



LEFKE AVRUPA ÜNİVERSİTESİ
EUROPEAN UNIVERSITY OF LEFKE

**Module Handbook
Horticulture (BSc)**



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1. Introduction

Department of Horticulture program was firstly established in 1996-1997 academic term under the Faculty of Agricultural Sciences and Technologies. This is the first agriculture related program in the Turkish Republic of Northern Cyprus. The faculty and program are located in the greenest part of the Cyprus Island; Lefke where it is feasible to conduct all kinds of horticulture. Therefore, the program has very important role in the University's strategic planning in terms of its uniqueness and provided benefits to the students. The program aims to train students as successful agriculture engineers with its strong academic staff, research fields and laboratories.

Horticulture - cultivation and management of fruits and vegetables - provides critical nutrients for a balanced diet. The discovery of agriculture/horticulture in the history is the key development in the rise of sedentary human civilization, whereby farming helped human beings develop settlements and civilizations and opened up more options for survival other than hunting and gathering. Domesticated species and cultivation of crops provided food to people that enabled the life in settlements/cities. Since then, horticulture is so crucial for human beings, and for countries. The Department of Horticulture at EUL has a very important role in the strategic planning of the Faculty of Agricultural Sciences and Technologies.

Mission

EUL Department of Horticulture has set a mission to educate agricultural engineers who are environmentally conscious, committed to the principles of sustainable horticulture, capable of accessing and analysing information related to the production of horticultural crops (from field to table), and ready to address the critical challenges facing our world (climate change, water scarcity, soil loss, etc.) by fulfilling all the requirements of the modern era.

Vision

To give graduates who are well-trained in the field of horticulture, who recognize regional and universal problems, who exhibit sensitive approaches to these problems, and to be a preferred department for students seeking academic programs at national and international level with the education it provides in this field.

The purpose of the degree programme is to offer a course of study leading to a recognized degree in preparation for a variety of professions in horticulture. It aims to educate students to serve as extension and production specialist, as well as specialist in horticultural engineering with a strong emphasis on greenhouse, and subtropical and semi-arid crop production. Horticulture graduates are in demand as: Researchers and scientists, Landscape professionals, Horticulture educators, Greenhouse managers, Orchard or vineyard managers, Crop protection specialists, Nursery managers, and International consultants. General aims of the programme are to:

- Provide students with the theoretical, practical and interdisciplinary training necessary for academic and/or career advancements in horticulture,
- Graduate individuals who are able to keep up with the latest developments and aware of the problems of the era,
- Provide students with necessary skills to be able to work as a part of a team or alone, and additional skills to take part in national and international projects,
- Provide students with skills to critically think, write and speak,

- Provide the students with an appreciation of and respect for social, moral and ethical values to the community.

A major in Horticulture gains a broad background in all facets of these diverse fields. After mastering the fundamentals, our students receive specialization through advisor-directed electives. Thus, students acquire in-depth knowledge in the production, utilization of plants, plant physiology, integrated pest and disease management, effective irrigation, plant nutrition, biotechnology and postharvest storage of fruits and vegetables. From biology to engineering, from genetics to economics, from nutrition to sociology, our students are exposed to the latest research and technology, and also learn to use that knowledge to help people solve problems and apply their knowledge to the real-world challenges.

A graduate of the Horticulture programme gains a broad background in all facets of these diverse fields. After mastering the fundamentals, our students receive specialization through advisor-directed electives. Thus, students acquire in-depth knowledge in the production, utilization of plants, plant physiology, integrated pest management, irrigation, fertilization, and business. From biology to engineering, from genetics to economics, from nutrition to sociology, our students are exposed to the latest research and technology, and also learn to use that knowledge to help people solve problems and apply their knowledge to real-world challenges.

The Department of Horticulture of the Faculty of Agricultural Sciences and Technologies, the first faculty of the Turkish Republic of Northern Cyprus in the field of agriculture, is also awarded the accreditation certificate by AQAS (Accreditation Quality Assurance Agency for Academic Programmes) for a period of 6 years until 30 September 2029.

The programme outcomes of the Department are:

- 1) to have the basic scientific foundation necessary for cultivation of horticultural crops mainly vegetables (including summer and winter vegetables, both in greenhouse and open field) and fruits (all kind, including viticulture) and be able to select the most economical techniques in site-specific manner.
- 2) to have the fundamental knowledge about using computer and internet technologies (IT) for reaching reliable, scientific and practical information in the field of horticulture.
- 3) to demonstrate a fundamental understanding of the biotic and abiotic environmental factors (climate, soil, water, biodiversity, etc.) affecting plant growth and development and develop strategies to manage them in a sustainable way.
- 4) to have knowledge both in theory and in practice about most common pests, diseases and weeds of horticultural crops and learn sustainable methods of management.
- 5) to have theoretical and practical knowledge about laboratory practices and safe use of agricultural tools, together with the basic principles of plant propagation, plant nutrition, irrigation and pruning required for healthy crop cultivation.
- 6) to have the ability and knowledge to apply organic horticulture and good agricultural practices in farms by following occupational health and environmental protection measures.
- 7) to have basic information about plant genetics, breeding, biotechnology and postharvest handling of horticultural crops.

- 8) to have ability and knowledge to conduct studies, interpret and evaluate data, define problems, and suggest solutions based on proof for several problems occur in crop farms and horticultural industries.
- 9) to have knowledge both in theory and in practice to develop and apply projects considering social responsibilities and develop professional skills with the awareness of the necessity of lifelong learning in the field of horticulture and to follow the developments in science and technology
- 10) to have the basic scientific foundation necessary for research, analyse and identify career opportunities in the field of horticulture as well as horticulture related disciplines.

This module handbook will give you information on the following topics:

- General Rules Regarding Exams and Grading
- Rules to Be Followed During Exams
- Practical Internship Regulations
- Code of Behaviour
- Curriculum
- Course Catalogue Descriptions
- Academic Staff

In this module handbook, you will also find general information about the exams and specific grading, rules to be followed during exams, practical internship regulations, your rights and the code of behaviour required by the faculty. You can also find information about 4-year curriculum, each specific course and faculty members in this handbook.

You can also obtain detailed information about the general regulations (including payments and disciplinary regulations) by accessing the university website.

2. General Rules Regarding Exams and Grading

In the Department of Horticulture, face to face exams are conducted in a way that enables the instructors to assess to which extent students have reached the predefined learning outcomes. Each course learning outcome is matched to the program outcomes when the course contents are prepared. There are two examination periods in a semester called the “midterm period” and “final period”, dates and times of which are predetermined by the Academic Calendar in the beginning of the year. An Examination time table is prepared by the Faculty Coordinator and hung on notice boards a week before the examination period, published online and are available at the Faculty Secretariat. According to EUL, examinations may not be scheduled during the last week of classes, nor may an exam be given without prior notice. The examination results are available to students on the Moodle system (www.moodle.eul.edu.tr) and grade.eul.edu.tr. Efforts are made to have a uniform examination schedule for students where there is at most one exam a day.

The exams are conducted in a way that it enables the instructors to see to which extent students have reached the predefined learning outcomes. Each questions/homework/project are designed to test at least one learning and one programme outcome. Besides to that, the overall of the exams should test all learning outcomes and pre-defined programme outcomes. For Field Practice lectures and other applied courses, the instructor can choose a different evaluation tool, such as project

submissions, presentations, oral examination, applied examination, homework submission and etc. Assignments/homework prepared during the term can be included in the overall evaluation.

Minimum of 70% of compulsory course attendance policy for students to be eligible for final examination. At least one midterm exam and final examinations are conducted every semester for each course. Furthermore, quizzes, homework's and assignments are given to students to help evaluate their performance. Midterm and final examination are considered by the instructor (teaching staff) and related department head. Usually in the first week of the classes, detailed course outlines of each registered course, which contains information on grading policy and the relative weights of the examinations, quizzes, field works, lab works, projects, presentations and homework are provided to students. The instructor of each course, informs the students in advance of any material that can be used during the exams. The midterm and the final exam schedule are posted both on the University website, Moodle platform, Teams channel and on the boards all around the faculty/school offices and are also available at the Faculty Secretariat. The letter grades are organized on a 4.00-point grading scale. The letter grades and their grade point equivalences are given in Table 1.

Table 1. The letter grades and their grade point equivalence for EUL undergraduate programmes

MARK	GRADE	EQUIVALENT SCORES AND EXPLANATION
90-100	A	4.00
85-89	A-	3.70
80-84	B+	3.30
75-79	B	3.00
70-74	B-	2.70
66-69	C+	2.30
62-65	C	2.00
58-61	C-	1.70
54-57	D+	1.30
50-53	D	1.00
40-49	D-	0.70
0-39	F	0.00
Failing from Absenteeism	FA	0.00
I	-	Incomplete
S	-	Satisfactory (Pass in a non credit-course)
U	-	Unsatisfactory (Failure in a non-credit-course)
E	-	Exempted
W	-	Withdrawal

Grades A, A-, B+, B, B-, C+, and C are issued to indicate varying levels of unconditional "Pass" status for the successful scores. Grades C-, D+, and D indicate

the "Conditional Pass" status, where the students with these grades are regarded as successful given that the Cumulative Grade Point Average (CGPA) is above or equal to 2.00. Grades D- and F indicate "Failure" and the students with these grades have to repeat the course in the proceeding semester when the course is offered. Students who do not comply with the required level of attendance and/or do not fulfil the requirements for the evaluation of the course are given the "FA" grade by the instructor of the course. The grades "S" or "U" are given to students who are registered to non-credit courses. "S" indicates satisfactory and "U" indicates unsatisfactory completion of the course. "I" grade is given to students who have not written the end of semester exam and/or have not completed some of the components of the course, which contributes to the end-of-semester grade, because of a valid reason that can officially be proved, if required. The grade "W" is given to students who were allowed to withdraw from a registered course.

The university offers two type of 'compensation' for exams: face to face make-up exams and re-sit exams. Makeup exams are simply conducted after the final exam and students who have missed midterm or final exam are allowed to sit for this exam to compensate their missed exam due to illness or for any other reason. The university conducts re-sit exams for the students to repeat (and replace) the final exam if they fail the course or if they believe that they could not perform as well as they could have done in the final exam. This exam is open for all the students and it is conducted after the grades are announced for the current semester and before the registration for the next semester. The assessment criteria are made transparent for the students and teaching staff. As mentioned before, the course outlines are given to the students in the beginning of the semester and also posted in the course website (Moodle system). Each syllabus contains clearly the number and weights (during the calculation of the final grade) of the assessments that is going to be given during the course. University regulations allow at most three graduation make-ups for those students who complete their credits but have last (at most) three courses that they have failed or, those students who complete their credits and have CGPA below 2.0. Every student is allowed to sit for graduation makeups once. If they fail or are not able to raise their CGPA to the desired amount, they will have to register and attend those courses, during the next semester. The graduation make-up exam grade counts for the total grade obtained for that course. It is clearly marked in the student transcript that the student took a graduation make-up exam for the associated courses.

The midterm examinations and final examinations take place during the examination period that is shown in the Academic Calendar, which is announced at the beginning of each academic year. According to EUL, examinations may not be scheduled during the last week of classes, nor may an exam be given without prior notice. The examination results are available to students on the Moodle system (www.moodle.eul.edu.tr).

In the case where a student believes that the grade received is different from what was expected, he/she may appeal against the grade by filing a petition with the head of the department. For a petition to be reviewed, a student must appeal within seven days from the date the results are announced. The university has accessibility for all the disabled students to classrooms, laboratory and staff offices. If any kind of disability (permanent or temporarily) which would exist on a student's ability to perform the given exams in a normal manner, an application will be done by the student to the relevant dean's office for consideration.

Most of the assignments are completed inside the institution (in the main campus or in the Research and Implementation Farm) and as a result we have a control over the quality assurance. Practical Internship (AGRI 320) is conducted outside or in the Research and Implementation Farm and reports are conducted outside; as a result, the practical internship committee not only checks the reports but asks for a presentation for the students for better evaluation of the conducted work.

Similar to practical internship, Graduation Project (AGRI 422) may be conducted outside or in the Research and Implementation Farm with the guidance of the project advisor. The students are asked to prepare report and a presentation which has the demonstration of the project. The jury consisting of the instructors from the department checks the work, report and presentation of the student and sees if it meets the standards of Horticulture graduate and awards the grades accordingly.

3. Rules to Be Followed During Exams

According to the University exam regulations all students, who would take the exams, are obliged to show their EUL ID before or during the exam when asked. The students must attend the exam in the classes which are announced on the boards. FA students may not take final exams.

