



VOCATIONAL AND TECHNICAL ANATOLIAN HIGH SCHOOL  
ANATOLIAN VOCATIONAL AND ANATOLIAN TECHNICAL PROGRAM

# AGRICULTURE FIELD

The Curriculum Framework

Ankara, 2021

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## **INTRODUCTION**

The rapid changes in science and technology, the changing needs of the individual and society, innovations and improvements in learning teaching theories and approaches have also directly affected the roles expected from individuals. This change describes an individual with qualifications like generating information; being able to use it functionally in life, problem solving, critical thinking, entrepreneurial, decisive, having communication skills, being able to empathize, contributing to the society and culture. Acquiring a profession is prioritized in the expectations of individuals and societies from education. Vocational education, within the integrity of the National Education System, comprises planning, researching, improving and organizing all vocational and technical education services together with agriculture, industry and service sectors and activities of coordinated administration, supervision and teaching. The objective of these educational activities carried out within the scope of a certain plan and schedule included in the applications of Vocational and Technical Education is to raise qualified intermediate member power which is needed at all stages of production and to raise competent individuals that will ensure continuity of the society. While curriculums that will serve to raise individuals having this texture of qualification are prepared, a structure that pays regard to individual differences, aims for the value and skill acquisition and turns out to be comprehensible has been adopted rather than a structure that merely conveys information. In line with this purpose, on the one hand, the repetitive acquisitions and explanations at different subject and grade levels with a spiral approach, and on the other hand, the learning outcomes aimed to be achieved in a holistic and one-time manner were included. Outcomes and explanations in both groups are competent, up-to-date, valid and capable of being interrelated with life during the education and training period of the relevant discipline. These outcomes and their demarcating explanations refer to a plain content with an aspect of providing integrity in the perspective of competencies, skills and values at the level of grades and education degrees. Thus, a total of curriculums providing meaningful and permanent learning, durable and interrelated with previous learning, integrated with other disciplines and daily life around values, skills and competencies has been constituted.

### **1. CURRICULUM DEVELOPMENT PROCESS IN VOCATIONAL AND TECHNICAL EDUCATION**

Vocational and technical education field curriculums are designed to prepare the individuals for the business life and based on the labour market needs and the approach of job analysis. In this approach, the profession profile is defined by analyzing the professions and the tasks/duties and processes assigned for the member of the profession are determined. On the one hand, while the curriculum aims to provide the students with the necessary knowledge, skills, manners and attitudes for fulfilling the relevant tasks and processes via courses and their outcomes; educational activities are planned in a way to prepare individuals for business life in accordance with this framework.

The developed curriculum is a detailed plan comprising the preparation, implementation and evaluation of the educational activities.

This plan is prepared in such a manner that

- It will raise members of profession meeting the requirements of the sector, having the national and international knowledge, skills and competencies.
- It will provide internal and vertical transfer opportunities for individuals at all proficiency levels.
- It will present the individuals convenient options in line with their differences and characteristics.

To that end, a curriculum approach based on the analysis of task and profession has been adopted in vocational and technical education.

**The curriculum development process is made up of the stages below:**

- Analysis** :Labor market needs analysis / skill needs analysis / training needs analysis / occupation analysis / national occupational standards
- Planning** :Specification of the curriculum approach and establishing a framework according to the approach
- Development** : Preparation of curriculum documents
- Implementation** :Approval and implementation of the curriculums
- Evaluation** : Monitoring, evaluation and updating of applications

Within this process, a commission has been established with the participation of labor market representatives, field teachers, specialist academicians in the field and representatives of civil society organizations to carry out the analysis, design and development stages. In the commission studies, the data from the European Qualifications Framework (EQF),the Turkish Qualifications Framework (TQF), international developments, the emerging developments in business life and professions , 3rd and 4th level of national occupational standards and national competencies, feedbacks from educational institutions and practitioners, international classifications and standards, educational policies, protocols, Research and Development (RD) reports, data from the Turkish Statistical Institute (TSI) and other institutions / associations have been referenced.

The curriculum frameworks prepared at the end of this process are based on the competencies of more than one profession within the framework of interdisciplinary curriculum perception. The vocational competencies generating the focus of the curriculum are separated into two units. These are “basic vocational skills” and “advanced or specific vocational skills” related to the profession. In vocational and technical education curriculums, it’s aimed to provide the students with the basic vocational skills by means of workshops, labs and vocational courses, and advanced or specific vocational skills through on-site vocational training and elective vocational courses.

By means of on-site vocational training, outcomes comprising the knowledge and skills required by the branch, necessitating the implementation and practicing of mainly the tasks, projects, experiments and the services are included.

Elective vocational courses aim to ensure the students adapt to the changes in science, industry and technology easily. These courses have been designed in a structure compatible with the properties of the school (students’ interests and needs, educational environments, etc) and with the regional needs of the sector.

## 2. THE CURRICULUM PERSPECTIVE

The basic objective of our education system is to raise individuals having knowledge, skills and behaviours integrated with our values and competencies. While knowledge, skills and behaviors are tried to be achieved through the curriculums, our values and competencies function as a horizon and a connection that provide integrity among these knowledge, skills and behaviours.

Our values are our own heritage from the national and spiritual resources of our society, which have reached today and will be transferred to our future. Competencies are our operational integrities that enable this heritage to participate and contribute to life and humanity.

### 2.1. VALUES

Current developments of our era are one of the reasons for the diversification in professions, trade and economy; even the most important one. The diversification in the labor market instruments, frequent use of virtual platforms has weakened face to face communication. This rapid change has revealed how important the human factor is in the work done and in the quality of the goods produced.

Raising members of professions who have national, spiritual, ethical and all humanistic values, stimulating cooperation and reliance between tradesmen and craftsmen; nascence of values like kindness, love, respect have become a social requirement. Professional associations, -Ahi Brotherhood community being in the first place- have regulated the cultural and social life of Turkish society as well as the professional life.

Professionals doing their job within the framework of moral principles always stand out from other colleagues. The Ahi Brotherhood culture is the supreme example of professional ethics in our history. The spread of values such as love, respect, solidarity, philanthropy, cooperation, justice, honesty and reliability, which are the building blocks of this culture, will bring dynamism to the business and commercial world.

### 2.2. COMPETENCIES

With the transition of societies from the technology age to the information age, the expectations of the society from the future members have also changed in the axis of scientific, technological, social changes and developments that have occurred in recent years. These developments and advancements necessitate providing the students with the competencies and skills such as cognitive ones like critical and original thinking, researching, problem solving; social ones like cultural and social participation, entrepreneurship, communication, developing empathy; personal ones like self-control, self-confidence, stability, leadership along with basic knowledge and skills.

As the skill ranges of the students, the competencies that will be needed in their personal, social, academic and business lives at a national and international level are defined in the Turkish Qualifications Framework (TQF). TQF defines eight key qualifications and describes them as follows:

- 1. Communication in the native language:** Means the interpretation and expression of notions, thoughts ,opinions and facts both verbally and in written (listening, speaking, reading and writing); having a linguistic interaction, convenient within all the social and

cultural contexts like education and training, workplace, home and entertainment, so as to be able to generate new ideas.

2. **Communication in foreign languages:** Mostly, shares the basic skill aspects of communication in native language and is based on the skills of interpretation, expression and comprehension of the feelings, thoughts, notions, facts and opinions both verbally and in written within a range of convenient social and cultural contexts like education, training, workplace, home and entertainment according to the requests and needs of the person. Communication in foreign languages also requires the skills of mediation and intercultural understanding. Competency level of the individual will vary between different languages with the aspects of listening, speaking, reading and writing depending on the individual's social and cultural background, environment, needs and interests.
3. **Mathematical competence and basic competencies in science/technology:** Mathematical competence is the improvement and implementation of mathematical thinking style to solve a range of problems encountered in daily life. The processes, activities and knowledge built on a steady arithmetical skill are emphasized. Mathematical competence includes the ability and willingness to use mathematical modes of thinking (logical and spatial thinking) and presenting (formulas, models, constructs, graphs and tables) to varying degrees. Competence in science refers to the ability and willingness to utilize methodology and the existence of the knowledge to explain the natural world in order to define questions and produce evidence-based results. Competence in technology is considered as the application of the methodology and knowledge within the context of meeting the perceived human wants and needs. Competence in science and technology involves understanding of the changes resulting from human activities and the responsibilities of each individual as a citizen.
4. **Digital competence:** Involves the safe and critical use of information communication technologies for business, daily life and communication. This competence is supported by means of basic skills such as access to information and the use of computers for the evaluation, storage, production, presentation and exchange of information, as well as engaging in common networks and communicating via the Internet.
5. **Learning to learn:** It is the ability to pursue and insist on learning so that the individual can organize his / her learning action individually or as a group in such a way to involve the effective time and information management. This competence involves the individual's awareness of learning needs and processes through recognizing the existing potentials and the ability of the individual to deal with challenges for a successful learning action. It means seeking for counselling support and making use of it as well as gaining new knowledge and skills, processing and adapting them to oneself. Learning to learn motivates learners to rely on previous learning and life experiences to use and apply the knowledge and skills in various contexts such as home, workplace, education and training environment.

- 6. Social and citizenship competencies:** These competencies include the personal, interpersonal and intercultural competencies; involve all courses of action enabling individuals to participate in diversifying society and working life effectively and constructively; providing them to be equipped with the qualifications to resolve conflicts when needed. Citizenship competence equips individuals to fully participate in civic life based on knowledge of social and political concepts and structures, and a commitment to democratic and active participation.
- 7. Taking initiative and entrepreneurship:** States the ability of individuals to turn their thoughts into action. It also includes the ability to plan and manage projects to achieve goals besides innovative thinking and taking risks. This competence supports everyone not only at home and in the community, but also in business life so that they can be aware of the context and conditions of their work and seize job opportunities; it also provides a basis for the more specific knowledge and skills needed by people who engage in or contribute to social and commercial activities. It also includes awareness of ethical values and supporting good governance.
- 8. Cultural awareness and expression:** It is an appreciation of the importance of expressing opinions, experiences and feelings more productively using a variety of mass media, including music, performing arts, literature and visual arts.

