basic Scier	nce	Basic Engine	eering	[if it	t contains	Ho: consider	rticulture rable design, mark with (√)]	Social Science		
				GEGGI	MENT CD	TTEDIA				
			AS	SESSN Fx	VIENT CR	TTERIA Type	Quantity	0/2		
			F	1st Mi	d - Term	ype	Quantity	2.5		
				2nd M	id Term		1	25		
			-				1	25		
	MID-T	ERM	-	Quiz	1					
				Home	work					
			H	Projec	t					
				Report	t					
				Others	$s(\ldots\ldots)$					
	FINAL I	EXAM					1	50		
P	REREQU	IEITE(S)		To hav	ve passed tl	ie Genei	ral Vegetables course			
COURSE DESCRIPTION				 Production areas and quantities of each species in the world and in our country, the botanical characteristics of the plant, its ecological requirements, cultivation techniques, and cultural treatments are explained. It is aimed to give detailed information and to teach cultivation of the economic importance, morphological characteristics, ecological requirements, cultivation method, soil preparation, sowing, planting, 						
				care treatments of summer-grown vegetables (tomato, pepper, eggplant,						
ADDITIVE PROFE	C OF CO SSIONA	URSE TO A L EDUATIO	PPLY DN	watermelon, melon, cucumber, zucchini, beans, okra). It is a course in which theoretical and practical information is given about the cultivation and cultural treatments of vegetables, which have an important place in the field of horticultural crops.						
COURSE OUTCOMES				At the end of this course, the student will have the necessary knowledge about; 1- Climate and soil requirements of warm season vegetables 2- Reproduction forms of warm season vegetables, 3- Growing techniques of warm season vegetables 4- Morphological characteristics of winter vegetables 5- Cultural treatments such as soil preparation, sowing, planting,						
ТЕХТВООК				 Kültür Sebzeleri (Sebze Yetiştirme) Vural, H., Eşiyok, D., Duman, İ. Ege Üniv. Ziraat Fak. Bahçe Bitkileri Bölümü, İzmir, 2005 Özel Sebzecilik. Şalk, A., Arın, L., Deveci M., Polat S. 2008. Onur Grafik Matbaa ve Reklam Hizmetleri İst. 						
OTH	IER REF	FERENCES								
TOOL	S AND E REQUI	QUIPMENT IRED	ſS							

COURSE SYLLABUS							
WEE	TOPICS						
K							
1	Tomato Cultivation						
2	Tomato Cultivation						
3	Tomato Cultivation						
4	Pepper Cultivation						
5	Pepper Cultivation						
6	I. Midterm exam, Eggplant Cultivation						
7	Eggplant Cultivation						
8	Watermelon Cultivation						
9	Cucumber Cultivation						
10	Melon Cultivation						
11	II. Midterm, Pumpkin cultivation						
12	Zucchini Cultivation						
13	Beans Cultivation						
14	Okra Cultivation						
15,16	Semester final exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	x		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Nuray ÇÖMLEKÇİOĞLU

Signature:

Date:



ESOGÜ Horticulture Department Course Information Form

COURSE CODE	COURSE CODE 251318025				COURSE NAME		Berries			
WEEKLY COURSE PERIO							COURSE OF			
SEMESTER	Theory	Practice	Lahrat	torv	Credit	ECTS	TVPE	LANGUAGE		
8	2	0	0	lory	2	1	COMPULSORY (X) ELECTIVE ()	Turkish		
0	Z	0	0	COL						
				COU	KSE CATA	GORY		a		
Basic Scier	Basic Science Basic Engineering				it contains o	Ho conside	rable design, mark with ($$)]	Social Science		
			A\$	SSES	SMENT CR	ITERI	X			
				E E E E E E E E E E E E E E E E E E E	Evaluation T	vne	Ouantity	%		
				1st N	lid-Term	jpe	1	40		
				2nd I	Mid-Term					
	MID T	FDM		Quiz						
	WIID-1	1218191	F	Hom	ework			ļ]		
			Ļ	Proje	ect			ļ]		
			-	Repo	ort					
	FINAL	EVAM		Othe	rs ()		1	(0		
D	FINAL I	LAANI HEITE(S)					1	00		
COURSE DESCRIPTION				 morphological and pomological characteristics, fertilization biology, ecological requirements, propagation, plantation and maintenance of strawberry, blackberry, raspberry, gooseberry, ribes, blueberry, and mulberry, kiwi and fig species will be discussed. The purpose of this course is to give the students knowledge on growing of strawberry, blackberry, raspberry, gooseberry, ribes, blueberry, and 						
ADDITIV PROFI	E OF CO	URSE TO AP L EDUATION	PLY N	Students will be informed about growing and maintenance of temperate zone fruits that intensively grown in our country.						
COURSE OUTCOMES				To learn the growing, processing and breeding techniques, varieties, harvesting and marketing strawberry, blackberry, raspberry, gooseberry, ribes, blueberry, and mulberry. To recognize the morphologic and pomologic characteristics of these species. To know the ecologic characteristics of the species and advise the appropriate species and cultivars to the growers and different areas. To recognize the possible problems in growing period of these species and develop solution advisories						
ТЕХТВООК				 Childers, N.F., Morris, J.R., Sibbet, G.S., 1995. Modern Fruit Science (Orchard and Small Fruit Culture). Horticultural Publications. Gainesville, Florida. Ağaoğlu, Y.S., 1986. Üzümsü Meyveler. A.Ü. Zir. Fak. Yay. 984. Ankara 						
OT	HER REF	FERENCES		 Kaşka, N., Türemiş, N.,Özdemir, E., 1995. Çilek Çeşit Kataloğu. Tarım ve Köyişleri Bakanlığı Yay., Ankara. Westwood, M.N., 1978. Temperate-Zone Pomology. W.H.Freeman and Company, SanFrancisco. 						
TOOLS AND EQUIPMENTS REQUIRED				Projection						

	COURSE SYLLABUS						
WEEK	TOPICS						
1	Introduction to small fruits						
2	Strawberry growing						
3	Strawberry growing						
4	Strawberry growing						
5	Blackberry growing						
6	Mid-term exam / Blackberry growing						
7	Blackberry growing						
8	Raspberry growing						
9	Raspberry growing						
10	Gooseberry growing						
11	Mid-term exam / Gooseberry growing						
12	Ribes growing						
13	Blueberry growing						
14	Mulberry growing						
15	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assoc. Prof. Dr. Volkan OKATAN

Date:



COURSE C	COURSE NAME Nut Fruits										
	~~ ~~ ~										
SEMESTER	Wł	EEKLY COUF	RSE PER	lod		COURSE OF					
	Theor	y Practice	Labr	atory	Credit	ECTS		TYPE	LANGUAGE		
8	2	0)	2	5	Com	pulsory () Elective (X)	Turkish		
				COUR	SE CATA	AGORY	ľ				
Basic Scier	nce	Basic Engir	neering	[if it	contains	Ho conside	orticu erable	llture e design, mark with (√)]	Social Science		
						DITED	X				
				ASSESS	MENT C	RITER	IA	Orrentiter	0/		
				Lot Mid	Torm	ype			% 0		
				2nd Mid	-Term			1	40		
				Quiz							
	MID-	TERM		Homewo	ork						
				Project							
				Others (Practice)						
	FINAL	EXAM						1	60		
PR	REREQ	UIEITE(S)									
				Cultural history, systematics, ecological demands.							
COU	RSE DE	ESCRIPTION		reproduction, cultivation, annual maintenance, production,							
				trade and role in human nutrition of nut fruit species.							
				To provide professional knowledge about the cultural history,							
COU	RSE O	BJECTIVES		systematics, ecological demands, breeding, cultivation, annual							
				nutrition of nut fruit species							
			DI V	With this course, students will have an idea about all the topics that are							
ADDITIVE PROFE	SSION/	JURSE TO AF AL EDUATIO	PLY N	important in their professional life related to the stone fruit species, which							
				is an important group of horticultural crops.							
				From n	ant infor	mation	; on t	the cultural history syst	tematics		
COL	URSE O	UTCOMES		cultivation annual maintenance production trade and role of							
				Hazelnut, Almond, Walnut, Pistachio. Chestnut. Pecan.							
				Locust and Pistachio species in human nutrition.							
	TEXT	BOOK		Genetics, Genomics and Breeding of Stone Fruits. Chittaranjan Kole, Albert G. Abbott.							
ОТН	IER RE	FERENCES		Production Technology of Stone Fruits. Mohammad Maqbool Mir, Umar Iqbal, Shabir Ahmad Mir.							
TOOLS AND EQUIPMENTS REQUIRED				Computer and Projection							

COURSE SYLLABUS					
WEEK	TOPICS				
1	Formation-Development Physiology and Common Characteristics of Nut Fruit Species				
2	Hazelnut Cultivation				
3	Hazelnut Cultivation				
4	Almond Cultivation				
5	Almond Cultivation				
6	Walnut Cultivation				
7	Midterm Exam				
8	Walnut Cultivation				
9	Pistachio Cultivation				
10	Pistachio Cultivation				
11	Chestnut Cultivation				
12	Pecan Cultivation				
13	Carob Cultivation				
14	Peanut Pine Cultivation				
15,16	Final				

