

COURSE LIST Institute of Natural and Applied Sciences

Field : Horticulture

Course Title	Code	ECTS Credit	COMU Credit	Lecturer
Physiological Disorders in Fruits	ULP-21-BB001	7.5	3	Prof. Dr. Kenan Kaynaş
Horticultural Physiology	ULP-21-BB002	7.5	4	Prof. Dr. Kenan Kaynaş
Special Post-Harvest Preservation Techniques in Horticulture	ULP-21-BB003	7.5	3	Prof. Dr. Kenan Kaynaş
Grapevine Biology	ULP-21-BB004	7.5	3	Yrd. Doç. Dr. Zeliha Gökbayrak
Grapevine Physiology	ULP-21-BB005	7.5	3	Yrd. Doç. Dr. Zeliha Gökbayrak
Organic Culture Processes in Horticulture	ULP-21-BB006	7.5	3	Yrd. Doç. Dr. Canan Öztokat Kuzucu
Vegetable Production Media	ULP-21-BB007	7.5	3	Yrd. Doç. Dr. Canan Öztokat Kuzucu
Horticultural Activities in Çanakkale	ULP-21-BB008	7.5	3	Yrd. Doç. Dr. Fatih Cem Kuzucu
Seed and Seedling Growing	ULP-21-BB009	7.5	3	Yrd. Doç. Dr. Canan Öztokat Kuzucu

Techniques				
Modern Techniques for Fruits Growing	ULP-21-BB010	7.5	3	Doç. Dr. Murat Şeker
Use of Molecular Markers in Plant Breeding	ULP-21-BB011	7.5	3	Doç. Dr. Murat Şeker
Molecular Genetic	ULP-21-BB012	7.5	3	Doç. Dr. Murat Şeker
Fertilization Biology in Horticulture Crops	ULP-21-BB013	7.5	3	Yrd. Doç. Dr. Hakan Engin
Advance Training Systems & Physiology in Horticulture	ULP-21-BB014	7.5	3	Yrd. Doç. Dr. Hakan Engin
Biological & Physiological Disorders in Horticulture Crops	ULP-21-BB015	7.5	3	Yrd. Doç. Dr. Hakan Engin
The Principles of Biology in Tree Fruit by Propagation	ULP-21-BB016	7.5	3	Yrd. Doç. Dr. Hakan Engin
Pruning and Physiology in Tree Fruit	ULP-21-BB017	7.5	3	Yrd. Doç. Dr. Hakan Engin

Course Code	ULP-21-BB001
Name of the Course in English	Physiological Disorders in Fruits

Name of the Course in Turkish	Meyvelerde Fizyolojik Bozukluklar
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Prof. Dr. Kenan Kaynaş
ECTS Credit	7.5
COMU Credit	3
Description	General definition of the physiological disorders of pre and post harvest periods examined on the fruits. Relationships between the cultural processes and ecology, general disorders, disorders examined on different cultivars, and precautions to be taken.

Course Code	ULP-21-BB002
Name of the Course in English	Horticultural Physiology
Name of the Course in Turkish	Bahçe Bitkileri Fizyolojisi
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Prof. Dr. Kenan Kaynaş
ECTS Credit	7.5
COMU Credit	4
Description	The importance of physiology on increasing the yield and quality of horticultural crops, their developmental physiology: relationships between growing, development, blooming, fruit formation, motorization, ripening.

Course Code	ULP-21-BB003
Name of the Course in English	Special Post-Harvest Preservation Techniques in Horticulture
Name of the Course in Turkish	Bahçe Ürünlerinin Özel Muhafaza Teknikleri
Language of the Course	Turkish – English
Level of the Course	Doctorate
Lecturer	Prof. Dr. Kenan Kaynaş
ECTS Credit	7.5
COMU Credit	3
Description	Harvesting, transporting, sorting and packaging in fruit and vegetable production, storage in natural storage rooms and cold rooms, pre-cooling, chemical and heat treatments, storage in controlled atmospheric rooms, pest and diseases and physiological disorders. Post harvest procedures applied in the region, storage and applications in dried products will be seen on-site and will be compared and contrasted to the other regions in Turkey.

Course Code	ULP-21-BB004
Name of the Course in English	Grapevine Biology
Name of the Course in Turkish	Asma Biyolojisi
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Zeliha Gökbayrak
ECTS Credit	7.5
COMU Credit	3

Description	Grapevine taxonomy, growth and development of vegetative and generative organs, fertilization biology of grapevine, fruit set and fruit development.
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Course Code	ULP-21-BB005
Name of the Course in English	Grapevine Physiology
Name of the Course in Turkish	Asma Fizyolojisi
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Zeliha Gökbayrak
ECTS Credit	7.5
COMU Credit	3
Description	Botanical aspects including morphology and domestication will precede lectures covering flower development and energy budget concepts. Impact of physiological variables such as photosynthesis translocation, mineral nutrition, and water relations on fruit ripening and composition.

Course Code	ULP-21-BB006
Name of the Course in English	Organic Culture Processes in Horticulture
Name of the Course in Turkish	Bahçe Bitkilerinde Organik Tarım
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Canan Öztokat Kuzucu
ECTS Credit	7.5

COMU Credit	3
Description	History of organic agriculture, main principles and characteristics of organic agriculture, organic farming methods, comparison with the conventional farming systems, the future of organic farming, production and research activities in Turkey.