### 3. ASSESSMENT AND EVALUATION

Assessment is defined as the representation of the observations after surveying a quality, with numbers or other symbols; and evaluation is the process of concluding by comparing the assessment results with a standard. Assessment and evaluation practices defining the extent to which the knowledge, skills and attitudes specified in the curriculum outcomes are achieved have an important place in making the education effective and successful in the education-training process. Assessment and evaluation practices enable the specification and correction of deficient learning and the conducting of effective guidance in the process with feedback. It is essential for the assessment instruments to be used in education to have sufficiently high validity and reliability and objectively reveal whether the students have learned the intended behaviours to be taught to them and the levels of competency and determination they have reached in these behaviours. Traditional and performance-based evaluation approaches should evenly take part in the curriculums of vocational and technical education institutions. Traditional assessment, also called result-based assessment, is predominantly used to measure acquisitions based on cognitive skills. Assessment instruments in traditional approach consist of true/false, matching, gap filling, short-answer, open ended and multiple-choice question types. Type of the question to be used is determined depending on the cognitive-skill level of the curriculum outcomes. Performance-based assessment, on the other hand, includes practices and tasks that will enable students to transfer their knowledge and skills to real life, taking into account their individual differences. Evaluation doesn't depend on a certain time in this approach in which students are expected to create a product or perform a task including more than one skill; it is carried out throughout the process. Individuals are expected to transform the knowledge they obtained



into skills by putting them into practice in vocational and technical education where psychomotor skills requiring mind-muscle coordination are predominant. On the purpose of assessing the process and the product that they present by integrating their knowledge and skills, students are asked to perform a task or an operation by means of experiments, projects, practices, etc and the results obtained are evaluated in accordance with predetermined criteria. In order to make a performance based evaluation, it is required to evaluate and score the performances of the students for the assigned performance-tasks with the appropriate one of check-list, rating scale, rubric, etc; consisting of previously prepared criteria. Students can be ensured to take part in the training process with the improvement of their critical thinking skills by using self-assessment and peer- assessment forms along with these evaluation approaches. While preparing assessment instruments, manners and behaviours needed for the skill should also be taken into consideration; a holistic structure appropriate for observing the cognitive, affective and psychomotor features as a whole should be constituted.

As diversity in education is influenced by the dynamics such as the individual, course content, social surroundings, school potentials, etc, the role of the education practitioners is considerably important in providing the efficiency of assessment and evaluation applications. The curriculum doesn't set certain limitations for the practitioners in terms of assessment instruments and methods that can be used in the assessment process, it only guides. However, necessary technical and academic standards should be observed within the preferred assessment and evaluation instrument and method.

#### **4. CERTIFICATION**

The graduate student is given a diploma showing his / her field and branch, and a business licence, as well as a certificate of the relevant professions that can be accessed through elective vocational courses. Along with an additional Europass certificate/diploma including the information of the basic competencies gained through training period within the scope of Turkish Qualifications Framework; a document representing the name of the business in which the student had his/her traineeship or on-site vocational training, the name of the learning unit taken and accomplished; is arranged for the requestor graduates of vocational and technical secondary education programs.

#### **5. AGRICULTURE FIELD**

##### **5.1. CURRICULUM OBJECTIVES**

No matter how advanced the technology, industry and service sectors are, people should be fed in a healthy and regular way. A healthy and regular diet can only be achieved with a balanced and sufficient agricultural production.

For the development of the population in the agricultural field, it is necessary to transfer and teach the knowledge, skills, applications and technologies in the agricultural field to the producers. As long as the educational institutions operating in this field increase their activities, the agricultural sector will feed the population of the country in a balanced and regular manner, increase the socioeconomic level of the individuals in the sector, keep the existence of sustainable and protected agricultural areas and contribute to the country's economy. Thus, a healthier and more peaceful future will be left to the

next generations. Educated agricultural personnel are needed to protect the existing agricultural areas in our country and to keep the production at a sufficient level for the population of the country.

In the Agricultural Field Curriculum Framework, Agriculture Branch is included.

In this direction, a formal education program has been prepared in accordance with national and international standards in the field of agriculture and professions under the field.

It is aimed to provide the student who complete this programme with the knowledge, skills and competencies about:

- Acquiring skills that will provide professional development in “professional ethics and Ahi Brotherhood, occupational health and safety, technological developments and industrial transformation, environmental protection, entrepreneurial ideas, establishing and running a business, intellectual and industrial property rights” in line with new age skills and design-oriented thinking approach,
- Meteorological events, characteristics of the land, soil structure, fertilization, irrigation techniques, tools and machines used in agriculture and geographically marked agricultural products,
- Climate conditions, preparing the land for agricultural production, determining the properties of the soil, making fertilization, establishing irrigation systems, showing the common and technical characteristics of tools and machines used in agriculture, the working system and its parts.

**In Agriculture Branch**, it is also aimed to provide the student with the knowledge, skills and competencies about:

- Understanding generative production, vegetative production, establishment of undercover systems, greenhouse, and in-greenhouse production environments, diagnosis of diseases, pests, and weeds that cause damage to plants and the harm types, application of control methods and use of pesticides, common and technical features and the operating system parts of engines and tractors used in agriculture.
- Application of generative and vegetative production methods in accordance with production techniques,
- Establishing undercover systems, greenhouse and in-greenhouse production environments,
- Identifying plant protection products and the methods of fighting against plant diseases, plant pests, and weeds,
- Making the basic applications of grain cultivation, industrial crop cultivation, edible grain legume cultivation, meadow pasture and forage crop cultivation, medicinal, aromatic and pleasure plants cultivation, fruit cultivation, vegetable cultivation, vineyard cultivation, indoor ornamental plants cultivation, outdoor ornamental plants cultivation and the lawn establishment,

- Identifying fruit, vegetable and grape varieties, performing garden establishment, maintenance, pruning and training systems and also performing harvesting and preservation processes,
- Identifying indoor ornamental plants, outdoor ornamental plants and roll grass technique, and conducting soil preparation and sowing / planting operations and maintenance processes,
- Identifying cereals, industrial crops, edible legumes, meadow pasture and forage crops, medicinal aromatic and pleasure plants, conducting soil preparation and sowing / planting, maintenance, harvesting / threshing and preservation processes.

## **5.2. DURATION OF THE CURRICULUM**

Total duration of the field program has been planned as 4 years.

## **5.3. REFERENCE DOCUMENTS AND BASES**

While the program was being prepared, the below-listed reference documents and bases were taken into consideration along with the educational legislation and reflected in the components of the curriculum.

- ISCED-F classification
- Labor Law No. 4857
- Social Insurance and Common Health Insurance Law No. 5510
- Occupational Health and Safety Law No. 6331
- Agriculture Law No. 5488
- Agricultural Struggle and Agricultural Quarantine Law No. 6968
- Seed Law No. 5553
- Protection of Farmers' Property Law No. 4081
- Organic Agriculture Law No. 5262
- Agricultural Insurance Law No. 5363
- Soil Conservation and Land Use Law No. 5403
- Agricultural Producer Unions Law No. 5200
- Agricultural Products Licensed Warehousing Law No. 5300
- Pasture Law No. 4342
- Agricultural Extension and Consultancy Services Regulation No. 26283
- Occupational Health and Safety Risk Assessment Regulation
- Regulation on Emergency Situations at Workplaces
- Regulation on Health and Safety Measures to be Taken in Workplace Building and Extensions
- Regulation on the Use of Personal Protective Equipment in Workplaces
- Health and Safety Signs Regulation
- Fruit / Vine Sapling and Production Material Certification and Marketing Regulation No. 26759
- Agricultural Extension and Consultancy Services Regulation No. 26283
- Agricultural Fighting Tools and Machines Regulation No. 6968
- VQA National Occupational Standard Sapling Grower Reference Code 16UMS0544-3
- VQA National Occupational Standard Fruit Grower Reference Code 16UMS0545-3
- VQA National Occupational Standard Vegetable Grower Reference Code 16UMS0546-3
- VQA National Occupational Standard Seed Breeder Reference Code 16UMS0547-3
- VQA National Occupational Standard Tobacco Grower Reference Code 17UMS0600-3
- VQA National Occupational Standard Ornamental Plants Grower Reference Code 17UMS0601-3

**5.4. ANATOLIAN VOCATIONAL AND ANATOLIAN TECHNICAL PROGRAM WEEKLY COURSE SCHEDULE**

**VOCATIONAL AND TECHNICAL ANATOLIAN HIGH SCHOOL  
ANATOLIAN VOCATIONAL AND ANATOLIAN TECHNICAL PROGRAM  
AGRICULTURE FIELD  
(AGRICULTURE BRANCH)  
WEEKLY COURSE SCHEDULE**

COURSE CATEGORIES	COURSES	9th GRADE	10th GRADE	11th GRADE	12th GRADE	
					AVP	ATP
COMMON COURSES	TURKISH LANGUAGE AND LITERATURE (*)	5	5	5	5	
	RELIGIOUS CULTURE AND MORAL KNOWLEDGE	2	2	2	2	
	HISTORY	2	2	2	-	
	TR. REVOLUTION HISTORY AND KEMALISM	-	-	-	2	
	GEOGRAPHY	2	2	-	-	
	MATHS	6	5	-	-	
	PHYSICS	2	2	-	-	
	CHEMISTRY	2	2	-	-	
	BIOLOGY	2	2	-	-	
	PHILOSOPHY	-	2	2	-	
	FOREIGN LANGUAGE	5	2	2	2	
	PHYSICAL EDUCATION AND SPORTS / VISUAL ARTS / MUSIC	2	2	2	-	
HEALTH KNOWLEDGE AND TRAFFIC EDUCATION	-	-	1	-		
<b>TOTAL</b>		<b>30</b>	<b>28</b>	<b>16</b>	<b>11</b>	
VOCATIONAL COURSES	VOCATIONAL DEVELOPMENT WORKSHOP	2	-	-	24	Academic Support Courses
	PREPARATION FOR AGRICULTURAL PRODUCTION	2	-	-		
	PRODUCTION AND REPRODUCTION TECHNIQUES	-	2	-		
	UNDERCOVER CULTIVATION SYSTEMS	-	2	-		
	BASIC PLANT PROTECTION	-	2	-		
	COMMON GARDEN PLANTS	-	-	3		
	COMMON ORNAMENTAL PLANTS	-	-	2		
	COMMON FIELD CROPS	-	-	2		
	PRACTICE (*)	7	8	10		
ON-SITE VOCATIONAL TRAINING (*)	-	-	-			
<b>TOTAL ACADEMIC SUPPORT COURSE HOURS</b>	-	-	-	-	<b>31</b>	
<b>TOTAL VOCATIONAL COURSE HOURS</b>	<b>11</b>	<b>14</b>	<b>17</b>	<b>24</b>	-	
<b>TOTAL ELECTIVE VOCATIONAL COURSE HOURS (**)</b>	-	-	<b>9</b>	<b>7</b>	-	
<b>TOTAL ELECTIVE COURSE HOURS (**)</b>	<b>2</b>	-		-		
<b>GUIDANCE AND ORIENTATION</b>	-	<b>1</b>	<b>1</b>	<b>1</b>		
<b>TOTAL COURSE HOURS</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>43</b>		

**NOTES:**

(\*) Courses which cannot be regarded as achieved with the year-end grade point average according to the Regulation on Secondary Education Institutions of the Ministry of National Education.