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			X
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Yakup ÖZKAN

Signature: Prof. Dr. Rafet ASLANTAŞ



COURSE C	ODE	251318027			COURS	E NAM	IE New Advances in Horticul	ture Breeding			
[1						
SEMESTER	ER WEEKLY COURSE PERIO				COURSE OF						
	Theory	Practice	Labi	atory	Credit	ECTS	ТҮРЕ	LANGUAGE			
8	2	2		0	3	4	Compulsory () Elective (X)	Turkish			
	-			COUR	RSE CAT	AGORY	7				
Basic Scier	nce	Basic Engin	eering			Но	orticulture	Social			
				[II II	contains	conside	rable design, mark with (V)]	Science			
				ASSESS	MENT C	RITER					
				Eva	aluation 7	Гуре	Quantity	%			
				1st Mid-	Term	~ 1	1	40			
				2nd Mid	-Term						
	MID T	Брм		Quiz							
	MID-I	EKM		Homewo	ork						
				Project							
				Report							
				Others ()	Practice)						
	FINAL I	EXAM					1	60			
PR	REREQU	IEITE(S)									
COU	RSE DES	SCRIPTION		Definition and scope of horticultural breeding and new developments in the related field.							
COU	RSE OB	JECTIVES		With this course, students will be taught about new developments in horticultural breeding.							
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				In addition to gaining basic professional information by teaching new developments in horticulture breeding theoretically, special examination of species groups within the scope of the course will also provide important sectoral information in their professional lives.							
COURSE OUTCOMES			Obtaining basic information about the methods used in horticultural breeding, Learning new techniques used in horticultural breeding, It is to obtain information about special breeding purposes and breeding studies of species groups in horticultural crops.								
	TEXTB	OOK		Baydar, H. 2020. Bitki Genetiği ve Islahı. Nobel Akademik Yayıncılık, Ankara.							
OTH	IER REF	TERENCES		Emiroğlu, Ü ve Bürün, H. Bitki Islahı Temel Kavramlar ve Mekanizmalar. Nobel Akademik Yayıncılık, Ankara.							
TOOLS	S AND E REQUI	QUIPMENT IRED	8	Computer and Projection							

	COURSE SYLLABUS
WEEK	TOPICS
1	Horticultural Breeding Methods; General and Modern Techniques
2	Morphological Characterization in Horticultural Breeding; UPOV and IPGRI criteria
3	Morphological Characterization in Horticultural Breeding; UPOV and IPGRI criteria
4	Molecular Characterization in Horticultural Breeding
5	Molecular Characterization in Horticultural Breeding
6	Molecular Characterization in Horticultural Breeding
7	Midterm Exam
8	Rootstock Breeding Strategies in Fruit Species
9	Breeding Strategies for Variety Improvement in Fruit Species
10	Breeding Strategies for Variety Improvement in Fruit Species
11	Rootstock Breeding Strategies in Vegetable Species
12	Breeding Strategies for Variety Improvement in Vegetable Types
13	Breeding Strategies in Ornamental Plants
14	Breeding Strategies in Viticulture
15,16	Final

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Х	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		Χ	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Rafet ASLANTAŞ



ESOGÜ Horticulture Department Course Information Form

COURSE C	ODE	2	51318028		COU	RSE NAM	E S	pecial Viticulture		
	W	TEE I	KLY COURS	SE PERI	OD			COURSE OF		
SEMESTER	Theo	ry	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE	
8	2		2	0		3	4	COMPULSORY() ELECTIVE (X)	Turkish	
<u> </u>			-		COURS	SE CATA	GORY			
Denie Geien			D'. E'				Hoi	rticulture	Social	
Basic Scien	ce		Basic Engine	ering	[if it	contains of	consider	able design, mark with (√)]	Science	
								Х		
				A	SSESS	MENT CR	ITERIA			
					Eva	aluation T	уре	Quantity	%	
					Ist Mid	l-lerm		1	40	
						u-renn				
	MID	-TE	CRM		Homew	vork				
					Project	OIK				
					Report					
					Others	()				
	FINA	L E	XAM					1	60	
PI	REREC	QUI	EITE(S)		To have	a passing g	rade in th	e General Viticulture course.		
COURSE DESCRIPTION			root structures in the vine, vine physiology (photosynthesis, respiration, water loss), abiotic stress factors, pollination, bloom, berry set, veraison stages in the vine, berry structure and developmental stages, harvest criteria in viticulture, growth and development regulators and their use in viticulture, harvest criteria in viticulture, table, wine, and raisin production and its importance, general ampelography descriptive methods, vine rootstocks, and their uses. To teach the growth and development stages of the vine, To gain knowledge about bud, shoot, and root systems in the vine, To provide a detailed understanding of grapevine physiology and biology, To teach vine breeding methods,							
ADDITIVI	E OF C	OU	RSE TO API	PLY	To explain the use of development and growth regulators in viticulture, To explain the use of development and growth regulators in viticulture, To teach the production and importance of table, wine and raisins, General ampelography definitions, vine rootstock and use in viticulture to gain knowledge on the issues. In addition to the general knowledge of viticulture, more specific issues in viticulture will be available direction of the set of the					
PROFESSIONAL EDUATION COURSE OUTCOMES			Students knows the annual life cycle of the vine, define grapevine organs morphologically, learns vine physiology and stress factors affecting physiology, learns the stages of pollination, fertilization biology and the importance and development process of flowering - berry set period in vine, learns vine breeding methods in viticulture, knows the berry structure and developmental stages, learns the harvest criteria to be taken into account according to grape evaluation methods in viticulture and its changes with the concept of phenolic maturity, knows the use of growth and development regulators in viticulture, knows fresh (table), wine grapes and raisin production and Turkey's potential in world production, knows general amelography concept method and vine rootstocks and usage areas							
ТЕХТВООК				Çelik, S. (1998). Bağcılık (Ampeloloji I). Anadolu Matbaacılık A.Ş. İstanbul, 425s. Ağaoğlu, Y. S. (2002). Bilimsel ve Uygulamalı Bağcılık Asma Fizyolojisi I, Kavaklıdere Eğitim Yayınları, Ankara, 446 s. Ağaoğlu, Y.S. (2000). Bilimsel ve Uygulamalı Bağcılık Asma Biyolojisi, Kavaklıdere Eğitim Yayınları, İstanbul, 205 s. Uzun, İ. (2004). Bağcılık El Kitabı, Hasad Yayıncılık, 160 s.						
OTH TOOLS AN	HER R	EFF	ERENCES ENTS REQUI	RED	(File Size Türkiye Tarımsal İstasyonu	e 17.97 MB Asma Gene araștırmal 1, 400 s.) 2nd Edit tik Kayna ar ve Po	tion ıkları Kataloğu, Gıda tarım ve Orma olitikalar Müdürlüğü, Tekirdağ Ba	- ancılık Bakanlığı, ğcılık Araştırma	

	COURSE SYLLABUS								
WEEK	TOPICS								
1	Growth and Development in Vine, Annual Life Cycle of Vine, Phenological Stages								
2	Bud, Shoot and Root System in Vine								
3	Vine Physiology (Photosynthesis, Respiration, Transpiration)								
4	Vine Physiology (Abiotic Stress Factors and Importance of Their Effects)								
5	Pollination, Bloom and Berry Set in Vines								
6	Vine Breeding (Classic Crossbreeding, Seedless Breeding, Embryo Rescue Technique)								
7	Midterm								
8	Vine Breeding (Polyploidy and Clone Selection Studies)								
9	Berry Structures and Developmental Stages								
10	Harvest Criteria in Viticulture (Table, Wine, Drying) and Phenolic Maturity Concepts								
11	Using Plant Growth Regulators (PGR) in Viticulture								
12	Production of Table Grapes, Wine Grapes, and Raisins And Their Importance								
13	Definitions And International Criteria For Ampelography								
14	Vine Rootstocks and Uses								
15,16	Final Exam								

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	х		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		x	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			x
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			x
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			x
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			x
1:No	ne. 2:Partially contribution. 3: Completely contribution.			