Course Code	ULP-21-BB007
Name of the Course in English	Vegetable Production Media
Name of the Course in Turkish	Sebzecilikte Üretim Ortamları
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Canan Öztokat Kuzucu
ECTS Credit	7.5
COMU Credit	3
Description	The characteristics of the growth media, comparison of media, physical and chemical characteristics, use of the plant nutrients, mixed media, fertilization, irrigation, sterilization, production pots.

Course Code	ULP-21-BB008
Name of the Course in English	Horticultural Activities in Çanakkale
Name of the Course in Turkish	Çanakkale Yöresinde Bahçe Bitkileri Tarımı
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Fatih Cem Kuzucu

ECTS Credit	7.5
COMU Credit	3
Description	Ecological characteristics of Çanakkale Province, fruits, vegetables and ornaments grown economically in Çanakkale, problems, solutions and their potential area, expectations in the future, adaptation of new varieties and evaluating the horticultural products.

Course Code	ULP-21-BB009
Name of the Course in English	Seed and Seedling Growing Techniques
Name of the Course in Turkish	Sebzecilikte Tohum ve Fide Yetiştirme Teknikleri
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Canan Öztokat Kuzucu
ECTS Credit	7.5
COMU Credit	3
Description	The quality and quality tests of the vegetable seeds, cleaning, conserving, packaging techniques of the vegetable seeds, seed certification, recent developments at seed industry all over the World and in Turkey, growing up seedlings, production planning.

Course Code	ULP-21-BB010
Name of the Course in English	Modern Techniques for Fruits Growing
Name of the Course in Turkish	Modern Meyve Yetiştirme Teknikleri

Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Doç. Dr. Murat Şeker
ECTS Credit	7.5
COMU Credit	3
Description	Selection of fruit types and rootstocks, growing techniques, selection on best fruit types according to the ecological factors, equipment uses on fruit types, mechanisation on fruit growing, modern techniques in nurser.

Course Code	ULP-21-BB011
Name of the Course in English	Use of Molecular Markers in Plant Breeding
Name of the Course in Turkish	Bitki Islahında Moleküler Markör Tekniklerinin Kullanılması
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Doç. Dr. Murat Şeker
ECTS Credit	7.5
COMU Credit	3
Description	The importance of early selection in modern breeding studies, defining and advertising molecular markers, isoenzymes, innovations obtained by total DNA and RNA fingerprints

Course Code	ULP-21-BB012
Name of the Course in English	Molecular Genetic

Name of the Course in Turkish	Moleküler Genetik
Language of the Course	Turkish – English
Level of the Course	Doctorate
Lecturer	Doç. Dr. Murat Şeker
ECTS Credit	7.5
COMU Credit	3
Description	Protein markers, isoenzymes, DNA markers, RFLP, RAPD, SSRP techniques, SCAR markers, analyses of nucleic acid chains and gen mapping will be discussed which are molecular markers used in molecular genetic field of horticulture.

Course Code	ULP-21-BB013
Name of the Course in English	Fertilization Biology in Horticulture Crops
Name of the Course in Turkish	Bahçe Bitkilerinde Döllenme Biyolojisi
Language of the Course	Turkish – English
Level of the Course	Doctorate
Lecturer	Yrd. Doç. Dr. Hakan Engin
ECTS Credit	7.5
COMU Credit	3
Description	Pollination, Inflorescence, pollen formation, Effective pollination period, Fertilization, Sporofitik and gametofitik incompatibility, Fruits and vegetables pollination groups, Philology of incompatibility, apomiksis, poliembriyoni, embriyo abortions, kseni and metakseni.

Course Code	ULP-21-BB014
Name of the Course in English	Advanced Training Systems & Physiology in Horticulture
Name of the Course in Turkish	Bahçe Bitkilerinde İleri Terbiye Sistemleri ve Fizyolojisi
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Hakan Engin
ECTS Credit	7.5
COMU Credit	3
Description	General rules and physiology of new training and pruning systems, use of different rootstocks, suitable training and pruning systems in different ecology.

Course Code	ULP-21-BB015
Name of the Course in English	Biological & Physiological Disorders in Horticulture Crops
Name of the Course in Turkish	Bahçe Bitkilerinde Biyolojik & Fizyolojik Düzensizlikler
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Hakan Engin
ECTS Credit	7.5
COMU Credit	3
Description	Periodicity, partenocarpy, apomictics, seedlessness, sterility, incompatibility, fruit and flower falls, graining, ripening.

Course Code	ULP-21-BB016
Name of the Course in English	The Principles of Biology in Tree Fruit by Propagation
Name of the Course in Turkish	Meyve Ağaçlarını Çoğaltmanın Biyolojik Esasları
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Hakan Engin
ECTS Credit	7.5
COMU Credit	3
Description	The role of tree fruit propagation in history, modern tree fruit propagation industry, hormonal control of tree fruit propagation, environmental factors of propagation, seed selection, the biology of propagation by seed, the biology of propagation by cuttings, biology of propagation by grafting.

Course Code	ULP-21-BB017
Name of the Course in English	Pruning and Physiology in Tree Fruit
Name of the Course in Turkish	Meyve Ağaçlarında Budama ve Fizyolojisi
Language of the Course	Turkish – English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Hakan Engin
ECTS Credit	7.5
COMU Credit	3

Description

Flower bud initiation and formation in tree fruit, type of spurs in soft and stone fruits, new pruning and training in tree fruits, some pruning and training system in USA and EU.