(\*\*) Explanations related to elective vocational courses and elective courses are given in the Implementation Principles of the Curriculum Framework.

## **5.5. IMPLEMENTATION PRINCIPLES OF THE CURRICULUM FRAMEWORK**

1. The program has been designed as 4 years. Weekly course schedule includes common courses, vocational courses, elective courses, elective vocational courses and academic support courses.
2. The courses that comprise basic vocational skills of the field are involved in the 9<sup>th</sup> grade whereas the courses that comprise vocational skills of the branch are involved in the 10<sup>th</sup> and 11<sup>th</sup> grades. At 12<sup>th</sup> grade, academic support courses are implemented for Anatolian Technical Program whereas on-site vocational training and elective vocational courses are implemented in Anatolian Vocational Program.
3. Branch education is carried on by considering regional and sectoral needs, school equipment, the teachers available at school, physical capacity of the school and interest and needs of the students.
4. The students selected with central exam score graduate from Anatolian Technical Program by completing academic support courses or depending upon their preferences they graduate from Anatolian Vocational Program on completing elective vocational courses and also on-site vocational training courses at 12<sup>th</sup> grade.
5. The students who are selected in Anatolian Vocational Program according to their field of secondary education can apply to Anatolian Technical Program in case of having the necessary qualifications in accordance with the relevant legislation.
6. Branch courses in 11<sup>th</sup> grade will be held at school in case there are no workplaces that are convenient education units for the practice in accordance with the relevant legislation.
7. The students at Anatolian Vocational Program will continue on-site vocational training along with the elective vocational courses in 12<sup>th</sup> grade.
8. The students at Anatolian Technical Program will select one of the course tables which encompass the academic support courses at 12<sup>th</sup> grade. The courses included in the tables are based on the rules/decisions published in the Journal of Announcements of Board of Education and the secondary education curriculums in practice.
9. Vocational courses are planned consecutively within the bounds of possibility or without destroying the integrity of the course hours indicated on the weekly course schedule.
10. Vocational courses indicated with (\*) sign are compulsory courses to be achieved for the field and branch. These courses will not be regarded as successful with year-end grade point average in accordance with the Ministry of National Education, Regulation on Secondary Education Institutions.
11. The elective courses at 9<sup>th</sup> grade will be selected from the vocational courses table in compliance with the decisions published in Journal of Announcements of Board of Education.
12. The total of elective courses and elective vocational courses have been planned as 9 course hours at 11<sup>th</sup> grade. These courses will be selected from the elective courses table, the elective vocational courses table, field/branch vocational courses or other field/branch

vocational courses in the direction of the decisions published in Journal of Announcements of Board of Education.

13. Anatolian vocational program students will select 7 lesson hours from the table of elective vocational courses in the curriculum framework in the 12<sup>th</sup> grade.
14. It is possible to get more than one certificate on field and branch by attending elective vocational courses.
15. Learning unit durations that belong to the course in course information forms are determined by the group teachers' board without changing the duration of course hours indicated in the weekly course schedule of vocational courses.
16. Course information forms will be referred with curriculum framework taken as a basis while education and training about vocational courses are planned.
  - a. So as to achieve the outcomes of vocational courses in the curriculum framework, subjects (content) in the course information forms, outcome explanations and application activities / practices will be referred.
  - b. Application activities / practices in the course information forms are selected by the vocational field group teachers' board so as to practise the utmost implementation activities by taking the physical capacity and equipment of the school, number of students into consideration in accordance with the learning outcome. In addition, different application activities / practices can be performed.
17. The content of the on-site vocational course is prepared by the group teachers' board considering the learning outcome including all knowledge and skill necessary for each branch and requiring mainly the performing and practicing of work, project, experiment and services.
18. Internship is applied in order to ensure the students develop their vocational knowledge, skill, attitude and behaviour, comply with the production and service environment and working life by being acquainted with the facilities and instruments that are not available at school. The content of the internship program is prepared by the group teachers' board so as to provide the implementation of practicing, work, project, experiment or service by grounding on the outcomes of relevant grade/grades.
19. Occupational health and safety measurements should be taken while applying the course and learning unit outcomes. The measurements that need to be taken in accordance with the occupational health and safety legislation stated in the reference documents are included by taking the features of the fields and branches in course information forms into account. Accordingly, occupational health and safety issues within the course information forms and the curriculum framework are negotiated at group teachers' board in order to raise individuals who make necessary skills and information related to occupational health and safety a habit.

## 5.6. COMPULSORY (\*) VOCATIONAL COURSES TABLE

Branch	Grade	Anatolian Vocational Program	Anatolian Technical Program
Agriculture	9	Practice	Practice
	10	Practice	Practice
	11	Practice	Practice
	12	On-site Vocational Training	-

## 6. COURSES

### 6.1. COMMON COURSES

Common courses are the courses that each student takes until they graduate from secondary education, which provide a minimum common general culture, aim to ensure awareness and power about being sensitive towards social problems, contribute to the economic, social and cultural development of the country, and prepare the students for higher education programs.

In the common courses in the weekly course schedule, the courses, course hours and programs determined by the Board of Education are applied.

### 6.2. VOCATIONAL COURSES

Vocational courses are the courses that orient the students to the higher education programs and / or the occupation and working areas that they aim and enable them to develop in this direction.

## 9TH GRADE VOCATIONAL COURSES AND OUTCOMES

### PREPARATION FOR AGRICULTURAL PRODUCTION COURSE

**Course Objectives** :In this course, it is aimed to provide the knowledge and skills about climatic conditions, soil structure, preparation of the land for agricultural production, fertilization, irrigation systems, common and technical features of tools and machines used in agriculture, and geographically marked agricultural products under occupational health and safety measures.

**Grade** : 9

**Weekly Course Hours** : 2

Learning Unit	Effect of Climate Factors on Plant Growing
Learning Outcomes	<ol style="list-style-type: none"><li>1. Students will be able to explain the structure and properties of the atmosphere.</li><li>2. Students will be able to explain the effect of temperature on plant growing.</li><li>3. Students will be able to explain the effect of light on plant growing.</li><li>4. Students will be able to explain the effect of wind on plant growing.</li><li>5. Students will be able to explain the effects of precipitation and humidity on plant growing.</li></ol>

<b>Learning Unit</b>	<b>Soil and Properties</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the definition and common structure of the soil.</li> <li>2. Students will be able to explain the main material of the soil and soil formation.</li> <li>3. Students will be able to explain the classification of soils.</li> <li>4. Students will be able to explain the properties of soils.</li> </ol>
<b>Learning Unit</b>	<b>Field Preparation Before Crop Production</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the factors affecting the production in the field.</li> <li>2. Students will be able to explain the materials that prevent production in the field.</li> <li>3. Students will be able to explain how to drain the field.</li> <li>4. Students will be able to explain how to level the soil.</li> <li>5. Students will be able to explain the cultivation of field to be cultivated.</li> </ol>
<b>Learning Unit</b>	<b>Fertilizer Types and Fertilization</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain organic fertilizers used in plant production.</li> <li>2. Students will be able to explain chemical nutrients used in plant breeding.</li> <li>3. Students will be able to explain plant growth regulators (PGRs) and herbal hormones required for plant breeding.</li> <li>4. Students will be able to explain the foliar fertilizers required for plant breeding.</li> <li>5. Students will be able to explain the microbial fertilizers required for plant breeding.</li> </ol>
<b>Learning Unit</b>	<b>Irrigation Systems</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to make preliminary preparations for irrigation in the land where plants are grown.</li> <li>2. Students will be able to explain irrigation systems suitable for plants and land.</li> </ol>
<b>Learning Unit</b>	<b>Features of Tools and Machines Used in Agriculture</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the common and technical features of land preparation and soil cultivation tools and machines.</li> <li>2. Students will be able to explain the common and technical features of planting machines.</li> <li>3. Students will be able to explain the common and technical features of plant care machines.</li> <li>4. Students will be able to explain the common and technical characteristics of harvesting and threshing machines.</li> </ol>
<b>Learning Unit</b>	<b>Geographical Indications in Herbal Products</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the definition of the region.</li> <li>2. Students will be able to explain the definition and organization of geographical indication.</li> <li>3. Students will be able to illustrate the geographical indications in herbal products in the European Union.</li> <li>4. Students will be able to explain geographical indications in herbal products in Turkey.</li> </ol>



## PRACTICE COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about climatic conditions, soil structure, preparation of the land for agricultural production, fertilization, establishment of irrigation systems, showing the parts and working system of tools and machines used in agriculture, and making adjustment and maintenance in accordance with the user manual under occupational health and safety measures.

**Grade** : 9

**Weekly Course Hours** : 7

<b>Learning Unit</b>	<b>Determining the Effects of Climate Factors on Plants</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to determine the effect of temperature on plant growing.</li> <li>2. Students will be able to determine the effect of light on plant growing.</li> <li>3. Students will be able to determine the effect of wind on plant growing.</li> <li>4. Students will be able to determine the effect of precipitation and humidity on plant growing.</li> </ol>
<b>Learning Unit</b>	<b>Determining Soil Properties and Sampling</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to determine the definition and common structure of the soil.</li> <li>2. Students will be able to determine the main material of the soil and soil formation.</li> <li>3. Students will be able to make the classification of the soils.</li> <li>4. Students will be able to determine the properties of the soils.</li> <li>5. Students will be able to take a soil sample from the land to be cultivated.</li> </ol>
<b>Learning Unit</b>	<b>Preparation Procedures of the Land for Plant Production</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to clean the materials that prevent production on the land.</li> <li>2. Students will be able drain areas with high groundwater.</li> <li>3. Students will be able to divide the lands into parcels by leveling the soil using leveling tools and materials on the rough lands to be cultivated.</li> <li>4. Students will be able to make the tillage of the land for production or have it done.</li> </ol>
<b>Learning Unit</b>	<b>Fertilization</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to fertilize the soil with organic fertilizers before vegetative production.</li> <li>2. Students will be able to make chemical fertilization using the nutrients necessary for plant breeding.</li> <li>3. Students will be able to apply plant growth regulators (PGRs) and herbal hormones required for plant breeding.</li> <li>4. Students will be able to observe the development of plants and apply foliar fertilization according to their needs.</li> <li>5. Students will be able to observe the development of plants and apply microbial fertilization according to their needs.</li> </ol>

<b>Learning Unit</b>	<b>Irrigation and Sampling from Water</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to make preparations for irrigation on the cultivated land.</li> <li>2. Students will be able to take samples from water to be used for agricultural irrigation.</li> <li>3. Students will be able to determine and apply the appropriate irrigation system for the plant and the field.</li> </ol>
<b>Learning Unit</b>	<b>Adjustments and Maintenance of Agriculture Tools and Machines</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to show the working system of the land preparation and soil processing tools and machines, and make their adjustments and maintenance in accordance with the user manual.</li> <li>2. Students will be able to show the parts of sowing and planting machines and their working system, and make their adjustments and maintenance in accordance with the user manual.</li> <li>3. Students will be able to show the parts of plant care machines and the working system, and make their adjustments and maintenance in accordance with the user manual.</li> <li>4. Students will be able to show the parts of the harvesting and threshing machines and the working system, and make their adjustments and maintenance in accordance with the user manual.</li> </ol>

## 10<sup>TH</sup> ,11<sup>TH</sup> GRADES VOCATIONAL COURSES AND OUTCOMES

### AGRICULTURE BRANCH

#### PRODUCTION AND REPRODUCTION TECHNIQUES COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about generative and vegetative production methods in accordance with production techniques under occupational health and safety measures.

