

PLANT GENETICS- GENBT044N

SEMESTER: FALL

ECTS: 3

REQUIREMENT: EXAM

DESCRIPTION: Students will learn about the structure and role of molecules that carry biological information in living cells, the organisation and replication of hereditary material. They learn about the genetic structure and function of higher plants. The stages of the cell cycle and the processes of plant mitosis and meiosis and their genetic consequences, with particular emphasis on the sources of genetic variability, the formation of macro- and microspores involved in the double fertilisation of lock plants. The basic laws of heredity described by Mendel are illustrated in horticultural plants, followed by examples of heredity processes other than Mendelian, illustrated with examples in horticultural plants. We will review how polyploid plants, important in horticultural production, evolve, their genetic consequences, types of polyploidy and their potential uses.

PLANT MORPHOLOGY- NOVTR074N

SEMESTER: FALL

ECTS: 6

REQUIREMENT: EXAM

DESCRIPTION: Within the framework of the subject, an important role is given to the basic knowledge of plant species. In addition, the concepts of species and variety, the levels of plant body organisation and the characteristics of the plant cell are discussed in detail. The vegetative and generative morphology of plants and the different organ modalities with different functions will be reviewed. The processes of sexual and asexual reproduction are covered in detail. Microscopic studies will be used to deepen the students' knowledge of histology and organ histology.

WOODY PLANT NURSERY- TETTD043N

SEMESTER: FALL

ECTS: 4

REQUIREMENT: EXAM

DESCRIPTION: The aim of the course is to familiarise students with nursery production as a sub-sector of horticulture, the main propagation methods, nursery technologies, and the marketing and regulation of the activity at a level that will provide graduating horticultural engineers with a basic knowledge of the subject and a basis for more in-depth study of the subject in the form of the chosen subject and related 'B' subjects.

FRUIT SPECIES AND VARIETIES- KERTU040N

SEMESTER: FALL

ECTS: 4

REQUIREMENT: EXAM

DESCRIPTION: The aim of the course is to provide an introduction to the most important species and varieties of domestic fruit production and to the main characteristics of world and European varieties. The morphological, growth and biological characteristics of fruit species, the domestic cultivability of each species, the pomological characteristics of the varieties, their usability and market value are taught, and an important aspect is the preparation for the practical application of the knowledge.

PLANT BIOTECHNOLOGY- GENTBT045N

SEMESTER: FALL

ECTS: 3

REQUIREMENT: EXAM

DESCRIPTION: Plant biotechnology uses the results of basic sciences to modify the life functions or genetic programmes of plants in order to improve and make more efficient cultivation technologies, breeding, plant protection and the production of propagating material. The aim of this course is to provide an introduction to biotechnological processes and the results achieved/available in horticultural plant species.

MEDICINAL PLANT PRODUCTION- KERTU035N

SEMESTER: FALL

ECTS: 4

REQUIREMENT: EXAM

DESCRIPTION: Group planning task. In the subject of medicinal plant production, we teach integrated crop production technologies and sustainable approaches to sectoral production. The students will learn about the 30 most important field and garden medicinal, spice and essential oil plant species, their biological, active and utilisation characteristics and their ecological needs. Building on this, we will review the technological steps of drug production, including GAP-based technologies for variety use, propagation, stocking, care, harvesting and primary processing.

CULTIVATION OF GREENHOUSE ORNAMENTALS- TETTD084N

SEMESTER: FALL

ECTS: 4

REQUIREMENT: EXAM

DESCRIPTION: The course provides a general introduction to the main areas of ornamental horticulture in the greenhouse. It provides a general knowledge of growing media, nutrient supplementation, use of growth regulators and timing of cultivation, applicable to all sub-areas. It describes in detail the cultivation techniques of the most important ornamental greenhouse crops. Students will practice the practical application of the knowledge acquired in the course by working in groups on a design project.

PLANT PATHOLOGY - NVVED028N

SEMESTER: FALL

ECTS: 3

REQUIREMENT: EXAM

DESCRIPTION: The subject covers diseases of horticultural plants. It deals with the causes of diseases, the course of diseases and methods of control. The objective of the course is to provide students with a working knowledge of the major diseases of horticultural plants. Students will learn to identify and recognize diseases of horticultural plants based on the knowledge gained in lectures and laboratory exercises.

ORGANIC FARMING- FFGAZ136N

SEMESTER: FALL

ECTS: 3

REQUIREMENT: EXAM

DESCRIPTION: Students will learn about the concepts, principles, guidelines, inspection, certification and certification systems of organic farming. They will learn about the place of organic farming in sustainable agricultural systems. An important part of organic farming is the systems approach, which applies to the whole production activity. The basis of organic farming is the circulation of material and energy within the production system, promoting the closing of natural cycles. Production, management and marketing are entirely based on the EU organic farming regulation in the Member States. By learning about organic farming, examples of individuals and communities living in greater harmony with their environment, and adopting an energy-saving lifestyle, will be presented to encourage students to reflect on their own and their community's way of life and future.

TECHNOLOGY OF VITICULTURE- SZBOR090N

SEMESTER: FALL

ECTS: 4

REQUIREMENT: EXAM

DESCRIPTION: The student will review the annual technology of viticulture. The topics covered are. The elements of the vineyard structure. Pruning. Planting the vineyards. Vine propagation. Nutrient management. Soil care. Irrigation. Harvesting, maintenance of the plantation. Explanation of the reasons and objectives for carrying out interventions in vine production. Make you capable of carrying them out.

