

Courses – ECTS Credits

Click the course name on the table below to find the detailed information about course objectives, course outcomes, course contents, evaluation and ECTS.

1. Year					
Code	Course Unit Title	ECTS	T+P+C	C/E	Language
Fall Semester					
251311001	Zoology	4	2+2	C	Turkish
251311002	Botany	4	2+2	C	Turkish
251311003	Physics	4	3+0	C	Turkish
251311004	Chemistry	4	2+2	C	Turkish
251311005	Mathematics	3	3+0	C	Turkish
251311006	Introduction to Horticulture	2	2+0	C	Turkish
251311007	Information Technology	2	2+0	C	Turkish
251311008	Turkish Language I	2	2+0	C	Turkish
251311009	Principles of Atatürk and Recent Turkish History I	2	2+0	C	Turkish
251311010	Foreign Language I	3	3+0	C	Turkish
Fall Semester Total :		30			
Spring Semester					
251312001	History of Agricultural and Deontology	2	2+0	C	Turkish
251312002	Surveying Technique	4	2+0	C	Turkish
251312003	Technical Drawing	4	1+2	C	Turkish
251312004	Biochemistry	3	2+0	C	Turkish
251312005	Meteorology	3	2+0	C	Turkish
251312006	Microbiology	4	2+0	C	Turkish
251312007	Agricultural Ecology	3	2+0	C	Turkish
251312008	Turkish Language II	2	2+0	C	Turkish
251312009	Principles of Atatürk and Recent Turkish History II	2	2+0	C	Turkish
251312010	Foreign Language II	3	3+0	C	Turkish
Spring Semester Total:		30			
YEAR TOTAL :		60			
2. Year					
Code	Course Unit Title	ECTS	T+P+C	C/E	Language
Fall Semester					
251313001	Animal Production	3	2+0	C	Turkish
251313002	Statistics	4	2+0	C	Turkish
251313003	Genetics	4	2+0	C	Turkish
251313004	Agricultural Economics	3	2+0	C	Turkish
251313005	Food Science and Technology	3	2+0	C	Turkish
251313006	Agricultural Structures and Irrigation	4	2+0	C	Turkish
251313007	Landscape Architecture	3	2+0	C	Turkish
251313008	Field Crops	3	2+0	C	Turkish
251313009	Foreign Language III	3	3+0	C	Turkish
251313012	Occupational health and Safety I	2	2+0	C	Turkish
Fall Semester Total:		30			
Spring Semester					
251314001	General Vegetable Growing	5	2+2	C	Turkish
251314002	Agricultural Extension and Communication	3	2+0	C	Turkish
251314003	Research and Experimental Methods	5	2+2	C	Turkish
251314004	Agricultural Machinery	3	2+0	C	Turkish
251314005	Soil Science	4	2+0	C	Turkish
251314006	Plant Physiology	4	2+0	C	Turkish
251314007	Plant Protection	3	2+0	C	Turkish
251314008	Foreign Language IV	3	3+0	C	Turkish
	Summer Training I			C	
251314011	Occupational health and Safety II	2	2+0	C	Turkish
Spring Semester Total:		30			
YEAR TOTAL:		60			
3. Year					
Code	Course Unit Title	ECTS	T+P+C	C/E	Language
Fall Semester					
251315001	General Viticulture	4	2+2	C	Turkish
251315002	General Fruit Growing	4	2+2	C	Turkish
251315003	Horticultural Biotechnology	3	2+0	C	Turkish
251315004	Propagation Techniques of Horticulture	5	2+2	C	Turkish
251315012	Professional Foreign Language I	2	2+0	C	Turkish
251315013	Professional Practice I	3	0+4	C	Turkish
3. Year Fall Semester Elective Courses (Within the Programme)					
251315008	Organic Agriculture in Horticulture	3	2+0	E	Turkish
251315009	Mushroom Growing Technique	3	2+0	E	Turkish

251315010	Fertilization of Horticultural Plants	3	1+2	E	Turkish
251315011	Seedling-Nursery Growing Technique	3	1+2	E	Turkish
251315014	Outdoor Ornamental Plants Propagation Tree-Shrub	3	2+0	E	Turkish
Elective Courses (Out of the Programme)					
251315005	Determination of Plant Fertilization Requirements	3	3+0	E	Turkish
251315006	Agriculture and Environment	3	3+0	E	Turkish
251315007	Bee and Silkworm Growing	3	3+0	E	Turkish
Fall Semester Total:		30			
Spring Semester					
251316001	Protected Cultivation of Vegetable Crops	5	2+2	C	Turkish
251316002	Horticultural Crop Breeding	5	2+2	C	Turkish
251316003	Diseases of Horticultural Crops	2	1+2	C	Turkish
251316004	Pests of Horticultural Crops	2	1+2	C	Turkish
251316005	Ornamental Plants Growing	2	2+0	C	Turkish
251316013	Professional Foreign Language II	2	2+0	C	Turkish
251316014	Professional Practice II	3	0+4	C	Turkish
	Summer Training II			C	
3. Year Spring Semester Elective Courses (Within the Programme)					
251316009	Sustainable Agriculture in Horticulture	3	2+0	E	Turkish
251316010	Soilless Culture	3	2+0	E	Turkish
251316011	Pruning Technique	3	1+2	E	Turkish
251316012	Fertilization Biology of Horticultural Crops	3	1+2	E	Turkish
251316015	Propagation of Seasonal Flower	3	2+0	E	Turkish
Elective Courses (Out of the Programme)					
251316006	Medicinal and Aromatic plants	3	3+0	E	Turkish
251316007	Fertilizers and Fertilization Technique	3	3+0	E	Turkish
251316008	Organic Animal Growing	3	3+0	E	Turkish
Spring Semester Total:		30			
YEAR TOTAL:		60			
4. Year					
Code	Course Unit Title	ECTS	T+P+C	C/E	Language
Fall Semester					
251317001	Special Vegetable Crops I	4	3+0	C	Turkish
251317002	Temperate Zone Fruits I	4	3+0	C	Turkish
251317003	Subtropical Fruits I	4	3+0	C	Turkish
251317004	Storage and Marketing of Horticultural Crops	2	2+0	C	Turkish
251317012	Diploma Thesis I	3	0+2	C	Turkish
251317013	Professional Practice III	4	0+4	C	Turkish
4. Year Fall Semester Elective Courses (Within the Programme)					
251317005	Subtropical Fruits II	3	2+0	E	Turkish
251317006	Postharvest Physiology of Horticultural Crops	3	2+0	E	Turkish
251317007	Seed and Certification of Horticultural Crops	3	2+0	E	Turkish
251317008	Biotechnological Practices in Horticulture	3	1+2	E	Turkish
251317009	Special Viticulture	3	1+2	E	Turkish
251317021	New Techniques on Fruit Growing	3	2+0	E	Turkish
Social Elective Courses					
251317010	Photography	3	3+0	E	Turkish
251317011	Marbling Art	3	3+0	E	Turkish
251317019	Turkish Folk Dance	3	3+0	E	Turkish
Fall Semester Total:		30			
Spring Semester					
251318001	Physiology of Horticultural Plants	4	2+2	C	Turkish
251318002	Special Vegetable Crops II	4	3+0	C	Turkish
251318003	Temperate Zone Fruits II	4	3+0	C	Turkish
251318004	Weeds	2	1+2	C	Turkish
251318012	Diploma Thesis II	3	0+2	C	Turkish
251318013	Professional Practice IV	4	0+4	C	Turkish
4. Year Spring Semester Elective Courses (Within the Programme)					
251318005	Tropical Fruits	3	2+0	E	Turkish
251318006	Citrus Growing	3	2+0	E	Turkish
251318007	Small Fruits	3	2+0	E	Turkish
251318008	Resistance Breeding in Horticulture	3	1+2	E	Turkish
251318009	Molecular Biology Practices in Horticulture	3	1+2	E	Turkish
251318021	Rootstock scion relationships of fruits	3	2+0	E	Turkish
Social Elective Courses					
251318010	Diction	3	3+0	E	Turkish
251318011	Interior Plants Decoration	3	3+0	E	Turkish
251318019	Effective Communication	3	3+0	E	Turkish
Spring Semester Total:		30			
YEAR TOTAL:		60			



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251311001	COURSE NAME	Zoology
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
1 st	2	0	2	3	4	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Horticulture [if it contains considerable design, mark with (√)]	Social Science
X			

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term	1	20
	2nd Mid-Term		
	Quiz		
	Homework	1	20
	Project		
	Report		
	Others (Practise)		20
FINAL EXAM			40

PREREQUIEITE(S)	None
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COURSE DESCRIPTION	Animal cell and its organelles, types of cell division, animal tissues, organs and systems, systematics and taxonomy, rules of nomenclature, classification of animal groups, general features of the animal groups, soil animals and their agricultural importance, earthworms and their contibutions to soil and agricultural products, animal ecology and ethology, faunistic richness of Turkey.
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COURSE OBJECTIVES	Present and explain the subjects of zoology and animal groups.
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ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
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COURSE OUTCOMES	To explain importance of animals among other organisms To summarize structure and function of animal cell, tissues, organs and systems To summarize importance of systematics and taxonomy To explain general rules of classification and nomenclature To summarize general features of animal groups To recognise the soil animals and summarize their agricultural importance. To explain the contributions of earthworms to soil and agricultural products. To comment animal ecology and ethology To present faunistic richness of Turkey To explain subject that what can be done to protect this richness.
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TEXTBOOK	Koç H. General Zoology Course Notes
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OTHER REFERENCES	1.Aktümsek A., Ünsal S., Kalyoncu L. (2007) Genel Zooloji, Ankara, Nobel publishing. 2.Mısırlıoğlu M. (2011) Omurgasız Hayvanlar Laboratuvar Kılavuzu, Ankara, Nobel publishing. 3.Mısırlıoğlu M. (2011) Topraksolucanları, Ankara, Nobel publishing. 4. Mısırlıoğlu M. (2014) Toprak Faunası, Ankara, Nobel publishing 5. Documentaries related the course.
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TOOLS AND EQUIPMENTS REQUIRED		Computer and projection, microscope, stereo microscope, basin, microscope slides, lamels, pens, alcohol, formaldehyde, jars.
COURSE SYLLABUS		
WEEK	TOPICS	
1	General features of animals	
2	Animal cell and its organelles	
3	Types of cell division	
4	Animal tissues	
5	Animal tissues	
6	Organs and Systems	
7	Organs and Systems	
8	Animal ecology	
9	Ethology	
10	Systematic and taxonomy, Classification of animals	
11	Systematic and taxonomy, Classification of animals	
12	Soil animals and their agricultural importance	
13	Earthworms and their contributions to soil and agriculture	
14	Faunistic richness of Turkey	
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					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:

Signature:



ESOGÜ Horticulture Department, Course Information Form

SEMESTER	Fall
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COURSE CODE	251311002	COURSE NAME	Botany
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
I	2	0	2	3	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM			Evaluation Type		Quantity		%
			1st Mid-Term		1		40
			2nd Mid-Term				
			Quiz				
			Homework				
			Project				
			Report				
			Others (.....)				
FINAL EXAM					1		60
PREREQUIEITE(S)			-				
COURSE DESCRIPTION			Description of plant cell Plant tissues Plant organs Classification of plants Photosynthesis and respiration				
COURSE OBJECTIVES			Morphological and anatomical structure of plants				
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION			1. Know and recognize the properties of plant cell under the microscope 2. Know and recognize the properties of plant tissues under the microscope 3. Know and distinguish the differences between plant tissues and is under the microscope 4. Know and recognize the properties of plant organs under the microscope 5. Know and distinguish the differences between plant organs and is under the microscope 6. Know classification of plants 7. Know photosyntesis and respiration				
COURSE OUTCOMES							
TEXTBOOK			Bozcuk, S. 2011. Genel Botanik, Hatipoğlu Basım ve Yayım, Ankara.				
OTHER REFERENCES			1. Akman, Y. ve Güney, K. 2011. Botanik-Bitki Biyolojisi, Palme Yayıncılık. 2. Yentür, S. 2003. Bitki Anatomisi, İstanbul Üniversitesi Yavınları, İstanbul.				

	3. Vardar, Y. ve Seçmen, Ö. 1993. Bitki Morfolojisinde Temel Bilgiler, Fakülteler Kitabevi, İzmir.
TOOLS AND EQUIPMENTS REQUIRED	Projection

COURSE SYLLABUS	
WEEK	TOPICS
1	Plant Cell Structure; cell wall, protoplast, nucleus, vacuole, 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 development and structure, seed types
13	Plant Systematic and Plant Classification
14	Photosynthesis and respiration
15	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			

Instructor(s):

Date:

Signature



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251311003	COURSE NAME	Physics
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
1	3	0	0	3	4	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Horticulture [if it contains considerable design, mark with (√)]	Social Science
X			

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term	1	40
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (.....)		
FINAL EXAM		1	60
PREREQUIEITE(S)		NONE	
COURSE DESCRIPTION		Mechanic Effects in Physics	
COURSE OBJECTIVES		learning the basic principles and concepts of physics	
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION		To use existing technology and to produce new technologies.	
COURSE OUTCOMES		To explain natural phenomena and analysis learn the science of physics, Understanding of scientific method and research skills.	
TEXTBOOK		PHYSICS For scientists& Engineers with Modern physics, Raymound A Serway.	
OTHER REFERENCES		PHYSICS For scientists& Engineers with Modern physics with problem solutions. Raymound A Serway.	
TOOLS AND EQUIPMENTS REQUIRED		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

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			

Instructor(s):

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251311004	COURSE NAME	Chemistry
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
1	2	0	2	3	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
X							
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	50
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Matter and mole concepts, chemical reactions, reaction sitokiometry, gases and their characteristics, periodic table, chemical connections, liquids, solids and solutions.			
COURSE OBJECTIVES				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.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				To gain the students the basic chemistry base.			
COURSE OUTCOMES				1. To comprehend matter and integral parts. 2.Using international naming system. 3. Separates chemical reaction types. 4. To be able to mak hemical reaction countings. 5. Brings thermodynamic comment to chemical reactions. 6. Comprehends interactions between molecules. 7. Learns to prepare and recognise solutions.			
TEXTBOOK				1) Temel kimya (Patkins ve L. Jones) 2) Genel kimya (Petrucci and Harwood) 3) Modern Üniversite kimyası (Martimer)			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Computer; projection			

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, ionizing energy, atom radius
5	Chemical connection, its kinds, dipole 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

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			

Instructor(s):

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251311005	COURSE NAME	Mathematics
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
1	3	0	0	3	3	COMPULSORY (√) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
√							
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
Others (.....)							
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Sets and Numbers, Functions, Limits and Contunuity, Derivation and Applications			
COURSE OBJECTIVES				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			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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				By the end of this module students will be able to: 1. 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. 2. Ability to determine, define, formulate and solve complex engineering problems; for that purpose an ability to select and use convenient analytical and experimental methods. 3. 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. 4. Ability to develop, select and use modern methods and tools required for engineering applications; ability to effective use of information technologies. 5. In order to investigate engineering problems; ability to set up and conduct experiments and ability to analyze and interpretation of experimental results. 6. Ability to work effectively in inner or multi-disciplinary teams; proficiency of interdependence. 7. Ability to communicate in written and oral forms in Turkish/English; proficiency at least one foreign language. 8. Awareness of life-long learning; ability to reach information; follow developments in science and technology and continuous self-improvement 9. Understanding of professional and ethical issues and taking responsibility 10. Awareness of project, risk and change management; awareness of entrepreneurship, innovativeness and sustainable development. 11. Knowledge of actual problems and effects of engineering applications on health, environment and security in global and social scale; an awareness of juridical results of engineering solutions.			
TEXTBOOK				Balcı, M., 2008. Genel Matematik I, Balcı Yayınları,416 s			
OTHER REFERENCES				1. Koçak, M., 2010. Genel Matematik, AC Kardeşler Matbaa Yayıncılık, 485 s. 2. Cengiz, N., Tarakçı, Ö., Aktaş, M.,2006, Genel Matematik I, Pegema Yayıncılık, 472 s.			
TOOLS AND EQUIPMENTS REQUIRED				-			

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

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			

Instructor(s):

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251311006	COURSE NAME	Introduction to Horticulture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
1	2	0	0	2	2	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(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.			
COURSE OBJECTIVES				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.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
TEXTBOOK				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 Vakfı Yayınları No:4, 1995.			
OTHER REFERENCES				Meyve Yetiştirme İlkeleri, Arif Soylu, Uludağ Üniversitesi Ziraat Fakültesi, Ders Notları No: 20, Bursa, 1992.			
TOOLS AND EQUIPMENTS REQUIRED				-			

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

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			

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251311007	COURSE NAME	Information Technology
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
1	2	0	0	2	2	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Hardware of computer, functions of hardware units, Windows XP, Microsoft Word, Microsoft Excel, Data, formatting cells, page operations, functions, mathematical process, preparing Powerpoint presentation, general knowledge on internet will be discussed.			
COURSE OBJECTIVES				Main objective of the course is to inform basic information systems and technologies, and introduce usage areas in education to the students. It is to be able to use the automation system.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Basic knowledge, computer hardware, Windows, commit word, counting tables, preparing presentation.			
COURSE OUTCOMES				To know information technologies To comprehend place of computer in information technologies To understand working principles of computer hardwares To be able to use Windows operating system To be able to use Microsoft Word program To be able to use Microsoft Excel program To be able to use Microsoft PowerPoint program To be able to use automation			
TEXTBOOK				1. BAL, Hasan Ç., "Bilgisayar ve İnternet Kullanımı", 11. Basım, Akademisyen Yayınevi, 2002 2. Halvorson, M and Young, J.M., “Microsoft Office 97 ile çalışmak”, Arkadaş Yayınevi, 1999 3. Borland, R., “Microsoft Word 97 ile çalışmak”, Arkadaş Yayınevi, 1997			
OTHER REFERENCES				1. Dodge, M.,Kinita, C. and Stinson ,C., “Microsoft Excel 97 ile çalışmak”, Arkadaş Yayınevi, 1997 2. Güneş, A., Erkan, K., Koyuncu, B., Meder, M., Sağıroğlu, Ş., Yıldırım, M. ve Yıldız, F., “Temel Bilgi Teknolojisi Kullanımı”, Pegem A Yayıncılık, 2003			
TOOLS AND EQUIPMENTS REQUIRED				Projection, computer			