The students who are not on the OIBS lists may not attend the exam. No electronic communication devices are allowed during the exam and will be kept out of the reach of the student. During the exam, only the exam materials (rubber, pen, calculator, etc.) are allowed to be used personally without sharing them with other students.

During the exam, the students are accountable for any forbidden materials, documents, or any written scripts around them even if they do not belong to them. If such a thing happens the student(s) will be counted as cheated and will be treated as such.

During the exam, if any student misbehaves and obliterates the exam atmosphere and insists on doing so after the warning, they will be automatically taken out of the exam room.

Without considering the exam duration, the students are not allowed to leave the exam room for the first 30 minutes.

4. Practical Internship Regulations

All students are obliged to complete one internship/training periods (40 working days) throughout the program. Internship Application and Submission dates are announced on the Faculty Boards.

Requirements for Trainees

- Trainees must follow the guidance provided by the department, as mentioned in the previous page
- All the sections in the log book should be filled out before the completion of the internship
- The trainee is responsible for writing the daily log during the training.
- The trainee is responsible for ensuring that each log page is signed and dated by their supervisor.

Practical Internship Application Guidelines

1. Students can only apply for practical internship, if they are registered to at least 6 courses from the 5th and 6th semesters.
2. Students can only undertake practical internship during the summer period (June to end of August). Practical internship conducted between semesters are not accepted.
3. Students participating in a practical internship programme cannot be registered to any courses during the summer period. Practical internship found to be conducted whilst the student is enrolled onto summer courses will be rejected without further consideration.
4. The practical internship period is 40 consecutive work days. Training conducted for a period less than the practical internship period is rejected and cannot be counted towards future practical internship.
5. Students are required to apply to the selected institution/company with a signed Application Letter.
6. The Application Letter should be obtained from the Secretary of the Faculty, which should be signed by the Head of the Department.
7. Scope of training work should be related to the major field within the Department of Horticulture. Internships that are not related to our field (such as, carrying stuff, watching someone doing a job, plugging the wires, research without an accomplishment, secretary work) are not accepted as practical internship.
8. Trainee should obtain the practical internship log book from the secretary of the Department of Horticulture. Each log book is given and signed by the department to be valid.
9. At the beginning of the internship, trainee should be assigned a qualified professional engineer or scientist as his/her Practical Internship Supervisor (PIS) by the institution/company. Once the training is completed, the practical internship log book should be approved (signed and stamped) by the PIS.
10. The practical internship log book should be completed by the student in English only and submitted to the Practical Internship Assessment Committee of the Department.
11. The practical internship log book should be submitted to the Department no later than the announced deadline; if submitted after the specified deadline, the practical internship log book will be rejected with no exceptions.
12. The evaluation form in the practical internship log book, together with the completed Log Book, should be signed by the PIS and given to you in a sealed

envelope upon completion of the internship. The sealed envelope should be submitted for evaluation to the Department.

13. The practical internship log book is evaluated by Practical Internship Assessment Committee. If the contents of the Log Book are found satisfactory, then trainee will be required to provide an oral presentation.

14. Trainee should prepare a power point presentation summarising the experiences and training gained during the internship.

5. Code of Behaviour

The Faculty of Agricultural Sciences and Technologies has established a Code of Conduct to promote professional ethics and academic integrity. Every student studying at the Faculty and the Department must comply with these rules. The purpose of these rules is to create an efficient and effective learning environment and to create a strong communication environment between students and instructors, as well as between students themselves. At the Faculty, all students and faculty members are expected to agree on basic common values. These values are:

- to treat their colleagues and all University community members with respect.
- to avoid any personal conflict or aggressive behaviour
- not to use any form of violence (physical and/or psychological and/or verbal) or threaten anyone in the academic environment.
- obeying the rules and not playing pranks on each other, especially in laboratory and field environments
- to respect differences (language, religion, race, sect, etc.)
- openness to new ideas and criticism
- cooperation and idea sharing

6. Curriculum

The programme integrates natural and engineering science elements leading to a four-year Bachelor degree. The programme outcomes are designed to reflect both academic and labour-market requirements. The design of the programme supports achievement of the intended learning outcomes. The programme follows a curriculum with 142 credits (240 ECTS) that lasts for 8 semesters (see Table 2 and Table 3). The students successfully completing the program are awarded a Bachelor of Science degree in Agricultural Engineering.

EUL Department of Horticulture academic year includes two semesters, namely “Fall” and “Spring”, each lasting not less than 14 weeks. The academic calendar to be used in conjunction with the program is determined every year with the University Senate decision. Some classes may be re-offered in the so called “Summer School”. The purpose of the Summer School is to offer classes for students who have taken and failed, who haven’t taken, or who choose to retake some courses to improve their GPA. Summer School has compressed 7-week duration, where the weekly class hours have been doubled compared to the 14-week regular semester.

The regular curriculum of the Horticulture Department is given below (Sem: Semester, T: theory, P: practical, C: Credits):

Table 2. The curriculum of the Horticulture Department

Sem	Course Code	Course Name	T	P	C	ECTS
1	COM100	INTRODUCTION TO COMPUTERS	3	0	3	5
	COM101	ENGLISH I	3	0	3	3
	COM109	MATHEMATICS	3	0	3	5
	COM111	CHEMISTRY	3	0	3	4
	COM112	ECONOMICS	3	0	3	6
	COM121	PHYSICS	3	0	3	4
2	AGRI114	ECOLOGY	2	2	3	8
	AGRI152	BOTANY	2	2	3	8
	COM106	TURKISH / TÜRKÇE	2	0	2	2
	COM108	HISTORY / TARİH	2	0	2	2
	COM110	ENGLISH II	3	0	3	3
	COM114	BIOCHEMISTRY	3	0	3	3
	GEN102	INTRODUCTION TO MOLECULAR BIOLOGY AND GENETIC	3	0	3	4
3	AGRI207	SOIL SCIENCE	2	2	3	5
	AGRI217	PHYTOPATHOLOGY	2	2	3	5
	AGRI251	VEGETABLE PRODUCTION I	3	0	3	5
	AGRI253	AGRICULTURAL MECHANIZATION	2	2	3	5
	AGRI255	BASICS OF FRUIT PRODUCTION	2	2	3	5
	STAT253	STATISTICS	3	0	3	6
4	AGRI204	PLANT AND SOIL LABORATORY	2	2	3	6
	AGRI216	PLANT PHYSIOLOGY	3	0	3	5
	AGRI218	ENTOMOLOGY	2	2	3	5
	AGRI226	PLANT BIOCHEMISTRY	3	0	3	5
	AGRI228	FIELD CROPS	2	2	3	5
	AGRI252	VEGETABLE PRODUCTION II	2	2	3	5
5	AGRI303	FIELD PRACTICE I	2	2	3	6
	AGRI313	DISEASES OF HORTICULTURAL PLANTS	2	2	3	5
	AGRI315	HORTICULTURAL TECHNIQUES	2	2	3	5
	AGRI351	IRRIGATION TECHNIQUES	2	2	3	5
		Elective	3	0	3	5
		Elective	3	0	3	4
6	AGRI302	FIELD PRACTICE II	2	2	3	6
	AGRI306	TEMPERATE & SUBTROPICAL FRUIT	3	0	3	5
	AGRI308	PEST OF HORTICULTURAL PLANTS	2	2	3	5
	AGRI314	PLANT NUTRITION	2	2	3	5
		Elective	3	0	3	5
		Elective	3	0	3	4
7	AGRI320	PRACTICAL INTERNSHIP	0	0	0	4
	AGRI409	GREENHOUSE TECHNOLOGIES	2	2	3	5
	AGRI425	ORGANIC FARMING	3	0	3	5
	AGRI471	PLANT BREEDING	3	0	3	5
	AGRI481	CITRICULTURE	2	2	3	5
		Elective	3	0	3	5
8	AGRI402	AGRICULTURE AND THE ENVIRONMENT	3	0	3	5
	AGRI404	VITICULTURE	2	2	3	5
	AGRI408	GREENHOUSE PRODUCTIONS	2	2	3	5
	AGRI418	POST HARVEST PHYSIOLOGY	2	2	3	6
	AGRI422	GRADUATION PROJECT	0	6	3	6
		Elective	3	0	3	5
TOTAL =			117	50	142	240

For the Elective courses, there is an elective pool, where students can select the most appropriate courses for them.

Table 3. The list of elective courses

Course Code	Course Name
AGRIXX1	CTE401 OCCUPATIONAL SAFETY AND HEALTH
LEUXX2	CFE201 LEADERSHIP AND MANAGEMENT
MIS 303	MANAGEMENT INFORMATION SYSTEMS
AGRI316	AGRICULTURAL POLICY
LEUXX1	CFE202 ENVIRONMENT AND SUSTAINABLE DEVELOPMENT
AGRIXX8	BIODIVERSITY MANAGEMENT
AGRIXX2	AGRI422 SEED TECHNOLOGY
COM351	RESEARCH METHODS
AGRIXX6	AGRI491 LANDSCAPE MANAGEMENT
AGRIXX3	AGRI430 WEED SCIENCE
AGRIXX7	AGRI492 FLORICULTURE
BUSN415	FEAXX3 - SMALL BUSINESS MANAGEMENT
AGRIXX9	PLANT BIOTECHNOLOGY
AGRIXX10	AGRICULTURAL EXTENSION AND COMMUNICATION
AGRIXX11	SCIENTIFIC WRITING AND PRESENTATION TECHNIQUES
AGRIXX12	USING PESTICIDES SAFELY

7. Course Catalogue Descriptions

In this section, the course catalogue descriptions of lectures are given. One page is designed for each of the courses. Course details, lecturer details, workload hours, credit points, ECTS, prerequisite (if exist), course objectives, learning outcomes and reference materials are provided.

Course Name	Introduction to Computers
Course Level	Undergraduate
Course Code	COM100
Semester	Fall
Person Responsible for the Course	Önder Onursal
Lecturer	Önder Onursal
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 1 st semester
Type of teaching, expected class size	Face-to-face lectures, <250 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Introduction to computer applications for use "at work and home." Microsoft Office, (Word, Excel, Access, PowerPoint) including Windows operating system, plus open source software, social networking and Web2.0 productivity tools for collaborative teamwork.
Course Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: <ol style="list-style-type: none"> (1) Use Windows OS Controls and Manage Files. (2) Having knowledge how to get connected, use browser, send email, and lunch search engine. (3) Ability to understand Application Software in action including software for word processing, spreadsheet, database management, Presentation, network and graphics. (4) Develop an understanding of diversity in hardware and software (5) Having knowledge how to use mutlimedia software
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Shelly Cashman Vermaat, Discovering Computers Essentials, 1st. ed. [ISBN 9781337285117] 2018 • Shelly Cashman Vermaat, Discovering Computers Fundamentals, 3rd ed. [ISBN 1-4188-4372-5] 2007 • Larry Long and Nancy Long, Computers IT in Perspective 10th ed. [ISBN 0-13-009479-X] 2002. • Shelly Cashman Vermaat, Office 2003, Premium ed. [ISBN 1-4188-5932-X] 2007

Course Name	English I
Course Level	Undergraduate
Course Code	COM101
Semester	Fall
Person Responsible for the Course	Mehmet Mert
Lecturer	Mehmet Mert
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 1 st semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 4 lecture hours per week • Self-study: 3 hours per week • Total Exercises and Examination preparation time: 30 hours
Credit Points - ECTS	3 Credit Points – 3 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course is intended for academically oriented students and it aims to bridge the gap between general and academic English. The course aims at developing the skills required for academic study, including note-taking, essay writing, as well as teaching strategies for undertaking research and dealing with unfamiliar academic vocabulary. The course also aims at teaching the features of guided writing, reading strategies such as predicting, skimming, and scanning. At the end of this course the students are expected to be able to; develop strategies to improve the ability to comprehend complex academic texts, to develop strategies to produce more coherent writing and, make clear, appropriate, relevant notes from academic texts, and to adopt various approaches to deal with new or unknown vocabulary by practicing effective use of dictionaries, and through making effective vocabulary records.
Course Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: <ol style="list-style-type: none"> 1. The students will be able to understand and use English structures accurately to express themselves. 2. The students will be able to learn and use the vocabulary learnt during the lessons.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Final Examination
Media Employed	Moodle for lecture notes sharing
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • English File, Intermediate Plus, Student's Book, Christina Latham-Koenig, et al, Oxford University Press, Third Edition Supporting: • English File, Pre-Intermediate Plus, Workbook, Christina Latham-Koenig, et al, Oxford University Press, Third Edition