Date:

Instructor(s): Assistant Prof. Turcan TEKER



COURSE CODE	2	251318029									
SEMESTER WEEKLY COURSE PERIO					OD COURSE OF						
SEMESTER	Theor	y Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAG F			
8	2	2			3	4	COMPULSORY () ELECTIVE (X)	Turkish			
				COUR	SE CATA	GORY					
Basic Scie	nce	Basic Engine	ering	[if it	t contains	Ho conside	rticulture rable design, mark with (√)] X	Social Science			
			A	SSESS	MENT CF	RITERI	A				
				Ev	aluation 7	Гуре	Quantity	%			
				1st Mi	d-Term		1	50			
				2nd M	id-Term						
	MID	TFPM		Quiz							
MID-IERM					work						
				Projec	t						
				Repor	t						
				Others	s ()		1	50			
	FINAL						1	30			
P	REREQ	UIEITE(S)		Soilloss culture mothods, plant nutrition in soilloss culture, advanta							
COU	RSE DI	ESCRIPTION		Solless culture methods, plant nutrition in solless culture, advantages and disadvantages in solless culture.							
COU	JRSE O	BJECTIVES		This course aims to enable students to learn the reasons for soilless plant cultivation, soilless agriculture techniques, plant nutrition in soilless plant cultivation, to plan and apply plant cultivation and to follow the developments in this field.							
ADDITIVE PROFE	E OF CO SSION	OURSE TO A AL EDUATIO	PPLY DN	To provide the ability to follow the causes, production techniques and current developments of soilless agriculture							
CO	URSE (DUTCOMES		 To learn the soilless culture systems Cultivate the plants in the soilless culture To be able to plan and manage soilless cultivation at commercial level 							
ТЕХТВООК					A. 2008. To	opraksız	Tarım. Hasad yayıncılık, 144 s.				
OTH	IER RI	EFERENCES		 Savvas, D. and Passam H. 2002. Hydroponic Production of Vegetables and Ormamentals. Embryo Publishing, Greece, 463p. Douglas, J. S. 1985. Advanced Guide to Hydroponics.BAS Printers Lmt, GB.368 p. 							
TOOLS AND EQUIPMENTS REOUIRED					Computer and projection.						

COURSE SYLLABUS							
WEEK	TOPICS						
1	History of soilless agriculture, soilless agriculture in the world and in Turkey, advantages and disadvantages of soilless agriculture						
2	Soilless culture techniques, hydroponic culture, aeroponics						
3	Substrate culture and properties of substrates						
4	Plant nutrition in soilless culture						
5	Substrates and their properties						
6	I. midterm exam, examples to soilless production						
7	Plant nutrition in hydroponic cultivation						
8	Nutrient solution preparation						
9	Nutrient solution preparation						
10	Sample Nutrient Solution Recipes						
11	Examples to soilless production						
12	Advantages and disadvantages of soilless culture						
13	Environmental impact of soilless culture						
14	Latest developments in Soilless Agriculture						
15,16	Final exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills		X	
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Nuray ÇÖMLEKÇİOĞLU

Signature:

Date:



ESOGÜ Horticulture Department Course Information Form

COURSE CODE		2513	318030			COURS NAMI	SE E	Rootstock scion relationships of fruits		
SEMESTER WEEKLY COURSE PERIC			OD	D COURSE OF						
	Theo	ory	Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAGE	
8	2		2	0)	3	4	COMPULSORY () ELECTIVE (X)	Turkish	
					COUF	RSE CATA	GORY			
Basic Scier	ice		Basic Engine	ering	[if i	it contains	Ho conside	orticulture rable design, mark with (√)]	Social Science	
				A	SSESS	MENT CF	RITERI	A		
					E	valuation T	уре	Quantity	%	
					1st M	id-Term		1	50	
					2nd N	lid-Term				
	MII	D-TE	ERM		Quiz	work				
					Project					
					Report					
					Other	s ()				
	FINA	L E	XAM					1	50	
PI	RERE	QUI	EITE(S)		-					
COU	IRSE I	DES	CRIPTION		In this course, physiological relationships of rootstock and scion of fruits will be discussed theoretically and practically.					
COL	URSE	OBJ	JECTIVES		To gain knowledge on subjects about rootstocks of fruits, their usage, grafting, incompatibilities of rootstock and scion.					
ADDITIVI PROFF	E OF (ESSIO	COU NAL	URSE TO AP	PLY N	To comprehend incompatibilities of rootstock and scion and to prevent these problems theoretically and practically.					
COURSE OUTCOMES				To learn rootstocks of different fruit species. To learn practice of grafting methods. To recognise problems at different rootstock and scion combinations. To learn how to prevent incompatibility problems. To teach different cultural techniques to growers.						
	TEX	ТВО	OOK		Özçağ Fizyo	ğıran, R. 19 lojik ilişkile	74. Mey er. Ege U	ve Ağaçlarında Anaç İle Kalem A Üniversitesi Basımevi, İzmir.	rasındaki	
ОТІ	HER F	REFI	ERENCES		Yılmaz, M. 1994. Bahçe Bitkileri Yetiştirme Tekniği. Çukurova Üniversitesi Basımevi, Adana.					
TOOLS AND) EQU	IPM	IENTS REQU	JIRED	Computer and projector					

	COURSE SYLLABUS									
WEEK	TOPICS									
1	Entrance to rootstock-scion relationships									
2	Grafting; aims, benefits and usage									
3	Corresponding effects of rootstock and scion									
4	Effects of rootstock to scion									
5	Effects of scion to rootstock									
6	Effects of inter-stock to rootstock and scion									
	Mid-term exam									
8	Crafting compatibility									
9	Symptoms and types of incompatibility									
10	Symptoms and types of incompatibility									
11	Changes at incompatible grafting combinations									
13	Reasons of incompatibilities									
14	To prevent incompatibility									
15, 16	Final Exam									
,										
NO	PROGRAM OUTCOMES	3	2	1						
	To have the basic information on horticulture and other agriculture engineering areas.									
1	describing the required data to solve the problems, to have the ability of gathering data									
	and solving the problems by using information technology									
	To have theoretical and practical (land and laboratory) information on growing and									
2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer	Х								
	these information accurately									
	To have the ability of determining and evaluating the source of the ecological, biological,									
3	technical and economical problems that negatively effects the sufficient yield and quality	Х								
	of horticultural crops									
1	To have the skill of utilizing different techniques for sustainable usage and protection of			v						
4	genetic resources in horticultural area and environment			Λ						
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine									
5	and ornamental plants			Λ						
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			Χ						
	To have the information and ability on breeding horticultural crops, developing a new									
7	cultivar, and propagation of these new varieties by different methods (seed, seedling, and	Х								
	sapling)									
8	To have the skill of using and applying biotechnology on horticulture			Χ						
	To have the information on good agricultural practices, and by the way, to decide the									
9	right time of cultural practices of the horticultural crops, and to have the ability of		X							
	describing the pest and diseases of horticultural plants									
10	To have the skill on observing the changes through harvest, post harvest, and storage of		x							
	horticultural crops, and to have the information on storage conditions									
11	Io have the ability of getting the data on horticultural area, and evaluation, recording,	X								
-	project creation and application skills									
10	To have the ability of working in individual, multiple and different disciplined teams, and			1						

Instructor(s):

having the responsibility 1:None. 2:Partially contribution. 3: Completely contribution.

Date:

Х

Signature:

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ESOGÜ Horticulture Department Course Information Form

COURSE CO	ODE 2	51318031		COURSE NAME Intelligent agriculture							
GEMEGTED	WEE	KLY COUR	SE PERI	[OD			COURSE OF				
SENIESTEK	Theory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAGE			
8	2	2	()	3	4	COMPULSORY () ELECTIVE (X)	Turkish			
	1			COUR	SE CATA	GORY					
Basic Scier	nce	Basic Engine	eering	[if it	contains	Ho consider	rticulture rable design, mark with (√)]	Social Science			
						TTEPT	X				
			A	ASSESSI Evol	MENT CR	TTERL	A Quantity	0/			
			15	t Mid-Te	erm	pe		40			
			2r	nd Mid-T	erm		1				
			0								
	MID-TEF	RM	H	omeworl	ζ						
			Pr	roject							
			R	eport				+			
			0	thers ()			+			
I	FINAL EX	AM)		1	60			
PR	EREQUIE	LITE(S)	-								
COURSE DESCRIPTION			Si fe th pr ag	Smart Agriculture applications; Reducing the costs of chemicals such as fertilizers and pesticides by applying Smart Agriculture techniques, protecting the environment by reducing these uses, providing a high quantity and quality product, providing a more effective information flow for business and aquaculture decisions, and establishing a record order in agriculture; Smart agriculture practices in our country and in the world.							
COURSE OBJECTIVES			by tra pr sn in in ba	by technological applications. It is possible to examine the technological transformation process of agriculture, especially by presenting the current practices more clearly. The use of today's communication technologies in smart agriculture systems and the use of developing technologies by integrating them with agricultural production are examined. It is aimed to inform students about smart agriculture and to create an infrastructure with basic application examples							
ADDITIVE PROFES	OF COUF SIONAL	RSE TO APP EDUATION	LY To es	To learn how today's technologies are used in the agricultural sector, especially in the fields of horticultural crops.							
COU	RSE OUT	COMES	1) 2) 3) sy 4) 5) 6) wv 7) 8)	 cspecially in the neuron forticultural crops. 1) Defines the concept of smart agriculture and its components 2) Explain wireless communication systems 3) Reduces input costs in agricultural production by using Smart Agricult systems 4) It contributes to the protection of the environment by using less chemic 5) Provides information on smart agriculture application technologies 6) Have knowledge about smart agriculture systems in Turkey and in world. 7) Prepares different presentations on any subject. 8) Learns the use of Internet Search environment Envite Environment Environment Environment Environment Environment							
	ТЕХТВО	OK	In Le	iternet pr ecture No	intouts otes						
ОТН	ER REFE	RENCES	In Le	iternet pr ecture No	vorintouts Notes						
TOOLS	AND EQU REQUIR	UIPMENTS ED	Р	rojection	1						