COURSE SYLLABUS	
WEEK	TOPICS
1	Hardware of computer, functions of hardware units
2	Windows XP, symbols in Windows desktop, Windows communication boxes, taskbar, general Windows operations, file and folder operations
3	Windows XP, start menu, Windows password, care of computer and other operations, backup
4	Safety of data and viruses, potential threats for data and precautions, how to keep backup, cleaning viruses
5	Microsoft Word, file operations, text operations, page view, adding file, object and picture/wordart
6	Microsoft Word, working on tables, working on drawings, page layout, sending the text to more than one person, equation organizing, printouts from a file
7	Important points of Word program, adjustments and clues
8	To recognise Microsoft Excel working sheet and cells, create formula, moving between cells, choosing cells
9	Data, forming cells, page operations, functions
10	Mathematical process and create formula, comparison functions, logical functions
11	Mid-term exam – Use of automation
12	Text functions, trigonometric functions, creating graphic
13	Preparing Powerpoint presentation
14	Information on internet, connection to internet, making search in internet, internet concepts
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					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:

Signature:



ESOĞÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251311008	COURSE NAME	Turkish Language I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
1	2	0	0	2	2	COMPULSORY (X) ELECTIVE ()	
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
							√
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			
				2nd Mid-Term		1	40
				Quiz		-	-
				Homework		-	-
				Project		-	-
				Report		-	-
				Others (.....)		-	-
FINAL EXAM				Final Exam		1	60
PREREQUIEITE(S)				Non-existence			
COURSE DESCRIPTION				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.			
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.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Provide using Turkish true and better in students’ daily lives, bring them skills for expressing the works done in their working life			
COURSE OUTCOMES				1.Student explains language families on surface and Turkish’s place among the world languages. 2.Identify the rules of Turkish. 3. Realizes the sound events. 4. Apply the rules of writing 5. Consitute Writing and Verbal composition 6. Make us of Turkish true.			
TEXTBOOK				1- Turkish Language and Composition I-II, Gürer Gülsevin-Erdoğan Boz. 2- Turkish Language for universities, Muharrem Ergin.			
OTHER REFERENCES				1. Kaplan, M., “Culture and language”, 8. printing, ,Dergah Publication, İstanbul, 1993. 2. Fuat, M., “About Language”, Adam Publication, İstanbul, 2001. 3. Ercilasun, A. B., “Turkish Language History from begining to twentieth century”, Akçağ Publication, 1. printing, Ankara, 2004. 4. Aksan, D., “Power of Turkish”, Bilgi Publisher, 4. printing, Ankara, 1997.			
TOOLS AND EQUIPMENTS REQUIRED				Projection, Board			

COURSE SYLLABUS	
WEEK	TOPICS
1	Language and its subbranch
2	Turkish language's place among the world languages
3	Turkish language's historical development ı
4	Turkish language's historical development ıı
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	<u>Derivational affix</u> and word ending
13	Word groups and sentence knowledge
14	Rules of spelling
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					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:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251311009	COURSE NAME	Principles of Atatürk and Recent Turkish History I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
1	2	0	0	2	2	COMPULSORY (x) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
							X
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			
				2nd Mid-Term		1	40
				Quiz			
				Homework			
				Project			
				Report			
Others (.....)							
FINAL EXAM						1	60
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				The Description of the term “revolution”; major historical events in the Ottoman Empire to the end of World War I; a general overview of Mustafa Kemal’s life; certain associations and their activities; arrival of Mustafa Kemal to Samsun; 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.			
COURSE OBJECTIVES				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 Turkish state was created.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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 Principles of Atatürk and their importance. 3.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 effects of Capitalism/Emperialism on Turkey. 3.3.Explains the relations / problems between Turkey and its neighbours. 3.4.Explains the importance of Turkey at Europe and World.			
TEXTBOOK				Gazi Mustafa Kemal Atatürk, Nutuk (Söylev), C. I-II, TTK., Ank., 1986. <i>İmparatorluktan Ulus Devlete Türk İnkılâp Tarihi, Cemil Öztürk (ed.), Ank., 2011.</i>			
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 EQUIPMENTS REQUIRED							

COURSE SYLLABUS	
WEEK	TOPICS
1	The Balkan Wars. First World War and input to war Ottoman Empire. The fronts that Ottoman Empire fought 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 Agreement and occupations on the Ottoman Empire. National Independence 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. Abolition of sultanate. Lausanne Treaty. Abolition of caliphate and lodges
7	Constitutional developments in Turkey. Internal and external political developments in the period of Atatürk's and İnönü'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.
12	Nationalism, Etatism and Populism.
13	Securalism, Revolutionism
14	General ecalutation.
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					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:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	FALL
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COURSE CODE	251311010	COURSE NAME	Foreign Language I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
1	3	0	0	0	3	Compulsory (+) Elective ()	TURKISH
COURSE CATEGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
X							
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1 st Mid-Term		1	40
				2 nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)							
COURSE DESCRIPTION				Fundamental concepts and knowledge			
COURSE OBJECTIVES				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 EDUCATION				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			
TEXTBOOK				1. Essential English, Beginner Student's Book, Richmond Publishing 2. Essential English, Workbook, Richmond Publishing			
OTHER REFERENCES				1. Murphy, R., 2004, English Grammar in Use, Cambridge University Press, 2. Dictionary of Contemprary English, Longman. 3. Start Up Comprehensive English Practice, 2007, Nüans Publishing			
TOOLS AND EQUIPMENTS REQUIRED				Course book, workbook, CD player, loudspeakers, dictionary.			

COURSE SYLLABUS	
WEEK	TOPICS
1	Subject Pronouns, indefinite article, a/an, <i>To be</i> , 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

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		

Instructor(s):

Date:

Signature(s):



ESOGÜ Agriculture Faculty Horticulture Department
COURSE INFORMATION FORM

SEMESTER Spring

COURSE CODE	251312001	COURSE NAME	History of Agriculture and Deontology
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
II	2	0	0	2	2	COMPULSORY (x) ELECTIVE ()	TURKISH
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM			Evaluation Type		Quantity		%
			1st Mid-Term		1		40
			2nd Mid-Term				
			Quiz				10
			Homework		1		10
			Project				
			Report				
			Others (.....)				
FINAL EXAM					1		40
PREREQUIEITE(S)			None				
COURSE DESCRIPTION			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.				
COURSE OBJECTIVES			Examine agricultural phases in historical development and teaching how agriculture reach current status. To learn related institution, establisments and legislations.				
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION			To gain information about the emergence and development of agriculture, professional responsibilities, rights and progressions.				
COURSE OUTCOMES			To have profesional profile, to know profesional education establishments and planned period establishments, responsibilities and rights.				
TEXTBOOK			-Eriş, A., 2002. Tarım Deontolojisi, U.Ü. Ziraat Fak. Ders Notları, No:88, Bursa.				
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

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				

Instructor: Prof.Dr. Rafet ASLANTAŞ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251312002	COURSE NAME	Surveying Technique
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
2	2	0	0	2	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)							
COURSE DESCRIPTION				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. Traverse surveys. Geometric and trigonometric leveling. Tacheometry.			
COURSE OBJECTIVES				Learning of basic field - map measures and coordinate systems. Calculating and drawing from the obtained measurements.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Solving of the measurement problems during the field applications. Understanding of Mapping and coordinate systems .			
COURSE OUTCOMES				Understanding of basic horizontal and vertical field measurement Performing of three dimensional calculation and drawing applications.			
TEXTBOOK				DİKER S., Ölçme Bilgisi Ders Notları			
OTHER REFERENCES				1- ŞERBETCİ M., SONGU C., GÜLAL E., Ölçme Bilgisi 1-2, Birsen Yay. İst. 2- KOÇ İ., Ölçme Bilgisi 1, YTÜ Yayınları, İst. 1998 3- KOÇ İ., Ölçme Bilgisi 2, YTÜ Yayınları, İst. 2003 ÖZBENLİ E., TÜDEŞ T., Ölçme Bilgisi, KTÜ, Trabzon, 1995			
TOOLS AND EQUIPMENTS REQUIRED							

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

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			

Instructor(s): Ass.Prof. Dr. Ertuğrul KARAS

Date:

Signature:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER	Spring
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COURSE CODE	251312003	COURSE NAME	Technical Drawing
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
2	1	2	0	2	4	COMPULSORY (√) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Garden Crops [if it contains considerable design, mark with (√)]			Social Science
		√		√			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			
				2nd Mid-Term		1	40
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)							
COURSE DESCRIPTION				- Line Types and Its Use -Basic Geometric Drawings -Front view, top view, left side view of a shape - Scale and dimensioning -Section views and sectional drawings -Perspective drawing			
COURSE OBJECTIVES				-This course focuses on teaching technical drawing rule education, development of drawing ability -Get ability to explain designed object with drawing,			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION				Teaching technical drawing rules education, drawing another shapes and objects using that rules.			
COURSE OUTCOMES				-Learn the rules of Technical Drawing -Gain ability to use Technical Drawing equipments - Gain perception to three dimension			
TEXTBOOK				All the resources releated Technical Drawing books can be used			
OTHER REFERENCES				All the resources releated the Technical Drawing can be used.			
TOOLS AND EQUIPMENTS REQUIRED				All the resources releated the Technical Drawing are used.			

COURSE SYLLABUS	
WEEK	TOPICS
1	Introduction to Technical Drawing- Aim and Importance
2	Line types and Its uses
3	Basic Geometrical Drawing
4	Basic Geometrical Drawing
5	Orthographic Projections
6	Orthographic Projections
7	Scale- Dimensioning
8	Scale- Dimensioning
9	Midterm Exam- Section views and sectional drawings
10	Section views and sectional drawings
11	Section views and sectional drawings
12	Perspective drawing
13	Perspective drawing
14	Perspective drawing
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					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. Sibel SARIÇAM

Date:

Signature:



ESOGU Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251312004	COURSE NAME	Biochemistry
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
2	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATEGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				NO			
COURSE 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.			
COURSE OBJECTIVES				The objective of this course to recognize the molecular basis of living systems and evaluation on biological processes occurring in the living systems.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION				To gain ability of understanding and interpreting of living chemistry to students..			
COURSE OUTCOMES				1. Recognizing of the macromolecules in living system. 2. Interpreting of the life in molecular level. 3. Recognizing and evaluating of the components of living system. 4. Interpreting of the dynamic interaction of molecules in living system.			
TEXTBOOK				1. Nelson, D.L., Cox, M.M., (2004) Lehninger Principles of Biochemistry. 3 rd Edition, Worth Publishers, Wisconsin, USA.			
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				Computer and data 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	Metabolism of the nitrogen compounds
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					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:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251312005	COURSE NAME	Meteorology
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
II	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Horticulture [if it contains considerable design, mark with (√)]	Social Science
X			

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	Mid-Term	1	40
	Quiz		
	Homework		
	Project		
	Report		
	Others (practice)		
FINAL EXAM			60
PREREQUIEITE(S)	None		
COURSE DESCRIPTION	Importence of meteorology, composition and layer of atmosphere, solar energy, temperature, frost, air humudity, precipitation, evaporation, air pressure, wind, clouds.		
COURSE OBJECTIVES	The main aim of the course is to teach atmosphere's event and change, explain this event's conclusion, describe effects on agriculture of meteorology and meteorological events.		
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Learns the effects of different weather events on agriculture		
COURSE OUTCOMES	1. Know the meteorological events 2. Know how formation meteorological events 3. Know how effects agriculture of meteorological events		
TEXTBOOK	Sezgin, F. 2001. Meteorology, Adnan Menderes University Agricultural Faculty, 85 p.		
OTHER REFERENCES			
TOOLS AND EQUIPMENTS REQUIRED	Projector and computer		

COURSE SYLLABUS	
WEEK	TOPICS
1	Definition of meteorology, history, weather events-agriculture relationships
2	Atmosphere
3	Solar energy, affecting factors on solar energy
4	Solar energy measurement, temperature
5	Affecting factors on temperature, thermic regime
6	Agricultural importance of temperature, temperature measuring
7	Frost, frost forecast methods, methods of fighting with frost event
8	Air humidity
9	Precipitation, precipitation types, precipitation shapes
10	Precipitation regimes, agricultural importance of precipitation, precipitation measuring
11	Evaporation, agricultural importance of evaporation, air pressure
12	Wind, wind kinds
13	Agricultural importance of wind
14	Clouds
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					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. Nihal KAYAN

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251312006	COURSE NAME	Microbiology
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
2	2	0	0	2	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	50
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				This course focuses on the general principles of microbiology and includes the following topics: Historical development of microbiology. Classification of microorganisms. General characteristics of the bacteria, yeasts, molds and macro fungi. Factors effecting the microbial growth. Control of microbial growth. Microbial metabolism. Microbial ecology. The roles of microorganisms in the elemental cycles in nature.			
COURSE OBJECTIVES				Introduce the diversity of microorganisms. To teach beneficial or hamful effects of microorganisms on the environment. To teach the role of microorganisms in biogeochemical cycles. To teach importance of soil, water and airborne microorganisms.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				After completing Microbiology Course, students will be able to interpret and evaluate a range of scientific literature in microbiology.			
COURSE OUTCOMES				1 - Describes the historical development of microbiology 2 - Describes the classification and diversity of microorganisms 3 - Compares the overall cell structure of prokaryotes and eukaryotes. 4 - Decribes the general morphological and biological characteristics of bacteria, yeasts, fungi and viruses. 5 - Describes microbial metabolic pathways in general terms. Compares aerobic respiration, anaerobic respiration, and fermentation. 6 - Lists the environmental factors required for microbial growth. 7 - Describes the common methods used to control microbial growth. 8 - Discusses the role of microorganisms in carbon, nitrogen and sulphur cycles. Describes the importance of these cycles for agriculture.			
TEXTBOOK				Demirbağ Z. (2006). General Microbiology, Trabzon.			
OTHER REFERENCES				1. Madigan MT, Martinko JM, Parker J. (2009) 11th Edition (translation: Çökmüş, C.). Brock Biology of Microorganisms, Palme Publishing, Ankara 2. Arda M. (2000). Basic Microbiology, Medisan, Ankara. 3. Bilgehan H. (1999). Basic Microbiology and Immunology, Barış Publications, Faculties Bookstore, İzmir. 4. S. Özçelik. (2009) General Microbiology (3th Edition) Süleyman Demirel University, Faculty of Agriculture. Isparta.			
TOOLS AND EQUIPMENTS REQUIRED				Computer and data show			

COURSE SYLLABUS	
WEEK	TOPICS
1	The definition and history of Microbiology. Classification of microorganisms
2	Functional anatomy of prokaryotic and eukaryotic cells: - morphological and anatomical characteristics of prokaryotic cells
3	Functional anatomy of prokaryotic and eukaryotic cells: - morphological and anatomical characteristics of prokaryotic cells
4	Functional anatomy of prokaryotic and eukaryotic cells: - morphological and anatomical characteristics of eukaryotic cells
5	General characteristics of fungi
6	Mid-Term-Microorganisms in rhizosphere and phyllosphere of plants
7	General characteristics of viruses; Microbial growth and growth curves
8	Environmental factors required for microbial growth
9	Methods to control microbial growth: 1. Physical Methods
10	Methods to control microbial growth: 2. Chemical Methods
11	Types of microbial metabolism: aerobic and anaerobic respiration
12	Types of microbial metabolism: fermentation
13	Microbial ecology: interactions between microorganisms and their environment
14	Microbial ecology: role of microorganisms in elemental cycles
15	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		

Instructor(s):
Signature:

Date:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251312007	COURSE NAME	Agricultural Ecology
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
II	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
X							
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (Practise)			
FINAL EXAM							60
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				Description of ecology and classification of ecology, fundamental principles of ecology, light, temperature, water, atmosphere, geographic and topographic factors, soil, fire, ecosystems, relation among organism in ecosystem, nutrient cycle in ecosystem, energy flow			
COURSE OBJECTIVES				This course can contribute to understand the role of environmental factors on agricultural production. Thus, this course can be considered as a prerequested course for agronomy major.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Identification of environmental factors which affect to growth and development of organism. Explain the relation of of the organism surrounding environment. Explain the effects of environmental factors on agricultural production.			
COURSE OUTCOMES				1.Student taken this course; can learn the role of environmental factors on agricultural production. 2. can understand more easily the course related to plant and animal production in the advance class. 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			
TEXTBOOK				Unpublished course notes			
OTHER REFERENCES				Andiç, C. 2002. Tarımsal Ekoloji. Atatürk Üniv Yay. no: 106 Kılınç, M. ve H.G. Kutbay, 2004. Bitki Ekolojisi.Palme yay. Özkütük K., Hayvan Ekolojisi. Çukurova Univ. Ders Kit. no: C-79 Gliessman, S.R., 2007. Agroecology, The Ecology of Sustainable Food Systems: CRC Press			
TOOLS AND EQUIPMENTS REQUIRED				Projector and computer			

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 their 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 their role in ecosystem
14	Description of energy flow and nutrient cycle in ecosystem
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					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. Ali KOÇ

Date:

Assoc. Prof. Nihal KAYAN

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251312008	COURSE NAME	Turkish language II
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
2	2	0	0	2	2	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
							√
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term		-	-
				Quiz		-	-
				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 quatitonsı). 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.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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				1.Distiguish Turkish Language abundance. 2.Identify Turkish Language rules. 3. Distinguish sound events. 4. Apply writing rules. 5. Constitute writing and verbal composition. 6. Use Turkish truely.			
TEXTBOOK				1- Turkish Language and Composition I-II, Gürer Gülsevin-Erdoğan Boz. 2- Turkish Language for universities, Muharrem Ergin.			
OTHER REFERENCES				1. Kaplan, M., “Culture and language”, 8. printing, ,Dergah Publication, İstanbul, 1993. 2. Fuat, M., “About Language”, Adam Publication, İstanbul, 2001. 3. Ercilasun, A. B., “Turkish Language History from begining to twentieth century”, Akçağ Publication, 1. printing, Ankara, 2004. 4. Aksan, D., “Power of Turkish”, Bilgi Publisher, 4. printing, Ankara, 1997.			
TOOLS AND EQUIPMENTS REQUIRED				Projection, Board			

COURSE SYLLABUS	
WEEK	TOPICS
1	Punctuation
2	Ambiguity
3	Notify in written I
4	Notify in written II
5	Notify in written III
6	Notify in written IV
7	Notify in written V
8	Notify in written VI
9	Honorifics
10	Official correspondence
11	Mid term Exam- Scientific literature; Verbal lecture
12	Scientific literature; Verbal lecture
13	Effective presentation skills
14	Sample letters
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					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:

Signature



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251312009	COURSE NAME	Principles of Ataturk and Recent Turkish History II
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
2	2	0	0	2	2	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
X							
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				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.			
COURSE OBJECTIVES				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			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION				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			
TEXTBOOK				Gazi Mustafa Kemal Atatürk, Nutuk (Söylev), C. I-II, TTK., Ankara, 1986.			
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 Açısından Türk Devriminin Temelleri ve Gelişimi, Ankara, 1976			
TOOLS AND EQUIPMENTS REQUIRED				Projection Machine, Map, Historical Photograph, Graphics.			