Course Name	Mathematics
Course Level	Undergraduate
Course Code	COM109
Semester	Fall
Person Responsible for the Course	Aslı Bardak
Lecturer	Aslı Bardak
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 1 st semester
Type of teaching, expected class size	Face-to-face lectures, <250 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 6 hours per week • Total Lab, Field Study and Examination preparation time: 40 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course consists of an introductory algebra enhanced with pre-algebra topics such as arithmetic, fractions, and word problems as need indicates. Topics include real numbers, linear equations and inequalities in one variable, polynomials, factoring, algebraic fractions, problem solving, systems of linear equations, rational and irrational numbers, and quadratic equations.
Course Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: <ol style="list-style-type: none"> (1) Ability of simplified the algebraic functions (2) Use the graph to illustrate business mathematical techniques (3) Ability to understand Rational numbers, surds and solving the equations (4) Ability to understand exponential numbers and logarithms (5) Ability to understand equations and inequalities
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Ernest F. Haeussler, Jr. Richard S. Paul. Introductory Mathematical Analysis, Prentice Hall, 2002 • Frank S. Budnick, Applied Mathematics for Business, Economics and The Social Sciences, 1994, McGraw Hill • Margaret L. Lial, Raymond N. Greenwell, Nathan P. Ritchey Finite Mathematics and Calculus with Applications, 10/E, Pearson, 2016 • L. Bostock, S. Chandler. Core Maths for A Level, Stanley Thornes (Publishers) LTD, 1994

Course Name	Chemistry
Course Level	Undergraduate
Course Code	COM111
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Saltuk Pirgalioğlu
Lecturer	Asst. Prof. Dr. Saltuk Pirgalioğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 1 st semester
Type of teaching, expected class size	Face-to-face lectures, <100 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 3 hours per week • Total Lab, Field Study and Examination preparation time: 39 hours
Credit Points - ECTS	3 Credit Points – 4 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course is based on understanding the theory of general chemistry designed for engineering majors. Develop an understanding of atomic and molecular structure of matter, periodic properties of elements, the interaction between the particles in liquid and solid phase, solutions, chemical equilibrium, acids and bases, solubility, and relation between chemical reactions and work. At the end of this course, students will have a general understanding of the structure of matter and its interaction. Students will have the basic knowledge on concepts such as properties and states of matter, electron configuration and periodic properties of atoms, chemical bonds and molecular structures.
Course Learning Outcomes	On successful completion of the course, the student will be able to (1) understand and carryout calculations on properties of Substances (2) learn atomic structure and naming of compounds (3) learn mole concept, balancing equations, stoichiometry (4) carry out calculations on aqueous reactions (5) learn ideal gasses, gas mixtures and gas properties (6) understand electronic configurations and covalent bonding (7) learn basic principles of thermochemistry
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination 2 • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing
Reading List/ Recommended Text Books	Main: <ul style="list-style-type: none"> • William L. Masterton, Cecile N. Hurley, Chemistry Principles and Reactions, 8th edition Cengage Learning, 2016 Supporting: <ul style="list-style-type: none"> • Raymond Chang and Kenneth Goldsby, General Chemistry: The Essential Concepts 7th Edition, 2014

Course Name	Economics
Course Level	Undergraduate
Course Code	COM112
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Berna Serener
Lecturer	Asst. Prof. Dr. Berna Serener
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 1 st semester
Type of teaching, expected class size	Face-to-face lectures, <100 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 3 hours per week • Total Lab, Field Study and Examination preparation time: 74 hours
Credit Points - ECTS	3 Credit Points – 6 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Learning the basic principles of economics in relation to production, supply and consumption with respect to markets, competition, cost, price and profits; and their applications. The significance of the contribution of production to the domestic and international economies and trade policies of nations will be discussed with reference to global trends.
Course Learning Outcomes	<p>Learn to use economic models in domestic and global contexts to analyze individual decision making,</p> <p>Learn how prices and quantities are determined in product and factor markets</p> <p>Learn to think critically about economic models, evaluating their assumptions and implications.</p>
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Lipsey, R., & Chrystal, A. (2011). Economics. Oxford University Press, USA. • Mankiw, N. G., & Taylor, M. P. (2020). <i>Economics</i>. Cengage Learning EMEA.

Course Name	Physics
Course Level	Undergraduate
Course Code	COM121
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Nemika Cellatoğlu
Lecturer	Asst. Prof. Dr. Nemika Cellatoğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 1 st semester
Type of teaching, expected class size	Face-to-face lectures, <250 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 3 hours per week • Total Lab, Field Study and Examination preparation time: 90 hours
Credit Points - ECTS	3 Credit Points – 4 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Main objective of this course is introducing the fundamental concepts of motion necessary for engineering science and provides essential background for engineering students. Understanding fundamental concepts of motion necessary for engineering science and supplying the essential background for engineering students, having deeper understanding of fundamental laws and concepts of nature and problem-solving methodology and strengthened creative and systematic thinking capability are among the objectives of this course.
Course Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: <ol style="list-style-type: none"> (1) an ability to translate, interpret and extrapolate important scientific models and laws governing classical mechanics, (2) an ability to demonstrate critical thinking and problem solving skills in the area of physics, (3) an ability to perform mathematical modeling of basic problems and establish their analytic solutions in field of classical mechanics, (4) an understanding of the connection of course material to real life applications.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • In-class exercises • Mid-term examination 1 • Mid-term examination 2 • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing
Reading List/ Recommended Text Books	Main: <ul style="list-style-type: none"> • Physics for Scientists and Engineers with Modern Physics, 9th edition, (2012) Raymond Serway, John W. Jewet • 2. Fundamentals of Physics, 10th edition (2013) Halliday and Resnick

Course Name	Ecology
Course Level	Undergraduate
Course Code	AGRI114
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Turgut Alas
Lecturer	Asst. Prof. Dr. Turgut Alas
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 2 nd semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 lecture hours per week • Self-study: 8 hours per week • Total Lab, Field Study and Examination preparation time: 72 hours
Credit Points - ECTS	3 Credit Points – 8 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Introduction to terms of definitions regarding ecosystems and their components, related topics. Ecology as the study of interrelationships among animals, plants, and their environment: ecosystems, biotic communities, population changes, and applied ecology. Study of ecological processes present in agricultural production systems, agroecosystems, ecosystem services to agriculture, footprints of various agricultural activities on the environment, ecosystem degradations are elaborated in some detail.
Course Learning Outcomes	<p>Purpose of the course can be summarized as below:</p> <ol style="list-style-type: none"> 1. Ecology and biodiversity. 2. Biomes and Ecosystems. 3. Energy, organisms, food web and nutrient cycles. 4. Population ecology and Agro ecology concepts
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Odum, E.P. (1971). Fundamentals of Ecology (Third Edition). W.B. Saunders Company, 574p. ISBN: 0-7216-6941 • Gliessmann, S.R. (2015). Agroecology: The ecology of sustainable food systems (Third Edition). CRC Press, 371p. • Keleş, R. and Harmancı, C. (2002). Çevrebilim (4. baskı). Imge Kitabevi Yayınları, 410p. ISBN: 975-533-043-7 • Tivy, J. (2014). Agricultural ecology. Routledge.xx

Course Name	Botany
Course Level	Undergraduate
Course Code	AGRI152
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Murat Helvacı
Lecturer	Asst. Prof. Dr. Murat Helvacı
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 1 st semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 lecture hours per week • Self-study: 8 hours per week • Total Lab, Field Study and Examination preparation time: 72 hours
Credit Points - ECTS	3 Credit Points – 8 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	In this course, the students are made familiar with the classification and their essential ecological function of plant kingdom. The relevant information will be given on plant cell, vascular system of plants, photosynthesis, growth and development of plants, plant growth regulators, respiration, primitive plants, monocot and dicot plants, morphological characteristics of plants, important plant families and their ecologies.
Course Learning Outcomes	1- Define botany and identify characteristics common to all plants 2- Describe the complexity of plant cell structure and function 3- Compare and contrast the structure and function of different groups of plants 4- Describe various systems of classification and basic properties of organisms found in each Kingdom and classify common plants based on the binomial system of nomenclature 5- Identify and describe the process and individual reactions of photosynthesis and respiration 6- Describe the basic principles of plant production
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Lacy, J. G. and Kaufman P. B. 2006. Botany Illustrated: Introduction to Plants, Major Groups, Flowering Plant Families (2nd Edition). Springer, 147p. • Jose, S. and Clennett C. 2019. Trees, Leaves, Flowers and Seeds (1st Edition). Darling Kindersley Publishing, 192p. • Mauseth, J. D. 1998. An Introduction to Plant Biology (1st Edition). Jones and Bartlett Publishers, 868p.

Course Name	Turkish
Course Level	Undergraduate
Course Code	COM106 / ORT106
Semester	Spring
Person Responsible for the Course	Assoc. Prof. Dr. Osman Erciyas
Lecturer	Assoc. Prof. Dr. Osman Erciyas
Language	English
Relation to Curriculum	Undergraduate degree program, Compulsory, 2 nd semester
Type of teaching, expected class size	Face to face lectures, <15 Students
Workload	<ul style="list-style-type: none"> • Lectures: 2 Lecture hours per week • Self-Study: 2 hours per week • Total Exercises and Examination Preparation time: 30 hours
Credit Points - ECTS	2 Credit Points – 2 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams.
Pre-requisites	
Course Descriptions	Introduction to the grammar and structure of Turkish language, the changes and developments; oral and written presentations. Reading and analyzing essays in Turkish literature. This course is designed specifically for Turkish-speaking students. International students take a different version of this course, COM106.
Course Learning Outcomes	<p>On successful completion of this course, all students will have developed knowledge and understanding of:</p> <ol style="list-style-type: none"> 1. Explains and exemplifies the phonological properties of Turkish 2. Explains and exemplifies the structures of Turkish. 3. Explains and exemplifies the sentence properties of Turkish 4. Reads and evaluates different text types Compares different text types
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Midterm Examination • Final Examination
Media Employed	Whiteboard, Projector and Moodle for Lecture note sharing
Reading List/ Recommended Text Books	<p>Main:</p> <ul style="list-style-type: none"> • Birsen Çankaya ve diğerleri. Easy Turkish Course. İstanbul: Fono Yayınları, 2006. <p>Supporting:</p> <ul style="list-style-type: none"> • Kurtuluş Öztopçu. Elementary Turkish. İstanbul, 2006. • Türkçe Sözlük, Türk Dil Kurumu Yay., Ankara: 2011. • Doğan Günay, Özdan Fidan ve diğerleri, Yabancılar İçin Türkçe Ders Kitabı + Alıştırma Kitabı, Papatya Yay., Ankara: 2013.

Course Name	History
Course Level	Spring
Course Code	COM108 / ORT108
Semester	Fall
Person Responsible for the Course	Assoc. Prof. Dr. Osman Erciyas
Lecturer	Assoc. Prof. Dr. Osman Erciyas
Language	English
Relation to Curriculum	Undergraduate degree program, Compulsory, 2 nd semester
Type of teaching, expected class size	Face to face lectures, <15 Students
Workload	<ul style="list-style-type: none"> • Lectures: 2 Lecture hours per week • Self-Study: 2 hours per week • Total Exercises and Examination Preparation time: 30 hours
Credit Points - ECTS	2 Credit Points – 2 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams.
Pre-requisites	
Course Descriptions	The course provides a detailed exposure on the history of the construction of the Turkish Republic under the light of Kemal Atatürk's principles this course is designed for Turkish speaking students. COM108 is designed for non-Turkish speaking foreign students. The aim of the course is to introduce brief history of Turkish Republic and Cyprus. Social, economic and political aspects and effects of Western Civilization on Turkey and Cyprus. Relations with Middle East.
Course Learning Outcomes	<p>On successful completion of this course, all students will have developed knowledge and understanding of:</p> <ul style="list-style-type: none"> • Analyzes the developments after World War I and the attitude of Mustafa Kemal and his friends in the face of these developments. • Understanding the Turkish Foreign Policy of the Atatürk Era. • They will have basic information about the political developments in Turkey and the world during and after the Second World War. • To have general information about the History of Cyprus.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Midterm Examination • Final Examination
Media Employed	Whiteboard, Projector and Moodle for Lecture note sharing
Reading List/ Recommended Text Books	<p>Main:</p> <ul style="list-style-type: none"> • Lewis, Bernard, The Emergence of Modern Turkey, London, 1967. <p>Supporting:</p> <ul style="list-style-type: none"> • Kinross, Patrick, Atatürk The Rebirth of a Nation, A Phoenix Giant Paperback Publishing, London, 1998. • Luke, Harry, Cyprus Under The Turks • Oberling, Pierre, The Road To Bellapais, USA, 1982. • Denktash, Rauf R, The Cyprus Triangle, The Office of the Turkish Republic of Northern Cyprus, New York, 1988.