COURSE SYLLABUS							
WEEK	TOPICS						
1	Course introduction, Smart Agriculture overview, Principles of Smart Agriculture						
2	Developmental Stages of Agriculture (Agriculture 1.0, Agriculture 2.0, Agriculture 3.0, Agriculture 4.0)						
3	Benefits of Smart Agriculture						
4	Introduction of communication technologies used in smart farming systems						
5	Explaining the infrastructures of communication technologies used in smart agriculture systems						
6	Midterm / Almond cultivation						
7	Introduction of sensors and modules used in digital transformation systems in agriculture						
8	Smart Agriculture Applications						
9	Use of Drone and UAV in smart agriculture						
10	Intelligent Irrigation and Fertilization Systems						
11	Smart Greenhouses and Farm Management Systems						
12	Using Geographic Information Systems in Smart Agriculture applications						
13	Internet of Things Concept and Application Examples						
14	Smart Agriculture Practices in Turkey and in the World						
15,16	Semester final exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		

Instructor(s): Assoc. Prof. Volkan OKATAN

Date:



COURSE CODE 251318032					COURSE NAME			Trends and Alternative Practices in Horticulture		
GEMEGTED	Wł	EEKLY COUR	SE PERI	OD	DD COURSE OF					
SEMESTER	Theor	y Practice	Labra	atory	Credit	ECTS		ТҮРЕ	LANGUAG E	
8	2	2	0)	3	4	Cor	mpulsory () Elective (X)	Turkish	
	-			COUR	SE CATA	GORY				
Basic Scier	nce	Basic Engine	ering	[if it	contains	Ho: consider	rticu rable	ulture e design, mark with (√)]	Social Science	
							Х	X		
			Α	SSESSI	MENT CF	RITERL	A			
				Ev	aluation 7	Гуре		Quantity	<u>%</u>	
				1st Mic	d-Term			1	40	
				2nd Mi	id-lerm		_			
	MID-	TERM		Homer	vork		+			
				Project						
					Report					
					(Practice)					
	FINAL	L EXAM		1				60		
P	REREQ	UIEITE(S)								
COU	IRSE DI	ESCRIPTION		Current trends and approaches in modern horticultural cultivation.						
CO	URSE O	BJECTIVES		Examining the current situation in horticulture cultivation, teaching current trends and teaching the basics and aims of modern cultivation.						
ADDITIVI PROFE	E OF CO	OURSE TO AP AL EDUATIO	PLY N	This course, which aims to teach department students new techniques applied in horticultural cultivation, will open up horizons about the future of the sector as well as vocational education.						
COURSE OUTCOMES				To have information about the current situation in the cultivation of modern horticultural crops; To be informed about current trends in horticultural cultivation.						
ТЕХТВООК				Advences in Fruit Breeding, Purdue University Press. Tarım ve Gıdada Yatırım Trendleri 2050, Rachid Serraj & Prabhu Pingali Scala Yayıncılık, 2021						
OTHER REFERENCES				Topraksız Tarım ve Bitki Besleme Teknikleri, Nobel Akademik Yayıncılık.						
TOOLS AND EQUIPMENTS REQUIRED			Computer and projector							

COURSE SYLLABUS							
WEEK	TOPICS						
1	Current Situation, Problems and Solutions in Horticulture						
2	Fundamentals of Modern Cultivation; Dwarf Cultivation						
3	Fundamentals of Modern Cultivation; Dwarf Breeding II						
4	Fundamentals of Modern Cultivation; Greenhouse Cultivation						
5	Fundamentals of Modern Cultivation; Soilless Agriculture						
6	Fundamentals of Modern Cultivation; Soilless Agriculture II						
7	Midterm Exam						
8	Modern Yetiştiriciliğin Temelleri; Akıllı Tarım						
9	Modern Yetiştiriciliğin Temelleri; Akıllı Tarım II						
10	Modern Yetiştiriciliğin Hedefleri; Piyasa Tercihlerine Uygun Yetiştiricilik						
11	Modern Yetiştiriciliğin Hedefleri; Hassas Tüketici Gruplarına Yönelik Yetiştiricilik						
12	Modern Yetiştiriciliğin Hedefleri; Yöresel Ürünlerin Sertifikalı ve Patentli Yetiştiriciliği						
13	Modern Yetiştiriciliğin Hedefleri; Modern Muhafaza Yöntemleri						
14	Modern Yetiştiriciliğin Hedefleri; Sanayiye Uygun Üretim						
15,16	Final						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X	
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			Х
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants	X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Prof. Dr. Rafet ASLANTAŞ

Signature:

Date:



ESOGÜ Horticulture Department Course Information Form

SEMESTER Fall

COURSE CODE	COURSE CODE 251317006 COURSE NAME Postharvest Physiology of Horticultural Cr							tural Crops		
GEMEGTED	WEE	KLY COUR	SE PERI	OD	DD COURSE OF					
SEMESTER	Theory	Practice	Labra	ntory	Credit	ECTS	ТҮРЕ	LANGUAG E		
7	2	0	0		2	3	COMPULSORY () ELECTIVE (X)	Turkish		
				COUR	SE CATA	GORY		1		
Basic Scier	nce	Basic Engine	eering	[if it	contains	Ho consider	rticulture °able design, mark with (√)]	Social Science		
							Х			
			Α	SSESSI	MENT CF	RITERL	A			
				Ev	aluation 7	уре	Quantity	%		
				1st Mic	d-Term		1	20		
				2nd Mi	id-Term		1	20		
	MID-TI	ERM		Quiz	1					
				Brojost	VOrK					
				Report						
				Others	()					
	FINAL F	XAM		1				60		
P	REREQU	IEITE(S)		-						
COURSE DESCRIPTION				and development physiology of fruits - vegetables, physical and chemical changes in fruits, development and changes in harvest criters, effects of postharvest processes on product quality, effects of different storage methods on product resistance and marketing. Physiological and parasitic deterioration in horticultural plants.						
CO	URSE OB	JECTIVES		Examination of physiological changes occurring after harvest in fruits, vegetables and ornamental plants						
ADDITIV PROFI	E OF COU ESSIONAI	JRSE TO AP L EDUATIO	PLY N	To give knowledge and gain ability on postharvest physiology of horticultural crops						
COURSE OUTCOMES				To know after harvest losses and their reasons in horticultural crops To determine after harvest changes occurring in horticultural crops To detect, explain and prevent physical and biochemical changes after harvest occurring in horticultural crops To be able to create proper storage conditions for horticultural crops and to prevent losses						
ТЕХТВООК				Karaçalı, İ., 2011. Bahçe Ürünlerinin Muhafazası ve Pazara Hazırlanması. E.Ü. Ziraat Fak. Yayın No: 494, 410 s. Cemeroğlu, B., Acar, J., 1986. Meyve ve Sebzelerde İşleme Teknolojisi. Gıda Derneği Yayın No: 6, Ankara Üniv. Ziraat Fak., Gıda Bölümü.						
OT	HER REF	Postharvest Diseases and Disorders of Fruits and VegetaA.L.Snowdown,1990.Commercial Cooling of Fruits, Vegetables and Flowers, J. F. Thomet al. University of California, Oakland, 2002.DeELL, R.J., Pranga, K.R., Peppelenbos, W.H., 2003. PosthaPhysiology of Fresh Fruits and Vegetables. Handbook of PosthaTechnology, Marcel Dekker, Inc., New York, Basel, 455,484.Projection								
TOOLS AND) EQUIPM	IENTS REQ	UIRED	110jee						

COURSE SYLLABUS							
WEEK	TOPICS						
1	Physiological events and inportance in horticultural plants, Chemical structures of fruits and vegetables and post harvest parameters						
2	Post harvest parameters of ornamental plants						
3	Post harvest changes in fruits (pome and stone fruits)						
4	Post harvest changes in fruits (nuts)						
5	Post harvest changes in fruits (grapes and small fruits; citrus and other subtropical fruits)						
6	1. Mid-term exam, Post harvest changes in fruits						
7	Post harvest changes in vegetables						
8	Post harvest changes in ornamental plants						
9	Changes observed in seeds and saplings						
10	Storage of fruits (pome and stone fruits)						
11	II. Mid-term exam, Storage of fruits (pome and stone fruits)						
12	Storage of fruits (grapes, small fruits, and nuts; citrus and other subtropical fruits)						
13	Storage of vegetables						
14	Storage of ornamental plants, analysis of warehouse losses.						
15,16	Final Exam						

THE DEGREE OF RELATIONSHIP BETWEEN COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (5: Very high, 4: High, 3: Medium, 2: Low, 1: Very low)								
NO	PROGRAM OUTCOMES	5	4	3	2	1		
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X						
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately				X			
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops			X				
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment					X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants					X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards					X		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)					X		
8	To have the skill of using and applying biotechnology on horticulture					Χ		
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			x				
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions	X						
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X				
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X						

Instructor(s):