COURSE SYLLABUS	
WEEK	TOPICS
1	Strategy of Turkish Revolution
2	Sevr and Lozan Alliances
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; Psychological 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

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		

Instructor(s): .

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251312010	COURSE NAME	Foreign Language II
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
2	3	0	0	0	3	Compulsory (+) Elective ()	
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
X							
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1 st Mid-Term		1	40
				2 nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)							
COURSE DESCRIPTION				Fundamental concepts and knowledge			
COURSE OBJECTIVES				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 EDUCATION				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			
TEXTBOOK				Essential English, Beginner Student’s Book, Richmond Publishing Essential English, Workbook, Richmond 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				Course book, workbook, CD player, loudspeakers, dictionary			

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	<i>Present simple, When, It is on, at, about... LOOK AT THE TIME</i>
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

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:

Instructor(s):

Signature(s):



ESOGU Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251313001	COURSE NAME	Animal Production
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
3	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Horticulture Department Profession [if it contains considerable design, mark with (√)]	Social Science
	X		

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term	1	40
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (.....)		
FINAL EXAM		1	60

PREREQUIEITE(S)

No

COURSE DESCRIPTION

Importance and scope of livestock in agricultural production, current situation of livestock in Turkey and world; Important terms in animal production; Definition and scope of some concepts in animal breeding; Requirements for profitable animal husbandry; Some economically important yields; Reproduction in livestock; Breeding methods; Concepts of species and breed; Characteristics of cattle, buffalo, sheep and goat breeds raised in Turkey, care and management of livestock; Broiler and laying chicken husbandry; Animal shelters: Feeds used in animal nutrition, nutrients, digestion and absorption, classification of feeds.

COURSE OBJECTIVES

The objective of the course is to provide basic information on animal husbandry, animal breeds, reproduction, nutritional, and basic knowledge of a sustainable and profitable animal production.

ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION

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.
Having general knowledge about crossbreeding, selection, breeding.

TEXTBOOK

Course notes

OTHER REFERENCES

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 Zootečni 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 EQUIPMENTS REQUIRED

No special tool its 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 maintenance, ration preparation.
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					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: Asst. Prof.Dr. Zekeriya Kıyma

Date:

Signature:



ESOĞÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251313002	COURSE NAME	Statistics
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
III	2	0	0	2	4	COMPULSORY (x) ELECTIVE ()	Turkish

COURSE CATEGORY

Basic Science	Basic Engineering	Horticulture [if it contains considerable design, mark with (√)]	Social Science
√			

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term	1	40
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (.....)		
FINAL EXAM		1	60

PREREQUISITE(S)	None
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COURSE DESCRIPTION	Definition of statistics and general concepts, types of data, intermittent and continuous data, summary of data, descriptive statistics, central tendency measures and calculation, exchange 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 calculation of independence in single and two way directional tables.
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COURSE OBJECTIVES	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.
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ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION	* Gaining the concept of researcher to students, * Development of analytical thinking, * It is aimed to increase the ability to comment on different branches of agriculture
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COURSE OUTCOMES	1) Learn how difficult, laborious, costly and time-consuming it is to work with populations, and create examples for it 2) Learn that such individuals must be chosen purely by chance. 3) It learns that the statistics estimated from the samples are parameter estimates of the population. 4) Learn how to create a hypothesis and experiment with it to control it, 5) Learn how to check the hypotheses generated by the researcher.
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TEXTBOOK	Zahide KOCABAŞ, M. Muhip ÖZKAN ve Ensar BAŞPINAR (2013). Temel Biyometri, Ankara Üniversitesi, Ziraat Fakültesi, Yayın No: 1606, Ders Kitabı: 558. Orhan DÜZGÜNEŞ, Tahsin KESİCİ ve Fikret GÜRBÜZ (1993). İstatistik Metotları (2. Baskı), Ankara Üniversitesi, Ziraat Fakültesi yayınları: 1291, Ders Kitabı: 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 Cliffs, New Jersey
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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
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TOOLS AND EQUIPMENTS REQUIRED	Calculator
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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 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)
13	Calculation and interpretation of confidence bounds and confidence bounds for difference 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

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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251313003	COURSE NAME	Genetics
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
3	2	0	0	2	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
X							
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				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.			
COURSE OBJECTIVES				To give basic information on genetics, heredity and variation. To review previous investigations, by the way to gain ability to make genetical investigations.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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 transferring these knowledge to practice.			
TEXTBOOK				Vardar, Y., Kesercioğlu, T., 1990. Genetiğe Başlarken. Bilgehan Basımevi, Bornova-İzmir.			
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

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		

Instructor(s): Asst. Prof. Dr. YaseminGEDİK

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251313004	COURSE NAME	Agricultural Economics
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF					
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE		
3	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	TURKISH		
COURSE CATAGORY									
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science		
							X		
ASSESSMENT CRITERIA									
MID-TERM				Evaluation Type		Quantity	%		
				1st Mid-Term		1	40		
				2nd Mid-Term					
				Quiz					
				Homework					
				Project					
				Report					
				Others (.....)					
FINAL EXAM						1	60		
PREREQUIEITE(S)				-					
COURSE DESCRIPTION				Basic principles, theories and concepts of economics and agricultural economics and their implementation on practical life.					
COURSE OBJECTIVES				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.					
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.					
COURSE OUTCOMES				Learning the basic principles of agricultural economics and providing to apply them into practical life.					
TEXTBOOK				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				Projector					

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 other international quality systems
12	Natural Resources Economy
13	Organising in Agriculture, Cooperatives
14	Rural development economy
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					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): Dr. Nihal CAN AĞIRBAŞ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251313005	COURSE NAME	Food Science and Technology
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
III	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Horticulture [if it contains considerable design, mark with (√)]	Social Science
		X	

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term	1	40
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (.....)		
FINAL EXAM		1	60
PREREQUIEITE(S)	None		
COURSE DESCRIPTION	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		
COURSE OBJECTIVES	To give information basic concepts and techniques of foods, to increase information in processing of agricultural products		
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	To provide strengthening of subjects in food science and technology		
COURSE OUTCOMES	To aim increasing of information and to improve knowledge and skills of students in related subject		
TEXTBOOK	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

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			

Instructor(s):

Date:

Signature:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER	Fall
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COURSE CODE	251313006	COURSE NAME	Agricultural Structures and Irrigation
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
III	2	0	0	2	4	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Horticulture [if it contains considerable design, mark with (√)]	Social Science
	X		

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term	1	50
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (.....)		
FINAL EXAM		1	50
PREREQUIEITE(S)	-		
COURSE DESCRIPTION	Agricultural structures, hydrology, soil-plant-water relations, agricultural drainage, irrigation water quality and salinity.		
COURSE OBJECTIVES	The main aim of the course is to provide knowledge about agricultural structures, irrigation, drainage and irrigation water quality		
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Learns the plain of agricultural structures and irrigation and drainage.		
COURSE OUTCOMES	1. Learning general planning feature of agricultural structures 2. Learning of business center and regulation 3. Learning examination of irrigation and drainage subject 4. Learning drainage methods 5. Learning irrigation water quality		
TEXTBOOK	Güngör, Y., Erözel, Z., Yıldırım, O. Sulama, Ankara Üniversitesi Ziraat Fakültesi Yayın No:1540, ders kitabı:493		
OTHER REFERENCES	-		
TOOLS AND EQUIPMENTS REQUIRED	-		

COURSE SYLLABUS	
WEEK	TOPICS
1	Soil-plant-water relations
2	Water intake rate of soil
3	Evapotranspiration
4	Plant coefficient
5	Irrigation yield
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

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		

Instructor(s): Asst. Prof.Dr. Ertuğrul KARAŞ

Date:

Signature:



ESOĞÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251313007	COURSE NAME	Landscape Architecture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
3	2	0	0	2	2	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Landscape concept, Historical development and Study Areas of Landscape 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			
COURSE OBJECTIVES				The main goals of the course are to understand what Landscape Architecture is and study areas and also to establish relations with agriculture			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Students will be informed about landscape architecture and its study area			
COURSE OUTCOMES				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			
TEXTBOOK				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, Yenışehir-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 Üniversitesi Ziraat Fakültesi Yardımcı Ders Kitabı No:20, Adana, 170 s.			
OTHER REFERENCES				Ceylan, G., (2004). Dış Mekan Süs Bitkileri ve Peyzajda Kullanımları, Flora Yayınları, İstanbul.			
TOOLS AND EQUIPMENTS REQUIRED				-			

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

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			

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251313008	COURSE NAME	Field Crops
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
3	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (Practise)			
FINAL EXAM							60
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				Presentation of field crops, Cultivation of field crops			
COURSE OBJECTIVES				To provide information the introduction and cultivation of field crops.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				To learn enought information about cultivation technological techniques in field crops.			
COURSE OUTCOMES				Understanding and use of arable crops farming in practice to gain the ability to field practicable technologic.			
TEXTBOOK				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	TOPICS
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

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		

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

Date:

Assoc.Prof.Dr. Nihal KAYAN

Signature:



ESOGÜ Horticulture Department

Course Information Form

SEMESTER	FALL
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COURSE CODE	251313009	COURSE NAME	Foreign Language III
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
3	3	0	0	0	3	Compulsory (+) Elective ()	TURKISH
COURSE CATAGORY							
Basic Science		Faculty of Agriculture		Horticulture [if it contains considerable design, mark with (√)]			Social Science
X							
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1 st Mid-Term		1	40
				2 nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)							
COURSE DESCRIPTION				Fundamental concepts and knowledge			
COURSE OBJECTIVES				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			
TEXTBOOK				Essential English, Elementary Student's Book, Richmond Publishing Essential English, Workbook, Richmond 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				Course book, workbook, CD player, loudspeakers, dictionary.			

COURSE SYLLABUS	
WEEK	TOPICS
1	Linking Ideas:present and past - IMAGES
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	Mid-Term Examination - Modals
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	Present Simple tense, questions, short answers HIS MUSIC, HER SHOW, THEIR CHARITIES
12	Present simple, DO YOU HAVE A BIG FAMILY ?
13	Present Simple, Wh questions MEET YOUR PERFEC PARTNER
14	Be going to for plans – THE PERFECT HOLIDAY
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					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:

Signature(s):



ESOGÜ Horticulture Department Course Information Form

SEMESTER	FALL
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COURSE CODE	251313012	COURSE NAME	Occupational health and Safety I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
3	2	0	0	0	2	Compulsory (+) Elective ()	TURKISH
COURSE CATAGORY							
Basic Science		Faculty of Agriculture		Horticulture [if it contains considerable design, mark with (√)]			Social Science
20		20		30			30
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1 st Mid-Term		1	40
				2 nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				Definition of occupational safety, occupational accidents, occupational diseases, occupational safety in workplaces and ergonomics			
COURSE OBJECTIVES				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 OF COURSE TO APPLY PROFESSIONAL EDUATION				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, dust 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.			
TEXTBOOK				Kahya, E. 2014, İş Güvenliği, 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 AND EQUIPMENTS REQUIRED				Explanation of topics with the help of visuals.			

COURSE SYLLABUS	
WEEK	TOPICS
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

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				

Instructor(s): Prof.Dr. Rafet ASLANTAŞ

Date:

Signature(s):



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251314001	COURSE NAME	General Vegetable Growing
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
4	2	2	0	3	5	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (Practice)			25
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				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.			
COURSE OBJECTIVES				This course aimed to increase the knowledge and abilities of students in basic principles of vegetable production			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Theoretical and practical information of vegetables production which has an important place in the horticultural crops is given in this course.			
COURSE OUTCOMES				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.			
TEXTBOOK				Genel Sebze Yetiştiriciliği Cilt I. A. GÜNAY, A. Ü. Z.F. Bahçe Bit. Böl. 1992. Ankara.			
OTHER REFERENCES				Sebzecilik (Genel Teknikler Özel Uygulamalar) H. Kaygısız. Hasad Yay			
TOOLS AND EQUIPMENTS REQUIRED				Projection device 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 treatmentsof 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

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			

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251314002	COURSE NAME	Agricultural Extension and Communication
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
4	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				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.			
COURSE OBJECTIVES				Importance of agricultural extension and communication will be explained, methods in agricultural extension will be informed.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
COURSE OUTCOMES				To have the ability of planning and application of agricultural extension methods that will be used through career.			
TEXTBOOK				1. Anonim, 2006. Eskişehir İl Tarım Müdürlüğü Verileri. 2. Anonim, 2006. Tarım ve Köyişleri Bakanlığı Verileri. 3. Ceylan, C.İ., Köksal, Ö., Akın, A. GAP Bölgesinde Tarımsal Üretim Sürecinde Bilgi İhtiyaçlarının Karşılanmasında Tarım Danışmanlarının Yeri. 4. Ceylan, C. Tarımsal Yayım İletişimi Ders Notu (2006/2007 Güz).			
OTHER REFERENCES				3. Ceylan, C., 2005. Yayımcı Rehberi, TKB Yayım Dairesi Başkanlığı, Tarımsal Yayım Serisi, 2005/1. 4. Gümüşçü, A., 2004. Çiftçi Eğitim ve Tarımsal Yayım. T.E.A.E. Bakış, Sayı6, Eylül 2004. 5. Özkaya, T., 1996. Tarımsal Yayım ve Haberleşme. Ege Üniversitesi, Ziraat Fakültesi Yayınları, Yayın No: 520, Bornova,İzmir. 6. Değirmenci, Y., Manyaz, İ., Güzelaydın, I., Erkuş, E., Koçak, F., Arı, B., 2008. Tarımsal Yayım ve Danışmanlık, Ankara.			
TOOLS AND EQUIPMENTS REQUIRED				Projection			

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 education 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	Seminizing 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.

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		

Instructor(s):Dr. Nihal CAN AĞIRBAŞ

Date:

Signature:



ESOGU Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251314003	COURSE NAME	Research and Experimental Methods
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
4	2	2	0	3	5	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
Others (.....)							
FINAL EXAM						1	60
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				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 $F = t^2$. Assumptions of ANOVA, homogeneity control 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			
COURSE OBJECTIVES				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. -To get the researcher's mission to the students, - Development of analytical thinking, - It is aimed to increase the ability to comment on different branches of the agricultural			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				* To get the researcher's mission to the students, * Development of analytical thinking, * It is aimed to increase the ability to comment on different branches of the agricultural			
COURSE OUTCOMES				1) To learn that information on the subject being studied can be obtained by carrying out experiments, 2) To learn that basic principles which are to be taken into consideration while carrying out an experiments, 3) To learn that the most appropriate experimental design depends on the amount of homogeneous experimental material and variable being studied 4) To learn to choose the most appropriate statistical method to analyze the collected data from experiments carried out in different experimental designs			
TEXTBOOK				Orhan DÜZGÜNEŞ, Tahsin KESİCİ, Orhan KAVUNCU ve Fikret GÜRBÜZ (1987). Araştırma ve Deneme Metodları (istatistik Metodları-II). Ankara Üniversitesi, Ziraat fakültesi Yayınları:1021, Ders Kitabı: 295. Mehmet MENDEŞ (2013). Uygulamalı Bilimler için İstatistik ve Araştırma Yöntemleri (3. Baskı), İstanbul, Kriter Yayıncılık Douglas C. MONTGOMERY, Design and Analysis of Experiments,Fifth Edition (2001). Arizona State University John Wiley & Sons, Inc			
OTHER REFERENCES				Fikret GÜRBÜZ, Ensar BAŞPINAR ve Zahide KOCABAŞ (1995). Araştırma ve Deneme Metodları Uygulama Kılavuzu (II. Baskı). Ankara Üniversitesi, Ziraat fakültesi, Yayın No: 1431, Uygulama Kılavuzu: 244.			
TOOLS AND EQUIPMENTS REQUIRED				Calculator			

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 $F = t^2$. 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

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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251314004	COURSE NAME	Agricultural Machinery
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
4	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Horticulture [if it contains considerable design, mark with (√)]	Social Science
	X		

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term	1	20
	2nd Mid-Term	1	20
	Quiz	-	-
	Homework	-	-
	Project	-	-
	Report	-	-
	Others (.....)	-	-
FINAL EXAM		1	60