**Grade** : 10

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Generative Production Methods and Techniques</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the production with seeds in accordance with the production methods and techniques.</li> <li>2. Students will be able to explain the production with spores in accordance with production methods and techniques.</li> </ol>
<b>Learning Unit</b>	<b>Vegetative Production Methods and Techniques</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the vegetative plant organs.</li> <li>2. Students will be able to explain the production with scions in accordance with the technique.</li> <li>3. Students will be able to explain the production with grafting in accordance with the technique.</li> <li>4. Students will be able to explain the production by layering in accordance with the technique.</li> <li>5. Students will be able to explain the production by separation and division according to the technique.</li> <li>6. Students will be able to explain the production with tissue culture in accordance with the technique.</li> </ol>

## UNDERCOVER CULTIVATION SYSTEMS COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about undercover systems, the establishment of greenhouse and in-greenhouse production environments under occupational health and safety measures.

**Grade** : 10

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Characteristics of the Undercover Systems</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the covering systems for the soil surface.</li> <li>2. Students will be able to explain the covering systems for the plant surface.</li> </ol>
<b>Learning Unit</b>	<b>Features and Establishment of Greenhouses</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the type of greenhouse and the factors affecting its establishment.</li> <li>2. Students will be able to explain greenhouse materials and its establishment.</li> <li>3. Students will be able to explain the in-greenhouse growing places.</li> <li>4. Students will be able to explain the in-greenhouse air conditioning conditions.</li> <li>5. Students will be able to explain the soilless agriculture system.</li> </ol>

## BASIC PLANT PROTECTION COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about plant protection products and struggling against plant diseases, plant pests, and weeds under occupational health and safety measures.

**Grade** : 10

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Plant Diseases</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain plant diseases and disease factors.</li> <li>2. Students will be able to explain the struggle against plant diseases in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Plant Pests</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain plant pests and damage types.</li> <li>2. Students will be able to explain the control of plant pests in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Weed Control Methods</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the characteristics of weeds.</li> <li>2. Students will be able to explain weed control methods.</li> </ol>
<b>Learning Unit</b>	<b>Characteristics and Application Technique of Plant Protection Products</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the basic knowledge of plant protection products.</li> <li>2. Students will be able to explain the application of plant protection products in accordance with the technique.</li> </ol>

## PRACTICE COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about generative production, vegetative production, establishment of undercover systems, greenhouse, in-greenhouse production environments in accordance with the techniques; diagnosis of diseases, pests, weeds that damage plants, the forms of damage they cause and their control; and also about the characteristics and use of plant protection products, the common and technical features, parts and working system of the engine and tractor used in agriculture under occupational health and safety measures.

**Grade** : 10

**Weekly Course Hours** : 8

<b>Learning Unit</b>	<b>Production by Generative Method</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to produce with seeds in accordance with the production methods and techniques.</li><li>2. Students will be able to produce with spores in accordance with the production methods and techniques.</li></ol>
<b>Learning Unit</b>	<b>Production by Vegetative Method</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to produce with scions in accordance with the technique.</li><li>2. Students will be able to produce with grafting in accordance with the technique.</li><li>3. Students will be able to produce with layering in accordance with the technique.</li><li>4. Students will be able to produce with separation and division in accordance with the technique.</li></ol>
<b>Learning Unit</b>	<b>Building Undercover Systems</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to build the systems covering the soil surface in accordance with the technique in plant cultivation.</li><li>2. Students will be able to build the systems covering the plant surface in accordance with the technique in plant cultivation.</li></ol>
<b>Learning Unit</b>	<b>Establishment of Greenhouse and In-greenhouse Production Environments</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to determine the type of greenhouse in accordance with the technique.</li><li>2. Students will be able to build a greenhouse using appropriate materials, tools and equipment.</li><li>3. Students will be able to build in-greenhouse plant growing places in accordance with the technique.</li><li>4. Students will be able to create appropriate air conditioning conditions inside the greenhouse by following the technique and occupational safety measures.</li><li>5. Students will be able to set up soilless farming systems in accordance with the technique.</li></ol>

<b>Learning Unit</b>	<b>Fighting Against Plant Diseases</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to determine disease factors of plants in accordance with technical instructions.</li> <li>2. Students will be able to apply disease-fighting methods in accordance with occupational health and safety measures.</li> </ol>
<b>Learning Unit</b>	<b>Fighting Against Plant Pests</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify pests of plants in accordance with technical instructions.</li> <li>2. Students will be able to apply pest control methods in accordance with occupational health and safety measures.</li> </ol>
<b>Learning Unit</b>	<b>Fighting Against Plant Weeds</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to detect weeds damaging plants in accordance with technical instructions.</li> <li>2. Students will be able to apply weed control methods in accordance with occupational health and safety measures.</li> </ol>
<b>Learning Unit</b>	<b>Implementation of Plant Protection Products</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to determine the crop protection products to be used for the protection of agricultural products in accordance with technical instructions.</li> <li>2. Students will be able to use plant protection products on the farm land in accordance with occupational health and safety measures.</li> </ol>
<b>Learning Unit</b>	<b>Engine and Tractors Used in Agriculture</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to show the common and technical characteristics of engines used in agriculture, and their operating systems with their parts.</li> <li>2. Students will be able to show the common and technical characteristics of tractors used in agriculture, and their operating systems with their parts.</li> </ol>

### COMMON GARDEN PLANTS COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about the principles of fruit, vegetable and vineyard cultivation under occupational health and safety measures.

**Grade** : 11

**Weekly Course Hours** : 3

<b>Learning Unit</b>	<b>Principles of Fruit Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the general characteristics and types of fruits.</li> <li>2. Students will be able to explain the establishment of an orchard.</li> <li>3. Students will be able to explain the care of orchards.</li> <li>4. Students will be able to explain pruning and training systems in orchards.</li> <li>5. Students will be able to explain the harvest and preservation of fruits in orchards.</li> </ol>

<b>Learning Unit</b>	<b>Principles of Vegetable Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the general characteristics and types of vegetables.</li> <li>2. Students will be able to explain the establishment of a vegetable garden.</li> <li>3. Students will be able to explain the care of vegetable gardens.</li> <li>4. Students will be able to explain the harvest and preservation of vegetables.</li> </ol>
<b>Learning Unit</b>	<b>Principles of Vineyard Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the characteristics and types of grapes.</li> <li>2. Students will be able to explain the establishment of a vineyard.</li> <li>3. Students will be able to explain the care of vineyards.</li> <li>4. Students will be able to explain pruning and training systems in vineyards.</li> <li>5. Students will be able to explain the harvest in vineyards, and preservation of grapes.</li> </ol>

### COMMON ORNAMENTAL PLANTS COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about the principles of indoor and outdoor ornamental plants and the cultivation of roll grass under occupational health and safety measures.

**Grade** : 11

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Principles of Outdoor Ornamental Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the general characteristics and types of outdoor ornamental plants.</li> <li>2. Students will be able to explain soil preparation and sowing / planting of outdoor ornamental plants.</li> <li>3. Students will be able to explain the care of outdoor ornamental plants.</li> </ol>
<b>Learning Unit</b>	<b>Principles of Indoor Ornamental Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the general characteristics and types of indoor ornamental plants.</li> <li>2. Students will be able to explain soil preparation and sowing / planting of indoor ornamental plants.</li> <li>3. Students will be able to explain the care of indoor ornamental plants.</li> </ol>
<b>Learning Unit</b>	<b>Principles of Roll Grass Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain soil preparation and leveling.</li> <li>2. Students will be able to explain the selection and planting of seeds.</li> <li>3. Students will be able to explain the care of growing roll lawn.</li> <li>4. Students will be able to explain harvesting and palletizing in roll grass growing.</li> </ol>

## COMMON FIELD CROPS COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about the principles of growing cereals, industrial plants, edible legumes, meadow pasture and forage crops, medicinal aromatic and pleasure crops under occupational health and safety measures.

**Grade** : 11

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Principles of Cereal Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the cultivation of cool climate cereals.</li> <li>2. Students will be able to explain the cultivation of warm climate cereals.</li> </ol>
<b>Learning Unit</b>	<b>Principles of Industrial Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the cultivation of fiber crops.</li> <li>2. Students will be able to explain the cultivation of oil crops.</li> <li>3. Students will be able to explain the cultivation of starch and sugar crops.</li> </ol>
<b>Learning Unit</b>	<b>Principles of Edible Grain Legume Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the cultivation of warm season edible legume plants.</li> <li>2. Students will be able to explain the cultivation of cool season edible legume plants.</li> </ol>
<b>Learning Unit</b>	<b>Establishing Meadow Pasture and Principles of Forage Crops Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the establishment of meadow pasture.</li> <li>2. Students will be able to explain the cultivation of grain forage crops.</li> <li>3. Students will be able to explain the cultivation of legume forage crops.</li> </ol>
<b>Learning Unit</b>	<b>Principles of Medicinal, Aromatic and Pleasure Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the general characteristics and types of medicinal, aromatic and pleasure plants.</li> <li>2. Students will be able to explain the common ecological demands of medicinal, aromatic and pleasure plants.</li> <li>3. Students will be able to explain the soil preparation and planting of medicinal, aromatic and pleasure plants.</li> <li>4. Students will be able to explain the care of medicinal, aromatic and pleasure plants.</li> <li>5. Students will be able to explain how to prepare drugs in medicinal, aromatic and pleasure plants.</li> </ol>

## PRACTICE COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about fruit and vegetable gardens establishment and their maintenance, vineyard establishment and maintenance, common indoor ornamental plants cultivation, common outdoor ornamental plants cultivation and roll grass cultivation, common cereal cultivation, common industrial plant cultivation, common edible legume cultivation, meadow pasture and forage crop cultivation, common medicinal, aromatic and pleasure crop cultivation under occupational health and safety measures.