COURSE CODE 251318033					COURSE NAME Citrus Trees							
SEMESTER	WEF	EKLY COURS	SE PERI	OD	COURSE OF							
~~~~~~	Theory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAGE				
ρ	2	2	0	) )	2	4	COMPULSORY () ELECTIVE	Turkish				
0	Z	Z	0	)	3	4	(X)					
				COURS	SE CATA	GORY	:14					
Basic Scier	nce	Basic Engine	ering	[if it o	contains c	nort	able design, mark with $()$	Social Science				
							X					
			A	SSESSI	MENT CF	RITERL	4					
				Eva	aluation T	vpe	Ouantity	%				
				1st Mic	l-Term	<i></i>	1	50				
				2nd Mi	d-Term							
				Quiz								
	MID-T	EKM		Homev	vork							
				Project								
				Report								
				Others	()							
	FINAL I	EXAM					1	50				
P	REREQU	IEITE(S)										
COURSE DESCRIPTION			Classification, history, distribution, economical importance, morphological and pomological characteristics, fertilization biology, ecological requirements, propagation, plantation and maintenance of sweet orange, mandarin, grapefruit, lemon, sour orange and kumquat species will be discussed.									
COU	IRSE OB	JECTIVES		The purpose of this course is to give the students knowledge on growing of sweet orange, mandarin, grapefruit, lemon, sour orange and kumquat species.								
ADDITIVE PROFE	C OF CO SSIONA	URSE TO A L EDUATIO	PPLY DN	Students will be informed about growing and maintenance of citrus fruits that intensively grown in our country.								
COURSE OUTCOMES			To learn the growing and breeding techniques, varieties, harvesting and marketing sweet orange, mandarin, grapefruit, lemon, sour orange and kumquat. To recognize the morphologic and pomologic characteristics of these species To know the ecologic characteristics of the species and advise the appropriate species and cultivars to the growers and different areas. To recognize the possible problems in growing period of these species and develop solution advisories									
	TEXTB	BOOK		-								
OTHER REFERENCES				<ol> <li>Davies, F.S., Albrigo, L.G. 1994. Citrus. Typeset by Solidus (Bristol) Limitedts, Great Britain.</li> <li>Tanrıverdi, F., 1987. Subtropik Meyve Türleri. Atatürk Üniversitesi Ziraat Fakültesi Ders Notları, Erzurum.</li> <li>Tuzcu, Ö., 2000. Turunçgiller (Ders Notları) Ç. Ü. Adana.</li> <li>Mendilcioğlu, K., 1991. Turunçgiller. E.Ü. Zir. Fak. Ofset Basımevi, Bornova, İzmir.</li> </ol>								
TOOL	S AND E REQUI	QUIPMENT IRED	TS .	Comput	er and proj	ection.						

COURSE SYLLABUS							
WEEK	TOPICS						
1	The origin and distribution of citrus						
2	The production, export and import of citrus fruits in Turkey and World						
3	Citrus classification, important species and cultivars						
4	Main citrus cultivars						
5	The morphological properties of citrus fruits						
6	The morphological properties of citrus fruits						
7	Mid-term exam - The biological properties of citrus fruits						
8	Citrus fruits and climate						
9	Citrus fruits and soil						
10	Propagation of citrus						
11	Propagation of citrus						
12	Citrus nursery						
13	Orchard establishment, tillage, and irrigation of citrus fruits						
14	Fertigasyon, pruning, harvest in citrus orchard						
15,16	Final Exam						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately		X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops		x	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	Χ		
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture			Х
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility			X
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

#### Instructor(s):



### ESOGÜ Horticulture Department Course Information Form

COURSE 251318012					COURSE NAME			Diploma Thesis II			
SEMESTER	W	/EEI	KLY COUR	SE PERI	OD	D COURSE OF					
	Theo	ory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAGE		
8	0		2	C	)	1	3	COMPULSORY (X) ELECTIVE ( )	Turkish		
		ł			COUR	SE CATA	GORY				
Basic Scier	ıce		Basic Engine	ering	[if it	contains o	Ho conside	rticulture rable design, mark with (√)]	Social Science		
					COEGO			X			
				A	SSESS Fr	MENT CF	VD0	A Quantity	0/2		
					1st Mi	d-Term	урс	Quantity	70		
					2nd M	id-Term					
	міг	\ те	DM		Quiz						
	IVIIL	)- I E	2KIVI		Home	work					
					Projec	t					
					Repor	ţ					
					Others (Graduate Thesis)			1	50		
	FINA	LE	XAM		(Presentation of Thesis) 1 50						
P	RERE	QUI	EITE(S)		-						
COU	IRSE I	DES	CRIPTION		Making research, preparing project and presentation of conclusions as thesis on a subject on related disciple of choosen lecturer.						
CO	URSE	OBJ	IECTIVES		Making research and application, preparing project, evaluating values and presenting the consequences by the students on a subject on horticulture will be provided.						
ADDITIV PROFI	E OF ( ESSIO	COU NAL	RSE TO AP	PLY N	To add the ability of research, application and presentation on particular subject.						
COURSE OUTCOMES				To gain the ability of making research, application and presentation on a subject on horticulture. To gain the ability of preparing a project, and presenting the consequences successfully on a professional subject.							
TEXTBOOK					Relate	d documen	ts and w	veb source			
OTHER REFERENCES				Related documents and web source							
TOOLS AND EQUIPMENTS REQUIRED				Projection							

COURSE SYLLABUS								
WEEK	TOPICS							
1	Studying on selected subject with choosen lecturer							
2	Studying on selected subject with choosen lecturer							
3	Studying on selected subject with choosen lecturer							
4	Studying on selected subject with choosen lecturer							
5	Studying on selected subject with choosen lecturer							
6	Studying on selected subject with choosen lecturer							
7	Studying on selected subject with choosen lecturer							
8	Studying on selected subject with choosen lecturer							
9	Studying on selected subject with choosen lecturer							
10	Control of preparations							
11	Control of preparations							
12	Presentation of graduate thesis							
13	Presentation of graduate thesis							
14	Presentation of graduate thesis							
15								

#### THE DEGREE OF RELATIONSHIP BETWEEN COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (5: Very high, 4: High, 3: Medium, 2: Low, 1: Very low)

NO	PROGRAM OUTCOMES	5	4	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X			
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately				X	
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops				X	
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X			
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants		X			
6	To have the skill of establishing and operating orchards, greenhouses and vineyards	X				
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X			
8	To have the skill of using and applying biotechnology on horticulture					Χ
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X		
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X			
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills			X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X				

Instructor(s): All teaching members

Date:



<b>COURSE CODE</b> 251318014				COURSE	NAME	Ornamental Plants Cultivat Applications II	Ornamental Plants Cultivation and Applications II				
SEMESTER	W	/EEK	LY COURS	SE PERI	OD			COURSE OF			
	Theo	ory	Practice	Labra	ntory	Credit	ECTS	ТҮРЕ	LANGUAG E		
VII	0		2	0		1	3	Compulsory (X ) Elective ( )	Turkish		
		1			COU	RSE CATA	GORY				
Basic Scier	ice	В	Basic Engine	ering	[if i	t contains	Hor consider	rticulture ∙able design, mark with (√) ]	Social Science		
				•	SCECC		DITEDL	X •			
				А	.99 <b>L</b> 95 E:	valuation 7	vne	Quantity	0/0		
					1st M	id-Term	ype	Quantity	70		
					2nd N	1id-Term					
	MID	те			Quiz						
	MID	9- I E F	KIM		Home	ework					
					Projec	et		1	100		
					Repor	rt					
					Other	s (Practice)		1	100		
	FINA	L EX	XAM					1	100		
PREREQUIEITE(S)					To have passed the Ornamental Plants Cultivation course						
COURSE DESCRIPTION					Making applications about ornamental plants growing technique, researching resources, preparing and presenting projects						
COL	URSE (	OBJE	ECTIVES		To enable them to research a subject about ornamental plants in detail, to carry out its application, to make a report and to present this subject they have prepared.						
ADDITIVI PROFI	E OF C ESSION	COUR NAL 1	RSE TO AP EDUATION	PLY N	To gain theoretical and practical information about ornamental plants as well as general information about their applications.						
CO	URSE	OUT	COMES		They have knowledge and skills about growing ornamental plants.						
ТЕХТВООК				Orçun, E. (1972). Özel Bahçe Mimarisi Dendroloji, İğne Yapraklı Ağaç ve Ağaçcıklar, Cilt I, İzmir. Orçun, E. (1972Peyzaj Mimarisi Dendroloji, Yapraklı Ağaç- Ağaçcıkların Özellikleri ve Peyzaj Mimarisinde Kullanılışları, Cilt II, İzmir. Ceylan, G. (2004). Dış Mekan Süs Bitkileri ve Payzajda Kullanımları, Flora Yayınları, İstanbul.							
OTHER REFERENCES											
TOOLS AND EQUIPMENTS REQUIRED											

COURSE SYLLABUS							
WEEK	TOPICS						
1	Ornamental Plants Cultivation and research of the thesis topic						
2	Determination of the thesis topic						
3	Literature review on the thesis topic						
4	Literature review on the thesis topic						
5	Literature review on the thesis topic						
6	Literature review on the thesis topic						
7	Literature review on the thesis topic						
8	Literature review on the thesis topic						
9	Literature review on the thesis topic						
10	Literature review on the thesis topic						
11	First evaluation (Control of the study program, presentation to the consultant,						
11	continuation of the study in line with the suggestions						
12	Collection of missing data and corrections						
13	Corrections						
14	Corrections						
15,16	Presentation						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		Х	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

#### Instructor(s): Assoc. Prof. Dr. Sibel SARIÇAM



<b>COURSE CODE</b> 251318015					COURSE NAME Fertilization Biology Practices in Fruits						
			~~ ~~~~	0.7							
SEMESTER	WE	EEKLY COUR	SE PERI	OD		1	COURSE OF	LANCHAC			
	Theor	y Practice	Labra	tory	Credit	ECTS	ТҮРЕ	LANGUAG E			