PREREQUIEITE(S)	-
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COURSE DESCRIPTION	Basic concepts related to farm machinery, description of the power and work, classification, basic information about construction properties and working principles.
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COURSE OBJECTIVES	To inform students for the following subjects; development of agricultural mechanization; energy and agriculture; engines; tractors; soil tillage tool and machines; sowing; planting; fertilizing and husbandry machines; irrigation machines; crop protection machines; harvesters; machinery in animal production; greenhouse mechanization; farm machinery management.
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ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	To gain basic knowledge in farm machinery area, to recognize farm power and work with machines, to know construction and working principles and solve the problems in this area.
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COURSE OUTCOMES	1 . Description of general concepts related to farm machinery 2 . Explanation of internal combustion engines, soil tillage tools and machinery, sowing; planting; fertilizing and husbandry machines; irrigation machines; crop protection machines; harvesters 3 . Selects suitable machines for farm enterprises 4 . Make plans in farm enterprises and enables machines to work in convenient times 5 . Has knowledges with usage and adjustments of farm machinery. 6 . Protects farm machines in good conditions and shape 7 . Solves problems related to farm machinery
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TEXTBOOK	ERDOĞAN, D., 2005. Farm Machinery. Ankara Uni., Ziraat Fakültesi, Yayın No: 1548, Ders Kitabı: 501, Ankara Üniversitesi Basımevi, 142 s., Ankara
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OTHER REFERENCES	-KESKİN, R. ve d. ERDOĞAN, 1984. Tarımsal Mekanizasyon. Ankara Üniv, Ziraat Fak. Yayınları: 927, Yardımcı Ders Kitabı: 262, 325 s., Ankara -SARAL, A. ve A. ONURBAŞ AVCIOĞLU, 2002 Motorlar ve Traktörler. Ankara Üniv, Ziraat Fak. Yayınları: 1529, Ders Kitabı: 482, 294 s., Ankara.
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TOOLS AND EQUIPMENTS REQUIRED	Course books, other books with course contents, semposium, etc. Power point presentations, catalogues; farm tools and machineries.
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COURSE SYLLABUS	
WEEK	TOPICS
1	Machinery in agriculture
2	Energy and agriculture
3	Engines
4	Tractors
5	Soil tool and machinery
6	Planting machines
7	Fertilizing and husbandry machines
8	Irrigation machines
9	Crop protection machines
10	Harvesting machines
11	Threshing machines
12	Barn and poultry mechanization
13	Greenhouse mechanization
14	Selection and management of farm machinery
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					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. Ertuğrul KARAS

Date:

Signature:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER	Spring
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COURSE CODE	251314005	COURSE NAME	Soil Science
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
IV	2	0	0	2	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				NONE			
COURSE DESCRIPTION				To teach defining soil formation and plant nutrition elements in soil			
COURSE OBJECTIVES				To learn soil formation and the basic principles of plant nutrition, to get detailed information on plant nutrients, their functions on plants, interactions with each others.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Being informed on the basic theoretical knowledge of plant nutrition and to be capable of using this knowledge			
COURSE OUTCOMES				Able to define soil formation and soil morphology, Being informed on plant nutrition.			
TEXTBOOK				1. Toprak Bilimi (2010). Prof.Dr. Mehmet Aydın ve Doç.Dr. Şeref Kılıç. Nobel Yayın Dağıtım.			
OTHER REFERENCES				1. Bitki Besleme (2010). Prof.Dr. Burhan Kacar ve Prof.Dr. Vahap Katkat			
TOOLS AND EQUIPMENTS REQUIRED				-			

COURSE SYLLABUS	
WEEK	TOPICS
1	Introduction to soil science and description of soil.
2	Soil formation, soil morphology and horizons
3	Physical properties of soil
4	Soil water types.
5	Chemical properties of soil
6	Organic matter
7	Land Use and Soil environment relations
8	Soil and plant transport mechanisms of plant nutrition
9	The definition and history of plant nutrition
10	Classification of plant nutrients,
11	Macro nutrients (N, P, K, Ca, Mg, S)
12	Micro nutrients (Fe, Cu, Zn, Mn, Mo, B, Cl...)
13	Beneficial nutrients (Se, Al, Na, Si, Co, et)
14	The relations of plant nutrient disorders and disease
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					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. Nurdilek GÜLMEZOĞLU
Signature

Date:



ESOGÜ Horticulture Department

Course Information Form

SEMESTER	Spring
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COURSE CODE	251314006	COURSE NAME	Plant Physiology
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
IV	2	0	0	2		COMPULSORY (x) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				√			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (Lab assignments)			
FINAL EXAM						1	60
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				Structure and organelles of plant cells, plant water relations, the importance of plant physiology of plant nutrients, photosynthesis and photosynthesis affecting factors, the transport of assimilates, respiration and factors affecting respiration, growth in plants and development concepts, growth and development of effective factors, growth and the development some important physiological events, Adaptation to changing environmental conditions in plants.			
COURSE OBJECTIVES				Provide basic information about plant physiology. To explain all vital activities and functions of physics in terms of physics, chemistry and biology.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				By explaining the physiological events occurring in the plants with examples, we will learn the basic issues that need to be known and recognized in plant breeding, affecting the breeding, thus leading to factors such as productivity and quality.			
COURSE OUTCOMES				- Ability to learn about the function of plant cells and organelles, plant-water relationship and mineral matter transport - Learn about water uptake and loss phenomena in plants and transport of organic materials - Learn more about photosynthesis, respiration and fermentation metabolisms -Hormonal association of growth, development and maturation events -Learn about stress events and signal transmission mechanisms in plants			
TEXTBOOK				- Bitki Fizyolojisi (Burhan Kacar, A. Vahap Katkat, Şule Öztürk), 4. Baskı, Nobel Yayınları			
OTHER REFERENCES				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).			
TOOLS AND EQUIPMENTS REQUIRED				Computer and projection.			

COURSE SYLLABUS	
WEEK	TOPICS
1	Structure and functions of plant cells and organelles
2	Cell division, structural elements, enzymes and processes
3	Water and cell relation, taking and transporting water, dehydration
4, 5	Plant nutrient intake, transport and deficiencies
6	Factors affecting photosynthesis and photosynthesis
7	Transport, storage and use of photosynthesis products
8	Factors affecting the respiratory and respiratory
9	Mid-term exam-Tropism movements in plants
10	Growth, development and maturation
11, 12	Plant hormones and functions
13	Stress physiology in plants
14	Some physiological disorders in plants
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				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. Rafet ASLANTAŞ

Date:

Signature:



ESOGÜ Horticulture Department

Course Information Form

SEMESTER	Spring
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COURSE CODE	251314007	COURSE NAME	Plant Protection
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
IV	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Horticulture [if it contains considerable design, mark with (√)]	Social Science
		√	

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term	1	40
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (Lab assignments)		
FINAL EXAM		1	60

PREREQUIEITE(S)	None
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COURSE DESCRIPTION	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.
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COURSE OBJECTIVES	The general information about plant diseases and pests will be given.
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ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Learn to pest and disease factors affecting the yield and quality of plants.
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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.
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TEXTBOOK	1. Tarımsal Savaşım Yöntem ve İlaçları. 1993. Delen, N. Ege Üniversitesi Ziraat Fakültesi Ofset Basımevi, İzmir.
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OTHER REFERENCES	2. Agricultural Chemicals. 1991. Thomson, W. T. Book IV-Fungicides, Thomson Puplication, California. 3. Agricultural Chemicals. 1991. Thomson, W. T. Book III-Miscellaneous Agricultural Chemicals, Thomson Puplication, California. 4. Agricultural Chemicals. 1991. Thomson, W. T. Book I-Insecticides, Thomson Puplication, California. 5. The Pesticide Manual. 1995. Tomlin, C. Incorporating the Agrochemicals Handbook, Crop Protection Publication, U.K. 6. Tarımsal Zararlılarla Savaş Yöntem ve İlaçları. 1993. Öncüler, C. Ege Üniversitesi Basımevi, İzmir. 7. Tarımda İlaç Mücadelenin Temel Prensipleri. 1996. Kaygısız, H. Hasad Yayıncılık LTD. ŞTİ. Rebel Ofset, İstanbul. 8. Bitki Koruma El Kitabı. 2002. Anonymous. T.C. tarım ve Köyişleri Bakanlığı İzmir İl Müdürlüğü Yayınları No:352.
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TOOLS AND EQUIPMENTS REQUIRED	Computer and projection.
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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 fungicides 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

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		

Instructor(s): Assoc.Prof.Dr. Coşkun GÜÇLÜ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251314008	COURSE NAME	Foreign Language IV
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
4	3	0	0	0	3	Compulsory (+) Elective ()	
COURSE CATAGORY							
Basic Science		Agriculture		Horticulture [if it contains considerable design, mark with (√)]			Social Science
X							
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1 st Mid-Term		1	20
				2 nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)							
COURSE DESCRIPTION				Fundamental concepts and knowledge			
COURSE OBJECTIVES				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			
TEXTBOOK				1. Essential English, Elementary Student’s Book, Richmond Publishing 2. Essential English, Workbook, Richmond Publishing			
OTHER REFERENCES				1. Murphy, R., 2004, English Grammar in Use , Cambridge University Press, 2. Dictionary of Contemporary English , Longman. 3. Start Up Comprehensive English Practice, 2007, Nüans Publishing			
TOOLS AND EQUIPMENTS REQUIRED				Course book, workbook, CD player, loudspeakers, dictionary			

DERSİN HAFTALIK PLANI	
HAFTA	İŞLENEN KONULAR
1	Linking ideas; present and past İMAGES
2	Present simple positive forms with some common verbs ORDINARY PEOPLE
3	Present simple with activities DOES HE LIKE YOU ?
4	<i>Present simple, When, It is on, at, about...</i> LOOK AT THE TIME
5,6	Present simple, Wh questions, Before, After, Everyday activities WHAT TIME DO YOU GET UP ?
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, 11	Mid Term Exam - 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	Be going to for plans – THE PERFECT HOLIDAY
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					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:

Signature(s):



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251314011	COURSE NAME	Occupational health and Safety II
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
4	2	0	0	2	2	Compulsory (+) Elective ()	Turkish
COURSE CATAGORY							
Basic Science		Agriculture		Horticulture [if it contains considerable design, mark with (√)]			Social Science
20		20		30			30
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1 st Mid-Term			40
				2 nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM							60
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				Occupational health and safety organization, occupational health and safety law no. 6311, agricultural issues			
COURSE OBJECTIVES				To teach how to prevent work accidents and occupational diseases in the workplace and solve possible problems.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION							
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, dust etc.) taking measurements, analyzing the results and interpretation. 3.Potential risks in the workplace, assessment and development of solutions to protect human health.			
TEXTBOOK				Kahya, E. 2014, İş Güvenliği, 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 AND EQUIPMENTS REQUIRED				Explanation of topics with the help of visuals.			

COURSE SYLLABUS	
WEEK	TOPICS
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

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				

Instructor(s): Prof.Dr. Rafet ASLANTAŞ

Date:

Signature(s):



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315001	COURSE NAME	General Viticulture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
5	2	2	0	3	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				History of viticulture, viticulture in Turkey and in the world, new- old viticulture, nutritional facts of grapes, area of usage, climatic and soil requirements of grapes, morphology of grape, propagation of grapes, cultural practices, will be discussed.			
COURSE OBJECTIVES				To give basic knowledge and abilities on general viticulture to the students.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				This is the main course that informed about vitis and information is given theoratically and practically on cultivation and maintenance of grapes.			
COURSE OUTCOMES				To have general knowledge on history of viticulture. To have information about viticulture in the World and Turkey. To learn ampelography. To learn ecological requirements of grapes. To learn propagation, pruning and rootstock usage of grapes. To have the knowledge and ability on accurate vitis plantation and management.			
TEXTBOOK				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 EQUIPMENTS REQUIRED				Projection and pc.			

COURSE SYLLABUS	
WEEK	TOPICS
1	History of viticulture, culture history and genetical resources
2	Viticulture in Turkey and in the world
3	Consuming types of grape and nutritional facts
4	Classification of grapes
5	Climatic and soil requirements of grapes
6	Morphology of grape
7	Ampelography
8	Propagation of grapes
9	Establishment of a grape plantation and pruning
10	Cultural practices (tillage, irrigation, fertilization, pest and disease management)
11	Mid-term exam / Cultural practices (tillage, irrigation, fertilization, pest and disease management)
12	Training systems
13	Grape production, trade and consumption methods
14	Harvest, sorting, packaging, storage and drying
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					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. Rafet ASLANTAŞ

Date:

Signature:



ESOĞÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315002	COURSE NAME	General Fruit Growing
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
5	2	2	0	3	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(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.			
COURSE OBJECTIVES				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.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
TEXTBOOK				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 EQUIPMENTS REQUIRED				Computer and projection.			

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 differentiation
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

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			

Instructor(s): Prof.Dr. Rafet ASLANTAŞ

Date:

Assoc. Prof.Dr. Yasemin EVRENOSOĞLU

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315003	COURSE NAME	Horticultural Biotechnology
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
IV	2	0		2	3	COMPULSORY (x) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Agricultural Biotechnology [if it contains considerable design, mark with (√)]			Social Science
				√			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz		2	10
				Homework		1	20
				Project			
				Report			
				Others (Lab assignments)			
FINAL EXAM						1	30
PREREQUIEITE(S)				None			
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 disease-free plants by tissue culture and micropropagation gene transfer techniques, production of transgenic horticultural crops			
COURSE OBJECTIVES				Application of biotechnological methods to crops, provide what has been and can be done in plant breeding. Micro and macro techniques are taught. Students are be able to know basic principles in biotechnology..			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Recent applications of plant biotechnology to improve the quality and yield of horticultural crops will be acquired			
COURSE OUTCOMES				Be able to use source of biotechnological knowledge Be able to enhance agronomical characteristics using biotechnology Be able to develop new cultivar Be able to conserve genetic resources Be able to understand gene transfer principles Be able to understand correlations between agronomical characteristics and genes Be able to understand use of technology in breeding			
TEXTBOOK				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			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Computer and projection.			

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	Midterm Exam, Haploidy
6	Haploid plant production and its use in plant breeding
7	Protoplast culture and somatic hybridization
8	Micro propagation
9	<i>In vitro</i> germplasm conservation
10	Gen transfer
11	Midterm Exam, transgenic plants
12	Gen transfer methods
13	Reason to development of transgenic plants
14	Development of transgenic plants
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	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. Nuray ÇÖMLEKÇİOĞLU

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315004	COURSE NAME	Propagation Techniques of Horticulture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
5	2	2	0	3	5	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				This course covers generative and vegetative propagation methods of horticultural crops, and propagation methods for fruits, vegetables, vineyards and ornamental plants.			
COURSE OBJECTIVES				To give detailed information about the methods and principles of propagation of horticultural crops.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				-			
COURSE OUTCOMES				1. to be learn knowledge about the methods used in the propagation of Horticultural crops 2. to be learn methods for propagation according to the type of fruit species 3. to be learn methods for propagation of vegetables, grapes and ornamental plants			
TEXTBOOK				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			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Projection			

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

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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315012	COURSE NAME	Proffesional Foreign Language I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
5	2	0	0	2	2	COMPULSORY (X) ELECTIVE ()	English
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			
				2nd Mid-Term		1	40
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				To teach words and patterns required in programs, help to express oneself and prepare to career in future.			
COURSE OBJECTIVES				To give information about proffesional terminology in foreing language and to give ability to use proffesional terminology			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Students will be informed about proffesional terminology in foreign language			
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 Ebcioglu, N., Bitki Adları Sözlüğü, İnkılap kitabevi			
TOOLS AND EQUIPMENTS REQUIRED				Dictionary			

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315013	COURSE NAME	Professional Practice I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
5	0	4	0	0	3	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	50
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Department of land and to make practical training courses in laboratory. Improve the knowledge by technical tours.			
COURSE OBJECTIVES				The practice ability sophisticating and making technical tours to students about all lessons.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				To make progress on using theoretical knowledge in practice.			
COURSE OUTCOMES				1. acquired some practical knowledge about vegetable crops 2. acquired some practical knowledge about fruit cultivation 3. acquired some practical knowledge about vineyard cultivation 4. acquired some practical knowledge about the cultivation of ornamental plants 5. Future projection composes by technical tours to institutions and establishments			
TEXTBOOK				-			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				-			

COURSE SYLLABUS	
WEEK	TOPICS
1	Harvest techniques in horticultural crops
2	Harvest techniques in horticultural crops
3	Classification of horticultural crops
4	Classification of horticultural crops
5	Packages and packaging techniques of horticultural crops
6	Harvest
7	Market offering
8	I. Midterm exam / Pazara sunum
9	Storage
10	Storage losses
11	Storage losses
12	Harvest
13	Autumn managements of orchards and vegetable gardens
14	Autumn managements of orchards and vegetable gardens
15	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			

Instructor(s): All Teaching Members

Date:

Signature:



ESOĞÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE		COURSE NAME	Outdoor Ornamental Plants Propagation Tree-Shrub
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
5	2	0	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			
				2nd Mid-Term		1	40
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Propogation of woody plants such as tree and shrub for landscape application			
COURSE OBJECTIVES				The main goals of the course are to learn outdoor woody plants and propagation methods of these plants			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Students will be informed about woody ornamental plants, its ecological conditions and propogation methods of these plants.			
COURSE OUTCOMES				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.			
TEXTBOOK				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 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.			
OTHER REFERENCES				Mamıkoğlu, N.G. (2007). Türkiye'nin Ağaçları ve Çalıları, NTV Yayınları, İstanbul, 727s.			
TOOLS AND EQUIPMENTS REQUIRED				Computer, projection			

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 - Angiospermae outdoor plants (Trees)
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

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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315008	COURSE NAME	Organic Agriculture in Horticulture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
5	2	0	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Organic agriculture and general principles, law and instruction of organic agriculture, sertification system, production methods of organic fruit and vegetable growing and organic viticulture			
COURSE OBJECTIVES				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			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
OTHER REFERENCES				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 EQUIPMENTS REQUIRED				Projection			

COURSE SYLLABUS	
WEEK	TOPICS
1	General basis of organic agriculture
2	Developing process of organic agriculture in the World and Turkey
3	Low and instruction of organic agriculture
4	Sertification system of organic agriculture
5	Increase 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

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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315009	COURSE NAME	Mushroom Growing Technique
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
5	2	0	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	50
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Mushroom production in Turkey and in the world, nutritional facts of mushroom, climatic and compost requirements, cultural practices and systems will be discussed.			
COURSE OBJECTIVES				The aim of this course is to introduce the students the cultivation of common mushroom and basic principles			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				This is the main course that informed about principles of cultivation techniques and commercial production of mushroom.			
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 Agaricus bisporus 6.Harvest and Packaging			
TEXTBOOK				* 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			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Projection and pc.			