**Grade** : 11

**Weekly Course Hours** : 10

<b>Learning Unit</b>	<b>Common Cereals Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to grow cool climate cereals in accordance with the technique.</li> <li>2. Students will be able to grow warm climate cereals in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Common Industrial Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to grow fiber crops in accordance with the technique.</li> <li>2. Students will be able to grow oil crops in accordance with the technique.</li> <li>3. Students will be able to grow starch and sugar crops in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Common Edible Grain Legume Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to grow warm season edible legume plants in accordance with the technique.</li> <li>2. Students will be able to grow cool season edible legume plants in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Common Meadow Pasture Establishing and Forage Crops Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to establish meadow pasture in accordance with the technique.</li> <li>2. Students will be able to grow grain forage crops in accordance with the technique.</li> <li>3. Students will be able to grow legume forage crops in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Common Medicinal, Aromatic and Pleasure Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to select the medicinal, aromatic and pleasure plants to grow according to their general characteristics.</li> <li>2. Students will be able to determine the ecological demands of medicinal, aromatic and pleasure plants.</li> <li>3. Students will be able to make soil preparation and planting of medicinal, aromatic and pleasure plants in accordance with the technique.</li> <li>4. Students will be able to conduct maintenance activities of the medicinal, aromatic and pleasure plants in accordance with the technique.</li> <li>5. Students will be able to harvest and store medicinal, aromatic and pleasure plants.</li> </ol>



<b>Learning Unit</b>	<b>Establishment and Maintenance of Orchards</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to select the fruits to grow according to their general characteristics.</li> <li>2. Students will be able to establish the orchard in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for orchards in accordance with the technique.</li> <li>4. Students will be able to apply pruning and training procedures in orchards in accordance with the technique.</li> <li>5. Students will be able to establish the orchard in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Establishment and Maintenance of Vegetable Gardens</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to choose the vegetables to grow according to their general characteristics.</li> <li>2. Students will be able to establish the vegetables garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for vegetable gardens in accordance with the technique.</li> <li>4. Students will be able to harvest and store the vegetables in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Establishment and Maintenance of Vineyards</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to select the grape varieties to grow according to their general characteristics.</li> <li>2. Students will be able to establish the vineyard in accordance with the technique.</li> <li>3. Students will be able to conduct the maintenance activities on the vineyards in accordance with the technique.</li> <li>4. Students will be able to apply pruning and training procedures in vineyards in accordance with the technique.</li> <li>5. Students will be able to harvest and store the grapes in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Common Indoor Ornamental Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to select the indoor ornamental plants to grow according to their general characteristics.</li> <li>2. Students will be able to make soil preparation and sowing/planting of indoor ornamental plants in accordance with the technique.</li> <li>3. Students will be able to conduct the maintenance activities of the indoor ornamental plants in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Common Outdoor Ornamental Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to select the outdoor ornamental plants to grow according to their general characteristics.</li> <li>2. Students will be able to make soil preparation and sowing/planting of outdoor ornamental plants in accordance with the technique.</li> <li>3. Students will be able to conduct the maintenance activities of the outdoor ornamental plants in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Roll Grass Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to make soil preparation and leveling in roll grass cultivation.</li> <li>2. Students will be able to make seed selection and planting in roll grass cultivation.</li> <li>3. Students will be able to conduct maintenance activities for roll</li> </ol>

	<p>grass cultivation.</p> <p>4. Students will be able to do harvesting and palletizing in roll grass cultivation.</p>
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### 6.3. ON-SITE VOCATIONAL TRAINING

Students carry out on-site vocational training in the enterprises which operate on the branch that students are educated in accordance with Regulation on Secondary Education Institutions of the Ministry of National Education. The course content of on-site vocational training is determined by the coordinator teachers, field teachers in the school and the authorities of the enterprise, taking into account the regional needs and the vocational area in which the enterprise operates. The students of the program types which do not involve on-site vocational training attend job trainings in accordance with the related legislation.

### 6.4. ACADEMIC SUPPORT COURSES

The courses within the scope of academic support in the 12th grade of Anatolian Technical Program are courses that allow students to progress in line with their target higher education programs.

### 6.5. ELECTIVE VOCATIONAL COURSES

Elective Vocational Courses are courses that enable students to develop themselves in various programs in accordance with their interests and desires, and to improve their personal abilities in the field they aim and tend to. Elective vocational courses make up an occupation or an important part of an occupation.

For this reason, elective vocational courses should be chosen by paying attention to the prerequisite learnings and the connections between the courses in accordance with the principle of horizontal and vertical coherence of their acquisitions.

#### 6.5.1. CERTIFICATE COURSES TABLE

Branch	Certificate	Courses	Course Hours
All Field Branches	Garden Plants	Fruit Growing	3
		Vegetable Growing	4
	Farm Plants	Industrial Plants Cultivation	4
		Cereal Cultivation	3
	Ornamental Plants	Outdoor Ornamental Plants Cultivation	4
		Indoor Ornamental Plants Cultivation	3
	Landscaping	Landscape Applications	3
		Outdoor Ornamental Plants Cultivation	4
	Agricultural Tools and Machines	Self-Propelled Agricultural Machines	3
		Plant Care Machines	2

		Tractor Attached Tools and Machines	2
	Tea Plant(Camellia Sinensis) Cultivation	Tea Plant(Camellia Sinensis) Cultivation	4
	Mushroom Production	Mushroom Production	2
	Medicinal And Aromatic Plant Growing	Medicinal And Aromatic Plant Growing	4
	Meadow Pasture and Forage Crops Cultivation	Meadow Pasture and Forage Crops Cultivation	3
	Sapling Production	Sapling Production	3
	Lawn Establishment	Lawn Establishment	2
	Plant Health	Plant Health	4
	Digital Skills	Programming	3
		Digital Design	2
		Social Media	2

### 6.5.2. ELECTIVE VOCATIONAL COURSES TABLE

Course	Grade	Course Hours
Fruit Growing	11-12	3
Vegetable Growing	11-12	4
Sapling Production	11-12	3
Mushroom Production	11-12	2
Meadow Pasture and Forage Crops Cultivation	11-12	3
Industrial Plants Cultivation	11-12	4
Cereal Cultivation	11-12	3
Medicinal And Aromatic Plant Growing	11-12	4
Tea Plant(Camellia Sinensis) Cultivation	11-12	4
Outdoor Ornamental Plants Cultivation	11-12	4
Indoor Ornamental Plants Cultivation	11-12	3
Landscaping	11-12	3
Lawn Establishment	11-12	2
Self-Propelled Agricultural Machines	11-12	3
Plant Care Machines	11-12	2
Tractor Attached Tools and Machines	11-12	2
Precision Agriculture	11-12	2
Forest Regeneration And Maintenance	11-12	2
Plant Health	11-12	4
Programming	11-12	3
Digital Design	11-12	2
Social Media	11-12	2

## FRUIT CULTIVATION COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about growing pome, stone, hard shelled and grape-like fruits as well as subtropical and tropical fruits under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 3

<b>Learning Unit</b>	<b>Pome Fruits Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics and varieties of pome fruits.</li> <li>2. Students will be able to establish the pome fruits garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for the pome fruits garden in accordance with the technique.</li> <li>4. Students will be able to apply pruning and training procedures in pome fruit gardens in accordance with the technique.</li> <li>5. Students will be able to perform the harvesting and preservation procedures of pome fruits in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Stone Fruits Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics and varieties of stone fruits.</li> <li>2. Students will be able to establish the stone fruits garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for the stone fruits garden in accordance with the technique.</li> <li>4. Students will be able to apply pruning and training procedures in stone fruit gardens in accordance with the technique.</li> <li>5. Students will be able to perform the harvesting and preservation procedures of stone fruits in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Hard Shelled Fruits Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics and varieties of hard shelled fruits.</li> <li>2. Students will be able to establish the hard shelled fruits garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for hard shelled fruits garden in accordance with the technique.</li> <li>4. Students will be able to apply pruning and training procedures in hard shelled fruit gardens in accordance with the technique.</li> <li>5. Students will be able to perform the harvesting and preservation procedures of hard shelled fruits in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Grape-like Fruits Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics and varieties of grape-like fruits.</li> <li>2. Students will be able to establish the grape-like fruit gardens in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for grape-like fruit gardens in accordance with the technique.</li> <li>4. Students will be able to apply pruning and training procedures in grape-like fruit gardens in accordance with the technique.</li> <li>5. Students will be able to perform the harvesting and preservation procedures of grape-like fruits in accordance with the technique.</li> </ol>

<b>Learning Unit</b>	<b>Subtropical Fruit Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics and varieties of subtropical fruits.</li> <li>2. Students will be able to establish the subtropical fruits garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for subtropical fruits garden in accordance with the technique.</li> <li>4. Students will be able to apply pruning and training procedures in subtropical fruit gardens in accordance with the technique.</li> <li>5. Students will be able to perform the harvesting and preservation procedures of subtropical fruits in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Tropical Fruit Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics and varieties of tropical fruits.</li> <li>2. Students will be able to establish the tropical fruits garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for tropical fruits garden in accordance with the technique.</li> <li>4. Students will be able to apply pruning and training procedures in tropical fruit gardens in accordance with the technique.</li> <li>5. Students will be able to perform the harvesting and preservation procedures of tropical fruits in accordance with the technique.</li> </ol>

## VEGETABLE CULTIVATION COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about growing nightshade vegetables, cucurbit vegetables, cabbage vegetables, lily vegetables, umbrella flower vegetables, legume vegetables, spinach vegetables, compound flower vegetables under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 4

<b>Learning Unit</b>	<b>Solanaceae Vegetables (Nightshade) Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of solanaceae vegetables.</li> <li>2. Students will be able to establish the solanaceae vegetables garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for solanaceae vegetables garden in accordance with the technique.</li> <li>4. Students will be able to perform the harvesting and preservation procedures of solanaceae vegetables in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Cucurbitaceae Vegetables (Cucurbit) Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of cucurbitaceae vegetables</li> <li>2. Students will be able to establish the cucurbitaceae vegetables garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for cucurbitaceae vegetables garden in accordance with the technique.</li> <li>4. Students will be able to perform the harvesting and preservation procedures of cucurbitaceae vegetables in accordance with the technique.</li> </ol>