VIII	0	2	0		1	3	COMPULSORY (X) ELECTIVE ( )	Turkish			
				COUR	SE CATA	GORY					
Basic Scier	nce	Basic Engine	ering	[if it	contains o	Ho consider	rticulture rable design, mark with (√)]	Social Science			
				COLOGI			X				
			A	SSESS	MENT CR	TTERIA Type	A Quantity	0/_			
				1st Mic	aluation 1 1-Term	уре	Quality	20			
				2nd Mi	d-Term		1	20			
	MID	TEDM		Quiz							
	MID-	IERM		Homev	vork						
							1	40			
					(Practice)	1	40				
FINAL EXAM					+0						
PREREQUIEITE(S)				Fertilization Biology Practices in Fruits I course must be successfully completed							
COU	RSE DI	ESCRIPTION		Literature screening, project preparation and presentation the topic on fertilization biology of fruits.							
COL	COURSE OBJECTIVES				The aims of the course are to study the topic on fruits of horticultural crops research during the training period, to prepare the results as a project and to present the subject to community.						
ADDITIVI PROFE	E OF CO	OURSE TO AP AL EDUATION	PLY N								
COURSE OUTCOMES				To learn searching literature, To learn summary the literature, To learn evaluating th results of literature, Understanding and interpretation of the results, Reporting the results of the researches, Presenting the project Ability to use the information obtained from the course in lifetime							
	TEXTBOOK				rent liter	atures	on the subject				
OTHER REFERENCES											
TOOLS AND EQUIPMENTS REQUIRED											

COURSE SYLLABUS							
WEEK	TOPICS						
1	Determination of the project topic						
2	Searching the literature about the topic						
3	Searching the literature about the topic						
4	Summary of the literature						
5	Summary of the literature						
6	Midterm exam						
7	Evaluating the literature						
8	Writing the results						
9	Writing the results						
10	Preparing the results as a report						
11	Preparing the results as a report						
12	Evaluating the report						
13	Presentation of the project						
14	Presentation of the project						
15,16	Evaluation of the project						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Х	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		Χ	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

### Instructor(s): Prof. Yasemin EVRENOSOĞLU



COURSE CODE		251317016			COURS NAMI	SE E	Cultivating Vegetables and Applications II				
	W	FEVI V COUD	SE DEDI								
SEMESTER	Theor	ry Practice	Labor	atory	Credit	ECTS	ТҮРЕ	LANGUAG			
8	0	2	(	)	1	3	COMPULSORY (X) ELECTIVE (	E Turkish			
	Ŭ	2			SE CATA	GORY	)				
Basic Scier	nce	Basic Engin	eering	[if it	contains	Ho	rticulture rable design, mark with (√)]	Social Science			
			A	SSESSI	MENT CH	RITERI	A				
				Ev 1st Mic 2nd M	aluation T d-Term id-Term	Гуре	Quantity	%			
MID-TERM					work						
				Project	t		1	100			
				Report							
				Others ()							
	FINA	L EXAM									
PI	REREQ	QUIEITE(S)									
COUI	RSE D	ESCRIPTION	I	Literature search, project preparation, presentation and implementation on the cultivation of vegetables							
COU	RSE C	DBJECTIVES		It is aimed that students search a research topic related to vegetable growing and special applications in detail, write and present a project related to the subject, conduct it and write a project report.							
ADDITIVE PROFE	COFC	OURSE TO A AL EDUATIO	PPLY ON	The ability to have theoretical and applied knowledge about vegetable growing and to use this knowledge.							
COURSE OUTCOMES				Learning to literature search Learning to sense, summarize and evaluate the literature Project preparation and practice Submit a project report The ability to use the results obtained							
ТЕХТВООК											
ОТН	IER R	EFERENCES									
TOOLS AND EQUIPMENTS REQUIRED											

	COURSE SYLLABUS							
WEE	TOPICS							
K								
1	Determining the research topic							
2	Literature search and evaluation							
3	Literature search and evaluation							
4	Literature summary and evaluation							
5	Writing a project							
6	Writing a project							
7	Writing a project							
8	Practice of the project							
9	Practice of the project							
10	Practice of the project							
11	Evaluation of data							
12	Writing a results report							
13	Writing a results report							
14	Writing a results report							
15,16	Presentation of the project report							

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment	X		
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Χ	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture		Χ	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

# Instructor(s): Prof. Dr. Nuray ÇÖMLEKÇİOĞLU

#### Signature:

Date:



<b>COURSE CODE</b> 251318017					COURSE NAME Fruit Growing Techniques II				
WEEKI V COUDSE DEDI									
SEMESTER	Theory	Practice	Labra	itory	Credit	ECTS	Түре	LANGUAG	
VIII	0	2	0		1	3	COMPULSORY (X) ELECTIVE ( )	Turkish	
				COURSE CATAGORY					
Basic Science Basic Engineering				[if it	contains o	Social Science			
							X		
			A	SSESSI	MENT CF	RITERL	A Orrentitu	0/	
				Let Mi	aluation I	уре	Quantity	<b>%</b> 0	
				2nd M	id Term				
					lu-Term				
	MID-T	ERM		Homey	vork				
				Project					
				Report					
				Others					
	FINAL F	EXAM		(Project) 1				100	
PREREQUIEITE(S)				The course of "Fruit Growing Techniques I" must be taken.					
COURSE DESCRIPTION				Literature screening, project preparation and presentation the topic on fruit growing.					
COURSE OBJECTIVES				The aims of the course are to study the topic on fruits of horticultural crops research during the training period, to prepare the results as a project and to present the subject to community.					
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION									
COURSE OUTCOMES			To learn searching literature, To learn summary the literature, To learn evaluating th results of literature, Understanding and interpretation of the results, Reporting the results of the researches, Presenting the project Ability to use the information obtained from the course in lifetime						
ТЕХТВООК				Different literatures on the subject					
ΟΤΙ	HER REF	ERENCES							
TOOLS AND	EQUIPN	MENTS REQU	UIRED						

COURSE SYLLABUS							
WEEK	TOPICS						
1	Determination of the project topic						
2	Searching the literature about the topic						
3	Searching the literature about the topic						
4	Summary of the literature						
5	Summary of the literature						
6	Midterm exam						
7	Evaluating the literature						
8	Writing the results						
9	Writing the results						
10	Preparing the results as a report						
11	Preparing the results as a report						
12	Evaluating the report						
13	Presentation of the project						
14	Presentation of the project						
15,16	Evaluation of the project						

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Х	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture		Χ	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

#### Instructor(s): Assist.Prof. Cenap YILMAZ



COURSE CODE 251		251318	251318018			COURSE NAME		MINOR VEGETABLES - II		
SEMESTER WEEKLY COURSE PEI				E PERI	COURSE OF					
	Theo	ry Prac	y Practice Lab		tory	Credit	ECTS	ТҮРЕ	LANGUAGE	
7	0	2	2	-		1	3	COMPULSORY (X) ELECTIVE ()	Turkish	
	COURSE CATAGORY									
Basic Science Basic Engineering			ring	[if it	Social Science					
ASSESSMENT CRITERIA										
					Evaluation Type			Quantity	%	
				1	st Mid-	Term				
				2	2nd Mid	-Term				
	MID	-TERM		(	Quiz					
				H	Iomewo	ork				
					roject					
				r	there (I	Dinloma 7	Theorie)	1	50	
					Presentation of Thesis			1	50	
	FINA	L EAAM								
PR	REREC	QUIEITE(	S)							
COURSE DESCRIPTION				C V V	Conducting research, preparing, and presenting projects on the subjects within the relevant department, as suggested by the faculty member chosen within the scope of the relevant course.					
COURSE OBJECTIVES				ך a r	The research will be conducted on any topic related to minor vegetables, and a research project will be designed to evaluate and successfully transfer the results.					
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Ι	Develop the ability to research and practice on the determined subject.					
COURSE OUTCOMES				s p	Students will be given the ability to conduct research and practice on any subject related to minor vegetables. The ability to create a project on any professional subject and successfully convey the results will be gained.					
ТЕХТВООК				F	Researched, relevant documents and resources on the subject.					
OTHER REFERENCES				F	Researched, relevant documents and resources on the subject.					
TOOLS AND EQUIPMENTS REQUIRED			(	Computer, projector						
	COURSE SYLLABUS									
-------	-----------------------------------------------------------------------------------------------------------------------------------	----------	----------	-----------	--	--	--	--	--	
WEE	K TOPICS									
1	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.									
2	Preparing a project on the subjects within the department of the faculty member selected within the scop of the relevant course.									
3	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.									
4	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.									
5	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.									
6	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.									
7	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.									
8	Preparing a project on the subjects within the department of the faculty member selected v of the relevant course.	within 1	the scop	be						
9	Preparing a project on the subjects within the department of the faculty member selected v of the relevant course.	within 1	the scop	pe						
10	Presentation of the project									
11	Presentation of the project									
12	Presentation of the project									
13	Presentation of the project									
14	Presentation of the project									
15,16	Final Exam									
NO	PROGRAM OUTCOMES	3	2	1						
	To have the basic information on horticulture and other agriculture engineering areas,									
1	describing the required data to solve the problems, to have the ability of gathering data and		x							
	solving the problems by using information technology			$\square$						