WINE TERROIRS- SZBOR103N

SEMESTER: FALL AND SPRING

ECTS: 3

REQUIREMENT: EXAM

DESCRIPTION: The course introduces students on an entertaining tour of the world's most celebrated winegrowing regions to discover the characteristics of the bond that ties the vine to its place of birth: the terroir. Topics are: terroirs in France, Spain, Italy, California, Chile, Australia, and South Africa, Hungary.

The course wants to show how environment and soil and climate contribute to the precise and individual character of each terroir, making the great winegrowing regions what they are today. Participants will hear about the relationship between international grape varieties and the soil in which they grow, and how these factors affect the taste of the wines.

BIOMETRICS- MATER011N

SEMESTER: SPRING

ECTS: 4

REQUIREMENT: EXAM

HORTICULTURAL ENGINEER BSC

DESCRIPTION: The course introduces students to the basic concepts of biometrics (probability and mathematical statistics) and the most important data analysis methods in the respective fields. The seminars are held in a computer laboratory in the case of attendance teaching, and statistical software is used throughout the semester. // The course is offered as an examination course in the autumn semester only.

MEDICINAL PLANTS AND SPICES- KERTU029N

SEMESTER: SPRING

ECTS: 4

REQUIREMENT: EXAM

DESCRIPTION: In this course, students will learn the most important areas of medicinal and herbal plant use, the most important aspects of drug knowledge, the range and classification of active substances, and the basic issues related to their use. The natural and agronomic systems for the production of medicinal and aromatic plants will be introduced, with particular emphasis on the medicinal and aromatic plants collected. Students will be introduced to the main national and international regulatory forms for the production of medicinal and aromatic plants and the obligations arising from them. GACP and GMP production and processing procedures, quality assurance and quality certification will be described.

FRUIT PRODUCTION- KERTU043N

SEMESTER: SPRING

ECTS: 4

REQUIREMENT: EXAM

DESCRIPTION: An introduction to fruit growing. Criteria for site selection. Elements and concepts of the cropping system. Elements of integrated production technology. Introduction to species-specific cultivation techniques.

PLANT PROTECTION ZOOLOGY- NVVED037N

SEMESTER: SPRING

ECTS: 3

REQUIREMENT: EXAM

DESCRIPTION: The student will learn to distinguish major pest species in their adult form or based on their damage symptoms, as well as to recognize larval and pupal forms of holometabolous insects. The student will also understand the different tactics used in horticultural pest-management programs, learn control tactics for managing pests and their advantages and limitations, gain an understanding of pest management in several model systems including grapevine, fruit, vegetable and ornamental plants.

OUTDOOR CULTIVATION OF ORNAMENTAL PLANTS- TETTD102N

SEMESTER: SPRING

ECTS: 4

REQUIREMENT: EXAM

HORTICULTURAL ENGINEER BSC

DESCRIPTION: THE AIM OF THE COURSE IS TO PROVIDE AN INTRODUCTION TO THE IMPORTANCE, MORPHOLOGICAL AND PHYSIOLOGICAL CHARACTERISTICS, ECOLOGICAL REQUIREMENTS, DEVELOPMENT AND CULTIVATION OF ORNAMENTAL PLANTS IN THE OPEN FIELD. THE COURSE WILL BROADEN THE STUDENTS' KNOWLEDGE OF PLANTS, THE APPLICATIONS OF THE SPECIES AND VARIETIES, AND THE MAINTENANCE OF GREEN SPACES.

VITICULTURE- SZBOR080N

SEMESTER: SPRING

ECTS: 4

REQUIREMENT: EXAM

DESCRIPTION: Students will learn about the history and current situation of viticulture in the world and in Hungary. The most important morphological characters of grape varieties (old wood, twig, bud, leaf, shoot, inflorescence, bunch and berry), the physiological processes and phenological phases of grapes will be introduced. The history and characteristics of the wine-growing regions are discussed in detail, as well as the production characteristics of the most important grape varieties.

THE WORLD OF TECHNICS- BASIC TECHNICAL KNOWLWDGE FOR NON-TECHNICIANS- MUSZK004N

SEMESTER: SPRING

ECTS: 3

REQUIREMENT: EXAM

DESCRIPTION:

PLANT BIOCHEMISTRY AND PLANT PHYSIOLOGY- NOVTR072N

SEMESTER: SPRING

ECTS: 5

REQUIREMENT: EXAM

DESCRIPTION: The course introduces students to the basics of plant metabolic biochemistry, its laws and the most important physiological processes in plants.

PRINCIPLES OF VEGETABLE PRODUCTION- KERTU089N

SEMESTER: SPRING

ECTS: 4

REQUIREMENT: EXAM

DESCRIPTION: The course introduces students to the most important basic knowledge needed for domestic vegetable production. This will include the general ecological conditions, economic conditions, storage and processing of products. It will be shown how farmers can prepare their farms for the production of one or more vegetable crops, following the principles of the principles. By completing the course, the student will learn the basic principles of vegetable production on arable farms, both in the field and in the glasshouse. Students will also learn about domestic regulatory systems related to the subject and the principles of quality vegetable production. By completing the course, they will be able to organise the production work of a small-scale growing enterprise (e.g. a family farm) on a large scale.