Course Name	English II
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Course Level	Undergraduate
Course Code	COM110
Semester	Spring
Person Responsible for the Course	Mehmet Mert
Lecturer	Mehmet Mert
Language	English
Relation to Curriculum	Undergraduate degree program, Compulsory, 2 nd semester
Type of teaching, expected class size	Face to face lectures, <20 Students
Workload	<ul style="list-style-type: none"> • Lectures: 3 Lecture hours per week • Self-Study: 3 hours per week • Total Exercises and Examination Preparation time: 30 hours
Credit Points - ECTS	3 Credit Points – 3 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams.
Pre-requisites	English I
Course Descriptions	This course is intended for academically oriented students and it aims to bridge the gap between general and academic English. The course aims at developing the skills required for academic study, including note-taking, essay writing, as well as teaching strategies for undertaking research and dealing with unfamiliar academic vocabulary. The course also aims at teaching the features of guided writing, reading strategies such as predicting, skimming, and scanning. At the end of this course the students are expected to be able to; develop strategies, to improve the ability to comprehend complex academic texts, to develop strategies to produce more coherent writing and, make clear, appropriate, relevant notes from academic texts, and to adopt various approaches to deal with new or unknown vocabulary by practicing effective use of dictionaries, and through making effective vocabulary records.
Course Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: <ul style="list-style-type: none"> • The students will be able to understand and use English structures accurately to express themselves. • The students will be able to learn and use the vocabulary learnt during the lessons in real life contexts.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Midterm Examination • Final Examination
Media Employed	Whiteboard, Projector and Moodle for Lecture note sharing
Reading List/ Recommended Text Books	Main: <ul style="list-style-type: none"> • English File, Intermediate Plus, Student's Book, Christina Latham- Koenig, et al, Oxford University Press, Third Edition • English File, Intermediate Plus, Workbook, Christina Latham- Koenig, et al, Oxford University Press, Third Edition

Course Name	Biochemistry
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Course Level	Undergraduate
Course Code	COM114
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Besim Özyel
Lecturer	Asst. Prof. Dr. Besim Özyel
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 2 nd semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 3 hours per week • Total Examination preparation time: 6 hours
Credit Points - ECTS	3 Credit Points – 3 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course includes the structure and function of important biomolecules such as carbohydrates, lipids, amino acids, proteins and nucleic acids; enzyme kinetics and the use of cofactors & coenzymes; and metabolic pathways including glycolysis, TCA, electron-transport system, fatty acid and amino acid pathways. Laboratory work includes current biochemical laboratory techniques such as chromatography and electrophoresis, application of specific topics described above, and analysis of data from laboratory experiments.
Course Learning Outcomes	<ul style="list-style-type: none"> • Understand how the chemical properties of molecules determine the ways in which they interact and react with each other. • Understand different types of chemical reactions and how they are used by living organisms.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Voet, D., & Voet, J. G. (2010). Biochemistry. John Wiley & Sons.

Course Name	Introduction to Molecular Biology and Genetic
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Course Level	Undergraduate
Course Code	GEN102
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Emrah Güler
Lecturer	Asst. Prof. Dr. Emrah Güler
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 2 nd semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 3 hours per week • Total Lab, Field Study and Examination preparation time: 36 hours
Credit Points - ECTS	3 Credit Points – 4 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Principles and applications of molecular biology, with emphasis on recombinant DNA technology, gene isolation and cloning, gene transfer into mammalian cells, transgenic animals, regulation of gene expression, molecular diagnostics, molecular biology of cancer and gene therapy
Course Learning Outcomes	<p>On completion of the course, the student should be able to:</p> <ol style="list-style-type: none"> 1- account for the structure and function of biomolecules and macromolecules, 2-describe the structure and organization of genomes, the transfer of genetic information, sources of genetic variation and their consequences for fitness, 3-describe cell structure and regulation in prokaryotic and eukaryotic cells describe the cell cycle, metabolism and principles of energy production within cells, 4-account for a number of modern molecular biology methods for molecular and genetic problems describe the evolutionary processes and mechanisms shaping genomes in natural populations, 5-describe the diversity of life and how this diversity is organized interpret phylogenetic trees, 6-read and critically evaluate scientific journal articles and discuss scientific, societal and ethical aspects of gene technology
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Molecular Biology of The Cell Fifth Edition

Course Name	Soil Science
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Course Level	Undergraduate
Course Code	AGRI207
Semester	Fall
Person Responsible for the Course	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Lecturer	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 3 rd semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course emphasizes the complex nature of the soils as a medium of plant production and in a broader sense as a life supporting system with respect to their formation, basic functions, use, conservation and limitations. Morphological, mineralogical, chemical, physical and biological properties of soils will be elaborated in some detail with respect to their production potentials. The expected outcome is a broader view of soils in relation to soil fertility and to their value as a natural resource.
Course Learning Outcomes	<p>Purpose of the course can be summarized as below:</p> <ol style="list-style-type: none"> 1) Learn the basic principles of soil science and understand the soil as a medium for plant growth; 2) Have knowledge about soil forming, soil properties and soil characteristics (both chemical and physical); 3) Understand the relationship between the soil, water and plant nutrients; 4) Have the ability to select suitable crops for different soil and define best way for soil management and plant nutrition.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • USDA (2014). Keys to Soil Taxonomy (by Soil Survey Staff). Twelfth Edition, 360p. • Lal, R. and Stewart, B.A. (2018). Soil and Climate. 1st Edition, CRC Press, 434p. ISBN 978149878365 • Mukherjee, S. (2022). Current topics in soil science: an environmental approach. Springer Nature. • Sparks, D. L. (2019). Fundamentals of soil chemistry. Encyclopedia of Water: Science, Technology, and Society, 1-11.

Course Name	Phytopathology
Course Level	Undergraduate
Course Code	AGRI217
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Turgut Alas
Lecturer	Asst. Prof. Dr. Turgut Alas
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 3 rd semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Objectives of the course are to equip the students with knowledge on the types and functions of disease making organisms and environmental factors that cause diseases in plants, mechanisms by which they cause disease, and methods of managing diseases and reducing damage.
Course Learning Outcomes	1. Identify factors, symptoms, and cycles of plant diseases. Define the role of suppression options as explained by the disease triangle. 2. Identify abiotic and biotic factors, plant pathogens. 3. Describe biological attributes of various types of plant diseases. 4. Identify plant selection and resistance as a plant disease control option.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Arjunan, G. Karthikeyan, G. Dinakaran, D. Raguchander, T. 1999. Diseases of Horticultural Crops, AE Publications, Coimbatore • Snowden, A.L. 1990. A Colour atlas of Post harvest diseases and disorders. Vol I & II Wolfe Scientific Limited. • Singh, R.S. 1999. Diseases of Vegetable Crops. Oxford & IBH Publications, New Delhi. 247. • Pathak, P.N. 2001. Diseases of Fruit Crops. Oxford & IBH Publications, New Delhi. 350. • Annika Djurle, Lisa Munk, Arne Tronsmo, Anne Marte Tronsmo, Jonathan Yuen, David B. Collinge, 2020. Plant Pathology and Plant Diseases.

Course Name	Vegetable Production I
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Course Level	Undergraduate
Course Code	AGRI251
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Serhat Usanmaz
Lecturer	Asst. Prof. Dr. Serhat Usanmaz
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 3 rd semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 6 hours per week • Total Lab, Field Study and Examination preparation time: 24 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	The aim of this course is to provide students a basic knowledge of the principles of vegetable growing technologies. The major topics of the course are “vegetable production systems and exploitation forms”, “ecological and economic factors influencing vegetable production”, “planning a vegetable garden or exploitation”, “seed propagation and seedling production”, “soil preparation”, “seeding and transplanting”, “management practices”, “pest, disease and weed control” and “crop rotation”. “Harvesting”, “postharvest handling”, “storage and market preparation of vegetables” are also discussed.
Course Learning Outcomes	<p>1) The aim of this course is to provide to student detailed information on the principles and practices of commercial vegetable production, flower types of vegetables and fertilisation biology, including the most important vegetables belonging to Solanacea, Cucurbitacea, Malvacea, Fabacea, Amaryllidacea, Liliacea, Brassicacea, Umbelliferae, Chemopodiacea and Compositea families.</p> <p>2) Students will learn the basic methods of vegetable grafting and plant care.</p> <p>3) Students will be able to choose appropriate production systems and technologies, irrigation systems and diagnose problems related to biotic and abiotic stress and to find suitable solutions to these problems.</p>
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Sinha, N. K., et al. (2010). Handbook of vegetables and vegetable processing. John Wiley & Sons. • Welbaum, G. E. (2015). Vegetable production and practices. CABI.

Course Name	Agricultural Mechanization
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Course Level	Undergraduate
Course Code	AGRI253
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Serhat Usanmaz
Lecturer	Asst. Prof. Dr. Serhat Usanmaz
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 3 rd semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course deals with design and use of agricultural machinery in relation to power engines, power transmission including hydraulics. Farm machinery topics covers the types and use of various tillage and harvesting equipment, their calibrations and service. Design and use of agricultural electrification as electrical circuits, motors, control systems for product processing and conservation for conditioning agricultural structures and for processing of farm products will be included as well.
Course Learning Outcomes	1) To improve the students' understanding about farm machinery topics, including various tillage and harvesting equipment, their calibrations and service. The digital farming techniques of these subjects will also be learnt. 2) To teach the importance of nozzles in pesticide applications and nozzle selection. 3) To teach the advantages and disadvantages of several agricultural equipment to the students 4) To improve the understandings of students about seeding, trans planters, fertilizer technology and etc.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Kormawa, P., et al. (2018). Sustainable agricultural mechanization: a framework for Africa. Sustainable agricultural mechanization: a framework for Africa. • Diao, X., Silver, J., & Takeshima, H. (2016). Agricultural mechanization and agricultural transformation (Vol. 1527). Intl Food Policy Res Inst.

Course Name	Basics of Fruit Production
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Course Level	Undergraduate
Course Code	AGRI255
Semester	Fall
Person Responsible for the Course	Prof. Dr. Mehmet Atilla Aşkın
Lecturer	Prof. Dr. Mehmet Atilla Aşkın
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 3 rd semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course gives the students information about basic aspects of fruit production, with respect to fruit classification, flowers and pollination, sexual and asexual production, orchard design and management, pruning, thinning operations, production of various fruit trees including citrus, olives; pomaceous fruits (apples, pears, stone fruits, apricots, peaches, plums) and berries (raspberries, blackberries).
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Learn the basic principles of classification of the fruit 2. Learn the basic principles of flowering biology and understand the pollination and fertilization, 3. Learn the basic principles of dormancy of buds, temperature, light and other environmental condition, 4. How we get more fruit from fruit trees and vegetables
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Introduction to Fruit Crops (Crop Science) by Mark Rieger, 2006. • Temperate and Subtropical Fruit Production by David I. Jackson and Norman Looney, 1999. • Temperate zone pomology. Timber Press. ISBN-13 978-1604690705. 2009

Course Name	Statistics
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Course Level	Undergraduate
Course Code	STAT253
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Nuru Giritli
Lecturer	Asst. Prof. Dr. Nuru Giritli
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 3 rd semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 6 hours per week • Total Lab, Field Study and Examination preparation time: 54 hours
Credit Points - ECTS	3 Credit Points – 6 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course is designed to introduce the student to the fundamental concepts in statistics. Concepts like population and sample, descriptive statistical operations (mean, mode, median, variance and standard deviation, coefficient of variation standard error), types of distribution, probability, confidence limits and various types statistical tests
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Ability of graphical and numerical data analysis and verbal summaries of data 2. Having knowledge of basic probability computations and the role of probability in statistical inference 3. Ability of understanding fundamental concerns involved in proper data collection 4. Ability to analyze and interpret confidence intervals for means, proportions and variances
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Lind Douglas A., Paul., Marchal William G., Wathen Samuel A.; Statistical Techniques in Business and Economics, 17th edition; McGraw-Hill, 2017 • Groebner David F., Shannon Patrick W., Fry Phillip C., Smith Kent D.; Business Statistics: A Decison Making Approach, 8th ed., Pearson Education Inc., 2011 • Kvanli Alan H., Pavur Robert J., Keeling Kellie B.; Concise Managerial Statistics, South-Western Thomson Learning, 2006