<b>Learning Unit</b>	<b>Brassicaceae Vegetables (Cabbage) Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of brassicaceae vegetables</li> <li>2. Students will be able to establish the brassicaceae vegetables garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for brassicaceae vegetables garden in accordance with the technique.</li> <li>4. Students will be able to perform the harvesting and preservation procedures of brassicaceae vegetables in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Liliaceae Vegetables (Lily) Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of liliaceae vegetables</li> <li>2. Students will be able to establish the liliaceae vegetables garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for liliaceae vegetables garden in accordance with the technique.</li> <li>4. Students will be able to perform the harvesting and preservation procedures of liliaceae vegetables in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Umbelliferae Vegetables (Umbrella Flower) Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of umbelliferae vegetables.</li> <li>2. Students will be able to establish the umbelliferae vegetables garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for umbelliferae vegetables garden in accordance with the technique.</li> <li>4. Students will be able to perform the harvesting and preservation procedures of umbelliferae vegetables in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Leguminoseae Vegetables (Legume) Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of leguminoseae vegetables.</li> <li>2. Students will be able to establish the leguminoseae vegetables garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for leguminoseae vegetables garden in accordance with the technique.</li> <li>4. Students will be able to perform the harvesting and preservation procedures of leguminoseae vegetables in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Chenopodiaceae Vegetables (Spinach) Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of chenopodiaceae vegetables.</li> <li>2. Students will be able to establish the chenopodiaceae vegetables garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for chenopodiaceae vegetables garden in accordance with the technique.</li> <li>4. Students will be able to perform the harvesting and preservation procedures of chenopodiaceae vegetables in accordance with the technique.</li> </ol>

<b>Learning Unit</b>	<b>Compositae Vegetables (Compound Flower) Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of compositae vegetables.</li> <li>2. Students will be able to establish the compositae vegetables garden in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance activities for compositae vegetables garden in accordance with the technique.</li> <li>4. Students will be able to perform the harvesting and preservation procedures of compositae vegetables in accordance with the technique.</li> </ol>

### SAPLING PRODUCTION COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about establishing a nursery business in fruit cultivation and ornamental plants, establishing rootstock and scion breeding beds, grafting for sapling production and caring for saplings under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 3

<b>Learning Unit</b>	<b>Establishing a Nursery</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to choose the nursery location according to the technique.</li> <li>2. Students will be able to make a land plan in accordance with the technique.</li> <li>3. Students will be able to prepare the nursery land in accordance with the technique.</li> <li>4. Students will be able to set up / have their nursery main units set up in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Establishment of Rootstock and Scion Breeding Beds</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to plan the rootstock and scion breeding beds.</li> <li>2. Students will be able to make site preparation and planting in rootstock and scion breeding beds.</li> <li>3. Students will be able to conduct maintenance activities for rootstock and scion breeding beds.</li> </ol>
<b>Learning Unit</b>	<b>Grafting Technique</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to make preparations for grafting.</li> <li>2. Students will be able to do bud grafting.</li> <li>3. Students will be able to do cleft grafting.</li> </ol>
<b>Learning Unit</b>	<b>Saplings Care</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to care for the saplings.</li> <li>2. Students will be able to make the removal and preservation of the saplings.</li> </ol>

## MUSHROOM PRODUCTION COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about preparing mushroom production environments and producing mushrooms under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Environment for Mushroom Production</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to explain the common characteristics of mushrooms.</li><li>2. Students will be able to explain the mushroom production areas in accordance with the technique.</li><li>3. Students will be able to prepare compost for mushroom production according to the technique.</li><li>4. Students will be able to provide the air conditioning of mushroom production areas in accordance with the technique.</li></ol>
<b>Learning Unit</b>	<b>Steps of Mushroom Production</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to perform micelle sowing for mushroom production in accordance with the technique.</li><li>2. Students will be able to conduct maintenance activities for mushrooms in accordance with the technique.</li><li>3. Students will be able to perform the harvesting and preservation procedures of mushrooms in accordance with the technique.</li></ol>

## MEADOW PASTURE AND FORAGE CROPS CULTIVATION COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about meadow pasture establishment, cereal forage crops and legume forage crops cultivation under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 3

<b>Learning Unit</b>	<b>Meadow Pasture Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to identify the characteristics of meadow pasture.</li><li>2. Students will be able to establish the meadow pasture field in accordance with the technique.</li><li>3. Students will be able to maintain and manage meadow pasture.</li></ol>
<b>Learning Unit</b>	<b>Cereal Forage Crops Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to identify the characteristics of cereal forage crops</li><li>2. Students will be able to explain the adaptation of cereal forage crops according to plant characteristics.</li><li>3. Students will be able to make soil preparation and planting for the cultivation of cereal forage crops.</li><li>4. Students will be able to conduct maintenance activities for cereal forage crops in accordance with the appropriate method and technique.</li><li>5. Students will be able to perform the harvesting and storage procedures of cereal forage crops in accordance with the</li></ol>



	technique.
<b>Learning Unit</b>	<b>Legume Forage Crops Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of legume forage crops.</li> <li>2. Students will be able to explain the adaptation of legume forage crops according to plant characteristics.</li> <li>3. Students will be able to make soil preparation and planting for the cultivation of legume forage crops.</li> <li>4. Students will be able to conduct maintenance activities for legume forage crops in accordance with the appropriate method and technique.</li> <li>5. Students will be able to perform the harvesting and storage procedures of legume forage crops in accordance with the technique.</li> </ol>

### INDUSTRIAL PLANTS CULTIVATION COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about growing oil crops, fiber crops, starch crops, sugar crops and pleasure crops under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 4

<b>Learning Unit</b>	<b>Oil Crops Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of oil crops.</li> <li>2. Students will be able to explain the adaptation of oil crops according to plant characteristics.</li> <li>3. Students will be able to make soil preparation and planting for the cultivation of oil crops.</li> <li>4. Students will be able to conduct maintenance activities for oil crops in accordance with the appropriate method and technique.</li> <li>5. Students will be able to perform the harvesting and storage procedures of oil crops in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Fiber Crops Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of fiber crops.</li> <li>2. Students will be able to explain the adaptation of fiber crops according to plant characteristics.</li> <li>3. Students will be able to make soil preparation and planting for the cultivation of fiber crops.</li> <li>4. Students will be able to conduct maintenance activities for fiber crops in accordance with the appropriate method and technique.</li> <li>5. Students will be able to perform the harvesting and storage procedures of fiber crops in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Starch Crops Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of starch crops.</li> <li>2. Students will be able to explain the adaptation of starch crops according to plant characteristics.</li> <li>3. Students will be able to make soil preparation and planting for the cultivation of starch crops.</li> <li>4. Students will be able to conduct maintenance activities for starch crops in accordance with the appropriate method and technique.</li> <li>5. Students will be able to perform the harvesting and storage procedures of starch crops in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Sugar Crops Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of sugar crops.</li> <li>2. Students will be able to explain the adaptation of sugar crops</li> </ol>

	<p>according to plant characteristics.</p> <ol style="list-style-type: none"> <li>3. Students will be able to make soil preparation and planting for the cultivation of sugar crops.</li> <li>4. Students will be able to conduct maintenance activities for sugar crops in accordance with the appropriate method and technique.</li> <li>5. Students will be able to perform the harvesting and storage procedures of sugar crops in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Pleasure Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of pleasure plants.</li> <li>2. Students will be able to explain the adaptation of pleasure plants according to plant characteristics.</li> <li>3. Students will be able to make soil preparation and planting for the cultivation of pleasure plants.</li> <li>4. Students will be able to conduct maintenance activities for pleasure plants in accordance with the appropriate method and technique.</li> <li>5. Students will be able to perform the harvesting and storage procedures of pleasure plants in accordance with the technique.</li> </ol>

### **CEREAL CULTIVATION COURSE**

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about the cultivation of cool and warm climate cereals, standardization and storage of field crops under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 3

<b>Learning Unit</b>	<b>Cool Climate Cereals Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of cool climate cereals.</li> <li>2. Students will be able to explain the adaptation of cool climate cereals according to plant characteristics.</li> <li>3. Students will be able to make soil preparation and planting for the cultivation of cool climate cereals.</li> <li>4. Students will be able to conduct maintenance activities for cool climate cereals in accordance with the appropriate method and technique.</li> <li>5. Students will be able to perform the harvesting and storage procedures of cool climate cereals in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Warm Climate Cereals Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of warm climate cereals.</li> <li>2. Students will be able to explain the adaptation of warm climate cereals according to plant characteristics.</li> <li>3. Students will be able to make soil preparation and planting for the cultivation of warm climate cereals.</li> <li>4. Students will be able to conduct maintenance activities for warm climate cereals in accordance with the appropriate method and technique.</li> <li>5. Students will be able to perform the harvesting and storage procedures of warm climate cereals in accordance with the technique.</li> </ol>

<b>Learning Unit</b>	<b>Standardization and Storage of Field Crops</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to standardize field crops on the basis of the technique.</li> <li>2. Students will be able to store field crops on the basis of the technique.</li> </ol>

## **MEDICINAL AND AROMATIC PLANT CULTIVATION COURSE**

**Course Objectives** : In this course, it is aimed to give the student the knowledge and skills about the general characteristics of medicinal and aromatic plants, production methods, soil preparation and cultivation, as well as caring, harvesting and threshing, and also about medical drug preparation under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 4

<b>Learning Unit</b>	<b>Common Properties of Medicinal and Aromatic Plants</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the types of medicinal and aromatic plants.</li> <li>2. Students will be able to classify medicinal and aromatic plants.</li> <li>3. Students will be able to explain the cultivation of medicinal and aromatic plants grown in nature using appropriate methods.</li> <li>4. Students will be able to explain the morphology of medicinal and aromatic plants and their utilization.</li> </ol>
<b>Learning Unit</b>	<b>Ecological Demands of Medicinal and Aromatic Plants</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the climate demands of medicinal and aromatic plants.</li> <li>2. Students will be able to explain the soil demands of medicinal and aromatic plants.</li> </ol>
<b>Learning Unit</b>	<b>Production Methods of Medicinal and Aromatic Plants</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to make annual medicinal and aromatic plants and their production using methods and techniques.</li> <li>2. Students will be able to produce perennial medicinal and aromatic plants with underground and aboveground components using appropriate methods and techniques.</li> </ol>
<b>Learning Unit</b>	<b>Soil Preparation and Planting of Medicinal and Aromatic Plants</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to make soil preparation using appropriate methods and techniques for the cultivation of medicinal and aromatic plants.</li> <li>2. Students will be able to do sowing and planting of medicinal and aromatic plants using methods and techniques suitable for the plant characteristics.</li> </ol>
<b>Learning Unit</b>	<b>Maintenance of Medicinal and Aromatic Plants</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to make fertilization of medicinal and aromatic plants using methods and techniques suitable for the plant.</li> <li>2. Students will be able to irrigate the medicinal and aromatic plants using methods and techniques suitable for the plant.</li> <li>3. Students will be able to make hoeing and weeding control for medicinal and aromatic plants using methods and techniques</li> </ol>