	To have theoretical and practical (land and laboratory) information on growing and			1						

2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. <b>2</b> :Partially contribution. <b>3</b> : Completely contribution.			

### Instructor(s): Assistant Prof. Dr. Kenan SÖNMEZ



COURSE 251318034					COURS NAMI	SE E	MINOR FRUITS - II			
SEMESTED	WEB	EKLY COUR	SE PERI	OD						
SEMILSTER	Theory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG E		
8	0	2	-		1	3	COMPULSORY (X ) ELECTIVE (	Turkish		
	I			COUR	SE CATA	GORY		<u> </u>		
Basic Science Basic Engineering				[if it	contains	Ho conside	rticulture rable design, mark with (√)]	Social Science		
			A	SSESSI	MENT CF	RITERI	A			
				Ev 1st Mic 2nd M	<b>aluation T</b> d-Term id-Term	Гуре	Quantity	%		
MID-TERM			Quiz Homev							
				Project Report						
				Others	(Diploma	1	50			
	FINAL I	EXAM		Presentation of Thesis 1 50						
P	REREQU	IEITE(S)								
COU	RSE DES	SCRIPTION		Conducting research, preparing, and presenting projects on the subjects within the relevant department, as suggested by the faculty member chosen within the scope of the relevant course.						
COU	IRSE OB	JECTIVES		The research will be conducted on any topic related to minor fruits, and a research project will be designed to evaluate and successfully transfer the results.						
ADDITIVE PROFE	C OF CO SSIONA	URSE TO A L EDUATIO	PPLY DN	Develop the ability to research and practice on the determined subject.						
COL	URSE OI	UTCOMES		Studen subject profess	ts will be g t related to sional subj	given th o minor ect and	e ability to conduct research and fruits. The ability to create a successfully convey the results w	practice on any project on any rill be gained.		
ТЕХТВООК				Resear	ched, relev	ant doc	uments and resources on the sub	ject.		
OTHER REFERENCES				Researched, relevant documents and resources on the subject.						
TOOLS AND EQUIPMENTS REQUIRED				Computer, projector						

COURSE SYLLABUS											
WEEK	TOPICS										
1	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.										
2	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.										
3	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.										
4	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.										
5	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.										
6	Preparing a project on the subjects within the department of the faculty member selected scope of the relevant course.	ed with	in the								
7	Preparing a project on the subjects within the department of the faculty member selected within the scope of the relevant course.										
8	Preparing a project on the subjects within the department of the faculty member selected scope of the relevant course.	ed with	in the								
9	Preparing a project on the subjects within the department of the faculty member selected scope of the relevant course.	ed with	in the								
10	Presentation of the project										
11	Presentation of the project										
12	Presentation of the project										
13	Presentation of the project										
14	Presentation of the project										
15,16	Final Exam										
NO PI	ROGRAM OUTCOMES	3	2	1							
1 des	have the basic information on horticulture and other agriculture engineering areas, acribing the required data to solve the problems, to have the ability of gathering data and ving the problems by using information technology		x								
2 To bre the	have theoretical and practical (land and laboratory) information on growing and eding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer se information accurately	x									

2	breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		x	
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

### Instructor(s): Assoc. Prof. Dr. Volkan OKATAN



<b>COURSE CODE</b> 251318022				COURSE	NAME	Fruit Culture II					
	WEE		SE DEDI								
SEMESTER	Theory	Practice	Labra	atory	Credit	ECTS	TYPE	LANGUAG E			
8	0	2	0		1	3	Compulsory (X) Elective ()	Turkish			
		11		COUR	SE CATA	GORY		I			
Basic Scier	Basic Science Basic Engineering			[if it	contains (	Hoi consider	rticulture able design, mark with (√)]	Social Science			
							Х				
			А	SSESSI	MENT CF	RITERIA	A				
				Eva	aluation T	ype	Quantity	%			
				1st Mic	d-Term						
				2nd Mi	id-lerm						
	MID-TH	ERM		Quiz	noulr						
				Project	VOIK						
				Report							
				Others	(Practice)		1	50			
	FINAL EXAM						1	50			
P	REREOUI	EITE(S)					I	<u> </u>			
COU	IRSE DES	CRIPTION		Within the scope of the related course, researching, project preparation and presentation of the results in the form of a thesis of the advisor faculty member and the faculty member							
CO	URSE OB.	JECTIVES		Students will be able to do research and practice on any subject related to Horticulture, to evaluate the results by creating a project and to transfer them successfully.							
ADDITIVI PROFI	E OF COU ESSIONAI	JRSE TO AP	PLY N	It will add the ability to research, practice and present on the determined subject.							
COURSE OUTCOMES			Students will be provided with the ability to conduct research and practice on any subject related to Horticulture and to present it. The ability to create a project on any professional subject and successfully transfer the results will be gained.								
	TEXTB	OOK		Relate	ed docum	nents ar	nd internet resources				
ΟΤΙ	HER REF	ERENCES		Related documents and internet resources							
TOOLS AND EQUIPMENTS REQUIRED			Computer and Projection								

	COURSE SYLLABUS									
WEEK	TOPICS									
1	Conducting literature research on thesis topics determined within the scope of the relevant course									
2	Conducting literature research on thesis topics determined within the scope of the relevant course									
3	Conducting literature research on thesis topics determined within the scope of the relevant course									
4	Conducting literature research on thesis topics determined within the scope of the relevant course									
5	Conducting literature research on thesis topics determined within the scope of the relevant course									
6	Conducting literature research on thesis topics determined within the scope of the relevant course									
7	Conducting literature research on thesis topics determined within the scope of the relevant course									
8	Conducting literature research on thesis topics determined within the scope of the relevant course									
9	Conducting literature research on thesis topics determined within the scope of the relevant course									
10	Checking the graduation thesis									
11	Checking the graduation thesis									
12	Presentation of graduation thesis									
13	Presentation of graduation thesis									
14	Presentation of graduation thesis									
15,16										

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology	X		
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards		Х	
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)	X		
8	To have the skill of using and applying biotechnology on horticulture		Х	
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants			X
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions		X	
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility	X		
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

### Instructor(s): Prof. Dr. Rafet ASLANTAŞ

Date:



COURSE 251318035					COURS NAMI	SE E	Viticulture Practices - II			
SFMFSTFR	WEI	EKLY COUR	SE PERI	OD	OD COURSE OF					
SEMESTER	Theory	Practice	Labra	atory	Credit	ECTS	ТҮРЕ	LANGUAG E		
8	0	2	-		1	3	COMPULSORY (X ) ELECTIVE (	Turkish		
	<u>8</u>			COUR	SE CATA	GORY				
Basic Science Basic Engineering				[if it	contains (	Ho conside	rticulture rable design, mark with (√)]	Social Science		
			A	SSESSI	MENT CF	RITERI	A	L		
				Ev 1st Mie	<b>aluation T</b> d-Term	Гуре	Quantity	%		
				2nd M	id-Term					
	MID T	тDM		Quiz						
	NIID-I			Homey						
				Project						
				Report	50					
				Others (Diploma Thesis)     1     50       Presentation of Thesis     1     50						
	FINAL	EXAM								
<b>P</b> ]	REREQU	IEITE(S)								
COU	RSE DES	SCRIPTION		Conducting research, preparing, and presenting projects on the subjects within the relevant department, as suggested by the faculty member chosen within the scope of the relevant course.						
COU	IRSE OB	BJECTIVES		The research will be conducted on any topic related to viticulture, and a research project will be designed to evaluate and successfully transfer the results						
ADDITIVE PROFE	COFCO SSIONA	URSE TO A L EDUATIO	PPLY DN	Develop the ability to research and practice on the determined subject.						
COURSE OUTCOMES				Studen subject profess	ts will be g t related t sional subj	given th o viticu ect and s	e ability to conduct research and ilture. The ability to create a successfully convey the results w	practice on any project on any ill be gained.		
	TEXTE	BOOK		Resear	ched, relev	ant doc	uments and resources on the subj	ect.		
OTHER REFERENCES				Resear	ched, relev	ant doc	uments and resources on the subj	ect.		
TOOLS AND EQUIPMENTS REOUIRED				Computer, projector						

#### **COURSE SYLLABUS** WEEK TOPICS Preparing a project on the subjects within the department of the faculty member selected within the 1 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 2 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 3 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 4 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 5 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 6 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 7 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 8 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 9 scope of the relevant course. 10 Presentation of the project Presentation of the project 11 Presentation of the project 12 13 Presentation of the project Presentation of the project 14 15,16 Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

### Instructor(s): Assistant Prof. Dr. Turcan TEKER



COURSE CODE	URSE 251318036 ODE					SE E	Vegetable Seed Practices -	II		
SEMESTED	W	EEKLY COUR	SE PERI	IOD	OD COURSE OF					