Course Name	Plant and Soil Laboratory
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Course Level	Undergraduate
Course Code	AGRI204
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Murat Helvacı
Lecturer	Asst. Prof. Dr. Murat Helvacı
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 4 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 68 hours
Credit Points - ECTS	3 Credit Points – 6 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Objectives of this course are making students familiar with the basic principles of soil and plant sampling techniques, introducing to various measurement systems and equipment, and with the determination of basis soil properties, nutrient element contents of soil and plant samples, extended examples of various laboratory calculations. The expected outcome is a better appreciation of soil and plant analyses in the assessment of soil fertility and nutritional status of crop plants for more efficient fertilizer applications.
Course Learning Outcomes	<p>Purpose of the course can be summarized as below:</p> <ol style="list-style-type: none"> 1) Learning basic principles of laboratory procedures, equipment and instruments for measurements 2) Provide students with an understanding of the importance of plant and soil analysis (including salinity) 3) Provide students with a knowledge of how to collect plant (including fruit and leaf) and soil samples 4) Learning the basic principles and guidelines of plant and soil analysis and how to read the results 5) Provide students with a knowledge about how to perform fruit quality analysis, chlorophyll and carotenoids, acidity, phenolic and etc.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Dwivedi, B. S., Sharma, G. D., Amule, F. C., Mitra, N. G. (2015). Laboratory Manual on Soil and Plant Analysis. Centre of Advanced Faculty Training, India, 50p. • Fuentes, J. A., Loczy, D., Bruhn, S. T., Zornoza, R (2019). Handbook of Plant and Soil Analysis for Agricultural Systems. CRAI Biblioteca, ISBN : 978-84-16325-86-3
Course Name	Plant Physiology

Course Level	Undergraduate
Course Code	AGRI216
Semester	Spring
Person Responsible for the Course	Prof. Dr. Mehmet Atilla Aşkın
Lecturer	Prof. Dr. Mehmet Atilla Aşkın
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 4 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Plant cells and water; bioenergetics and ATP synthesis; photosynthesis; growth and development of cells; plant hormones; allocation, translocation, and partitioning of photoassimilates and plant development and flowering and fruit development are the main topics of this course.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Learn the basic principles of Plant Physiology. 2. Have knowledge about plant cell organelles. 3. Understand Plant cytoskeleton 4. Learn plant cell and water relationship
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Plant Physiology, L. Taiz and E. Zeiger, 2003, Sinauer Associates, ISBN: 0878938230, 690 pages. • Introduction to Plant Physiology, W. G. Hopkins and N. P. A. Hüner, 2009, John Wiley & Sons, Inc., ISBN: 9780470247662 • Handbook of Plant and Crop Physiology, M. Pessarakli, 2002, Marcel Dekker, Inc., ISBN: 0-8247-0546-7 • Physicochemical and Environmental Plant Physiology, P.S. Nobel, 2009, Elsevier Inc., ISBN: 978-0-12-374143-1

Course Name	Entomology
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Course Level	Undergraduate
Course Code	AGRI218
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Murat Helvacı
Lecturer	Asst. Prof. Dr. Murat Helvacı
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 4 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	An introduction to the principles and theory of systematic zoology and comparative biology including species concepts and speciation; methods for higher classification including phylogenetic systematics, phenetics, and evolutionary taxonomy; and an introduction to zoological nomenclature are covered in this course.
Course Learning Outcomes	Learning outcomes of the lecture can be summarized as below: 1- Identify to Order, at sight, any common insect; 2- Identify to Family, at sight and with the aid of keys, several members of common Orders; 3- Correctly spell all Family names; 4- Learn the name, history, biology, habitat and hosts of each taxa.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Fakhri, M. S. A, Gindaba, A., Negeri, M. (2022). Handbook of Insect Morphology Physiology & Taxonomy (1st Edition). Akinik Publications, India. 533p. • Wins, J. A., Kumari V. J., Babasaheb, J. S., Kumar, K. R., Mahamuni, R. R., Sangeetha, P. (2022). Textbook of Entomology (1st Edition). AIB Saliha Publications, India. 239p. • Patel, L. C. (2023). Applied Entomology: Insect Ecology and Integrated Pest Management (1st Edition). CRC Press, 331p.

Course Name	Plant Biochemistry
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Course Level	Undergraduate
Course Code	AGRI226
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Turgut Alas
Lecturer	Asst. Prof. Dr.Turgut Alas
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 4 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course provides the basic knowledge on the vital processes including photosynthesis, respiration and other the biochemical pathways of metabolic and biosynthetic processes in plants.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Understand plant cell structure, organization, and apply specific biochemical functions to all compartments of the plant cell. Learn the structure, function and biosynthetic pathways of essential biochemical molecules including their key chemical and physical properties. 2. Learn amino acid structures and relate their chemical properties to the synthesis and function of proteins and enzymes. 3. Understand how light energy is captured and used to provide chemical forms of energy to power the functions of cells and whole plants. The importance of CO₂ fixation and carbohydrate metabolism will be presented. The nature and composition of plant cell walls will be explored. 4. Learn about the rich diversity of secondary compounds and metabolism in plants and how such compounds contribute to human health.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Nelson, D. L. and. Cox, M. M. (2005): Lehninger's. Principles of Biochemistry. W. H Freeman and Company, New York. • Farabee, M.J. (2007): Cells II: Cellular Organization

Course Name	Field Crops
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Course Level	Undergraduate
Course Code	AGRI228
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Murat Helvacı
Lecturer	Asst. Prof. Dr. Murat Helvacı
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 4 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	The objectives of this course are to give students the basic knowledge on the growth and development of field crops grown as staple food, fodder and fiber, their cropping systems and basic environmental requirements.
Course Learning Outcomes	Learning outcomes of the lecture can be summarized as below: 1- Identify to Order, at sight, any common insect; 2- Identify to Family, at sight and with the aid of keys, several members of common Orders; 3- Correctly spell all Family names; 4- Learn the name, history, biology, habitat and hosts of each taxa.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Fakhri, M. S. A, Gindaba, A., Negeri, M. (2022). Handbook of Insect Morphology Physiology & Taxonomy (1st Edition). Akinik Publications, India. 533p. • Patel, L. C. (2023). Applied Entomology: Insect Ecology and Integrated Pest Management (1st Edition). CRC Press, 331p.

Course Name	Vegetable Production II
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Course Level	Undergraduate
Course Code	AGRI252
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Serhat Usanmaz
Lecturer	Asst. Prof. Dr. Serhat Usanmaz
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 4 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course provides students detailed information on the principles and practices of commercial vegetable production. In the course, the most important vegetables belonging to Solanaceae, Cucurbitaceae, Malvaceae, Fabaceae, Amaryllidaceae, Liliaceae, Brassicaceae, Umbelliferae, Chenopodiaceae and Compositae families will be described.
Course Learning Outcomes	1) To improve the knowledge of the students about the biology, reproduction and production of major vegetable crops 2) Students will get more detail information about the sub-species and varieties of several vegetable groups in horticultural production 3) The students will gain information about the control of pests, diseases and weeds of vegetable crops 4) Students will learn the environmental stress factors, which affect vegetable production and will gain information about managing these factors 5) To improve the understandings of the students about the phytochemical composition and health benefits of vegetable crops 6) The students will be able to compare the different production methods and select the most suitable method for site-specific conditions
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Salunkhe, D. K., & Kadam, S. S. (1998). Handbook of vegetable science and technology: production, compostion, storage, and processing. CRC press. • Welbaum, G. E. (2015). Vegetable production and practices. CABI.
Course Name	Field Practice I

Course Level	Undergraduate
Course Code	AGRI303
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Serhat Usanmaz
Lecturer	Asst. Prof. Dr. Serhat Usanmaz
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 5 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 68 hours
Credit Points - ECTS	3 Credit Points – 6 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Students have access to facilities in the Research and Application Farm of EUL to apply the theoretical knowledge they acquire in the classes. Nurseries are active year-round production of citrus and olive saplings. Students take part in the various seasonal horticultural activities to strengthen their theoretical knowledge by performing the various task themselves.
Course Learning Outcomes	1) Improving the students' understanding about the importance of horticultural crops, selection of horticultural crops and reproduction of horticultural crops 2) It is aimed to teach the soil characteristics and its relationship between crop selection 3) Students will be able to understand the impacts of different environmental stress conditions on the crop yield and quality and how to manage these conditions 4) The students will also learn the practical applications of pruning, training, grafting together with practical information about pests, diseases, weeds and greenhouse crop management
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Fereres, E., Goldhamer, D. A., & Parsons, L. R. (2003). HortScience, 38(5), 1036-1042. • Ferree, D. C., & Schupp, J. R. (2003). Pruning and training physiology. Apples: botany, production and uses, 319-344. • Acquaah, G. (2008). Horticulture: principles and practices (No. Ed. 4). Pearson education, Inc. • Kahramanoglu, I. (Ed.). (2017). Postharvest Handling. BoD– Books on Demand.

Course Name	Diseases of Horticultural Plants
Course Level	Undergraduate
Course Code	AGRI313
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Turgut Alas
Lecturer	Asst. Prof. Dr. Turgut Alas
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 5 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course covers the topics on etiology, symptoms, mode of spread, survival, epidemiology and management of diseases of horticulture crops; and the study of symptoms and host–parasite relationship of important diseases of fruits, vegetables, spices and condiments, plantations and horticultural crops.
Course Learning Outcomes	<p>Identify factors, symptoms, and cycles of plant diseases.</p> <p>Define the role of suppression options as explained by the disease triangle.</p> <p>Identify abiotic and biotic factors, plant pathogens. Describe biological attributes of various types of plant diseases. Identify plant selection and resistance as a plant disease control option.</p>
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Arjunan, G. Karthikeyan, G. Dinakaran, D. Raguchander, T.1999. Diseases of Horticultural Crops, AE Publications, Coimbatore • Snowden, A.L. 1990. A Colour atlas of Post harvest diseases and disorders. Vol I & II Wolfe Scientific Limited. • Singh, R.S.1999. Diseases of Vegetable Crops. Oxford & IBH Publications, New Delhi. 247. • Pathak, P.N. 2001. Diseases of Fruit Crops. Oxford & IBH Publications, New Delhi. 350. • Annika Djurle, Lisa Munk, Arne Tronsmo, Anne Marte Tronsmo, Jonathan Yuen, David B. Collinge, 2020. Plant Pathology and Plant Diseases.

Course Name	Horticultural Techniques
Course Level	Undergraduate
Course Code	AGRI315
Semester	Fall
Person Responsible for the Course	Prof. Dr. Mehmet Atilla Aşkın
Lecturer	Prof. Dr. Mehmet Atilla Aşkın
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 5 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	The objectives of this course are to give the students the technical information about plant propagation methods of various fruit and vegetable crops, pests and diseases management, orchard design, introduction to greenhouse construction and soilless culture methods.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Learn basic principles of plant physiology and morphology to the reproduction of plants. 2. Learn plant propagation method for specific species. 3. Learn in vitro propagation techniques.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • American Horticultural Society Plant Propagation: The Fully illustrated Plant by Plant Manual of Practical Techniques by Alan Toogood, 1999. • Propagation Techniques by Geoff Hodge and Rosemary Ward, 2012. • Soilless Culture: Theory and Practice by Michael Raviv and J. Heinrich Lieth, 2007. • Introduction to Fruit Crops (Crop Science) by Mark Rieger, 2006.

Course Name	Irrigation Techniques
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Course Level	Undergraduate
Course Code	AGRI351
Semester	Fall
Person Responsible for the Course	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Lecturer	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 5 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Main objectives of this course are to give the basic principles of irrigation, regarding climate, soil and plant factors. Determination of seasonal and total water requirements of various crop plants, methods of irrigation, undesirable consequences of irrigation and the need for drainage are some of the topics elaborated in this course. The expected outcomes of this course are the better understanding of crop production under irrigation, with respect to optimum crop yield, its impact on soil quality and to water economy. Development of salinity and sodicity will be discussed in some detail.
Course Learning Outcomes	1) Learning fundamentals of irrigation and soil & water relationships 2) Provide students with an understanding of the importance of irrigation and things need to be considered before designing of an irrigation system 3) Have detail information about the principles of irrigation scheduling and using of CropWAT program 4) Provide students with a knowledge of techniques used in irrigation 5) Provide students with a basic information about the automatic irrigations systems and fertigation
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Merrett, S. (2001). Water for Agriculture: Irrigation Economics in International Perspective (1st Edition). CRC Press, 250p. • Azhar, A.H., Ashraff, M., Ahmed, M. (2011). Modern irrigation techniques and technologies: Efficient Utilisation of Scarce Water Resources. VDM Verlag Dr. Müller, 168p. • FAO (2018). http://www.fao.org/land-water/databases-and-software/cropwat/en/
Course Name	Occupational Safety and Health

Course Level	Undergraduate
Course Code	CTE401 / AGRIXX1
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Semih Oğuzcan
Lecturer	Asst. Prof. Dr. Semih Oğuzcan
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 5 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	The principal aim of this course is to provide the theory and history of occupational health and safety and globally including the enforcement of laws that address occupational safety and health. In addition, students will gain an understanding on the roles and responsibilities of workers, unions and employers. This course also reviews other safety related issues and aspects of recognizing, evaluating, and understanding control of safety and health hazards in the workplace.
Course Learning Outcomes	<p>Gain an historical, economic, and organizational perspective of occupational safety and health</p> <p>Demonstrate a base of knowledge in the recognition and assessment of health and safety hazards in the workplace</p> <p>"Identify the roles and functions of the occupational health and safety professional in the application of the conceptual framework."</p> <p>Describe basic components of an effective company safety and health program including management commitment, employee involvement, hazard recognition and control and training.</p>
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Koradecka, D. (2010) Handbook of Occupational Safety and Health. Taylor and Francis Group. CRC Press, USA. • Reese, C.D. (2016) Occupational Health and Safety Management – A Practical Approach. 3rd ed. Taylor and Francis Group. CRC Press, USA. • Reese, C.D. (2017) Occupational Safety and Health – Fundamental Principles and Philosophies. Taylor and Francis Group. CRC Press, USA.