	<p>suitable for the plant.</p> <p>4. Students will be able to fight against diseases and pests in medicinal and aromatic plants using methods and techniques suitable for the plant.</p>
<b>Learning Unit</b>	<b>Harvesting Medicinal and Aromatic Plants and Preparing Drugs</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to harvest medicinal and aromatic plants using methods and techniques suitable for the plant.</li> <li>2. Students will be able to conduct post-harvest procedures of medicinal and aromatic plants using methods and techniques suitable for the plant.</li> <li>3. Students will be able to make quality and standardization of medicinal and aromatic plant products by using method techniques in accordance with official legislation.</li> <li>4. Students will be able to recognize drugs and prepare simple herbal drugs.</li> </ol>

### TEA PLANT(CAMELLIA SINENSIS) CULTIVATION COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about tea sapling cultivation, creating and maintaining tea garden, fresh tea harvesting, black tea processing, green tea processing and tea packaging under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 4

<b>Learning Unit</b>	<b>Tea Sapling Breeding</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the types of tea plants and their general characteristics.</li> <li>2. Students will be able to grow tea saplings from seeds.</li> <li>3. Students will be able to grow tea saplings from stem cuttings.</li> </ol>
<b>Learning Unit</b>	<b>Creating and Maintaining Tea Gardens</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to prepare the fields to create tea gardens.</li> <li>2. Students will be able to plant tea saplings.</li> <li>3. Students will be able to conduct maintenance in the tea gardens.</li> </ol>
<b>Learning Unit</b>	<b>Fresh Tea Harvesting</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to harvest fresh tea leaves.</li> <li>2. Students will be able to transport the collected fresh tea leaves to processing centers.</li> </ol>
<b>Learning Unit</b>	<b>Processing Black Tea Leaves</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the fresh tea processing methods.</li> <li>2. Students will be able to carry out the withering process on fresh tea leaves in accordance with the technique.</li> <li>3. Students will be able to make curling of withered tea leaves according to the technique.</li> <li>4. Students will be able to make oxidation of the curled tea in accordance with the technique.</li> <li>5. Students will be able to dry the oxidized tea in accordance with the technique.</li> <li>6. Students will be able to extract fibre and stalk from the dried tea with electrostatic machines in accordance with the technique.</li> <li>7. Students will be able to sort dried tea by its grades in accordance with the technique.</li> <li>8. Students will be able to sack and store the sorted tea.</li> </ol>

<b>Learning Unit</b>	<b>Processing Green Tea Leaves</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the green tea processing methods.</li> <li>2. Students will be able to carry out the quick withering process on green tea leaves in accordance with the technique.</li> <li>3. Students will be able to carry out curling process of green tea in accordance with the technique.</li> <li>4. Students will be able to carry out the drying process of green tea in accordance with the technique.</li> <li>5. Students will be able to classify green tea in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Tea Blending and Packaging</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to blend sorted and classified tea according to the technique.</li> <li>2. Students will be able to pack tea in bulk according to the technique.</li> <li>3. Students will be able to make tea bags in accordance with the technique.</li> </ol>

## **OUTDOOR ORNAMENTAL PLANTS CULTIVATION COURSE**

**Course Objectives** :In this course, it is aimed to provide the student with the knowledge and skills about production and maintenance of coniferous trees, ornamental deciduous trees, small trees and shrubs, hedge plants, wrapping and creeping plants, annual flowers, perennial flowers, rock garden plants, riparian and aquatic ornamental plants and geophyte plants under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 4

<b>Learning Unit</b>	<b>Coniferous Trees Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of coniferous trees.</li> <li>2. Students will be able to cultivate coniferous trees in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance of the coniferous trees in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Ornamental Deciduous Trees Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of ornamental deciduous trees.</li> <li>2. Students will be able to cultivate ornamental deciduous trees in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance of ornamental deciduous trees in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Small Tree and Shrub Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of small trees and shrubs.</li> <li>2. Students will be able to cultivate small trees and shrubs in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance of small trees and shrubs in accordance with the technique.</li> </ol>

<b>Learning Unit</b>	<b>Hedge Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of hedge plants.</li> <li>2. Students will be able to cultivate hedge plants in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance of hedge plants in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Wrapping and Creeping Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of wrapping and creeping plants.</li> <li>2. Students will be able to cultivate wrapping and creeping plants in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance of wrapping and creeping plants in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Annual Flowers Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of annual flowers.</li> <li>2. Students will be able to cultivate annual flowers in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance of annual flowers in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Perennial Flowers Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of perennial flowers.</li> <li>2. Students will be able to cultivate perennial flowers in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance of perennial flowers in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Rock Garden Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of rock garden plants.</li> <li>2. Students will be able to cultivate rock garden plants in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance of rock garden plants in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Riparian and Aquatic Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of riparian and aquatic plants.</li> <li>2. Students will be able to cultivate riparian and aquatic plants in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance of riparian and aquatic plants in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Geophyte Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of geophyte plants.</li> <li>2. Students will be able to cultivate geophyte plants in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance of geophyte plants in accordance with the technique.</li> </ol>

## INDOOR ORNAMENTAL PLANTS CULTIVATION COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about growing decorative leafy indoor plants, flowery indoor plants and succulent plants under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 3

<b>Learning Unit</b>	<b>Decorative Leafy Indoor Ornamental Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to identify the characteristics of decorative leafy indoor ornamental plants</li><li>2. Students will be able to apply the cultivation technique of decorative leafy indoor ornamental plants.</li><li>3. Students will be able to conduct maintenance of decorative leafy indoor ornamental plants in accordance with the technique.</li></ol>
<b>Learning Unit</b>	<b>Flowery Indoor Ornamental Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to identify the characteristics of flowery indoor ornamental plants.</li><li>2. Students will be able to apply the cultivation technique of flowery indoor ornamental plants.</li><li>3. Students will be able to conduct maintenance of flowery indoor ornamental plants in accordance with the technique.</li></ol>
<b>Learning Unit</b>	<b>Succulent Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to identify the characteristics of succulent plants.</li><li>2. Students will be able to apply the cultivation technique of succulent plants.</li><li>3. Students will be able to conduct maintenance of succulent plants in accordance with the technique.</li></ol>

## LANDSCAPING COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about project implementation, setting up hobby gardens in landscaping and caring for landscaping under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 3

<b>Learning Unit</b>	<b>Project Implementation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to read a landscape project.</li><li>2. Students will be able to use architectural and constructional elements in accordance with the technique.</li><li>3. Students will be able to use botanical elements in accordance with the technique.</li></ol>
<b>Learning Unit</b>	<b>Hobby Gardens</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to establish a hobby garden in accordance with the technique.</li><li>2. Students will be able to establish a vertical garden in accordance with the technique.</li></ol>

	<ol style="list-style-type: none"> <li>3. Students will be able to establish an ornamental pool in accordance with the technique.</li> <li>4. Students will be able to establish a botanical garden in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Maintenance of Landscape Areas</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to conduct autumn maintenance in parks and gardens in accordance with the technique.</li> <li>2. Students will be able to conduct spring and periodic maintenance in parks and gardens in accordance with the technique.</li> </ol>

## LAWN ESTABLISHMENT COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about the cultivation of turf plants, establishment of a lawn and cultivation of roll grass under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Turf Plants Cultivation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to identify the characteristics of turf plants.</li> <li>2. Students will be able to distinguish the ecological demands of turf plants.</li> <li>3. Students will be able to distinguish the usage areas of turf plants.</li> </ol>
<b>Learning Unit</b>	<b>Lawn Establishment</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to establish the grass planting area in accordance with the technique.</li> <li>2. Students will be able to plant grass in accordance with the technique.</li> <li>3. Students will be able to conduct maintenance procedures of the lawn in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Roll Grass Production</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to make soil preparation and leveling for roll grass cultivation.</li> <li>2. Students will be able to make seed selection and sowing of roll grass cultivation.</li> <li>3. Students will be able to conduct maintenance operations of roll grass cultivation.</li> <li>4. Students will be able to explain harvesting and palletizing of roll grass cultivation.</li> </ol>



## SELF-PROPELLED AGRICULTURAL MACHINES COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about adjustment and maintenance of combine harvesters, self-propelled plant protection machines and self-propelled fruit harvesters under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 3

<b>Learning Unit</b>	<b>Combine Harvesters</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to adjust the combine harvesters according to the user manual by taking occupational health and safety measures.</li><li>2. Students will be able to maintain the combine harvesters according to the user manual by taking occupational health and safety measures.</li></ol>
<b>Learning Unit</b>	<b>Self Propelled Fruit Harvesters</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to adjust the self-propelled fruit harvesters according to the user manual by taking occupational health and safety measures.</li><li>2. Students will be able to maintain the self-propelled fruit harvesters according to the user manual by taking occupational health and safety measures.</li></ol>
<b>Learning Unit</b>	<b>Self Propelled Plant Protection Machines</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to adjust the self-propelled plant protection machines according to the user manual by taking occupational health and safety measures.</li><li>2. Students will be able to maintain the self-propelled plant protection machines according to the user manual by taking occupational health and safety measures.</li></ol>

## PLANT PROTECTION MACHINES COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about the adjustment and maintenance of hoeing tools and machines, agricultural control tools and machines, fertilization tools and machines under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Hoeing Tools and Machines</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to adjust the hoeing tools and machines in accordance with the user manual.</li><li>2. Students will be able to maintain the hoeing tools and machines in accordance with the user manual.</li></ol>
<b>Learning Unit</b>	<b>Agricultural Control Tools and Machines</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. Students will be able to adjust the agricultural control tools and machines in accordance with the user manual.</li><li>2. Students will be able to maintain the agricultural control tools and machines in accordance with the user manual.</li></ol>

<b>Learning Unit</b>	<b>Fertilization Tools and Machines</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to adjust the fertilization tools and machines in accordance with the user manual.</li> <li>2. Students will be able to maintain the fertilization tools and machines in accordance with the user manual.</li> </ol>

### TRACTOR ATTACHED TOOLS AND MACHINES COURSE

**Course Objectives** :In this course, it is aimed to provide the student with the knowledge and skills about the adjustment and maintenance of land preparation and tillage tools and machines, sowing-planting machines, harvesting-threshing machines under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Land Preparation and Tillage Tools and Machines</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to adjust and maintain the land clearing tools and machines in accordance with the user manual.</li> <li>2. Students will be able to adjust and maintain the soil leveling tools and machines in accordance with the user manual.</li> <li>3. Students will be able to adjust and maintain tillage tools and machines in accordance with the user manual.</li> </ol>
<b>Learning Unit</b>	<b>Sowing-Planting Tools and Machines</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to adjust and maintain the sowing machines in accordance with the user manual.</li> <li>2. Students will be able to adjust and maintain the planting machines in accordance with the user manual.</li> </ol>
<b>Learning Unit</b>	<b>Harvesting Machines</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to adjust and maintain the harvesting machines in accordance with the user manual.</li> <li>2. Students will be able to adjust and maintain the harvesting-threshing machines in accordance with the user manual.</li> </ol>