SEMESTER	Theor	ry Practice	Labr	atory	Credit	ECTS	ТҮРЕ	LANGUAG E		
8	0	2	-	-	1	3	COMPULSORY (X ) ELECTIVE (	Turkish		
				COUR	SE CATA	GORY				
Basic Science Basic Engineering				[if it	contains o	Ho conside	rticulture rable design, mark with (√)]	Social Science		
			A	SSESS	MENT CF	RITERI	A			
	MID	-TERM		Ev 1st Mid 2nd M Quiz	<b>aluation T</b> d-Term id-Term	уре	Quantity	<u>%</u>		
				Homey Project Report	work t					
				Others (Diploma Thesis)			1	50		
	FINA	L EXAM		Presentation of Thesis						
P	REREQ	QUIEITE(S)								
COU	RSE D	ESCRIPTION	[	Conducting research, preparing, and presenting projects on the subjects within the relevant department, as suggested by the faculty member chosen within the scope of the relevant course.						
COU	IRSE (	DBJECTIVES		The research will be conducted on any topic related to vegetable seed practices, and a research project will be designed to evaluate and successfully transfer the results.						
ADDITIVE PROFE	C OF C SSION	OURSE TO A NAL EDUATIO	PPLY DN	Develo	op the abili	ty to res	search and practice on the determ	ined subject.		
COURSE OUTCOMES				Students will be given the ability to conduct research and practice on any subject related to vegetable seed practices. The ability to create a project on any professional subject and successfully convey the results will be gained.						
	TEX	ГВООК		Resear	ched, relev	ant doc	uments and resources on the subj	ect.		
OTE	IER R	EFERENCES		Researched, relevant documents and resources on the subject.						
TOOLS AND EQUIPMENTS REQUIRED				Computer, projector						

#### **COURSE SYLLABUS** WEEK TOPICS Preparing a project on the subjects within the department of the faculty member selected within the 1 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 2 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 3 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 4 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 5 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 6 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 7 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 8 scope of the relevant course. Preparing a project on the subjects within the department of the faculty member selected within the 9 scope of the relevant course. 10 Presentation of the project Presentation of the project 11 Presentation of the project 12 13 Presentation of the project Presentation of the project 14 15,16 Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	To have the basic information on horticulture and other agriculture engineering areas, describing the required data to solve the problems, to have the ability of gathering data and solving the problems by using information technology		X	
2	To have theoretical and practical (land and laboratory) information on growing and breeding of fruits, vegetables, grapevine and ornamental plants, and to use and transfer these information accurately	X		
3	To have the ability of determining and evaluating the source of the ecological, biological, technical and economical problems that negatively effects the sufficient yield and quality of horticultural crops	X		
4	To have the skill of utilizing different techniques for sustainable usage and protection of genetic resources in horticultural area and environment		X	
5	To have the ability of describing, classification and growing fruits, vegetables, grapevine and ornamental plants	X		
6	To have the skill of establishing and operating orchards, greenhouses and vineyards			X
7	To have the information and ability on breeding horticultural crops, developing a new cultivar, and propagation of these new varieties by different methods (seed, seedling, and sapling)		X	
8	To have the skill of using and applying biotechnology on horticulture			X
9	To have the information on good agricultural practices, and by the way, to decide the right time of cultural practices of the horticultural crops, and to have the ability of describing the pest and diseases of horticultural plants		X	
10	To have the skill on observing the changes through harvest, post harvest, and storage of horticultural crops, and to have the information on storage conditions			X
11	To have the ability of getting the data on horticultural area, and evaluation, recording, project creation and application skills	X		
12	To have the ability of working in individual, multiple and different disciplined teams, and having the responsibility		X	
1:Non	e. 2:Partially contribution. 3: Completely contribution.			

Instructor(s): Assistant Prof. Dr. Sıtkı ERMİŞ



### SEMESTER SPRING

COURSE CODE	URSE 251318037			COURSE NAME		MODERN ORCHARDS MANAGEMENT II					
SEMESTER	WEEKLY COURSE PERI			OD COURSE OF							
SLULSTER	Theo	ry Practice	actice Labra		Credit	ECTS	ТҮРЕ	LANGUAG E			
8	-	2	-		1	3	COMPULSORY (X ) ELECTIVE ( )	Türkçe			
COURSE CATAGORY											
Basic Science Basic Engineering			[if it	Social Science							
			P	E	valuation '	Туре	Quantity	%			
				1st Mic	d-Term						
				2nd Mi	2nd Mid-Term						
MID-TERM				Quiz							
				Homev							
				Project							
				Report							
				Others	(Graduatio	on thesis	) 1	50			
FINAL EXAM				Thesis	presentati	1	50				
PREREQUIEITE(S)											
COURSE DESCRIPTION				In this course, the student prepares for the graduation thesis on a predetermined subject by using the knowledge and skills he has acquired so far. The topics to be chosen here should be more about modern orchard management. These topics are; In the dwarf apple, amulet, cherry, or peach orchards, there should be topics that include the cultural practices of modern gardens such as irrigation, fertilization, disease and pest control, and tree treatment and pruning systems							
COURSE OBJECTIVES				In this course, the student who takes the course on the management of a modern garden from A to Z, taking into account irrigation, fertilization, pruning, training, support systems, rootstocks and varieties used in dwarf orchards, gains skills or theoretically prepares a thesis on this subject.							
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION			Thanks to this course, the person who takes the course gains theoretical or applied skills on issues related to modern orchards in the world.								
COURSE OUTCOMES				Gains equivalent knowledge of modern orchard management practices in the world.							
ТЕХТВООК				Book title; Intensive Orchard Management, Author; Dr. Bruce H. Barritt, Publication Year; 1992, ISBN;0-9630659-1-2, List price; \$30							
OTHER REFERENCES			General Fruiting, Editors; R. Gerçekçioğlu et al., Chapter 12. Pruning of Fruit Trees. Pages 385-449.								
TOOLS AND EQUIPMENTS REQUIRED			Articles and presentations on the subject								

COURSE SYLLABUS								
WEEK	TOPICS							
1	What does Modern Orchard Management mean?							
2	Which criteria are used to determine planting spacing between rows and above rows in modern orchards?							
3	Are support systems a choice in modern orchards? Or is it a necessity?							
4	Does the combination of poles, stems and wires from support systems in dwarf orchard vary according to the rootstock and cultivars used?							
5	Determining the suitability of concrete, iron and wood materials used in support systems for the orchard system and facilitating cultural processes							
6	Multiple row planting systems and their application in modern apple, pear, cherry and peach orchards.							
7	Vegetative power levels, classification, compatibility with varieties and effects on crown development of rootstocks used in modern apple, pear, cherry and peach orchards.							
8	Placement of drip irrigation pipes and design of fertilizer tanks and apparatus used for irrigation and fertilization in modern orchards							
9	Determination of the developmental status of Spur and standard apple, pear, cherry and peach varieties in modern orchards according to the rootstocks used.							
10	The use of weekly different irrigation and fertilization regimens according to phenological periods in modern orchards.							
11	Creation and pruning of super spindle and slender spindle systems applied in modern orchards							
12	Creation and pruning of Steep Leader, Vogel Central Leader, Spanish Bush, UFO, Kim Green Bush, Tall Spindle ax and Super Spindle systems applied in modern cherry orchards							
13	Formation and pruning of vertical cordon, Y palmette, single-armed horizontal cordon, V system and super spindle systems in dwarf pear orchards							
14	The use of natural methods in the fight against diseases and pests in modern orchards							
15,16								

NO	PROGRAM OUTCOMES	3	2	1		
1	Adequate knowledge of Agricultural Engineering and fruit growing in particular; the ability to apply theoretical and applied knowledge in these fields to model and solve problems related to modern fruit growing	X				
2	Ability to identify, define, formulate and solve problems related to Agricultural Engineering and modern garden management by selecting and applying appropriate analysis and modeling methods	X				
3	The ability to design a complex system by applying garden design and production models in line with a determined goal.	x				
4	Ability to learn, develop, select and use modern techniques and tools required for Agricultural Engineering practices and to make effective use of information technologies		x			
5	Ability to design, experiment, collect data, analyze and interpret results, to design a garden setup for the study of Agricultural Engineering and Horticulture problems	X				
6	Ability to work individually and in interdisciplinary and interdisciplinary teams		x			
7	Ability to communicate effectively in Turkish orally and in writing, and the ability to use/develop foreign language knowledge about modern fruit growing	x				
8	Ability to communicate effectively in Turkish orally and in writing, and the ability to use/develop foreign language knowledge about modern fruit growing		x			
9	Professional and ethical responsibility awareness		X			
1:Non	1:None. 2:Partially contribution. 3: Completely contribution.					

### Instructor(s): Prof. Dr. Yakup ÖZKAN