Course Name	Leadership and Management
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Course Level	Undergraduate
Course Code	CFE201 / LEUXX2
Semester	Fall
Person Responsible for the Course	Sıdika İskeleli
Lecturer	Sıdika İskeleli
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 5 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 3 hours per week • Total Lab, Field Study and Examination preparation time: 36 hours
Credit Points - ECTS	3 Credit Points – 4 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	In this course, an analysis of theoretical and practical knowledge is made. In this context, basic social and psychological factors associated with the concept of leadership and current theories will be explained and how theoretical knowledge can be applied in terms of leadership and management functions in organizations will be emphasized. The aim of the course is to provide students with a deep understanding of leadership and management concepts and to develop their own leadership skills.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Describe the concept of leadership and effective leadership theories 2. Distinguish between managerial processes, traits & skills 3. Recall diversity and the challenges of workforce environments 4. Identify the effective use of power & influence in organizations 5. Recognize leading change in organizations
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Leadership in organizations / Gary Yukl and William Gardner, Pearson Education, 2020

Course Name	Management Information Systems
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Course Level	Undergraduate
Course Code	MIS303
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Ersin Çağlar
Lecturer	Asst. Prof. Dr. Ersin Çağlar
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 5 th semester
Type of teaching, expected class size	Face-to-face lectures, <80 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course focuses on the applications of information technology within organizations, particularly the acquisition, development, and implementation of computer-based information systems. It covers planning and the use of information systems by management. Various approaches to developing and building MIS, software tools, end user computing and information centres in planning strategies and management science.
Course Learning Outcomes	<p>On successful completion of the course, the student should have gained:</p> <ol style="list-style-type: none"> 1. Understand the perception and the place of MIS in a variety of environments 2. Understand the role of the MIS Manager and what he/she contributes to the operational capability of an organization, 3. Develop knowledge on the role of Network for businesses, different types of networks, particular network components and their role, 4. Develop an understanding of the information needs of managers and assess the value of decision-making skills amongst managers.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing
Reading List/ Recommended Text Books	<p>Main:</p> <ul style="list-style-type: none"> • Laudon, Kenneth & Laudon, Jane, Management Information Systems: Managing the Digital Firm, 16th Edition, Prentice Hall, 2019 <p>Supporting:</p> <ul style="list-style-type: none"> • John Gallaughier, Information Systems: A Manager's Guide to Harnessing Technology, August 2017 • Kusumlata Bhargava, Management Information Systems, 2009

Course Name	Field Practice II
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Course Level	Undergraduate
Course Code	AGRI302
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Serhat Usanmaz
Lecturer	Asst. Prof. Dr. Serhat Usanmaz
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 6 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 68 hours
Credit Points - ECTS	3 Credit Points – 6 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course is the spring term continuation of Field Practice1 activities in accordance with the horticultural production. calendar. All areas of horticulture, e.g. vegetable production in field and greenhouse; orchard and greenhouse management, and nursery production will be presented and the student will be involved in field works. Emphasis will be placed on equipment used in production and its maintenance.
Course Learning Outcomes	1) To provide students with a technical information on horticultural techniques and the basic understanding of fruit and vegetable production and orchards management (including soil selection, irrigation, pruning and etc.). Additionally, it allows students to understand the principles of crop protection from weeds, pests and diseases in horticultural crops.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Chadha, K. L. (2001). Handbook of horticulture. Handbook of horticulture. • Bisbis, M. B., Gruda, N. S., & Blanke, M. M. (2019). Securing horticulture in a changing climate—A mini review. Horticulturae, 5(3), 56. • Acquaah, G. (2008). Horticulture: principles and practices (No. Ed. 4). Pearson education, Inc.

Course Name	Temperature & Subtropical Fruits
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Course Level	Undergraduate
Course Code	AGRI306
Semester	Spring
Person Responsible for the Course	Prof. Dr. Mehmet Atilla Aşkın
Lecturer	Prof. Dr. Mehmet Atilla Aşkın
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 6 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Principles of fruit production, emphasizing on temperate zone and subtropical fruits are the main subject of this course. Within this course integrated management of temperate and subtropical fruit cropping systems including site selection, cultural and management practices, taxonomic classifications, physiological and environmental control of plant development will be covered. Subject matter will include orchard establishment and production methods.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Learn basic principles of temperate fruits (Pome Fruits), 2. Learn basic principles of temperate fruits (Prunes), 3. Learn basic principles of temperate fruits (Nuts), 4. Learn basic principles of subtropics fruits (Olive, banana, avocado, mango, date), 5. Learn basic principles of subtropics fruits (kiwi, pineapple, coconut)
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Temperate zone pomology. M.N. Westwood. W.H Freeman and Company San francisco 2009 • Jackson, D., Looney, N. E., & Morley-Bunker, M. (Eds.). (2011). Temperate and subtropical fruit production. CABI. • Mohamed, Z., AbdLatif, I., & Abdullah, A. M. (2011). Economic importance of tropical and subtropical fruits. In Postharvest biology and technology of tropical and subtropical fruits (pp. 1-20). Woodhead Publishing.

Course Name	Pest of Horticultural Plants
Course Level	Undergraduate
Course Code	AGRI308
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Murat Helvacı
Lecturer	Asst. Prof. Dr. Murat Helvacı
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 6 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course teaches the principles of plant pest management, covering morphology and life cycles of insects and other small animals and plant pathogens. Details integrated management of pests that commonly attack horticultural crops. Lab stresses diagnosis, chemical and non-chemical control of specific pests, and pesticide safety.
Course Learning Outcomes	1- Learn key concepts and background knowledge that will help you make enriched decisions in your career as a horticulturalist, entomologist, or other field 2- Recognize beneficial and harmful arthropods associated with horticultural plantings and understand the basics of pest biology (life cycles, behavior, damage, resources need to survive) 3- Understand the principles of Integrated Pest Management and how they relate to horticultural crop settings. 4- Characterize different types of plant injury and associate it with the arthropod pest that is responsible 5- Identify and employ all facets of modern pest management programs, including sampling, interpretation of available thresholds, and multiple management strategies
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Patel, L. C. (2023). Applied Entomology: Insect Ecology and Integrated Pest Management (1st Edition). CRC Press, 331p • Omkar, (2019). Pests and Their Management. Singapore: Springer Nature Singapore, 1078p.

Course Name	Plant Nutrition
Course Level	Undergraduate
Course Code	AGRI314
Semester	Spring
Person Responsible for the Course	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Lecturer	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 6 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Basic terms and principles of mineral nutrition of agricultural plants regarding plant yield determining factors, soil productivity- fertility, movement and root absorption of essential plant nutrient elements, function of these elements in plants, their deficiency symptoms, assessment of deficiencies by plant tests and their correction by fertilization, introduction to fertigation practices will be discussed in this course.
Course Learning Outcomes	<p>The expected outcomes of this course are:</p> <p>1- improve the students' understanding of the basic principles of plant nutrition and introduce the essential plant nutrients to the students</p> <p>2- improve the understanding of the students about relationships among plant nutrients and soil matrix (including plants) and learn the nutrient uptake mechanism of the plants</p> <p>3- learn and discuss the roles of macro and micro nutrients in crops' growth and development and learn the yield & nutrient deficiency symptoms</p> <p>4- improve the knowledge of students about the types of nutrients, fertilizers and calculation of the fertilizer needs of the crops</p>
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Havlin, J.L., et al. (2005) Soil Fertility and Fertilizers: An Introduction to Nutrient Management. 7th Edition, Pearson Educational, Inc., Upper Saddle River, New Jersey

Course Name	Agricultural Policy
Course Level	Undergraduate
Course Code	AGRI316
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Turgut Alas
Lecturer	Asst. Prof. Dr. Turgut Alas
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 6 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course aims to introduce agricultural policies in an economy in theory and in practice to the students that they will need in their professional or academic career. Basic microeconomic and macroeconomic principles are adopted to the agricultural issues. Furthermore, trends in the world agricultural developments are also studied during the semester.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Effect of Industrial Revolution onto the agriculture and environment. 2. Agriculture, and international agricultural organizations, agricultural policies including common agricultural policies of the EU, agricultural policies in North Cyprus and Turkey. 3. Impact of agriculture and human activities onto the environmental policies. 4. Rural development policies and cooperation in agriculture.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Agricultural Policies in Developing Countries, Frank Ellis, 1992 • The Costs of the Common Agricultural Policies, A. Buckwell, K. A. Parton, D. R. Harvey, K. J. Thomson, 1982

Course Name	Seed Technology
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Course Level	Undergraduate
Course Code	AGRI422 / AGRIXX2
Semester	Spring
Person Responsible for the Course	Prof. Dr. Mehmet Atilla Aşkın
Lecturer	Prof. Dr. Mehmet Atilla Aşkın
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 6 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 3 hours per week • Total Lab, Field Study and Examination preparation time: 36 hours
Credit Points - ECTS	3 Credit Points – 4 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	The aim of this course is to provide students with a basic knowledge of seed industry in the world. The course starts with the structure and properties of types of seeds, the quality properties of seeds (genetic, biological, physical, physiological and pathological features), and vegetable seed production methods in different crops. The major topics of the course are the production, certification, harvesting, separation and sizing, field and laboratory controls, drying, postharvest treatments, packaging, preservation and storage, commercialization and distribution of vegetable seeds.
Course Learning Outcomes	<ol style="list-style-type: none"> 1) Understanding of seed physiology in seed crops 2) Determining the cultural requirements and production requirements for different seed crops 3) Describing the physiological and morphological processes of seed development as modified by the environment from pollination to maturity 4) Applying the principles of biochemistry and physiology to the processes controlling seed development, maturation, germination, dormancy, and deterioration
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Bradford, K. J. and Nonogaki, H. (2007). Seed Development, Dormancy and Germination. Blackwell Publishing Ltd., • Hasanuzzaman, M. and Fotopoulos, V. (2019). Priming and Pretreatment of Seeds and Seedlings. Springer Nature Singapore Pte Ltd., ISBN 978-981-13-8624-4, Singapore. • Desai, B. B. (2004). Seeds Handbook Biology, Production, Processing, and Storage. Taylor & Francis.