### PRECISION AGRICULTURE COURSE

**Course Objectives** :In this course, it is aimed to provide the student with the knowledge and skills about sustainable agriculture, vertical agriculture and smart agriculture practices under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Sustainable Agriculture</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to perform good agricultural practices in accordance with the technique.</li> <li>2. Students will be able to perform organic agriculture in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Vertical Agriculture</b>

<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the definition and importance of vertical farming practices.</li> <li>2. Students will be able to make the classification of vertical agriculture.</li> <li>3. Students will be able to produce with vertical farming systems.</li> </ol>
<b>Learning Unit</b>	<b>Smart Agriculture and Industry 4.0</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the management information system in smart agriculture.</li> <li>2. Students will be able to explain the precision farming system in smart agriculture.</li> <li>3. Students will be able to explain the agricultural automation-robotic system in smart agriculture.</li> </ol>

### **FOREST REGENERATION AND MAINTENANCE COURSE**

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about land preparation in the forest area, forest regeneration and forest maintenance under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Land Preparation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to distinguish the types of forest trees and classify forests.</li> <li>2. Students will be able to carry out land clearing in the forest area in accordance with the technique.</li> <li>3. Students will be able to do sowing-planting and soil cultivation in the forest area in accordance with the technique.</li> <li>4. Students will be able to do sowing-planting in the forest area in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Forest Regeneration</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the common principles of regeneration in accordance with the technique.</li> <li>2. Students will be able to regenerate the forest in accordance with the technique.</li> </ol>
<b>Learning Unit</b>	<b>Forest Maintenance</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the principles and precautions of forest maintenance in accordance with the technique.</li> <li>2. Students will be able to conduct maintenance in different forests in accordance with the technique.</li> </ol>

## PLANT HEALTH COURSE

**Course Objectives** : In this course, it is aimed to provide the student with the knowledge and skills about struggling against fruit diseases, vineyard diseases, vegetable diseases, field crop diseases, common pests, horticultural pests, field crop pests and warehouse pests in accordance with agricultural control technical instructions under occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 4

<b>Learning Unit</b>	<b>Fruit Disease Control</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to recognize the fungal diseases of fruits and fight against them in accordance with the agricultural control technical instructions.</li> <li>2. Students will be able to recognize the bacterial diseases of fruits and fight against them in accordance with the agricultural control technical instructions.</li> <li>3. Students will be able to recognize the virus and virus-like diseases of fruits and fight against them in accordance with the agricultural control technical instructions.</li> </ol>
<b>Learning Unit</b>	<b>Vineyard Disease Control</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to recognize the fungal diseases of vineyards and fight against them in accordance with the agricultural control technical instructions.</li> <li>2. Students will be able to recognize the bacterial diseases of vineyards and fight against them in accordance with the agricultural control technical instructions.</li> <li>3. Students will be able to recognize the virus and virus-like diseases of vineyards and fight against them in accordance with the agricultural control technical instructions.</li> </ol>
<b>Learning Unit</b>	<b>Vegetable Disease Control</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to recognize the fungal diseases of vegetables and fight against them in accordance with the agricultural control technical instructions.</li> <li>2. Students will be able to recognize the bacterial diseases of vegetables and fight against them in accordance with the agricultural control technical instructions.</li> <li>3. Students will be able to recognize the virus and virus-like diseases of vegetables and fight against them in accordance with the agricultural control technical instructions.</li> </ol>
<b>Learning Unit</b>	<b>Field Crops Disease Control</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to recognize the fungal diseases of field crops and fight against them in accordance with the agricultural control technical instructions.</li> <li>2. Students will be able to recognize the bacterial diseases of field crops and fight against them in accordance with the agricultural control technical instructions.</li> <li>3. Students will be able to recognize the virus and virus-like diseases of field crops and fight against them in accordance with the agricultural control technical instructions.</li> </ol>
<b>Learning Unit</b>	<b>Common Pest Control</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to recognize the underground pests and fight against them in accordance with the agricultural control technical instructions.</li> </ol>

	2. Students will be able to recognize the above-ground pests and fight against them in accordance with the agricultural control technical instructions.
<b>Learning Unit</b>	<b>Horticultural Pest Control</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to recognize the fruit pests and fight against them in accordance with the agricultural control technical instructions.</li> <li>2. Students will be able to recognize the vegetable pests and fight against them in accordance with the agricultural control technical instructions.</li> <li>3. Students will be able to recognize the vineyard pests and fight against them in accordance with the agricultural control technical instructions.</li> </ol>
<b>Learning Unit</b>	<b>Field Crops Pest Control</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to recognize the grain pests and fight against them in accordance with the agricultural control technical instructions.</li> <li>2. Students will be able to recognize the industrial crops pests and fight against them in accordance with agricultural control technical instructions.</li> <li>3. Students will be able to recognize the forage pests and fight against them in accordance with the agricultural control technical instructions.</li> <li>4. Students will be able to recognize the legume pests and fight against them in accordance with the agricultural control technical instructions.</li> </ol>
<b>Learning Unit</b>	<b>Warehouse Pest Control</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to recognize the stored grain pests and fight against them in accordance with the agricultural control technical instructions.</li> <li>2. Students will be able to recognize the stored legume pests and fight against them in accordance with the agricultural control technical instructions.</li> <li>3. Students will be able to recognize the stored fruit pests and fight against them in accordance with the agricultural control technical instructions.</li> </ol>

## PROGRAMMING COURSE

**Course Objective** : In this course, it is aimed to provide the students with knowledge and skills about basic algorithm, visual block programming, programming of devices which can create a communication network and game programming.

**Grade** : 11-12

**Weekly Course Hours** : 3

<b>Learning Unit</b>	<b>Block-Based Programming</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the functions of a program presented in a block-based programming tool.</li> <li>2. Students will be able to plan basic algorithms by using appropriate techniques in a block-based programming tool.</li> <li>3. Students will be able to debug a program presented in a block-based programming tool.</li> <li>4. Students will be able to develop and arrange a program presented in a block-based programming tool according to the given criteria.</li> <li>5. Students will be able to choose the most appropriate decision</li> </ol>

	structures to adapt an algorithm. 6. Students will be able to create an original project that includes all programming structures.
<b>Learning Unit</b>	<b>Internet of Things</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the functions of circuit elements.</li> <li>2. Students will be able to make applications with block-based programming tools.</li> <li>3. Students will be able to write a program for the Internet of Things with programming language.</li> <li>4. Students will be able to use the software language on the microcontroller board hardware.</li> <li>5. Students will be able to design a system by using a simulation device (Packet Tracer).</li> </ol>
<b>Learning Unit</b>	<b>Game Programming</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to carry out basic coding and user interaction processes.</li> <li>2. Students will be able to edit characters and environment.</li> <li>3. Students will be able to carry out animation and simulation processes.</li> <li>4. Students will be able to publish the created game after testing it.</li> </ol>

## DIGITAL DESIGN COURSE

**Course Objective** : In this course it is aimed to provide the students with the knowledge and the skills related to carrying out drawings in compliance with the drafting principles, printing out the designs which are prepared by making three dimensional designs on computer, designing and administrating a web site by using template web contents, and preparing animation under the occupational health and safety measures.

**Grade** : 11-12

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>Digital Design</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to use design supporting tools.</li> <li>2. Students will be able to insert shapes to the working plane.</li> <li>3. Students will be able to create new shapes by grouping the shapes.</li> <li>4. Students will be able to create a new shape by extracting another shape from a shape.</li> <li>5. Students will be able to create original shapes by using importing.</li> <li>6. Students will be able to export a design for other applications or 3D printers.</li> </ol>
<b>Learning Unit</b>	<b>Ready-made Web Pages</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to install the content manager software and its add-ons.</li> <li>2. Students will be able to carry out the adjustments of web site oncontrol panel.</li> <li>3. Students will be able to carry out content and category processes.</li> <li>4. Students will be able to carry out menu and page processes.</li> </ol>
<b>Learning Unit</b>	<b>Preparing Animation</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to adapt the working screen.</li> <li>2. Students will be able to insert standard shapes to the working plane.</li> <li>3. Students will be able to carry out processes on objects with designing tools.</li> <li>4. Students will be able to change the parametric features of the inserted shapes.</li> <li>5. Students will be able to develop the inserted shapes using modification tools.</li> <li>6. Students will be able to add texture to the designed objects by using</li> </ol>

	<p>the Material Editor.</p> <ol style="list-style-type: none"> <li>7. Students will be able to add a camera to the present project to be used in an animation.</li> <li>8. Students will be able to develop animations by using keyframes.</li> <li>9. Students will be able to render the project.</li> <li>10. Students will be able to explain the render tools.</li> </ol>
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## SOCIAL MEDIA COURSE

**Course Objective** : In this course, it is aimed to provide the students with knowledge and skills about collecting the news messages on media, collecting news about an institution and conducting a public relations campaign, e-commerce applications, data analysis and graphics.

**Grade** : 11-12

**Weekly Course Hours** : 2

<b>Learning Unit</b>	<b>E-commerce</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the basic concepts of e-commerce.</li> <li>2. Students will be able to explain the types of e-commerce.</li> <li>3. Students will be able to list e-commerce marketing stages.</li> <li>4. Students will be able to explain the technical background and security factors required for e-commerce.</li> <li>5. Students will be able to follow legal regulations related to e-commerce.</li> </ol>
<b>Learning Unit</b>	<b>Social Media</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to share contents which are in compliance with ethical principles and fundamental rights and freedom, while using social media.</li> <li>2. Students will be able to use social media by taking the responsibilities of legal rules without concealing identity.</li> <li>3. Students will be able to protect themselves against cyber violence while using social media.</li> <li>4. Students will be able to explain the digital brand management and the necessity of digital transformation.</li> <li>5. Students will be able to explain the social media devices.</li> <li>6. Students will be able to create a content plan for social media platforms.</li> <li>7. Students will be able to perform social media analysis and reporting.</li> <li>8. Students will be able to plan and apply crisis communication campaign on social media.</li> </ol>
<b>Learning Unit</b>	<b>Data Analysis and Graphics</b>
<b>Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. Students will be able to explain the concepts of data and information.</li> <li>2. Students will be able to explain the types of data and data sources around.</li> <li>3. Students will be able to collect data with data collection tools and create a data set.</li> <li>4. Students will be able to prepare data in the form of tables.</li> <li>5. Students will be able to understand the graphic types and make graphic selection according to the purpose.</li> <li>6. Students will be able to create data based graphs using data visualization tools.</li> </ol>

## **6.6. ELECTIVE COURSES**

Elective courses that enable students to develop themselves in various programs in accordance with their interests and desires, improve their personal abilities in the field they aim and tend to.

While selecting an elective course, other schedules which belong to the course, if there is any, follow an order and the courses which are required to be taken previously are considered.