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 indoor cultivation place
5	Steps to commercial cultivation
6	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	Irrigation and temperature at harvest time
10	Classification and packaging
11	Mid-term Exam, Mushroom Pest and Disease
12	Mushroom Pest and Disease
13	Marketing
14	Pest and Diseases in mushroom growing
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				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. Nuray ÇÖMLEKÇİOĞLU

Date:

Signature:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER	Fall
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COURSE CODE	251315010	COURSE NAME	Fertilization of Horticultural Plants
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
V	1	2	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Introducing horticulture crops, explaining effects of factors to fertilization, learning of fertilization timing, application form of fertilizers to horticultural plants.			
COURSE OBJECTIVES				Learning of fertilization timing, application form of fertilizers to fruit and vegetable plants.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Identification of basic principles on fertilization programs and application the programs in selected plants			
COURSE OUTCOMES				-Learning Application forms, timing, and amount of fertilization, and gaining ability on application of fertilization of plants. - Preperation of specific fertilization program for horticultural plants.			
TEXTBOOK				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 Gübrenmesi. Bornova –İzmir. Zengin M. ve Özbahçe A. 2010. Bitkilerin iklim ve toprak istekleri. Atlas akademi Yayınları.			
TOOLS AND EQUIPMENTS REQUIRED				-			

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

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		

Instructor(s): Assoc. Prof.Dr.Nurdilek Gülmezoğlu

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315011	COURSE NAME	Seedling - Nursery Growing Technique
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
5	1	2	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
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.			
COURSE OBJECTIVES				To get information about production of vegetable seedling and nursery production.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Students will be informed about production of vegetable seedling and nursery production.			
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.			
TEXTBOOK				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.			
OTHER REFERENCES				Yılmaz, S., Çelik, H., Zengin, S., Fırat, A.F., . (2009). Tohum, fide ve çeşit seçimi. Örtüaltı Biber Yetistirciliği. 4. Bölüm.49-58s. Batı Akdeniz Tarımsal Aras. Enst., Antalya.			
TOOLS AND EQUIPMENTS REQUIRED				Projection and pc.			

COURSE SYLLABUS	
WEEK	TOPICS
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 in nursery
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				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. Yasemin EVRENOSOĞLU

Date:

Assoc. Prof.Dr. Nuray ÇÖMLEKÇİOĞLU

Signature:



ESOGÜ Horticulture Department

COURSE INFORMATION FORM

SEMESTER	Fall
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COURSE CODE	251315005	COURSE NAME	Determination of Plant Fertilization Requirements
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
V	3	0	0	3	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Diagnosing nutrient disorders of plants			
COURSE OBJECTIVES				Determine for fertilizer needs while diagnosing nutrient disorders in growing crops include plant tissue analysis and visual symptoms of nutrient deficiency and toxicity.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				To fertilize considering deficiency of plant nutrition.			
COURSE OUTCOMES				Diagnosing nutrient disorders and to determine which form of fertilizer needs by plants.			
TEXTBOOK				Gübreler ve Gübreleme Tekniği (2009). Prof. Dr. B. Kacar ve Prof. Dr. V. Katkat.			
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.			
TOOLS AND EQUIPMENTS REQUIRED				-			

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 nutrients, 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, Mitscherlich, 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

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		

Instructor(s): Assoc. Prof.Dr. Nurdilek Gülmezoğlu

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315006	COURSE NAME	Agriculture and Environment
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF					
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE		
5	3	0	0	3	3	COMPULSORY () ELECTIVE (X)	Turkish		
COURSE CATAGORY									
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science		
		X							
ASSESSMENT CRITERIA									
MID-TERM				Evaluation Type		Quantity	%		
				1st Mid-Term		1	20		
				2nd Mid-Term		1	20		
				Quiz					
				Homework					
				Project					
				Report					
				Others (.....)					
FINAL EXAM						1	60		
PREREQUIEITE(S)				-					
COURSE DESCRIPTION				Agricultural practices and environment					
COURSE OBJECTIVES				Protection of environment in relation to agricultural practices					
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Awareness in agricultural applications					
COURSE OUTCOMES				To make ecologically sensible agricultural production To have the ability of utilizing agricultural and industrial waste in agricultural production					
TEXTBOOK				Unpublished lecture notes					
OTHER REFERENCES				Organic Agriculture and Environment (Prof. Dr. S. Kırımhan, Uğurer Publishing, 2005)					
TOOLS AND EQUIPMENTS REQUIRED				-					

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 distillery 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

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		

Instructor(s): Assoc.Prof.Dr.Hatice DAĞHAN

Date:

Signature:



ESOGU Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251315007	COURSE NAME	Bee and Silkworm Growing
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
5	3	0	0	3	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture Department Profession [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				No			
COURSE DESCRIPTION				The importance of bees and silk-worm rearing, honey bee breeds, morphological features used to determine breeds, tasks of bees, inside and outside of the bee hive, bee products, formation and composition of honey maintenance of bees through season, honey harvest, life stages of silkworm, formation and production of silk, maintenance of silk worms, problems and possible solutions in apiculture and sericulture.			
COURSE OBJECTIVES				To emphasize importance of bee products in human health and nutrition and role of bees in pollination. Providing information about issues like creating a healthy bee colonies to ensure profitable production and to help pollination in crop production to increase the quality and efficiency, importance of silk production and give basic knowledge about creating the infrastructure for a profitable production.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION				Bee and silkworm cultivation, production of quality products in these areas and social and economic contributions of bee and silkworm cultivation will be taught.			
COURSE OUTCOMES				It is aimed to introduce honeybee and silkworm rearing with theoretical knowledge and practices and teach methods of obtaining high-quality products.			
TEXTBOOK				Şahan Ü., 2011. İpekböcekçiliği. Dora Yayınları, Bursa. Akbay, R., 1986. Arı ve İpekböceği Yetiştirme. A.Ü.Zir. Fak. Yayın. 956 / 276. Ankara.			
OTHER REFERENCES				Genç, F., Dodoloğlu, A., 2003. Arıcılığın Temel Esasları. Atatürk Üniversitesi Yayınları No: 931. Atatürk Üniversitesi Ziraat Fakültesi Ofset Tesisi, Erzurum. Güler, Ahmet, Bal Arısı (Apis mellifera L.) . Ondokuzmayis Universitesi Ziraat Fakultesi Ders Kitabı No:55			
TOOLS AND EQUIPMENTS REQUIRED				None			

COURSE SYLLABUS	
WEEK	TOPICS
1	The importance of beekeeping in agricultural production, beekeeping in the world and in Turkey, breeds of bees.
2	Colony development, nutrition, duties of colony members, basic structural differences among members, colony life cycle.
3	Anatomy and physiology of the honey bee, behaviors of honey bee: age-related division of labor, communication, feeding puppies, building honey comb, defense, air-conditioning, cleaning, nectar, pollen, water, collection and processing.
4	Honey bee genetics and breeding, starting beekeeping, equipment, record-keeping.
5	Colony management of honeybees: early spring maintenance, spring maintenance; feeding, assembly, renewal of queen bees, control of colony splitting, summer care, honey flow, and additional of honey comp, harvesting honey.
6	Midterm Exam
7	Colony Management: Fall care and wintering, colony splitting, looting prevention, water supply, honey comp renewal, transport, Queen bee and male bee.
8	Types of silkworm, their place in systematic, the story of the birth and spread of silk worm around the world, sericulture in the world, Europe and Turkey, economics of sericulture, morphological and physiological characteristics.
9	Life cycle of silkworm, classification and distribution, cocoon-selection, gender identification, disease control.
10	Preparation of seed production, storage of eggs, incubation conditions, larval stage, the preparation of care facilities, temperature and humidity conditions.
11	Care and feeding through different age periods, types, properties of hangers, hanging methods.
12	Cocoon harvesting, strangulation, classification, characteristics of cocoon, pulling silk, cooking, properties of silk.
13	The main diseases and pests, legal status and organization, planting mulberries for sericulture.
14	Problems and solutions of sericulture.
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					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: Asst.Prof.Dr. Yüksel AKSOY

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316001	COURSE NAME	Protected Cultivation of Vegetable Crops
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
6	2	2	0	3	5	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (Practice)			25
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				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.			
COURSE OBJECTIVES				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.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
TEXTBOOK				Örtüaltı Sebzeciliği, Sevgican, A., Ege Univ. Ziraat Fak. Yayın No. 528, Bornova-Izmir, 2002.			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				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

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				

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316002	COURSE NAME	Horticultural Crop Breeding
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
6	2	2	0	3	5	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Introduction to breeding, plant reproduction models, sources of variation, 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 OBJECTIVES				To teach plant breeding methods and how these methods are used to improve plant characteristics			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Learns the breeding of horticultural plants.			
COURSE OUTCOMES				1) Understanding and practicing horticultural plant breeding methods 2) Understanding nad practicing molecular breeding methods 3) Being able to improve plant characteristics using breeding methods 4) Understanding biotechnological applications of breeding methods			
TEXTBOOK				Jack Brown, Peter Caligari, 2008. An Introduction to Plant Breeding, Blackwell Publishing			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				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

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		

Instructor(s): Assoc. Prof. Nuray ÇÖMLEKÇİOĞLU

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316003	COURSE NAME	Diseases of Horticultural Crops
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
6	1	2	0	2	2	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				In this course, vegetables, pathogens causing fruits, vegetable and other diseases, ant their symptoms, biology and control methods will be taught			
COURSE OBJECTIVES				This course is designed to teach students the basic information about the symptoms, biology and control of diseases of horticultural crops			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				To know horticultural diseases.			
COURSE OUTCOMES				1. To understand abiotic diseases factors and its symptoms 2. To learn important pome and stone fruit bacterial and fungal diseases, their economic importance, host plants, symptoms, biology and control methods. 3. To learn important virus and virus-like organism diseases in horticultural crops, their economic importance, host plants, symptoms and control methods 4. To learn chestnut, walnut, olive diseases, their economic importance, host plants, symptoms, biology and control methods 5. To learn important citrus, vineyard, strawberry diseases in orchard, their economic importance, host plants, symptoms, biology and control 6. To learn damping-off, vascular wilt agents, their economic importance, host plants, symptoms, biology and control methods in vegetables 7. Important cabbage, lettuce, union, spinach diseases, their economic importance, host plants, symptoms, biology and control methods 8. Important cucurbitaceae and solanaceae diseases, their economic importance, host plants, symptoms, biology and control methods 9. To learn important postharvest diseases of horticultural crops			
TEXTBOOK				G.N. 2005. Plant Pathology. Fith Edition, Academic Press, Inc. p952. Baykal, N. 1994. BahçeBitkileri Hastalıkları. U.Ü. Zir. Fak. Ders Notları. No:2 Anonymous, 1995. Zirai Mücadele Teknik Talimatları. Tarım Bakanlığı. Koruma ve Kontrol Genel Müdürlüğü. Baykal, N. 1997. Sebze Fungal Hastalıkları. Uludağ Üniversitesi Basımevi, Ders Notları No:76, Bursa. Fletcher, J. F. 1991. Compendium of Tomato Diseases. Edited by J. B. Jones, J. P. Jones, R. E. Stall and T. A. Zitter. St. Paul, Minnesota: APS Press.			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Projection			

COURSE SYLLABUS	
WEEK	TOPICS
1	Abiotic and biotic diseases in horticulture
2	Biotic factors of the disease in horticultural crops
3	Diseases in pomefruits
4	Diseases in stone fruits
5	Viruses and virus-like diseases in horticulture
6	Mid-term exam Viruses and virus-like diseases in horticulture
7	Diseases in nut species
8	Diseases in citrus species
9	Diseases in vineyard, olive and strawberry
10	Diseases in vegetables
11	Diseases in vegetables
12	Diseases in vegetables
13	Diseases in ornamental species
14	Post harvest and storage diseases
15	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		

Instructor(s): Assoc.Prof.Dr. Coşkun GÜÇLÜ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316004	COURSE NAME	Pests of Horticultural Crops
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
6	1	2	0	2	2	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Description, biology, damage and their control of important pests in fruit, vineyard and ornament plants.			
COURSE OBJECTIVES				Objective of this course, description, biology, damage and their control of important pests in fruit, vineyard and ornament plants in Turkey are teach.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				To know pests of horticultural plants.			
COURSE OUTCOMES				Knowledge about description, biology, damage and their control of important pests in fruit, vineyard and ornament plants are learning. Knowledge about description, biology, damage and their control of important pests in fruit, vineyard and ornament plants are understand. Knowledge about description, biology, damage and their control of important pests in fruit, vineyard and ornament plants are assimiliate. Knowledge about description, biology, damage and their control of important pests in fruit, vineyard and ornament plants are improve. Knowledge about description, biology, damage and their control of important pests in fruit, vineyard and ornament plants can be comment. Knowledge about description, biology, damage and their control of important pests in fruit, vineyard and ornament plants in to farmers can be transfer.			
TEXTBOOK				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)..			
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 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 AND EQUIPMENTS REQUIRED				Projection			

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

Instructor(s): Assoc.Prof.Dr. Coşkun GÜÇLÜ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316005	COURSE NAME	Ornamental Plants Growing
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
6	2	0	0	2	2	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			
				2nd Mid-Term		1	40
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				The historical development and socio-economic importance of ornamental plantations, Propagation and growing techniques for some important cut flower			
COURSE OBJECTIVES				To learn some important cut flower species and propagation techniques.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Students will be informed about ornamental plants and its propagation methods.			
COURSE OUTCOMES				To have knowledge of growing techniques of some cut flowers			
TEXTBOOK				Süs Bitkileri. 1996. Mengüç,A. Anadolu Üniversitesi, Açıköğretim Fakültesi Yayınları,Eskişehir.			
OTHER REFERENCES				Altan, S.,1989. Süs Bitkileri Üretim Tekniği. Çukurova Üniversitesi Ziraat Fakültesi Ders Kitapları Yayını, No. 9, Adana. Tanrıverdi, F. 1993. Çiçek Üretim Tekniği, Sera ve Açık Alanlarda Saksı, Kesme ve Bahçe Çiçeği Yetiştirme İlkeleri Ders Kitabı, İnkılap Kitabevi, İstanbul. Korkut A., 1993. Seralarda Çiçek Yetiştiriciliği, Sera Üreticisinin El Kitabı,, Yayın Yeri: Hasad Yayıncılık.			
TOOLS AND EQUIPMENTS REQUIRED				-			

COURSE SYLLABUS	
WEEK	TOPICS
1	The historical development and socio-economic importance of ornamental plants propagation
2	Süs Bitkilerinin sınıflandırılması-Süs Bitkileri sektörü
3	Rose Propagation
4	Carnation Propagation
5	Chrysanthemum Propagation
6	Gerbera Propagation
7	Anthurium Propagation
8	Alstroemeria Propagation
9	Midterm Exam- Gladiol Propagation
10	Gladiol Propagation
11	Orchids Propagation
12	Daffodil Propagation
13	Tulip Propagation
14	Lilium Propagation
15	Final

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			

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

Date:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316013	COURSE NAME	Proffesional Foreign Language II
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
6	2	0	0	2	2	COMPULSORY (X) ELECTIVE ()	English
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			
				2nd Mid-Term		1	40
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				To teach words and patterns required in programs, help to express oneself and prepare to career in future.			
COURSE OBJECTIVES				To give information about proffesional terminology in foreing language and to give ability to use proffesional terminology			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Students will be informed about proffesional terminology in foreign language			
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				-			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Dictionary			

COURSE SYLLABUS	
WEEK	TOPICS
1	Turkish to English translation work (in about Fruit Growing and Breeding)
2	Turkish to English translation work (in about Fruit Growing and Breeding)
3	Turkish to English translation work (in about Fruit Growing and Breeding)
4	Turkish to English translation work (in about Fruit Growing and Breeding)
5	Turkish to English translation work (in about Fruit Growing and Breeding)
6	Turkish to English translation work (in about Fruit Growing and Breeding)
7	Turkish to English translation work (in about Fruit Growing and Breeding)
8	Turkish to English translation work (in about Fruit Growing and Breeding)
9	Midterm exam, Turkish to English translation work (in about Ornamental Plants Growing and Breeding)
10	Turkish to English translation work (in about Ornamental Plants Growing and Breeding)
11	Turkish to English translation work (in about Ornamental Plants Growing and Breeding)
12	Turkish to English translation work (in about Vegetable Growing and Breeding)
13	Turkish to English translation work (in about Vegetable Growing and Breeding)
14	Turkish to English translation work (in about Viticulture)
15	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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316014	COURSE NAME	Professional Practice II
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
6	0	4	0	0	3	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	50
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Department of land and to make practical training courses in laboratory. Improve the knowledge by technical tours.			
COURSE OBJECTIVES				The practice ability sophisticating and making technical tours to students about all lessons.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				To make progress on using theoretical knowledge in practice.			
COURSE OUTCOMES				1. acquired some practical knowledge about vegetable crops 2. acquired some practical knowledge about fruit cultivation 3. acquired some practical knowledge about vineyard cultivation 4. acquired some practical knowledge about the cultivation of ornamental plants 5. Future projection composes by technical tours to institutions and establishments			
TEXTBOOK				-			
OTHER REFERENCES				-			
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

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			

Instructor(s): All Teaching Members

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE		COURSE NAME	Propagation of Seasonal Flower
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
6	2	0	0	3	3	COMPULSORY () ELECTIVE (x)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			
				2nd Mid-Term		1	40
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
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.			
COURSE OBJECTIVES				Annual, biannual and perennial seasonal flowers will be explained and propogation methods of these flowers will be teached.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				To have knowledge about seosonal flower and their propogation methods			
COURSE OUTCOMES				1.To have recognize seosonal flowers 2.To have general knowledge about seasonal flowers that is grown annual, bi-annual and perennial 3. To have learn ecological demands and propogation methods of them			
TEXTBOOK				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 İşleri, İzmir, 207.			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Computer, projection			

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 seasonal 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 Eschscholzia, Exacum, Gazania, Gomphera, Godetia, Impatiens
8	The production use growing demands and care of Impatiens hawkeri, Ipomea, Lathyrus, Lobelia, Mathiola, Mesembrianthemum
9	Midterm Exam - The production use growing demands and care of Nigella, Petunia, Phlox, Portulaca, Salvia, Tagetes,
10	The production use growing demands and care of Nigella, Petunia, Phlox, Portulaca, Salvia, Tagetes,
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

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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316009	COURSE NAME	Sustainable Agriculture in Horticulture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
6	2	0	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term			
				Quiz			
				Homework		1	25
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Determination of sustainable agriculture, reason and principles of practice, organic agriculture, good agricultural practices (GAP), GLOBALGAP protocol as production standard of good agricultural practices for the certification of agricultural applications in agricultural and horticultural industry, general rules of GLOBALGAP, samples of sustainable agriculture in horticulture.			
COURSE OBJECTIVES				Students will be informed on sustainable agriculture in horticulture, and will be made them know sustainable agriculture methods in horticultural growing.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Nowadays that environment friendly growing methods come into prominence, these techniques will be provided to learn and applicate by students according to productions groups.			
COURSE OUTCOMES				To learn determination, 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 that one of sustainable agriculture methods. To have information on GLOBALGAP protocol. To make and been made production according to these principles, and solve the problems through production.			
TEXTBOOK				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.			
OTHER REFERENCES				Türkiye 1., 2. Ekolojik Tarım Sempozyumları Organic Farming Diamond Farm Enterprises New Yrk, USA Lampkin, N., 1990. Mollison, B., 1988, Permaculture: A Designers' Manual, ISBN-10: 0908228015, ISBN-13: 978-0908228010, Tagari Publications, Australia.			
TOOLS AND EQUIPMENTS REQUIRED				Projection			

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	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	Mid-term exam, 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

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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316010	COURSE NAME	Soilless Culture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
IV	2	0		2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				√			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term			
				Quiz			
				Homework		1	25
				Project			
				Report			
				Others (Lab assignments)			
FINAL EXAM						1	50
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				Soilless culture methods, plant nutrition in soilless culture, advantages and disadvantages in soilless culture.			
COURSE OBJECTIVES				To aim is to let students to plan and manage soilless cultivation at commercial level, to solve problems facing in soilless plant production			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Being able to planning and applying of soilless cultivation Plan and practice the techniques of soilless cultivation on different plant species			
COURSE OUTCOMES				- To learn the soilless culture systems - Cultivate the plants in the soilless culture - To plan and to manage soilless cultivation at commercial level			
TEXTBOOK				-Gül, A. 2008. Topraksız Tarım. Hasad yayıncılık, 144 s.			
OTHER REFERENCES				- Savvas, D. and Passam H. 2002. Hydroponic Production of Vegetables and Ornamamentals. Embryo Publishing, Greece, 463p. - Douglas, J. S. 1985. Advanced Guide to Hydroponics.BAS Printers Lmt, GB.368 p.			
TOOLS AND EQUIPMENTS REQUIRED				Computer and projection.			