Course Name	Environment And Sustainable Development
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Course Level	Undergraduate
Course Code	CFE202 / LEUXX1
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Semih Oğuzcan
Lecturer	Asst. Prof. Dr. Semih Oğuzcan
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 6 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Ecology and sustainability, biodiversity, urbanization, ecological succession, climate and biodiversity, sustaining biodiversity, sustaining resources and environmental quality: food production, water resources and pollution, mineral sources, energy sources, environmental hazards and human health, air pollution, ozone depletion, climate change, solid and hazardous wastes
Course Learning Outcomes	On successful completion of the course, the student will be able to: <ol style="list-style-type: none"> (1) understand environmental problems (2) construct relationship between ecology, biodiversity and sustainability (3) apply principles of sustainability on various environmental issues (4) understand sustainable resources management: water, energy, minerals (5) understand how resource consumption affects air pollution and climate change (6) understand advantages and disadvantages of different strategies in solid waste management
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Jefferson W. Tester, Elisabeth M. Drake, Michael J. Driscoll, Michael W. Golay, and William A. Peters, «Sustainable Energy Choosing Among Options», 2nd Edition, MIT Press, 2012. • G. Tyler Miller, Scott Spoolman, «Environmental Science», 15th Edition, Cengage Learning, 2016 (Textbook)

Course Name	Practical Internship
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Course Level	Undergraduate
Course Code	AGRI320
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Murat Helvacı
Lecturer	Asst. Prof. Dr. Murat Helvacı
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 7 th semester
Type of teaching, expected class size	
Workload	
Credit Points - ECTS	0 Credit Points – 4 ECTS
Requirements according to the examination regulations	
Pre-requisites	
Course Descriptions	The focus of this internship is to enable students to be trained for entry level positions in various areas of horticultural planning, organizing and production activities of government or private organizations. Students will get hands on experience and insights into the practical nature of the horticultural areas. The internship will give students an opportunity to apply classroom theories to practical issues by performing basic duties and responsibilities in the selected segment of the horticulture. Thus, students will be able to develop practical skills during the internship period, explore career opportunities, be exposed to various standards and conditions, and also provide students with the opportunity to start their own professional network.
Course Learning Outcomes	
Study and Examination Requirements and Forms of Examination	
Media Employed	
Reading List/ Recommended Text Books	

Course Name	Greenhouse Technologies
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Course Level	Undergraduate
Course Code	AGRI409
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Murat Helvacı
Lecturer	Asst. Prof. Dr. Murat Helvacı
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 7 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Design and use of enclosed structures to manipulate controlled environments, effects on growth as applied to crops, their production, will be introduced and elaborated in this course, with an emphasis on vegetable production
Course Learning Outcomes	<ol style="list-style-type: none"> 1. To improve the knowledge of the students about design and use of greenhouse structures for manipulating controlled environments, by describing the greenhouse types, main construction skeleton and covering materials. 2. To give basic information about the importance of greenhouse and greenhouse selection for different climates, together with the economics and their efficiency. 3. To introduce the heating, cooling and ventilation systems of greenhouses. 4. To provide detailed information to the students about the types of polyethylene (i.e. UV-added polyethylene) used as greenhouse covering materials
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • The Greenhouse Environment, by J.W.Mastalerz,1997 • Principles and Species by Dole and Wilkins. 2005

Course Name	Organic Farming
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Course Level	Undergraduate
Course Code	AGRI425
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Murat Helvacı
Lecturer	Asst. Prof. Dr. Murat Helvacı
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 7 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Principles and practices of organic farming; farms as ecological systems; the certification process and agencies; organic matter management to support the soil food web and nutrient availability; managing biodiversity, crop rotations, plant competition, ground cover, and plant health; integrating crops and animals; organic animal husbandry practices, crop systems studies, farmer and researcher panel discussions.
Course Learning Outcomes	1- Identify the ecological concepts and current issues in organic agriculture versus conventional farming 2- Demonstrate appropriate organic farming techniques and strategies used in crop and animal production 3- Plan strategies for marketing organic products and organic farm inputs 4- Recognize organic certification standards and procedures 5- Advocate for organic agriculture 6- Perform and develop skill in simple independent scientific inquiry to instill in them that science-based decisions are important and urgent
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Nandwani, D. (2016). Organic Farming for Sustainable Agriculture. Springer International Publishing. ISBN 978-3-319-26801-9. Switzerland. • Vacante, V. and Kreiter, S. (2017). Handbook of Pest Management in Organic Farming. MA: CABI. • Somasundaram, E., Nandhini, D. U., Meyyappan, M. (2019). Principles of Organic Farming: (With Theory and Practical). India: New India Publishing Agency.

Course Name	Plant Breeding
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Course Level	Undergraduate
Course Code	AGRI471
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Turgut Alas
Lecturer	Asst. Prof. Dr. Turgut Alas
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 7 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Plant Breeding is one of the most interesting fields of Plant Sciences and have very important place in horticultural education programs. It is the art and science of changing the genetics of plants in order to produce new varieties with desired characteristics. Plant breeding can be accomplished through many different techniques ranging from simply selecting plants with desirable characteristics for propagation to more complex molecular techniques. Conventional and Modern Breeding Methods.
Course Learning Outcomes	<p>Upon completion of this course the conscientious students should be able to;</p> <ol style="list-style-type: none"> 1. Evaluate scientific literature related to crop improvement. Apply genetic and plant breeding principles to new problems. Demonstrate an understanding of basic plant breeding facts and principles. 2. Design appropriate crop improvement strategies for specific problems. Develop new plant breeding programmes and projects. Work in breeding projects and apply successfully appropriate plant breeding techniques
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Biology of Citrus, Pinhas Spiegel-Roy, Cambridge University Press, 1996. • Chahal, C. S., Gosal, S.S. 2009. Principles and Procedures of Plant Breeding: Biotechnological and Conventional Approaches. Narosa Publishing House, New Delhi. • Bradley J. Till, Joanna Jankowicz-Cieslak, Jochen Kumlehn, Thomas H. Tai. 2016. Biotechnologies for Plant Mutation Breeding.

Course Name	Citriculture
Course Level	Undergraduate
Course Code	AGRI481
Semester	Fall
Person Responsible for the Course	Asst. Prof. Dr. Turgut Alas
Lecturer	Asst. Prof. Dr. Turgut Alas
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 7 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Conventional and Modern Breeding Methods. Purpose of the course can be summarized as history and origin, taxonomic classification, morphological and biological characteristics of citrus. Also, information of World production and marketing of citrus fruits.
Course Learning Outcomes	<p>Upon completion of this course the conscientious students should be able to;</p> <ol style="list-style-type: none"> 1. Meeting environmental requirements and limiting factors typical for citrus. Knowing the peculiarities of the morphology, anatomy, physiology and citrus systematic. Within each of the species and varieties of citrus important in World, its characteristics and its distribution. 2. Knowing the criteria-based selection of varieties and patterns. Determining the influence of certain natural factors in the citrus.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Citrus Fruit Biology, Technology and Evaluation, Milind Ladinya, 2008. • Biology of Citrus, Pinhas Spiegel-Roy, Cambridge University Press, 1996. • Sri Hari Babu R. Rajput C.B.S. 2014. Citriculture

Course Name	Weed Science
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Course Level	Undergraduate
Course Code	AGRI430 / AGRIXX3
Semester	Fall
Person Responsible for the Course	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Lecturer	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 7 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course is a study of weeds and their control. Principles involving weed plant classification, weed biology and ecology, and plant and herbicide chemistry will be presented. Practices which prevent, eliminate, and control weeds in grain crops, legumes, vegetables, fruit, pasture, and other crop ecologies will be discussed. Herbicide formulations and safe herbicide use will be taught.
Course Learning Outcomes	1) Learning basic principles of weed science, including weed biology, morphology, reproduction, distribution, and etc. 2) Provide students with an understanding of the weeds, important weed species 3) Provide students with a knowledge of non-chemical weed management practices, including mechanical, biological, physical, cultural and etc. 4) Provide students with an understanding of the chemical weed management practices and fundamentals of pesticide application
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Inderjit (2004). Weed Biology and Management. Kluwer Academic Publisher, 553p. • Radosevic, S.R. and Holt, J.S. (1984). Weed Ecology: Implications for vegetation management. John Wiley & Sons, 265p. • Singh, H. P., Batish, D. R., & Kohli, R. K. (Eds.). (2006). Handbook of sustainable weed management. CRC Press. • Burgos, N. R., Duke, S. O., & Korres, N. E. (Eds.). (2019). Weed Control: Sustainability, Hazards and Risks in Cropping Systems Worldwide. CRC Press, Taylor & Francis Group.

Course Name	Biodiversity Management
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Course Level	Undergraduate
Course Code	AGRIXX8
Semester	Fall
Person Responsible for the Course	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Lecturer	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 7 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course delves into the principles and practices of biodiversity management, with a focus on applications within horticulture. Students will explore the importance of biodiversity in maintaining healthy ecosystems, the role of native species in sustainable gardening, and strategies for preserving genetic diversity in crops. The course will cover habitat restoration, integrated pest management, and the impact of climate change on plant diversity. Through lectures, case studies, and hands-on projects, students will gain the skills needed to promote and manage biodiversity in various horticultural settings.
Course Learning Outcomes	<p>After completing this course, students will be qualified to:</p> <ol style="list-style-type: none"> 1. Determine the main risks to biodiversity and the difficulties in managing it. 2. Determine and evaluate the issues of biodiversity management that are related to science vs values. 3. Determine which management strategies are most likely to be successful in managing and conserving biodiversity in various contexts. 4. Use a variety of media to disseminate knowledgeable criticism or analysis of biodiversity management practices.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Heller, N. E., & Zavaleta, E. S. (2009). Biodiversity management in the face of climate change: a review of 22 years of recommendations. <i>Biological conservation</i>, 142(1), 14-32. • Altieri, M., & Nicholls, C. (2018). Biodiversity and pest management in agroecosystems. CRC press.

Course Name	Agriculture and the Environment
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Course Level	Undergraduate
Course Code	AGRI402
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Murat Helvacı
Lecturer	Asst. Prof. Dr. Murat Helvacı
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 8 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course gives you an understanding of how agriculture interacts with the environment. There is an emphasis on sustainability and the ecological consequences of unsound management. It gives you the skills for a career related to sustainability in farming systems, environmental management or rural development.
Course Learning Outcomes	1) Provide students with an understanding of importance of plants in natural ecosystems, and problems arising due to non-diversification in food consumption 2) Learn the concepts of food safety, food security and food systems to the students with the economic principles 3) Provide students with an understanding of the relationships between agriculture and the environment, including climate change, green revolution, and etc. 4) Provide students with an understanding of the soil ecosystem and its role in agriculture 5) Learn the basic principles of phytoremediation and hyperaccumulator plants 6) Learn the basic principles of sustainable agriculture and make an introduction to the principles of Good Agricultural Practices.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Jørgensen, S.E. et al. (2007). A New Ecology: System Perspective. Elsevier. • Bredahl, M.E. (2020). Agriculture, Trade, And The Environment: Discovering And Measuring The Critical Linkages. CRC Press • Vassel-Be-Hagh, A. and Ting, D.S.K. (2020). Environmental Management of Air, Water, Agri and Energy. CRC Press, 234p.

Course Name	Viticulture
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Course Level	Undergraduate
Course Code	AGRI404
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Turgut Alas
Lecturer	Asst. Prof. Dr. Turgut Alas
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 8 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	To learn the theoretical and practical aspects of vine botany, its cultivation, vineyard establishment, seasonal management, propagation, irrigation, fertilization, training and pruning of grapevines, major cultivars, insect pest and disease control, harvest and post-harvest applications.
Course Learning Outcomes	1- History of viti-viniculture 2- Nutritional values and health benefits of grapes and grape products 3- Characteristics and geographical limits of species, grape and rootstock varieties 4- Functions of vegetative and generative organs and flower type-fruit set relations 5- Factors affecting vegetative and reproductive growth cycles 6- Aspects of site and soil selection for table, wine and raisin grape productions 7- Selection of rootstock and grape varieties for given location 8- Principle and practices of asexual (clonal) propagation of grapevine 9- Planning and techniques of vineyard establishment 10- Selection and practices of pruning and training systems considering climate-soil conditions, rootstock grape varieties
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • General Viticulture, Pierre Gallet, 2000, OENOPLURIMEDIA sarl, ISBN: 2-905 428-13-9. Chateau de Chaintre-71570 CHAITRE-FRANCE

Course Name	Greenhouse Productions
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Course Level	Undergraduate
Course Code	AGRI408
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Serhat Usanmaz
Lecturer	Asst. Prof. Dr. Serhat Usanmaz
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 8 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Principles of greenhouse operation and management for production of horticultural crops; construction and operation of greenhouse structures and systems; regulating and controlling the environment and applying cultural practices as they affect plant physiological processes and influence plant growth and development; management of a greenhouse business.
Course Learning Outcomes	1) To provide basic information about greenhouse cultivation, giving information about cultivation techniques of some vegetable species (including tomatoes, watermelon, cucumber, eggplant, melon, peppers, etc.) grown under greenhouse and teaching the encountered problems and solutions 2) To gain basic information about the soil born diseases in greenhouses and how to manage it 3) Aim at improving the understandings of the students about environmental factors of greenhouse production systems and how to manage them
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Welbaum, G. E. (2015). Vegetable production and practices. CABI. • Nonnecke, I. L. (1989). Vegetable production. Springer Science & Business Media. • Maynard, D. N., & Hochmuth, G. J. (2006). Knott's handbook for vegetable growers. John Wiley & Sons.

Course Name	Post-Harvest Physiology
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Course Level	Undergraduate
Course Code	AGRI418
Semester	Spring
Person Responsible for the Course	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Lecturer	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 8 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied Hours: 2 applied hours per week • Self-study: 6 hours per week • Total Lab, Field Study and Examination preparation time: 40 hours
Credit Points - ECTS	3 Credit Points – 6 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	The objective of this course is to provide the student with a basic understanding of the Postharvest Physiology of harvested horticultural products. Understanding the quantitative factors affecting post-harvest losses of horticultural crops, including physiological and biochemical considerations, and compositional and physical changes occur during maturation and senescence. Also, to study commercial procedures of harvest, handling, packing, storage and marketing in relation to commodity requirements and responses.
Course Learning Outcomes	1) Improve the students' understanding about the physiology of fresh products and learn why they deteriorate 2) Provide students with an understanding of the factors accelerating deterioration in fresh products 3) Teach the maturity indices and "things to consider before harvesting" to the students 4) Improve students' understanding about the innovative and eco-friendly methods in postharvest handling of fresh fruits and vegetables
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Kahramanoğlu, İ. (Ed.) (2023). Postharvest Physiology and Handling of Horticultural Crops. CRC Press, 380p. • Kahramanoğlu, İ (Ed.) (2017). Postharvest Handling. IntechOpen, edited book. • Thompson, A. K. (2008). Fruit and vegetables: harvesting, handling and storage. John Wiley & Sons.

Course Name	Graduation Project
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Course Level	Undergraduate
Course Code	AGRI422
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Turgut Alas
Lecturer	Asst. Prof. Dr. Turgut Alas
Language	English
Relation to Curriculum	The undergraduate degree program, Compulsory, 8 th semester
Type of teaching, expected class size	
Workload	
Credit Points - ECTS	
Requirements according to the examination regulations	
Pre-requisites	
Course Descriptions	Planning, preparation and completion of a project in the area of horticulture is required for graduation from the faculty. The student takes a topic of his/her choice and during class hours learns the fundamental parts of project planning and preparation. Then students apply their carry out projects as experiments or observations in the university farm or in private gardens or orchards under the supervision of the instructor for two semesters, covering most of the plant production season. Every project must be completed with a printed and bound formal Graduation Thesis including Introduction, Methods and Materials, Results and Discussion and Conclusions sections.
Course Learning Outcomes	
Study and Examination Requirements and Forms of Examination	
Media Employed	
Reading List/ Recommended Text Books	

Course Name	Landscape Management
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Course Level	Undergraduate
Course Code	AGRI491 / AGRIXX6
Semester	Spring
Person Responsible for the Course	Asst. Prof. Dr. Murat Helvacı
Lecturer	Asst. Prof. Dr. Murat Helvacı
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 8 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	Identify components of a successful landscape management; Distinguish and describe components of a landscape management contract; List procedures to identify, select, and acquire necessary landscape maintenance equipment; Discuss the importance of landscape design and its implications for landscape maintenance techniques and strategies; Describe water management techniques and practices to increase irrigation use efficiency; Discuss the use of fertilizer and application techniques; Describe bed preparation and plant installation techniques ;Describe management strategies for annuals, herbaceous perennials, & ornamental grasses in the landscape; Discuss the importance of sustainable landscape management practices and the need for environmental stewardship; Describe sustainable landscape management practices and techniques
Course Learning Outcomes	1-Demonstrate competency in sustainable landscape maintenance and installation activities, including: safe use of tools and equipment, operation of irrigation systems, pruning and training techniques, hardscape installation and reading/installing from a design plan; 2-Identify common woody and herbaceous plants in the landscape; 3-Recognize and evaluate key pests in the landscape and propose solutions based on IPM strategies; 4-Use a basic understanding of plant biology and soil science to make sound decisions in the design and maintenance of landscapes;
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Efe, R., Zencirkıran, M., Cürebal, İ., (Eds.). (2018). Recent Researches in Science and Landscape Management. Cambridge Scholars Publishing.

Course Name	Floriculture
Course Level	Undergraduate
Course Code	AGRI492 / AGRIXX7
Semester	Spring
Person Responsible for the Course	Prof. Dr. Mehmet Atilla Aşkın
Lecturer	Prof. Dr. Mehmet Atilla Aşkın
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 8 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course aims to provide students with a comprehensive understanding of the principles and practices involved in floriculture, including the historical and economic significance of the industry. Additionally, to enable students to identify various floricultural plants, including annuals, perennials, bulbs, and flowering shrubs, and understand the criteria for selecting appropriate species for different purposes and environments. It also aims to teach students the essential techniques for the successful cultivation of floricultural crops, including soil preparation, planting, fertilization, irrigation, pruning, and pest management. To introduce students to various plant propagation methods, such as seed sowing, cuttings, grafting, and tissue culture, and to understand their applications in floriculture.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Learn Application of Cultivation Techniques: Students will demonstrate proficiency in the essential techniques of floricultural crop cultivation, such as soil preparation, planting, fertilization, irrigation, pruning, and pest management. 2. Learn Floral Design and Arrangement Skills: Students will be able to create aesthetically pleasing floral designs and arrangements, utilizing principles of design, color theory, and knowledge of different flower and foliage types.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Introduction to Floriculture Editor: Roy A. Larson Publisher: Academic Press ISBN: 9780124077917 Year: 2013 • The Floriculture Industry Author: R. L. Sheela Publisher: New India Publishing Agency ISBN: 9789380235953 Year: 2011

Course Name	Plant Biotechnology
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Course Level	Undergraduate
Course Code	AGRIXX9
Semester	Spring / Fall
Person Responsible for the Course	Asst. Prof. Dr. Turgut Alas
Lecturer	Asst. Prof. Dr. Turgut Alas
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 7 th & 8 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course introduces the fundamental concepts and techniques of plant biotechnology, tailored for horticulture students. Topics include genetic engineering, tissue culture, and molecular markers, with a focus on their applications in improving crop yield, disease resistance, and stress tolerance. Students will learn about the latest advancements in plant biotechnology and their potential to address global food security and sustainability challenges. Through lectures, lab sessions, and case studies, students will gain hands-on experience and a comprehensive understanding of how biotechnological innovations can enhance horticultural practices.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Describe the fundamental physiological and molecular mechanisms involved in plant growth, development, and environmental adaptability. 2. Recognize the ways in which biotechnology has been applied to advance our understanding of intricate plant systems. 3. Describe the application of biotechnology to plant enhancement and talk about the moral ramifications of that use. 4. Assess scientific research articles attentively and create research plans to fill up any gaps that are found.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Abdin, M. Z., Kiran, U., & Ali, A. (Eds.). (2017). <i>Plant biotechnology: principles and applications</i>. Springer Singapore. • Stewart Jr, C. N. (Ed.). (2016). <i>Plant biotechnology and genetics: principles, techniques, and applications</i>. John Wiley & Sons.

Course Name	Agricultural Extension and Communication
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Course Level	Undergraduate
Course Code	AGRIXX10
Semester	Spring / Fall
Person Responsible for the Course	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Lecturer	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 7 th & 8 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course focuses on the principles and practices of agriculture extension and effective communication within the context of horticulture. Students will learn how to disseminate scientific knowledge and innovative techniques to farming communities, enhancing productivity and sustainability. Key topics include extension methods, communication strategies, program planning, and the use of digital tools in outreach. Through interactive lectures, role-playing, and field activities, students will develop skills in engaging with diverse audiences, facilitating community education, and promoting best practices in horticulture and agriculture.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Introduce the learner to the expansion of horticulture. 2. Investigate career options (as well as the corresponding skill sets required for success) in public service, business, career and technical institutions, agricultural communications, and agricultural industry groups. 3. Gain knowledge of the self-leadership abilities required to succeed in a range of work and personal settings. 4. Introduce pupils to the components of an agricultural or technological education program as a whole. 5. Develop communication abilities both in writing and speaking
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Prokopy, L. S., Bartels, W. L., Burniske, G., & Power, R. (2017). Agricultural extension and climate change communication. In Oxford Research Encyclopedia of Climate Science. • Dubey, V. K. (2008). <i>Extension education and communication</i>. New Age International.

Course Name	Scientific Writing and Presentation Techniques
Course Level	Undergraduate
Course Code	AGRIXX11
Semester	Spring / Fall
Person Responsible for the Course	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Lecturer	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 7 th & 8 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 3 lecture hours per week • Self-study: 5 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course equips horticulture students with essential skills in scientific writing and presentation. Emphasizing clarity and precision, students will learn to compose research papers, reports, and grant proposals tailored to the scientific community. Key topics include structuring manuscripts, proper citation, and effective data visualization. Additionally, students will master presentation techniques, from crafting compelling slides to delivering engaging talks. Through practical exercises, peer reviews, and interactive workshops, students will gain confidence and proficiency in communicating their research findings and ideas to both academic and professional audiences.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Recognize the elements of a well-organized, cogent academic essay; 2. Recognize the importance of drafting and editing techniques and include them into your writing process; 3. Provide a solid and persuasive scholarly essay; 4. Using the guidelines for a strong scientific presentation, create a three-minute presentation about your findings; 5. Recognize the value of research integrity and schedule your own education.
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Lindsay, D. (2020). <i>Scientific writing= thinking in words</i>. Csiro Publishing. • Ebel, H. F., Bliefert, C., & Russey, W. E. (2004). <i>The art of scientific writing: from student reports to professional publications in chemistry and related fields</i>. John Wiley & Sons.

Course Name	Using Pesticides Safely
Course Level	Undergraduate
Course Code	AGR1XX12
Semester	Spring / Fall
Person Responsible for the Course	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Lecturer	Assoc. Prof. Dr. İbrahim Kahramanoğlu
Language	English
Relation to Curriculum	The undergraduate degree program, Elective, 7 th & 8 th semester
Type of teaching, expected class size	Face-to-face lectures, <40 students
Workload	<ul style="list-style-type: none"> • Lectures: 2 lecture hours per week • Applied: 2 applied hours per week • Self-study: 4 hours per week • Total Lab, Field Study and Examination preparation time: 38 hours
Credit Points - ECTS	3 Credit Points – 5 ECTS
Requirements according to the examination regulations	A student must have attended at least 70% of the lectures to sit in the exams
Pre-requisites	
Course Descriptions	This course provides horticulture students with comprehensive knowledge and practical skills for the safe and effective use of pesticides. Emphasizing safety and environmental stewardship, the curriculum covers pesticide types, application techniques, regulatory requirements, and integrated pest management strategies. Students will learn to identify pest problems accurately, select appropriate control measures, and implement safety protocols to protect themselves, others, and the environment. Through a combination of lectures, hands-on training, and field demonstrations, students will develop the expertise to manage pests responsibly and sustainably in various horticultural contexts.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Recognize that all pesticides are poisons, should only be used when absolutely necessary, and need to be applied in accordance with tight safety guidelines 2. Understand how to read labels on pesticides 3. Be aware of how to use, handle, and store pesticides safely 4. Recognize typical signs of pesticide toxicity
Study and Examination Requirements and Forms of Examination	<ul style="list-style-type: none"> • Mid-term examination • Project/Homework • Final Examination
Media Employed	Whiteboard, Projector, Moodle for lecture notes sharing, Laboratory and Research Field
Reading List/ Recommended Text Books	<ul style="list-style-type: none"> • Matthews, G. (2015). Pesticides: health, safety and the environment. John Wiley & Sons. • Levine, M. J. (2007). Pesticides: a toxic time bomb in our midst (pp. 213-214). Westport: Praeger Publishers. • Eldridge, B. F. (2008). Pesticide application and safety training for applicators of public health pesticides. California Department of Public Health, Vector-Borne Disease Section, 1616.

8. Academic Staff

Prof. Dr. Mehmet Atilla Aşkın		
BSc-MSc Degree	Ege University	1979
PhD Degree	Ege University	1989
Department	Horticulture	
Research Area	Horticultural Production, Fruit Production, and Breeding	

Assoc. Prof. Dr. İbrahim Kahramanoğlu		
BSc Degree	European University of Lefke	2006
MSc Degree	Çukurova University	2008
PhD Degree	European University of Lefke	2017
Department	Horticulture	
Research Area	Horticultural Production, Postharvest Biology & Technology and Good Agricultural Practices	

Asst. Prof. Dr. Serhat Usanmaz		
BSc Degree	European University of Lefke	2002
MSc Degree	European University of Lefke	2013
PhD Degree	European University of Lefke	2018
Department	Horticulture	
Research Area	Vegetable and Fruit Production (including greenhouse crops and soilless culture), Organic Farming and Plant Stress Management	

Asst. Prof. Dr. Murat Helvacı		
BSc Degree	European University of Lefke	2011
MSc Degree	European University of Lefke	2014
PhD Degree	European University of Lefke	2018
Department	Horticulture	
Research Area	Horticultural Production and Plant Protection	

Asst. Prof. Dr. Turgut Alas		
BSc Degree	European University of Lefke	2009
MSc Degree	European University of Lefke	2012
PhD Degree	European University of Lefke	2017
Department	Horticulture	
Research Area	Citrus Diseases; Plant Biotechnology; Plant Biochemistry and Plant Breeding	