COURSE SYLLABUS	
WEEK	TOPICS
1	Introduction to horticultural plant physiology
2	Classification of soilless culture, Water culture, NFT, Aeroponics
3	Substrate culture and substrates
4	Plant nutrition in soilless culture
5	Substrates and their properties
6	Midterm exam, examples to soilless production
7	Plant nutrition in soilless culture
8	Nutrient solution preparation
9	Nutrient solution preparation
10	Recipes of the Sample Nutrient Solution
11	Midterm exam examples to soilless production
12	Advantages and disadvantages of soilless culture
13	Environmental impact of soilless culture
14	Future of soilless culture
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					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. Nuray ÇÖMLEKÇİOĞLU

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316011	COURSE NAME	Pruning Technique
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
6	1	2	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				In this course Fruit trees pruning and training techniques used are discussed as theoretical and practical			
COURSE OBJECTIVES				To gain experiences and get information about pruning fruit trees and training systems.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION							
COURSE OUTCOMES				1. Get to know pruning, aims and can comprehend the effects. 2. To be able to learn pruning times. 3. To put into practice the training forms that applied to fruit trees. 4. To be able to learn technical operations that applied in pruning. 5. To know pruning and training forms that applied to different fruit species. 6. To learn pruning methods that applied in different age periods of trees. 7. To get information about pruning tools and machinery.			
TEXTBOOK				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				Training and Pruning Apple and Pear Trees (C.G Forshey, D.C Elfving,R. L. Stebbins). Pruning Fruit and Nut Trees (Leaflet 21171,University of California). Pruning &Training. A Fully Illustrated Plant by Plant Manual (C. Brickell, D. Joyce)			
TOOLS AND EQUIPMENTS REQUIRED				-			

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

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		

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

Date:

Signature:



ESOĞÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316012	COURSE NAME	Fertilization Biology of Horticultural Crops
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
6	1	2	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(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.			
COURSE OBJECTIVES				It was aimed to give information on pollination and fertilization of horticultural plant species to students.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
TEXTBOOK				Özçağiran, R., 2000. Bahçe Bitkilerinde Döllenme Biyolojisi (Ders notları). Ege Üniversitesi 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 EQUIPMENTS REQUIRED				Projection			

COURSE SYLLABUS	
WEEK	TOPICS
1	Pollination and flower structures, inflorescences – racemes – cymes
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 carriers (Wind, insects, water, birds); Factors affecting pollination
8	Fertilization
9	Germination of pollen and factors affecting pollen development
10	Incompatibility; Fertilization of some fruit species and fertilizer varieties
11	Mid-term exam / Incompatibility
12	Fertilization of vegetables
13	Abnormalities in generative reproduction of plants, apomixis, parthenocarpy, parthenospermy, stenopericarp, polyploidy
14	Seed and fruit development, senescence, fruit fall
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					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. Yasemin EVRENOSOĞLU

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316006	COURSE NAME	Medicinal and Aromatic plants
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
6	3	0	0	3	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	30
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (practice)		1	20
FINAL EXAM						1	50
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				History, importance, ecology, agronomy, harvesting, storage, chemical composition of medicinal and aromatic plants			
COURSE OBJECTIVES				Comprehension of the importance of medicinal and aromatic plants in Turkey and World, teaching medicinal and aromatic plants and their agronomic practices in Turkey			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Applicability of knowledge gained with production projects			
COURSE OUTCOMES				1. Comprehension of importance of medicinal and aromatic plants. 2. Learning cultivation of important in medicinal and aromatic plants 3. Learning general information in medicinal and aromatic plants 4. Processing, storage and drying of seeds in these crops 5. Giving information to about these plants for production, proceeding and marketing plan			
TEXTBOOK				Ceylan, A. 1995. Tıbbi Bitkiler, Ege Üni. Zir. Fak. Yayınları, 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 (Primary metabolites, secondary metabolites: alkaloids, glycosides, essential oils)
3	Spices, harvesting, drying, sterilization, storing principles 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	Solanaceae family
14	Other families
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					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. Duran KATAR

Date:

Signature:



ESOGÜ Horticulture Department COURSE INFORMATION FORM

SEMESTER	Spring
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COURSE CODE	251316007	COURSE NAME	Fertilizers and Fertilization Technique
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
VI	3	0	0	3	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Classification of fertilizers and characteristics of organic and chemical fertilizers, standardization and variety of chemical fertilizer, fertilizer application methods and time are explaining.			
COURSE OBJECTIVES				Able to solve problems related to fertilization of plant needs and to knowledge about the fertilizer			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Knows importance of fertilization on agricultural activities. Able to compare application methods of horticulture fertilizers.			
COURSE OUTCOMES				-Able to explain fertilizer, soil and plant interactions. -Able to compare fertilization methods. -Able to use of technical information and data for suggestion of fertilization.			
TEXTBOOK				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				-Tisdale, S.L., Nelson, W.L. and Beaton, J.D. 1985. Soil Fertility and Fertilizers. Macmillan Publishers Company, New York, USA. -Güneş, A., Alpaslan, M. ve İnal, A. 2004. Bitki Besleme ve Gübreleme. A.Ü. Ziraat Fakültesi yayın No: 1539, Ders Kitabı: 492.			
TOOLS AND EQUIPMENTS REQUIRED				-			

COURSE SYLLABUS	
WEEK	TOPICS
1	Importance of fertilization on agricultural activities, classification of fertilizers.
2	Properties of organic fertilizers and effects on soil and environment. Fermentation of barnyard manure.
3	Composting and its content; stubble composition; C/N rate and bio-fertilizer
4	Progress of fertilizer production
5	Nitrogen (N) containing chemical fertilizer production, physical and chemical properties. Reaction of N fertilization in soil.; Phosphorus (P) containing chemical fertilizer production, physical and chemical properties. Reaction of P fertilization in soil.
6	Midterm Exam- Potassium (K) containing chemical fertilizer production, physical and chemical properties. Reaction of K fertilization in soil.
7	Potassium (K) containing chemical fertilizer production, physical and chemical properties. Reaction of K fertilization in soil.
8	Calcium (Ca), magnesium (Mg) and sulfur (S) containing chemical fertilizer production, physical and chemical properties. Reaction of Ca, Mg and S fertilization in soil.
9	Micronutrient containing chemical fertilizer production, physical and chemical properties. Reaction of micronutrient fertilizer in soil.
10	Properties of compound fertilizer and importance of its in respect to agriculture.
11	Midterm Exam- Application methods of chemical fertilizers on soil; Application methods of chemical fertilizers on plant and seed.
12	Application methods of chemical fertilizers on soil; Application methods of chemical fertilizers on plant and seed.
13	Fertigation method
14	Economical and optimizing fertilizer use and affecting factors
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					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. Nurdilek Gülmezoğlu

Date:

Signature:



ESOGU Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251316008	COURSE NAME	Organic Animal Growing
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
6	3	0	0	3	3	COMPULSORY () ELECTIVE (x)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture Department Profession [if it contains considerable design, mark with (√)]			Social Science
		X					
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				No			
COURSE DESCRIPTION				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.			
COURSE OBJECTIVES				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.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION				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.			
TEXTBOOK				Organik Tarımın Esasları ve Uygulanmasına İlişkin Yönetmelik (2010) Yayımlandığı Resmi Gazetenin Tarihi: 18 Ağustos, Sayı: 27676. www.tarim.gov.tr			
OTHER REFERENCES				Birinci Uluslararası Organik Hayvansal Üretim ve Gıda Güvenliği Kongresi, Tebliğler Kitabı, 28 Nisan-1 Mayıs 2004, Kuşadası. Petek, M., Üstüner, H., 2004. Organik Hayvancılık, Geçmişe duyulan özlem mi? Geleceğe yatırım mı? 1. Veteriner Zootekni Kongresi Tebliğler kitabı, Elazığ. Ergün, A., Tuncer, Ş.D., 2001. Yemler, yem hijyeni ve teknolojisi. Medisan Yayınevi, Ankara. Petek, M., 2010. Organik Hayvancılık. Türkiye IV. Organik tarım Sempozyumu, Erzurum.			
TOOLS AND EQUIPMENTS REQUIRED				None			

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

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		

Instructor:

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317001	COURSE NAME	Special Vegetable Crops I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	3	0	0	3	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Factors to be considered the cultivation of winter grown vegetables, evaluation of the economic and ecological factors, determine of economically effective of production systems, suitable species and varieties for cultivation will be discussed.			
COURSE OBJECTIVES				To give basic knowledge and abilities on winter-grown vegetables (onion, garlic, leek, asparagus, lettuce-salad, artichokes, cabbage, cauliflower, broccoli, radishes, spinach, carrots), economic importance, morphology, ecological requirements, cultivation methods, soil preparation, sowing and planting			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				This is the main course that informed about winter-grown vegetables and information is given theoratically and practically.			
COURSE OUTCOMES				At the end of this course, the student will have the necessary knowledge on 1-Climatic and soil requirements of winter grown vegetables, 2-Reproduction methods of wintergrown vegetables, 3-Cultivation techniques in winter grown vegetables 4-Morphological characteristics of winter grown vegetables 5-Soil preparation, planting, fertilization and irrigation on cultural practices			
TEXTBOOK				1. Kültür Sebzeleri (Sebze Yetiştirme) Vural, H., Eşiyok, D., Duman, İ. Ege Üniv. Ziraat Fak. Bahçe Bitkileri Bölümü, İzmir,. 2005 2.Özel Sebzecilik. Şalk, A., Arın, L., Deveci M., Polat S. 2008. Onur Grafik Matbaa ve Reklam Hizmetleri İst.			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Projection and pc.			

COURSE SYLLABUS	
WEEK	TOPICS
1	Growing onions
2	Growing onions
3	Growing garlic
4	Growing leeks
5	Growing Lettuce-Salad
6	Mid-term exam, Growing Lettuce-Salad
7	Growing Lettuce-Salad
8	Growing cabbage
9	Growing cauliflower-broccoli
10	Growing cauliflower-broccoli
11	Mid-term exam, Growing green pea
12	Growing radishes;
13	Growing carrots
14	Growing spinach
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					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. Nuray ÇÖMLEKÇİOĞLU

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317002	COURSE NAME	Temperate Zone Fruits I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	3	0	0	3	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
Others (.....)							
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Classification, history, distribution, economical importance, morphological and pomological characteristics, fertilization biology, ecological requirements, propagation, plantation, maintenance and production, trade, and politics of pome and stone fruits species will be discussed.			
COURSE OBJECTIVES				The purpose of this course is to give the students knowledge on growing of pome and stone fruit species.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
TEXTBOOK				Özçağırın, 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. Özçağırın, 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 Meyvecilik - Kışın Yaprağını Döken Meyve 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

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		

Instructor(s): Assoc.Prof.Dr. Yasemin EVRENOSOĞLU

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317003	COURSE NAME	Subtropical Fruits I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	3	0	0	3	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				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.			
COURSE OBJECTIVES				The purpose of this course is to give the students knowledge on growing of olive, pomegranate, fig, loquat and tea species.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
TEXTBOOK							
OTHER REFERENCES				Yılmaz, C., 2007. Nar. Hasad yayıncılık, 276 s. Subtropik İklim Meyveleri, K. Mendilcioğlu, Ege Üniversitesi, Ziraat Fak. Ders Notları, İzmir, 2000.			
TOOLS AND EQUIPMENTS REQUIRED				Projection			

COURSE SYLLABUS	
WEEK	TOPICS
1	Olive growing
2	Olive growing
3	Olive growing
4	Pomegranate growing
5	Pomegranate growing
6	Mid-term exam - Pomegranate growing
7	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	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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317004	COURSE NAME	Storage and Marketing of Horticultural Crops
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
7	2	0	0	2	2	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM			Evaluation Type		Quantity		%
			1st Mid-Term		1		20
			2nd Mid-Term		1		20
			Quiz				
			Homework				
			Project				
			Report				
			Others (.....)				
FINAL EXAM					1		60
PREREQUIEITE(S)			-				
COURSE DESCRIPTION			Importance and aim of preservation Horticultural crops and general properties, development of organs, biochemical structure and change, physiological development, harvest, storage systems, postharvest some treatments in horticultural crops.				
COURSE OBJECTIVES			To give theoretical and practical information on developmental physiology of horticultural crops, biochemical structure and change, harvest and cold storage.				
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION			Students will be informed about harvest, postharvest stages of preservation and marketing of horticultural products.				
COURSE OUTCOMES			To follow product development and detect the correct harvest time of different products. To take precautions in horticultural crops for quality losses caused by structural changes. Ability to different post-harvest treatments Ability to store different horticultural crops It may exhibit approaches to modern preservation methods. Ability to detect postharvest disorders occurred during storage				
TEXTBOOK			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 Yayınları, Bornova-İzmir.				
OTHER REFERENCES			Commercial Cooling of Fruits, Vegetables, and Flowers, James F. Thompson et al., University of California, Oakland, 2002. Postharvest Diseases&Disorders of Fruits&Vegetables, Anna L. Snowdon, Wolfe Scientific, 1990. Postharvest Technology of Horticultural Crops, Adel A. Kader, University of California, 1992. Controlled Atmosphere Storage of Fruits and Vegetables, A.K. Thompson, CABI Publishing, New York, 1998.				
TOOLS AND EQUIPMENTS REQUIRED			Projection				

COURSE SYLLABUS	
WEEK	TOPICS
1	Definition of the conservation, history, importance, Horticultural crops and general properties
2	Development of organs
3	Biochemical structure and change
4	Biochemical structure and change
5	Physiological development
6	Midterm Exam, Warehouse damage
7	Physiological disorders
8	Factors affecting development in preharvest period
9	Harvesting, sorting and packaging principles.
10	Fundamentals of conservation of horticultural plants.
11	Midterm Exam, Fundamentals of conservation of horticultural plants.
12	Environmental factors affecting to postharvest period and factors affecting storage period; Storage systems
13	Postharvest some treatments in horticultural crops, drying storage.
14	Conservation of production materials,
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					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:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317012	COURSE NAME	Diploma Thesis I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	0	2	0	1	3	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (Graduate Thesis)		1	50
FINAL EXAM				(Presentation of Thesis)		1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Making research, preparing project and presentation of conclusions as thesis on a subject on related disciple of choosen lecturer.			
COURSE OBJECTIVES				Making research and application, preparing project, evaluating values and presenting the consequences by the students on a subject on horticulture will be provided.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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				Related documents and web 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					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:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317013	COURSE NAME	Professional Practice III
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
7	0	4	0	0	3	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	50
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
Others (.....)							
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Department of land and to make practical training courses in laboratory. Improve the knowledge by technical tours.			
COURSE OBJECTIVES				The practice ability sophisticating and making technical tours to students about all lessons.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				To make progress on using theoretical knowledge in practice.			
COURSE OUTCOMES				1. acquired some practical knowledge about vegetable crops 2. acquired some practical knowledge about fruit cultivation 3. acquired some practical knowledge about vineyard cultivation 4. acquired some practical knowledge about the cultivation of ornamental plants 5. Future projection composes by technical tours to institutions and establishments			
TEXTBOOK				-			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				1st Mid-Term			

COURSE SYLLABUS	
WEEK	TOPICS
1	Harvest criterions
2	Harvest criterions
3	Technical tours to institutions and establishments
4	Some laboratory tests
5	Some laboratory tests
6	Fruit harvest
7	Product losses
8	I. Midterm exam / Product losses
9	Horticulture marketing strategies
10	Horticulture marketing strategies
11	Technical tours to institutions and establishments
12	Fruit harvest
13	Fruit harvest
14	Technical tours to institutions and establishments
15	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			

Instructor(s): All teaching members

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317005	COURSE NAME	Subtropical Fruits II
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	2	0	0	2	3	COMPULSORY () ELECTIVE (x)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	50
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Classification, history, distribution, economical importance, morphological and pomological characteristics, fertilization biology, ecological requirements, propagation, plantation and maintenance of banana, avocado, pecan, carob and prickly pear will be discussed.			
COURSE OBJECTIVES				The purpose of this course is to give the students knowledge on growing of banana, avocado, pecan, carob and prickly pear species.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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 banana, avokado, pecan, carob and prickly pear. 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.			
TEXTBOOK							
OTHER REFERENCES				Subtropik İklim Meyveleri, K. Mendilcioğlu, Ege Üniversitesi, Ziraat Fak. Ders Notları, İzmir, 2000.			
TOOLS AND EQUIPMENTS REQUIRED				Projection			

COURSE SYLLABUS	
WEEK	TOPICS
1	Introduction of subtropical fruits
2	Banana growing
3	Banana growing
4	Banana growing
5	Avocado growing
6	Mid-term exam - Avocado growing
7	Avocado growing
8	Avocado growing
9	Pecan growing
10	Pecan growing
11	Carob growing
12	Carob growing
13	Prickly pear growing
14	Prickly pear growing
15	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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317006	COURSE NAME	Postharvest Physiology of Horticultural Crops
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
7	2	0	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				The importance of post-harvest physiology and affecting factors. Growing 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.			
COURSE OBJECTIVES				Examination of physiological changes occurring after harvest in fruits, vegetables and ornamental plants			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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			
TEXTBOOK				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.			
OTHER REFERENCES				Postharvest Diseases and Disorders of Fruits and Vegetables, A.L.Snowdown,1990. Commercial Cooling of Fruits, Vegetables and Flowers, J. F. Thompson et al. University of California, Oakland, 2002. DeELL, R.J., Pranga, K.R., Peppelenbos, W.H., 2003. Postharvest Physiology of Fresh Fruits and Vegetables. Handbook of Postharvest Technology, Marcel Dekker, Inc., New York, Basel, 455,484.			
TOOLS AND EQUIPMENTS REQUIRED				Projection			

COURSE SYLLABUS	
WEEK	TOPICS
1	Physiological events and importance 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	I. 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					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:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317007	COURSE NAME	Seed and Certification of Horticultural Crops
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
7	2	0	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Seed concern, flower structure, seed formation, seed classes, seed morphology and physiology in horticulture, seed growth and 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, F1 seed, terminator gene technology, seed gene banks.			
COURSE OBJECTIVES				The aim of this course is to teach theoretically and practicaly, production, usage, trade and standardization of vegetative organs that used as seed, the technical and bureaucratic procedures of seed production, determination of suitability standards in field and laboratory, rules and standards to be applied.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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 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				Sağsöz, S., 1999. Tohumluk Teknolojisi, Atatürk Üniversitesi Yayınları No: 677, Ziraat Fakültesi Yayınları no: 302, Ders kitapları Serisi No: 54, Erzurum. Şehirali, S. 1997. Tohumluk ve Teknolojisi, Fakülteler Matbaası, İstanbul.			
OTHER REFERENCES				Copeland, LO., McDonald, MB. 1995. Seed Science and Technology, Kluwer Academic Publishers, Boston/Dordrecht/London.			
TOOLS AND EQUIPMENTS REQUIRED				Projection			

COURSE SYLLABUS	
WEEK	TOPICS
1	Flower structure, seed formation, seed classes, seed concern, seeds used in horticulture
2	Seed morphology and physiology in horticulture
3	Seed germination physiology and dormancy classes
4	Seed growth and development, production of organs used as seeds (bulb, tuber, stolone, rhizome)
5	Ecological properties of seed production and seed production
6	Ecological properties of seed production and seed production
7	Protection and isolation; Who produces seed, necessary permits for seed production
8	Seed producer's declarations, drying seeds
9	Seed storage
10	The stages of the seed certification system; field controls
11	Mid-term exam / Seed gene banks
12	Seed sampling methods, the classes of the certification; Laboratory tests; physical purity, analysis of quantity in a kilo, germination tests
13	Evaluation of reports, variety determination, seed vigour tests
14	Seed registration, certification and classification
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		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. Rafet ASLANTAŞ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317008	COURSE NAME	Biotechnological Practices in Horticulture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	1	2	0	2	3	COMPULSORY () ELECTIVE (x)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				√			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (Lab assignments)			35
FINAL EXAM						1	40
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				Preparation of basic nutrient media and culture conditions in plant tissue culture, plant tissue culture methods and gene transfer techniques.			
COURSE OBJECTIVES				To teach plant tissue culture techniques utilized in practice			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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 improvement.			
TEXTBOOK				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			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Computer and projection, basic plant biotechnology laboratory			

COURSE SYLLABUS	
WEEK	TOPICS
1	Description and classification of biotechnology-Introduction of plant tissue culture laboratory
2	Planning of plant tissue culture-Introduction plant tissue culture ingredients.
3	Preparation of plant tissue culture medium-Practice in laboratory
4	Explants preparation-Practice in laboratory
5	Meristem Culture-Practice in laboratory
6	Midterm exam, Meristem culture
7	Embriyo Culture-Practice in laboratory
8	Micro propagation -Practice in laboratory
9	Callus and cell culture-Practice in laboratory
10	Protoplast culture and kültürü ve somaclonal variation-Practice in laboratory
11	Midterm exam, production haploid plant
12	Somatic hybridization-Practice in laboratory
13	Haploid plant production-Practice in laboratory
14	Genetic transformation-Practice in laboratory
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	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. Nuray ÇÖMLEKÇİOĞLU

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317009	COURSE NAME	Special Viticulture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	1	2	0	2	3	COMPULSORY () ELECTIVE (x)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				To pass “General Viticulture” course			
COURSE DESCRIPTION				Physiology of vitis, photosynthesis, respiration, perspiration, growing and development physiology, growth regulators, ripening of grapes and harvest, storage of grapes, grape varieties (edible, vin, well drying), rootstock varieties, techniques used to enhance quality of grapes, greenhouse viticulture, organic viticulture, vertical and horizontal supporting of vitis, ampelography, vine genetical resources.			
COURSE OBJECTIVES				To introduce the leading raisin, table, wine and roostock varieties. To provide a detailed understanding of vine physiology and biology. To teach how to make production planning in a vineyard and how to manage and control the important factors such as ripening, harvest, yield and quality in grape production.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Students will be informed about special viticulture.			
COURSE OUTCOMES				Recognizes the important grape rootstock and varieties; knows their utilization and cultivation. Evaluates the effects of canopy management on grapevine physiology. Using this evaluation, predicts the effect of canopy management practices on the ultimate quality/quantity of fruit. Communicates verbally and in writing with other parts of the society on this subject at a professional level and transmits information to the partners. By the use of this knowledge can perform basic and practical studies in order to develop new cultural practices and cultural techniques in the field of viticulture.			
TEXTBOOK				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.			
OTHER REFERENCES				Viticulture - Ebook (2011) (Stephen Skelton MW) PDF for Adobe Digital Editions (File Size 17.97 MB) 2nd Edition Türkiye Asma Genetik Kaynakları Kataloğu, Gıda tarım ve Ormancılık Bakanlığı, Tarımsal araştırmalar ve Politikalar Müdürlüğü, Tekirdağ Bağcılık Araştırma İstasyonu, 400 s.			
TOOLS AND EQUIPMENTS REQUIRED				-			

COURSE SYLLABUS	
WEEK	TOPICS
1	Cultivation and use of major wine, table and raisin grapevine cultivars: fundamental differences
2	Major rootstock varieties and rootstock selection
3	Postharvest technology and marketing strategies of table grapes
4	Dormancy and cold hardiness
5	Ampelography and International characteristics
6	Ampelography
7	Abiotic stress factors in vine
8	Vine microclimate
9	Vine nutrient dynamics
10	Vine water relations, mulch usage
11	Midterm Exam / Vine water relations, mulch usage
12	Trademark productions and standarts
13	Crop load management of vine
14	Canopy management
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					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. Rafet ASLANTAŞ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317021	COURSE NAME	New Techniques on Fruit Growing
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
7	2	0	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Horticulture [if it contains considerable design, mark with (√)]	Social Science

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term	1	50
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (.....)		
FINAL EXAM		1	50
PREREQUIEITE(S)	-		
COURSE DESCRIPTION	In this course, new techniques and developments on fruit growing will be discussed theoretically and practically.		
COURSE OBJECTIVES	To gain knowledge on subjects on new orchard plantations, training and pruning systems, cultural techniques and harvest methods.		
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	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.		
TEXTBOOK	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

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		

Instructor(s): Assoc.Prof. Dr. Yasemin Evrenosoğlu

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317010	COURSE NAME	Photography
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	3	0	0	3	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
							x
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework		1	20
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	40
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				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.			
COURSE OBJECTIVES				Basic photography knowledge and abilities will be gain to students by informing about photograph machines and objectives.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				To learn to use fotograph machines and taking a picture in 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			
TEXTBOOK				Doble, R.G., 2011, Her Yönüyle Dijital Fotoğrafçılık, ISBN: 9789755096841, Arkadaş Yayınevi, 336 sayfa.			
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 EQUIPMENTS REQUIRED				Photograph machine, projection			

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

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Fall
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COURSE CODE	251317011	COURSE NAME	Marbling Art
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	3	0	0	3	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
							x
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework		1	20
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	40
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				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.			
COURSE OBJECTIVES				To introduce Turkish marbling art and to be gained knowledge and abilities on marbling applications.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				-			
COURSE OUTCOMES				To recognize the marbling art To have information on marbling applications			
TEXTBOOK				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 EQUIPMENTS REQUIRED				Projection, marbling 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
6	Mid-term Exam- Paper and other material
7	Paper and other material; Marbling application
8	Marbling forms
9	Flower marbles
10	Akkase marbles
11	Mid-term Exam- Wavy marbles
12	Wavy marbles; 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

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		

Instructor(s):

Date:

Signature:



ESOGU Horticulture Department
Course Information Form

SEMESTER Fall

COURSE CODE	251317019	COURSE NAME	TURKISH FOLK DANCE
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
VII	3	0	0	3	3	COMPULSORY () ELECTIVE (X)	TURKISH
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				()			X
ASSESSMENT CRITERIA							
MID-TERM			Evaluation Type		Quantity		%
			Mid-Term		100		40
			Quiz				
			Homework				
			Project				
			Report				
			Others (.....)				
FINAL EXAM					100		60
PREREQUIEITE(S)			None				
COURSE DESCRIPTION			Folk Dance Art and music, music communication, instrument communication, nuances, understanding sensing and recognition of folk dance.				
COURSE OBJECTIVES			Students will obtain information about Turkish Folk Dance culture				
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION			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.				
COURSE OUTCOMES			Sudent recognizes importance and benefits of Turkish folk dance art. Student realizes importance of Turkish folk music in communication. Student learns types of Turkish folkdance, music and instruments.				
TEXTBOOK							
OTHER REFERENCES							
TOOLS AND EQUIPMENTS REQUIRED			Dance hall, Sport wear and shoes.				

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	İzmir Zeybek region dances (Al Basma Zeybeği, Gündoğdu Zeybeği)
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

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		

Instructor(s):
Signature:

Date:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318001	COURSE NAME	Physiology of Horticultural Plants
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	2	2	0	3	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				√			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (Lab assignments)			
FINAL EXAM						1	60
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				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.			
COURSE OBJECTIVES				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			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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. -Knows the basic principles of water uptake and water loss in horticultural crops; -Knows the physiological functions of plant nutrients and establishes correct relations between plant nutrition and cultivation.			
TEXTBOOK				- Rafet ASLANTAŞ – Atatürk Üniversitesi Ziraat Fakültesi Ders Notu			
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).			
TOOLS AND EQUIPMENTS REQUIRED				Computer and projection.			

COURSE SYLLABUS	
WEEK	TOPICS
1	Introduction to horticultural plant physiology, subjects and concepts
2	Growth, development and maturation
3	The effects of ecological factors on growth, development and maturation
4	The effects of ecological factors on growth, development and maturation
5	The effects of internal factors on growth and development
6	Midterm exam / The effects of internal factors on growth and development
7	Dormancy and its mechanism
8	Germination, spouting and rooting
9	Apical dominancy, flowering, photoperiodicity,
10	Sterility and incompatibility, parthenocarp and apomixes in horticultural crops
11	Flower and fruit drop, Maturity, Aging
12	Tropisms, Vernalisation, thermoperiodism and regeneration
13	Abiotic Stresses, Plant-water relations
14	Plant nutrition
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					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. Rafet ASLANTAŞ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318002	COURSE NAME	Special Vegetable Crops II
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	3	0	0	3	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Factors to be considered the cultivation of summer grown vegetables, evaluation of the economic and ecological factors, determine of economically effective of production systems, suitable species and varieties for cultivation will be discussed.			
COURSE OBJECTIVES				To give basic knowledge and abilities to students on summer grown vegetables (tomatoes, peppers, eggplant, watermelon, melon, cucumber, squash, beans, okra), economic importance, morphology, ecological requirements, cultivation methods, soil preparation, sowing, planting and maintenance procedures			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				This is the main course that informed about summer grown vegetables and information is given theoratically and practically			
COURSE OUTCOMES				At the end of this course, the student will have the necessary knowledge on 1-Climatic and soil requirements of summer grown vegetables, 2-Reproduction methods of summer grown vegetables, 3-Cultivation techniques in summer grown vegetables 4-Morphological characteristics of summer grown vegetables 5-Soil preparation, planting, fertilization and irrigation on cultural practices			
TEXTBOOK				1. Kültür Sebzeleri (Sebze Yetiştirme) Vural, H., Eşiyok, D., Duman, İ. Ege Üniv. Ziraat Fak. Bahçe Bitkileri Bölümü, İzmir,. 2005 2.Özel Sebzecilik. Şalk, A., Arın, L., Deveci M., Polat S. 2008. Onur Grafik Matbaa ve Reklam Hizmetleri İst.			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Projection and pc.			

COURSE SYLLABUS	
WEEK	TOPICS
1	Growing tomato
2	Growing tomato
3	Growing tomato
4	Growing pepper
5	Growing pepper
6	Mid-term exam, Growing eggplant
7	Growing eggplant
8	Growing cucumber
9	Growing melon
10	Growing watermelon
11	Mid-term exam, Growing bean
12	Growing squash;
13	Growing okra
14	Course evaluation
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					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. Nuray ÇÖMLEKÇİOĞLU

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318003	COURSE NAME	Temperate Zone Fruits II
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	3	0	0	3	4	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Classification, history, distribution, economical importance, morphological and pomological characteristics, fertilization biology, ecological requirements, propagation, plantation and maintenance, production, trade, and politics of nut species will be discussed.			
COURSE OBJECTIVES				The purpose of this course is to give the students knowledge on growing of nuts.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Students will be informed about growing and maintenance of nuts that intensively grown in our country.			
COURSE OUTCOMES				To learn the growing and breeding techniques, varieties, harvesting and marketing of hazelnut, walnut, almond, pistacio, chestnut, pecan and other nuts. 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.			
TEXTBOOK				Özçağiran, R., Ünal, A., Özeker, E., İsfendiyaroğlu, M., 2005, Ilıman İklim Meyve Türleri, Yumuşak Çekirdekli Meyveler, Cilt II, Ege Üniversitesi Ziraat Fakültesi Yayınları No: 556, Ege Üniversitesi Basımevi, Bornova-İzmir, 200 sayfa. Özçağiran, 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 Meyvecilik - Kışın Yaprığını Döken Meyve Türleri.			
OTHER REFERENCES				Soylu, A., 2006, Ilıman İklim Meyveleri II. 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	Common specifications of nuts
2	Hazelnut growing
3	Hazelnut growing
4	Walnut growing
5	Walnut growing
6	Mid-term exam / Almond growing
7	Almond growing
8	Pistacio growing
9	Chestnut growing
10	Pecan growing
11	Mid-term exam / Stone pine growing
12	Carob growing
13	Other nuts
14	Usage of dry and dried fruit species, trade and politics
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					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.Rafet ASLANTAŞ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318004	COURSE NAME	Weeds
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	1	2	0	2	2	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Weed biologies, ecological requirements, economic values, and different herbicides in crops and weeds is to make information on methods of control.			
COURSE OBJECTIVES				Development of weed science and culture in all aspects of its relations with the introduction of plants are aimed.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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 theoretically and practically To know the classification of herbicides and herbicides registered in Turkey			
TEXTBOOK				Özer, Z., Kadioğlu, 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			
OTHER REFERENCES				Günçan, A., 2009. Yabancı Otlar ve Mücadele Prensipleri. Selçuk Üniversitesi, Ziraat Fakültesi, 4. Baskı, Konya			
TOOLS AND EQUIPMENTS REQUIRED				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

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		

Instructor(s): Assoc.Prof.Dr. Coşkun GÜÇLÜ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318012	COURSE NAME	Diploma Thesis II
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	0	2	0	1	3	COMPULSORY (X) ELECTIVE ()	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (Graduate Thesis)		1	50
FINAL EXAM				(Presentation of Thesis)		1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Making research, preparing project and presentation of conclusions as thesis on a subject on related disciple of choosen lecturer.			
COURSE OBJECTIVES				Making research and application, preparing project, evaluating values and presenting the consequences by the students on a subject on horticulture will be provided.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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				Related documents and web 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				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:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318013	COURSE NAME	Professional Practice IV
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF					
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE		
8	0	4	0	0	3	COMPULSORY (X) ELECTIVE ()	Turkish		
COURSE CATAGORY									
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]		Social Science			
				X					
ASSESSMENT CRITERIA									
MID-TERM			Evaluation Type		Quantity		%		
			1st Mid-Term		1		50		
			2nd Mid-Term						
			Quiz						
			Homework						
			Project						
			Report						
			Others (.....)						
FINAL EXAM					1		50		
PREREQUIEITE(S)			-						
COURSE DESCRIPTION			Department of land and to make practical training courses in laboratory. Improve the knowledge by technical tours.						
COURSE OBJECTIVES			The practice ability sophisticating and making technical tours to students about all lessons.						
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION			To make progress on using theoretical knowledge in practice.						
COURSE OUTCOMES			1. acquired some practical knowledge about vegetable crops 2. acquired some practical knowledge about fruit cultivation 3. acquired some practical knowledge about vineyard cultivation 4. acquired some practical knowledge about the cultivation of ornamental plants 5. Future projection composes by technical tours to institutions and establishments						
TEXTBOOK			-						
OTHER REFERENCES			-						
TOOLS AND EQUIPMENTS REQUIRED			-						

COURSE SYLLABUS	
WEEK	TOPICS
1	Soil preparation
2	Soil preparation
3	Soil preparation
4	Tecnical tour
5	Pruning
6	Pruning
7	Fighting with pests, diseases and weeds
8	Midterm exam / Fighting with pests, diseases and weeds
9	Tecnical tour
10	Fighting with pests, diseases and weeds
11	Tecnical tour
12	Irrigation systems
13	Irrigation systems
14	Tecnical tour
15	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			

Instructor(s): All teaching members

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318005	COURSE NAME	Tropical Fruits
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	2	0	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(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.			
COURSE 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.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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 develop solution advisories.			
TEXTBOOK				-			
OTHER REFERENCES				Paul, R.E., 2010. Tropical Fruits V.I. Cabi publication, 408 Pages, ISBN:9781845936723			
TOOLS AND EQUIPMENTS REQUIRED				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	Mid-term exam - Mango growing
7	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	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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318006	COURSE NAME	Citrus Growing
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	2	0	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term		1	25
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(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.			
COURSE OBJECTIVES				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 OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
TEXTBOOK				1. Davies, F.S., Albrigo, L.G. 1994. Citrus. Typeset by Solidus (Bristol) Limitedts, Great Britain. 2. Tanrıverdi, F., 1987. Subtropik Meyve Türleri. Atatürk Üniversitesi Ziraat Fakültesi Ders Notları, Erzurum. 3. Tuzcu, Ö., 2000. Turunçgiller (Ders Notları) Ç. Ü. Adana. 4. Mendilçioğlu, K., 1991. Turunçgiller. E.Ü. Zir. Fak. Ofset Basımevi, Bornova, İzmir.			
OTHER REFERENCES				-			
TOOLS AND EQUIPMENTS REQUIRED				Projection			

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	Mid-term exam - The morphological properties of citrus fruits
7	The biological properties of citrus fruits
8	Citrus fruits and climate
9	Citrus fruits and soil
10	Propagation of citrus
11	Mid-term exam - Propagation of citrus
12	Citrus nursery
13	Orchard establishment, tillage, and irrigation of citrus fruits
14	Fertigasyon, pruning, harvest in citrus orchard
15	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		

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

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318007	COURSE NAME	Small Fruits
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	2	0	0	2	3	COMPULSORY () ELECTIVE (x)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				x			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	20
				2nd Mid-Term		1	20
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Classification, history, distribution, economical importance, 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.			
COURSE OBJECTIVES				The purpose of this course is to give the students knowledge on growing of strawberry, blackberry, raspberry, gooseberry, ribes, blueberry, and mulberry species.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
TEXTBOOK				1. Childers, N.F., Morris, J.R., Sibbet, G.S., 1995. Modern Fruit Science (Orchard and Small Fruit Culture). Horticultural Publications. Gainesville, Florida. 2. Ağaoğlu, Y.S., 1986. Üzümsü Meyveler. A.Ü. Zir. Fak. Yay. 984. Ankara			
OTHER REFERENCES				1. Kaşka, N., Türemiş, N.,Özdemir, E., 1995. Çilek Çeşit Kataloğu. Tarım ve Köyişleri Bakanlığı Yay., Ankara. 2. 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

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		

Instructor(s): Prof.Dr. Rafet ASLANTAŞ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318008	COURSE NAME	Resistance Breeding in Horticulture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	1	2	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				X			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	40
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	60
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				Mechanisms against to stress conditions in horticulture, resistance breeding against diseases, low and high temperatures, salinity, drought and high moisture in horticultural plants.			
COURSE OBJECTIVES				To give information about importance of resistance breeding in horticulture, its mechanisms and breeding methods for resistance in horticultural crops.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Students will be informed about resistance breeding for different stress conditions in horticulture			
COURSE OUTCOMES				Understand importance of resistance breeding Understand genetic mechanisms of resistance Understand breeding methods for resistance in horticultural crops Understand importance of resistance breeding in the future			
TEXTBOOK				Demir, İ., Turgut, İ., 1999. Genel Bitki Islahı, Ege Üniversitesi Ziraat Fakültesi Yayınları No: 496, Bornova-İzmir, 338-382. Janick, J., Moore, J., 1975, Advances in Fruit Breeding, Purdue University Press, West Lafayette, Indiana, 640 sayfa.			
OTHER REFERENCES				Pal Singh D. (1987) Breeding for Resistance to Diseases and Insect Pests, Springer-Verlag; 1 edition, 222 p. Tamassy, I. (1964) Resistance breeding in horticultural plants by directed training, 247 pp.			
TOOLS AND EQUIPMENTS REQUIRED				Projection			

COURSE SYLLABUS	
WEEK	TOPICS
1	Stress sources and importance of resistance breeding in horticulture
2	Developed strategies in horticultural resistance
3	Genetic mechanisms of resistance breeding
4	Genetic resources for resistance breeding
5	Resistance to low temperature stress and exothermy
6	Mechanisms developed for heat stress
7	Breeding for disease resistance
8	Breeding for insect resistance
9	Resistance mechanism for drought stress
10	Resistance breeding for other extreme conditions
11	Midterm exam / resistance to salt and lime stress
12	Resistance breeding methods
13	Resistance tests
14	New technologies in resistance breeding
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	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. Rafet ASLANTAŞ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318009	COURSE NAME	Molecular Biology Practices in Horticulture
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	1	2	0	2	3	COMPULSORY () ELECTIVE (x)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
				√			
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	25
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (Lab assignments)		1	25
FINAL EXAM					1	50	
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				Molecular biologic methods that used in horticultural plant physiology, phlogenetic studies and horticultural plant breeding.			
COURSE OBJECTIVES				The purpose of this course is to give basic information about molecular biology applications in physiology and breeding of horticultural crops.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Applications of plant molecular biology methods in physiology and breeding of horticultural crops.			
COURSE OUTCOMES				-Learn molecular biology techniques -Learn molecular biologic methods used in horticulture -Learn the use of molecular biologic techniques to solve the problems in plant growing			
TEXTBOOK				- Moleküler Biyoloji (Temel Bilgiler) (A. Eriş, H. Gülen) 2004. Uludağ Üniv. Ziraat Fak. Ders Notları No: , 136 s. - Molecular Genetics of Plant Development (S.H. Howell) 1998. Cambridge University Press, UK., 365 p. - Practical Protein Electrophoresis for Genetic Research (G. Acquaah) 1992. Dioscorides Press, Theodore R.Dudley, PhD., General Editor, Portland, Oregon, 131 p. - Molecular Biology of The Cell (B. Alberts, D. Bray, J. Lewis, M. Raff, K. Roberts, J.D. Watson) 1994. Garland Publishing, Inc., New York & London, 1294 p.			
OTHER REFERENCES				- Bitki Biyoteknolojisi-II (Genetik Mühendisliği ve Uygulamaları) (S. Özcan, E. Gürel, M. Babaoğlu) 2001. Selçuk Üniv. Vakfı. Yay., Konya, 456 s. -Moleküler Biyolojide Kullanılan Yöntemler (G. Temizkan, N. Arda) 1999. Nobel Tıp Kitabevi Ltd, 236 s.			
TOOLS AND EQUIPMENTS REQUIRED				Computer and projection, basic molecular biology laboratory			

COURSE SYLLABUS	
WEEK	TOPICS
1	Giving outlines and the textbooks of the course.
2	Molecular biology techniques used in horticulture-I
3	Molecular biology techniques used in horticulture -II
4	Molecular biology techniques used in horticulture -III
5	Molecular biology techniques used in plant phylogenic studies-I
6	Molecular biology techniques used in plant phylogenic studies-I
7	Molecular biology techniques used in plant phylogenic studies-II
8	Molecular biology techniques used in plant phylogenic studies-III
9	Molecular biology techniques used in plant breeding-I
10	Molecular biology techniques used in plant breeding-II
11	Midterm exam / Terminator gene usage in horticulture
12	Molecular biology techniques used in plant breeding-III
13	Techniques of developing transgenic plants in horticulture-I
14	Techniques of developing transgenic plants in horticulture-II
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	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. Rafet ASLANTAŞ

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318021	COURSE NAME	Rootstock scion relationships of fruits
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
8	2	0	0	2	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	50
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			
				Report			
				Others (.....)			
FINAL EXAM						1	50
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				In this course, physiological relationships of rootstock and scion of fruits will be discussed theoretically and practically.			
COURSE OBJECTIVES				To gain knowledge on subjects about rootstocks of fruits, their usage, grafting, incompatibilities of rootstock and scion.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				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.			
TEXTBOOK				Özçağiran, R. 1974. Meyve Ağaçlarında Anaç İle Kalem Arasındaki Fizyolojik ilişkiler. Ege Üniversitesi Basımevi, İzmir.			
OTHER REFERENCES				Yılmaz, M. 1994. Bahçe Bitkileri Yetiştirme Tekniği. Çukurova Üniversitesi Basımevi, Adana.			
TOOLS AND EQUIPMENTS REQUIRED				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
7	Mid-term exam
8	Rootstock-scion incompatibility
9	Grafting capabilities of fruit species and cultivars to each other
10	Symptoms and types of incompatibility
11	Symptoms and types of incompatibility
12	Changes at incompatible grafting combinations
13	Reasons of incompatibilities
14	To prevent incompatibility
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					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. Yasemin Evrenosoğlu

Date:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318010	COURSE NAME	Diction
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
8	3	0	0	3	3	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
							X
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term		1	30
				2nd Mid-Term			
				Quiz			30
				Homework			
				Project			
				Report			
				Others (practice)			
FINAL EXAM						1	40
PREREQUIEITE(S)				-			
COURSE DESCRIPTION				The quota of the course must be limited up to 24 students. If the number of students passes 24, another class can be opened.			
COURSE OBJECTIVES				On the context of phonics and effective communication analyzing the sounds; Properly, fluently and understandable speaking; using body language effectively; removing the speech disorders; during the business life and career being able to express ourselves in oral speech easily; being able to speak in front of a community and improving the skill of making effective presentation. Speech types like symposium, panel discussion, conference and forum. Effective listening methods.			
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION				Cognizing the integrative feature of common, standard language by removing the pronunciation of the birth place. While expressing the feelings and thoughts, using the sentences properly by making the best pronunciations of sounds and words. Realizing the fineness of the art of speaking well and effectively by paying attention to intonations, pauses and stresses. Learning the ways and methods of making impression on the audience.			
COURSE OUTCOMES				Providing the being transferred properly of the professional knowledge with a proper Turkish.			
TEXTBOOK				After completed this course, students can; 1. express themselves easily and effectively in verbal communication during business life; 2. describe the basic concepts and terms about verbal speech; 3. prepare verbal/ written texts in different verbal/ written expression types by using the methods of ordering and improving ideas; 4. use the grammar of Turkish properly and efficiently; 5. apply the diction methods (like breathing techniques, articulation, stress and intonation) to be able to speak well, properly and effectively; 6. use efficiently their voice and body language. 7. express their thoughts verbally by making prepared / unprepared speeches in front of a community and evaluate their own speeches. 8. develop their self-confident feelings by getting the skill of expressing their ideas in an integrated way during the business life and social sphere. 9. plan what, where, how and how much they will say by ordering the words and without digressing the topic during their speeches. 10. improve the talent of quick thinking beside speaking. 11. improve the skills of being convincing and reassuring while speaking.			
OTHER REFERENCES				Ses Bilimi ve Diksiyon, GÜLER, Eser; HENGİRMEN Mehmet, Engin Yayınları, Ankara, 2005. Spikerlik ve Türkçenin Kullanımı, ÜNSAL, Füsun; ŞAHİN, Hakan, TRT Eğitim Dairesi Başkanlığı, Ankara, 2014.			
TOOLS AND EQUIPMENTS REQUIRED				1.Alıştırmalı Diksiyon Sanatı, ŞENBAY, Nüzhet, MEB Yayınları, İstanbul, 1991. 2. Söz Söyleme ve Diksiyon, GÜRZAP, Can, Remzi Kitabevi, İstanbul, 2006. 3. İmlâ Kılavuzu, Türk Dil Kurumu Yayınları, Ankara.			

COURSE SYLLABUS	
WEEK	TOPICS
1	Introduction; acquaintance, information about course content, references and grading. The content of speaking: the relation of communication-language-thought and speaking.
2	The place of verbal and written expressions in the communication; the relation between the voice and character.
3	The features of a good speaker and the features of a good speech voice.
4	Relaxation, discharging the mind, heating the body; breathing (diaphragm works, the use and keep of voice).
5	The occurrence of the sound and speech organs; voice and the features of voice.
6	Tone and Intonation; melody, duration.
7	Tone and Intonation; melody, duration
8	Stressing and pause.
9	Stressing and pause.
10	Speech, the value of speech (artistic function, daily function); the rules and defects of speech.
11	The speech types: unprepared speech, prepared speech.
12	Discussion, contest, open forum, panel, forum and symposium.
13	Speech Practices.
14	Speech Practices.
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					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:

Signature:



ESOGÜ Horticulture Department Course Information Form

SEMESTER	Spring
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COURSE CODE	251318011	COURSE NAME	Interior Plants Decoration
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAG E
8	3	0	0	3	3	COMPULSORY () ELECTIVE (X)	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Horticulture [if it contains considerable design, mark with (√)]	Social Science
		X	

ASSESSMENT CRITERIA

MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term		
	2nd Mid-Term		
	Quiz		
	Homework	1	40
	Project		
	Report		
	Others (.....)		
FINAL EXAM		1	60
PREREQUIEITE(S)	-		
COURSE DESCRIPTION	Introducing indoor plants and use of aesthetically and in terms of design principles.		
COURSE OBJECTIVES	Explaining the basic principles regarding the use of indoor plants and introduction of plant species suitable for use		
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Students have learned about indoor plants and its ecological condition. Students could be used right plants in right condition considering design principles		
COURSE OUTCOMES	To know about plant design principles To know about indoor plants and its general features To know about maintenance techniques of indoor plants To know about interesting practice (terrarium, ikebana, kusamono...)		
TEXTBOOK	Yazgan, M., Uslu, A., Tanrıvermiş, E. (2003). İç Mekan, Kitap, Ankara. Uzun, G. (2006) Türkiye İç Mekan Bitkileri Tanıtım Kitabı, Floraplus Yayınları, 80 s. Oral, N. (1999). İç Mekan Süs Bitkileri, Ezgi Kitabevi Yayınları, Bursa, 374s. McHoy, P., Donaldson, S. (2012). Saksı Bitkileri El Kitabı, İş Bankası, ISBN 994488653X Ebcioğlu, N. (2002). Salon ve Balkon Bitkileri, Remzi Kitabevi, İstanbul, 173s. Yıldırım Birişçi, T., Güney, A., Türel Sönmez, H., Kılıçarslan, Ç. (2006). Bitkisel Tasarım, Bornova-İzmir, 74 s.		
OTHER REFERENCES	Odabaş, A. (1993). Süs ve Sera Bitkileri, Özgür Yayın Dağıtım, İstanbul, 288s.		
TOOLS AND EQUIPMENTS REQUIRED	-		

COURSE SYLLABUS	
WEEK	TOPICS
1	The importance of pot plants, the concept and design of indoor plants
2	Indoor plants design principles Shape, Measure, Tissue, Color and Odor
3	Classification of indoor plants according to ecological requirements
4	Classification of indoor plants according to their form properties
5	Classification of indoor plants according to leaf properties
6	Classification of indoor plants according to their flower characteristics
7	Problems and maintenance mistake in indoor plants
8	Mid-term exam- Factors determining and influencing interior design
9	Factors determining and influencing interior design
10	Interior plant design methods, Soliter (Single) Design, Group design
11	Poisonous indoor plants
12	Special design examples- Ikebana-Kokedama
13	Special design examples -Terrarium
14	Special design examples –Vertical garden
15	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		

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

Date:

Signature:



ESOGÜ Horticulture Department
Course Information Form

SEMESTER Spring

COURSE CODE	251318019	COURSE NAME	Effective Communication
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
	3	0	0	3	3	COMPULSORY () ELECTIVE (x)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Horticulture [if it contains considerable design, mark with (√)]			Social Science
20		20					60
ASSESSMENT CRITERIA							
MID-TERM				Evaluation Type		Quantity	%
				1st Mid-Term			30
				2nd Mid-Term			
				Quiz			
				Homework			
				Project			30
				Report			
				Others (practice)			
FINAL EXAM							40
PREREQUIEITE(S)				None			
COURSE DESCRIPTION				Communication, the basic components of communication, communication models, communication types, communication barriers, conflict resolution, empathy, effective presentation techniques, communication applications.			
COURSE OBJECTIVES				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 OF COURSE TO APPLY PROFESSIONAL EDUATION				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				1. To make a definition of communication 2. To know the basic components of communication 3. To compare the similarities and differences between communication models 4. To identify communication barriers 5. To design applications demonstrating oral, written and verbal communication skills 6. To use effective presentation techniques			
TEXTBOOK				Baltaş, A. ve Baltaş, Z. (2015). Bedenin dili. İstanbul: Remzi. Harvard Business Review . (2008). Etkin iletişim. İstanbul: Optimist. İzgören, A. Ş. (2016). Dikkat vücudunuz konuşuyor. Ankara: Elma.			
OTHER REFERENCES				Dökmen, Ü. (2016). Sanatta ve günlük yaşamda iletişim çatışmaları ve empati. İstanbul: Remzi.			
TOOLS AND EQUIPMENTS REQUIRED				Projector and computer			

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	Communication barriers
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

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		

Instructor(s):
Signature:

Date: