MENDELU
Faculty
of Horticulture

COURSES TAUGHT
AT THE FACULTY OF HORTICULTURE

	CODE	TITLE OF THE COURSE	SEMESTER	ECTS	LOCATION	NOTE
1	EFL1	Floristics I	W	5	Lednice	
2	EGLHS	Garden and Landscape Heritage Studies	W	6	Lednice + excursion	Landscape architecture, Floristics or Horticulture students only; min. 3 students
3	DEUM	History of Art I	W	3	Brno	
4	EZVY	Horticultural Exhibitions	W	5	Lednice	
5	ENK1	Landscape Theory	W	2	Lednice	min. 3 students
6	EKPL	Landscape Planning	W	2	Brno	min. 5 students
7	EKV1	Floriculture	W or S	5	Lednice	
8	EAPZ	Alternative Production in Horticulture	W	4	Lednice	
9	EMPPD	Molecular plant pathology and diagnostics	W	5	Lednice	
10	EMOD	Minor Fruits Species	W	6	Brno/Lednice	
11	EPRT	Production and Utilization of Perennials	W	5	Lednice	
12	ESKV	Protected Cultivation	W	5	Lednice	
13	EOTS	Tropical and Subtropical Fruit Production	W	5	Brno/Lednice	
14	ESPR	Special Plants	W	5	Lednice	
15	EARS	Architecture and Buildings	S	4	Lednice	
16	EOVK	Fruit Trees and Cultural Landscapes	S	6	Lednice	Landscape architecture or Horticulture students only; min. 3 students
17	EATZ3	Project Studio III	S	8	Lednice	

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18	EGKI	GIS and Landscape Interpretation	S	3	Lednice	min. 5 students
19	EWS2	Workshop II	S	10	Lednice	
20	WOLAT	Workshop - Landscape Topic	S	7	Lednice + Field Survey	Landscape architecture student only 1 student
21	EJRP	Quality of Plant Products	S	4	Lednice	
22	IMHSSARBT	IMHS Applied Plant Biotechnology	S	6	Lednice	
23	IMHSTOD	IMHS Technology of Fruit Distillates	S	4	Lednice	
24	IMHSZMII	IMHS Horticultural Machinery	S	5	Lednice	
25	IMHSVIN	IMHS Wine production	S	6	Lednice	
26	IMHSSVP	IMHS Sophisticated Vegetable Production	S	5	Lednice	
27	IMHSPPE	IMHS Stone Fruit Production	S	6	Brno/Lednice	
28	EATEHP	Current trends in European horticultural production	S	5	Lednice	
29	IMHSSOV	IMHS Fruit Storage	S	6	Lednice	
30	ESOM	Sommelier	S	3	Lednice	
31	EJRP	Quality of Plant Products	S	4	Lednice	
32	ELROZ	Medicinal plants in ornamental horticulture	S	5	Lednice	

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Instructions

- *Please be careful with selecting courses. "W" stands for winter semester, which is semester from September to February, and "S" stands for summer semester, which is semester from February to August.*
- *Some courses are opened only to the student with specific studyfield such as Landscape architecture, Floriculture and / or Floristics (see the column „NOTE").*
- *Some courses will be offered only if there are enough students registered (see the column „NOTE" for the required minimum number of students enrolled).*

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1. EFL1 Floristics I

Course supervisor: doc. Ing. Jiří Martinek, Ph.D. (Department of Planting Design and Maintenance)
Teacher: doc. Ing. Jiří Martinek, Ph.D.
Semester: W
Mode of delivery and timetable classes: 0/3 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: bachelor; master

Aim of the course and learning outcomes:
The main objective of this course is to learn step by step all the basic rules and principles of creating large floral works, using practical examples required by floral practice - from the libretto (the inspiration, idea sketch) through design activities (making detailed plans, material specifications and budgeting) to the final implementation of the proposal (creating the floral arrangement). Emphasis is placed on gaining practical experience by working on real objects and in larger working groups.

Course content:

1. **Introduction to the course.** (allowance 0/3)
   a. Presentation of the latest trends in the floral design sector for students.
   b. Presentation of case study projects for the current course.
   c. Presentation of the best projects of the past years.
   d. Dividing students into teams to work on selected case studies.
2. **Phase of developing the documentation.** (allowance 0/12)
   a. Creation of key motifs and communication with customer.
   b. Libretto case study.
   c. Feasibility study.
   d. Project documentation for the implementation phase.
3. **Budgeting phase.** (allowance 0/6)
   a. Exploration of the market for floricultural products.
   b. List of materials.
   c. Preparation of the budget frame.
4. **Implementation phase.** (allowance 0/18)
   a. Preparation of floral decoration pieces at the Faculty of Horticulture.
   b. Transport to the place of realisation.
   c. Completion of the floral decorations on site.
5. **Presentation of the project that was implemented.** (allowance 0/3)
   a. Finalisation of the project documentation.
   b. Creation of the presentation and its demonstration.

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2. EGLHS Garden and Landscape Heritage Studies

Course supervisor: doc. Dr. Ing. Alena Salašová (Department of Landscape planning)

Teachers: Ing. Barbora Dohnalová, Ph.D., doc. Dr. Ing. Alena Salašová, Ing. Eva Žallmanová, Ph.D.

Semester: W

Mode of delivery and timetable classes: 2/0/7 (hours weekly/ hours weekly/ days in semester) (hours of lectures per week / hours of seminars per week)

ECTS Credits: 6

Level of course: bachelor; master

Aim of the course and learning outcomes:

The aim of the course is to present the garden and landscape heritage of the Czech Republic and principles of their conservation, restoration, and specific management. The course is divided in two sections: a) theoretical lectures focused on the history of garden art in the Czech Republic and problematics of heritage preservation in national and international context and b) field work in representative historical gardens and landscapes. Individual student work (case study of the chosen garden/landscape) is an integral part of this course. The student will gain credits for his/her case study and participation in excursions.

Course content:

1. Historical gardens of the Czech Republic. (allowance 2/0)
2. Legislative frame of the heritage management. National and international context. (allowance 2/0)
3. Landscape as a monument. UNESCO categories of historical landscapes. (allowance 2/0)
4. Landscape heritage zones – identification, presentation, and management. (allowance 2/0)
5. Lednice-Valtice cultural landscape. History and development. Management of UNESCO sites (allowance 2/0)
6. Excursion 1: Průhonice park, Prague castle gardens (allowance 0/8)
7. Excursion 2: National Stud cultural landscape, Kladruby nad Labem (UNESCO site) (allowance 0/8)
8. Excursion 3: Kroměříž UNESCO gardens (allowance 0/8)
9. Excursion 4: Lednice-Valtice designed landscape, Mikulov heritage reserve (allowance 0/8)
10. Excursion 5: Slavkov u Brna (Austerlitz) – historic garden, town, and battlefield (associative landscape) (allowance 0/8)
11. Seminar: presentation of the students case studies (allowance 0/8)

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3. DEUM1 History of Art I

Course supervisor: Mgr. Marcela Hanáčková, Ph.D., (Department of Garden and Landscape Architecture)
Teacher: Mgr. Marcela Hanáčková, Ph.D.,
Semester: W
Mode of delivery and timetable classes: full-time, 2/0 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 3
Level of course: bachelor

Aim of the course and learning outcomes: History of Art - Painting, Sculptures, Architecture (Antique period - Middle Ages).

Course content:

1. **Prehistory Art** (allowance 2/0)
   a. Palaeolithic
   b. Neolithic
   c. Agricultural Revolution
2. **Ancient Art** (allowance 10/0)
   a. Egypt and Mesopotamia
   b. Greek Art
   c. Hellenistic Period
   d. Roman Art
3. **Medieval Art** (allowance 16/0)
   a. Early Christian Art
   b. Byzantine Art
   c. Romanesque Art
   d. Gothic Art

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4. EZVY Horticultural Exhibitions

Course supervisor: doc. Ing. Jiří Martinek, Ph.D. (Department of Planting Design and Maintenance)
Teacher: doc. Ing. Jiří Martinek, Ph.D.
Semester: W
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: bachelor; master

Aim of the course and learning outcomes: The aim of the course is to acquaint students with contemporary trends in the presentation of horticultural industries to the public, whether the presentation involves various products of horticultural production or landscape architecture projects. Students will study examples of exhibition spaces, mainly in the form of comprehensive or thematic exhibitions organised indoors or outdoors. The case studies will also include publicity and the production of an accompanying programme or activities.

Course content:

1. The importance and history of exhibiting (allowance 2/0)
2. Perspectives and trends in contemporary exhibition design (allowance 2/0)
3. The development of the horticultural exhibition sector in the European context (allowance 2/0)
4. Horticultural exhibition venues and their subdivision (allowance 2/0)
5. Types of exhibitions and their classification, exhibition as part of urban space (allowance 2/0)
6. Typology of expositions, methodology of creating expositions and composing horticultural expositions (allowance 2/2)
7. Theme (allowance 2/4)
8. Libretto (allowance 2/2)
9. Scenario (allowance 2/4)
10. Operational assessment (allowance 2/2)
11. Project (allowance 2/12)
12. Exposure implementation and removal (allowance 2/2)
13. Advertising and public relations (allowance 2/0)
14. Accompanying activities (allowance 2/0)

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5. ENK1 Landscape Theory

Course supervisor: doc. Dr. Ing. Alena Salašová (Department of Landscape planning)
Teachers: doc. Dr. Ing. Alena Salašová, Ing. Eva Žallmannová, Ph.D.

Semester: W
Mode of delivery and timetable classes: full-time, 2/0 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 2
Level of course: bachelor

Aim of the course and learning outcomes: The course is focused on the theory of geosystem. There is the landscape structure, principles of its forming, and landscape evolution are described in detail. Main emphasis lays on explanation of primary landscape structure forming.

Course content:

1. **Landscape - definition of the term** (allowance 2/0)
   a. Different lenses to the definition
   b. Structure and dimension of the landscape
   c. Landscape genesis
2. **Study methods** (allowance 2/0)
   a. Gnoseological and interpretative methods
3. **Hierarchic levels of a geosystem** (allowance 2/0)
   a. Planetary geosystem
   b. Geoms
4. **Geological structure** (allowance 2/0)
   a. Geological development of the Czech Republic area
   b. Geological characteristics of the Czech Republic
5. **Topography** (allowance 6/0)
   a. Endogenic factors of the relief forming
   b. Exogenetic factors of the relief forming
   c. Types of topographic forms
   d. Topographic types of the landscape
6. **Water regime** (allowance 2/0)
   a. Fluvial processes
   b. Types of the river landscapes
7. **Soil characteristics** (allowance 2/0)
   a. Pedogenic processes
   b. Soil erosion
   c. Types of the soils
8. **Types of abiotic landscape complexes** (allowance 2/0)

a. Relations and correlation within the primary landscape structure

9. **Landscape and biosphere** (allowance 6/0)
   a. Biotic factors forming a geosystem
   b. Potential vegetation
   c. Animals and a landscape
   d. Biogeographic characteristics of the Czech Republic - This lecture has been innovated within the project CZ.1.07/2.2.00/15.0122
10. **Nature and landscape protection** (allowance 2/0)
   a. Development and trends in nature and landscape protection
   b. International conventions
   c. Czech legislative

6. EKPL Landscape Planning

Course supervisor: doc. Dr. Ing. Alena Salašová (Department of Landscape planning)
Teachers: Ing. Barbora Dohnalová, Ph.D., doc. Dr. Ing. Alena Salašová, Ing. Eva Žallmannová, Ph.D.
Semester: W
Mode of delivery and timetable classes: full-time, 2/0 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 2

In case of need of more information, please contact the respective Faculty Coordinator.

7. EKV1 Floriculture

Course supervisor: doc. Dr. Ing. Jiří Uher (Department of Vegetable Growing and Floriculture)
Teacher: doc. Dr. Ing. Jiří Uher
Semester: W / S
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5

In case of need of more information, please contact the respective Faculty Coordinator.

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8. EAPZ Alternative Production in Horticulture

Course supervisor: doc. Ing. Tomáš Kopta, Ph.D. (Department of Vegetable Growing and Floriculture)
Teachers: doc. Ing. Tomáš Kopta, Ph.D., doc. Ing. Jarmila Neugebauerová, Ph.D., Ing. Ivo Ondrášek, Ph.D.
Semester: W
Mode of delivery and timetable classes: full-time, 2/0 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 4
Level of course: bachelor; master

Aim of the course and learning outcomes: The aim of the course is to introduce with the importance, legislation and with the main technological issues of the organic production of horticultural crops. Main topics are related to vegetable and fruit production as well as medicinal, aromatic and spicy plants.

Course content:

1. Introduction and organisation of the study, task assignment. (allowance 0/0)
2. Introduction to the system of organic production on the field (certified organic field on the Faculty campus). (allowance 0/0)
3. Organic farming statistics. Quality of organic food. Situation on the market. (allowance 0/0)
4. Biodiversity in organic farming. How to promote biological pest control? (allowance 0/0)
5. Organic fruit production. (allowance 0/0)
6. Organic production of medicinal, aromatic, and spicy plants. (allowance 0/0)
7. Field trip to the organic farm or company processing organic products. (allowance 0/0)
8. Presentation of seminary works. (allowance 0/0)

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9. EMPPD Molecular plant pathology and diagnostics

Course supervisor: doc. Mgr. Miroslav Baránek, Ph.D. (Mendeleum - Institute of Genetics and Plant Breeding)
Teachers: doc. Mgr. Miroslav Baránek, Ph.D.
Semester: W
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: master

Aim of the course and learning outcomes: The aim of the course is to acquaint students with the background of plant diseases at the molecular level with special emphasis on current methods available for detection of plant pathogens in plant tissues.

Course content:

1. Introduction + symptomatology I (allowance 2/2)
2. Symptomatology II (allowance 2/2)
3. Plant-pathogen interaction (allowance 2/2)
4. Molecular background of plant resistance (allowance 2/2)
5. General overview of methods for pathogen identification (allowance 2/2)
6. Nucleic acid extraction and PCR method (allowance 2/2)
7. Immunological methods for pathogen detection (allowance 2/2)
8. Real Time PCR for pathogen identification (allowance 2/2)
9. RNA amplification method, LAMP method (allowance 2/2)
10. Next Generation Sequencing as a toll for pathogen identification (allowance 2/2)
11. Methods of microscopy for pathogen identification (allowance 2/2)
12. Molecular diagnostic methods: Limitations and advantages in plant pathology (allowance 2/2)

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10. EMOD Minor Fruits Species

Course supervisor: Ing. Ivo Ondrášek, Ph.D. (Department of Fruit Science)
Teachers: Ing. Ivo Ondrášek, Ph.D.
Semester: W
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 6
Level of course: master

Aim of the course and learning outcomes:

Various uncommon fruit producing trees, shrubs, and vines are being considered or tried by growers as alternatives over the more traditional fruit crops. Some of them are native in the Europe, and some have been imported from primary genetic centres of origin. Groupe of minor fruit tree species grown in Europe deserves more attention, due to the diversity and potential economic and environmental importance of their cultivation. Distribution maps, genetic variability, morphological, ecological and biological characteristics are presented for berry fruits, Cornus, Sambucus, Hippophäe, Lonicera, Morus, Rosa, Cydonia, Sorbus, Mespilus, Castanea, Corylus, Juglans and Amelanchier. Some of these species are interesting for different traits, for example excellent fruit quality, high nutritional value or unique processing characteristics. Special attention will be paid to the disease resistance of selected minor fruit species and making them suitable for organic or integrated fruit production.

Course content:

1. Genetic resources of fruit species; genetic resources as a unit of heritable variability of actual or potential value; genetic diversity as a factor for plant domestication (allowance 0/0)
2. Taxonomy of minor fruits and nut trees species growing in Europe (allowance 0/0)
3. Detailed study of areas, production, climate and soil requirements, propagation, planting density, training systems (allowance 0/0)
4. Factors influencing the fruitfulness and unfruitfulness; self-incompatibility and pollinisers (allowance 0/0)
5. Physiology of flowering and pollination of minor fruit species (allowance 0/0)
6. Principles, objectives, types and methods of pruning (allowance 0/0)
7. Special production problems like alternate bearing problems and their remedies (allowance 0/0)
8. Medicinal and other uses for minor fruits; allergenic ingredients of fruits (allowance 0/0)
9. Basic principles of organic farming in relation to minor fruit species (allowance 0/0)

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11. EPRT Production and Utilization of Perennials

Course supervisor: doc. Dr. Ing. Jiří Uher (Department of Vegetable Growing and Floriculture)
Teachers: Ing. Oldřiška Sotolářová, Ph.D., doc. Dr. Ing. Jiří Uher
Semester: W
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: master

Aim of the course and learning outcomes: The course was built to meet the growing demand for the exact informations that are necessary for the efficient production of perennials, as one of the few floral commodities, meeting the requirements for maintaining the competitiveness of Czech producers in the European market. Students will deepen their knowledge in morphology, anatomy and physiology of perennial plants and will learn to navigate in the rapidly expanding assortments of perennials, and particularly in the growing practice in recent years significantly zracionalizovaných floricultural crops.

Course content:

1. **Introduction to perennials production** (allowance 2/2)
   a. Perennials in history and its present status
   b. Geographical origin of most significant genera of perennials, climatic and vegetation zones and its influence over hardiness and cultivation
2. **General aspects of perennial production** (allowance 2/2)
   a. Propagation of perennials and cultural advices
   b. Floral induction and floral development, forcing of perennials
3. **Chamaephytic perennials** (allowance 2/2)
   a. chamaephytic plants of steppe and semi-desert areas
   b. chamaephytic plants of highlands
4. **Hemicryptophytic perennials** (allowance 2/2)
   a. shade-tolerant hemicryptophytic plants of forests
   b. hemicryptophytic plants of grasslands
5. **Cryptophytic perennials** (allowance 2/2)
   a. Ephemer-like geophytes of forests
   b. Geophytes of steppe and semi-desert areas
6. **Model situation: Photoperiodical control of flowering in perennials, cut flower production in greenhouses** (allowance 2/2)
   a. Chrysanthemum
   b. Symphyotrichum and Solidago
7. **Model situation: Hemicryptophytic perennials for cut flower production in the open ground: the most significant genera of the Asteraceae family** (allowance 2/2)
   a. Tanacetum and Leucanthemum

b. Echinacea and Helenium

8. **Model situation: Hemicryptophytic perennials for cut flower production in the open ground: the most significant genera of other families** (allowance 2/2)
   a. Paeonia
   b. Scabiosa (sensu lato)
9. **Model situation: Cryptophytic perennials for cut flower production** (allowance 2/2)
   a. Bulbs-producing geophytes: Tulipa and Narcissus
   b. Tuber-producing geophytes: Aconitum an Liatris
10. **Model situation: Cryptophytic perennials for pot plant production** (allowance 2/2)
    a. Hyacinthus
    b. Scilla (sensu lato), including Muscari
11. **Model situation: Hemicryptophytic perennials for pot plant production** (allowance 2/2)
    a. Geranium
    b. Bergenia
12. **Model situation: Chamaephytic perennials for pot plant production** (allowance 2/2)
    a. Arabis and Aubrieta
    b. Ajuga
13. **Special cultures: Stonecrops and Houseleeks (Sedum and Sempervivum, sensu lato)** (allowance 2/2)
    a. Stonecrops for the cut flower production
    b. The taxa for roof-gardens
14. **Special cultures: Woody plants for the cut flower production** (allowance 2/2)
    a. Woody plants for forcing of cut flowers
    b. Woody plants for cut of ornamental berries-production

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12. ESKV Protected Cultivation

Course supervisor: prof. Ing. Robert Pokluda, Ph.D. (Department of Vegetable Growing and Floriculture)
Teacher: prof. Ing. Robert Pokluda, Ph.D.
Semester: W
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: bachelor

Aim of the course and learning outcomes: Course will acquaint with management and organisation of protected cultivation, with equipment and methods used for growth regulation and increase of productivity of hortic. crops.

Course content:

1. History of protected cultivation. World cultivation centres, organisation of protected cultivation enterprises. Climate regulation, heating systems, cooling. Physiological importance of temperature for plants. (allowance 4/4)
2. Light - physiological importance for plants, artificial lighting (incl. costs), shading.
   Plant nutrition - specifity of protected cultivation, properties of nutrient solution.
   Water - sources, quality demand, water preparation, use, forms of application.
   Alternative growing system, hydroponics. Growing media. (allowance 4/4)
3. Plant nutrition management and control, systems of automated nutrition.
   CO2 importance, physiology, application, efficiency.
   Plant regulators, classification, physiology, use in production systems. (allowance 4/4)
4. Protection of plants in protected cultivation. Legislation, worker safety. Prevention. Biological control, chemical measures and methods, integrated plant protection, application technique. (allowance 4/4)
5. Pathogens monitoring and detection, diagnostics. Protection measures.
   Harvest and postharvest manipulation. Shelflife, vase-life, grading. Storing and storability of products.
   Expedition of products. (allowance 4/4)
6. Marketing of horticultural products, standardization, egalization, quality control. Supply chains.
   Planning of production, use of investment and equipment. (allowance 4/4)

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13. EOTS Tropical and Subtropical Fruit Production

Course supervisor: Ing. Ivo Ondrášek, Ph.D. (Department of Fruit Science)
Teacher: Ing. Ivo Ondrášek, Ph.D.
Semester: W
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: bachelor; master

Aim of the course and learning outcomes: Students will acquire basic information and an overview of fruit production from the subtropics and tropics. Among the basic topics of the lectures belongs climatological, pedological characteristics of areas of the tropics and subtropics, taxonomy and description of the trade important fruit species. The attention will also be given to the kinds of local importance. The individual fruit species will be introduced for the botanical classification, origin and distribution, botanical characteristics, technology reproduction and cultivation, harvesting and utilization of significance or fruits.

Course content:

1. Climatologically-ecological characteristics of tropical and subtropical areas. Center of origin of crop plants in the tropics and subtropics (allowance 0/0)
2. World production of subtropical and tropical fruit, a major export countries, the development of world production (allowance 0/0)
   a. Citrus taxonomy and most important species in the commercial production.
3. The genus of Citrus – ecological requirements of individual groups, the importance and use of fruit, world production. (allowance 0/0)
4. Deciduous subtropical species with the market relevance (allowance 0/0)
5. The tropical fruit species with commercial value – classification and characteristics (allowance 0/0)
6. The possibility of storing, the specifics of harvest and post-harvest treatment, grading, disease and pests. (allowance 0/0)

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14. ESPR Special Plants

Course supervisor: doc. Ing. Jarmila Neugebauerová, Ph.D. (Department of Vegetable Growing and Floriculture)
Teacher: doc. Ing. Jarmila Neugebauerová, Ph.D.

Semester: W
Mode of delivery and timetable class
es: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: bachelor, master

Aim of the course and learning outcomes: To introduce importance of cultivated medicinal, aromatic and spice plants (MASP)

Course content:

1. General plants characteristic and division of special plants (MASP), plants assortment, importance, recognising of assortment.
2. Characterization of species, cultural requirements, plats management practice and utilization of species Clavicipitaceae, Polygonaceae, Rosaceae, Fabaceae and Onagraceae family.
3. Legislation of MASP, MASP seed production.
4. Family Apiaceae, Hypericaceae, Malvaceae.
5. Description of fresh and dried materiál, propagation of MASP.
6. Family Valerianaceae, Solanaceae, Scrophulariaceae, Plantaginaceae.
7. Family Lamiaceae I.
8. Family Lamiaceae II.
9. Family Asteraceae I.
10. Family Asteraceae II.
11. Adaptogens
12. Use of MASP in phytotherapy (methods of treatment of medicinal and aromatic plants, dosage, effects and risks

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15. EARS Architecture and Buildings

Course supervisor: doc. Ing. Barbara Ševčíková, Ph.D. (Department of Garden and Landscape Architecture)
Teachers: doc. Ing. Barbara Ševčíková, Ph.D.

Semester: S
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 4
Level of course: master

Aim of the course and learning outcomes: The course introduces students to the theory of architecture of the 20th and beginning of the 21st century. The course focuses on the interpretation of the Czech architectural scene (in some examples with the participation of foreign authors). The students will be acquainted with examples of architectural design that are important realizations Czech architecture in the European context. Czech scene has been extended by the architectural scene of Vienna - the aspect of development through linking with Otto Wagner.

Course content:

1. **Architectural concept** (allowance 4/4)
   a. Subjective and objective factors of architecture.
   Small architectural Forms and their relationship with craft and so called "Official Architecture".
   Architectural detail.
   b. Architectural Heritage concept. Content and a Form of a Contemporary Architecture in the Heritage Environment.
   c. Key words : Space, Building Mass, Construction, Shape, Typology, Professional terminology

2. **19th Century Architecture** (allowance 6/6)
   a. Classicism
   b. Romanticism and Historicism
   c. Art Nouveau

3. **20th Century Architecture** (allowance 6/6)
   a. Contemporary Design, Cubism and Purism in Czech Architecture
   b. Functional Architecture
   c. World Architecture from 1930 to 1960

4. **Architectural Movements from 1970 up to Present Day** (allowance 6/6)
   a. Realizations and projects in the conservation area Brno. This topic has been innovated in the frame of the project No.CZ.1.07/2.2.00/15.0122
   b. Brno - Architecture todays (1990-2010). This topic has been innovated in the frame of the project No.CZ.1.07/2.2.00/15.0122
   c. Landscape today. This topic has been innovated in the frame of the project No. CZ.1.07/2.2.00/15.0122

5. **Contemporary Landscape Design** (allowance 6/6)
    a. Construction design of buildings in process designing a landscape architect. This topic has been innovated in the frame of the project No. CZ.1.07/2.2.00/15.0122

16. EOVK Fruit Trees and Cultural Landscapes

Course supervisor: doc. Dr. Ing. Alena Salašová (Department of Landscape Planning)
Teachers: doc. Dr. Ing. Alena Salašová

Semester: S
Mode of delivery and timetable classes: full-time, 2/1 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 6
Level of course: master

Aim of the course and learning outcomes: The course is focused on a history and development of the European cultural landscape and protection of its identity as well. There are the specific role of fruit trees in garden design and cultural landscape are described in detail.

Course content:

1. Cultural landscape of the Czech Republic - history, development, problems (allowance 8/0)
2. Rural development (allowance 2/2)
3. Fruit trees in the landscape (allowance 8/8)
4. Fruit trees and a current landscaping (allowance 8/4)

17. EATZ3 Project Studio III

Course supervisor: Ing. Viktor Filipi (Department of Garden and Landscape Architecture)
Teachers: Ing. Viktor Filipi

Semester: S
Mode of delivery and timetable classes: full-time, 0/8 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 8
Level of course: bachelor

Aim of the course and learning outcomes: This course enables students to synthesize theoretical and practical knowledge in Landscape Design assignment.

- Survey and Assessment of the Site (pointing out all problems)
- Variety of Design along with Presentation is the key approach.

Course content:

1. **Renewal of the basic Public Urban Space along with application of planting** (allowance 0/112)
    a. Streets, Squares, Village square - This topic has been innovated in the frame of the project No.CZ.1.07/2.2.00/15.0122
    b. Sport / Recreation / Leisure / Sanatorium areas
    c. Special accessories areas

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18.EGKI GIS and Landscape Interpretation

Course supervisor: Ing. Jozef Sedláček, Ph.D. (Department of Landscape Planning)
Teachers: Ing. Jozef Sedláček, Ph.D.

Semester: S
Mode of delivery and timetable classes: full-time, 0/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 3
Level of course: bachelor; master

Aim of the course and learning outcomes: To acquaint students with modern methods of landscape analyses as well as assessment and changes in landscape structure using ArcGIS and its extensions. Students will be gradually introduced to subject both to acquire and integrate geographic data, how to analyze and interpret the results. All topics are demonstrated on selected tasks.

Course content:

1. **Introduction to geoinformation technologies (GIT). Methods of survey, analysis, publishing and sharing geographical data. 2D and 3D data representation - vector datasets, raster datasets, point clouds and meshes.** (allowance 4/0)
   a. GIT in Landscape analysis. Current best available technology and emerging trends.
   b. GIT in landscape planning. Examples of good practice.
2. **Introduction to national datasets and standards (Czech Republic).** (allowance 0/4)
   a. Web mapping services of primary landscape structure.
   b. Web mapping services and satellite imagery of recent and historical land-use.
   c. Web mapping services covering tertiary landscape structure (sociological, cultural objects, nature protection areas, cultural heritage conservation areas).
3. **Principles of photogrammetric data processing and 3D representation on geographical datasets.** (allowance 0/4)
   a. Introduction to photogrammetry.
   b. Working with photogrammetric software Pix4d.
   c. Sharing and publishing of 3D datasets online.
4. **Field survey of selected area.** (allowance 0/0)
   a. Field survey - UAV mapping (drone).
   b. Data processing - point clouds, mesh, digital terrain model and digital surface model.
   c. Data presentation, creation of maps and web based interactive maps and point cloud models.
   d. Multi-spectral areal imagery.
5. **Case study of selected area - landscape interpretation. Application of previous skills and field survey.** (allowance 0/0)
   a. Defining goals of case study. Possible topic: landscape suitability for different land-use, landscape perception and analysis, 3D representation of landscape.
   b. Presentation of case study.

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19. EWS2 Workshop II

Course supervisor: doc. Ing. Barbara Ševčíková, Ph.D. (Department of Landscape Planning)
Teachers: doc. Ing. Barbara Ševčíková, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 0/10 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 10
Level of course: master

Aim of the course and learning outcomes: The aim of the course is to examine students' ability to implement project activities. Teaching is done on "projects requested". These are initiated by the government and by partners the university.
Course content:
1.Workshop 2 - development of the project in the field of landscape architecture (allowance 0/0)

20.WOLAT Workshop - Landscape Topic

Course supervisor: doc. Dr. Ing. Alena Salašová (Department of Landscape planning)
Teachers: doc. Dr. Ing. Alena Salašová
Semester: S
Mode of delivery and timetable classes: full-time, 0/10 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 7
Level of course: bachelor

Aim of the course and learning outcomes: Main goal of the course is practical skills development oriented on problems of landscape planning. Special accent is put on development of creativity, increasing knowledge about conceptual landscape planning and collaborative planning skills development. Final output is the case study of real area made by students' team.

Course content:

1. **1st week: Landscape study - theoretical introduction** (allowance 24/16)
    a. Landscape plan - goals, content, case studies
    b. Landscape character assessment
    c. Landscape perception by people
    d. Collaborative planning - team building, team management
    e. Creativity development, presentation skills
2. **2nd week: Landscape mapping and analysis - field work** (allowance 0/40)
    a. Field work in a case area
    b. Collaboration with the stakeholders
3. **3rd week: Landscape plan processing** (allowance 0/40)
    a. Local development plan (study)

b. Presentation of the proposals to the stakeholders
c. Public exhibition

21. EJRP Quality of Plant Products

Course supervisor: Ing. Miroslav Horák, Ph.D. (Department of Post-Harvest Technology of Horticultural Products)
Teachers: Ing. Miroslav Horák, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 2/0 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 4
Level of course: bachelor

Aim of the course and learning outcomes: To make students acquainted with fundamental characteristics of agricultural production and principle of quality assurance of plant production. To give a review about requirements on quality parameters of raw material and their food utilization. Attain knowledge of technology principles of choice food production.

Course content:

1. Fundamental characteristics of agricultural production (allowance 4/0)
2. Principle of quality assurance of plant production
   (This topic has been innovated in the frame of the project No.CZ.1.07/2.2.00/15.0122) (allowance 5/0)
3. Importance, production, quality characteristics and utilization of cereals (allowance 2/0)
4. Importance, production, quality characteristics and utilization of pulse crops (allowance 2/0)
5. Importance, production, quality characteristics and utilization of oilseeds (allowance 2/0)
6. Importance, production and quality characteristics of sugar-crops, potatoes and hop (allowance 3/0)
7. Importance, production and quality characteristics of fruit and vegetables
   (This topic has been innovated in the frame of the project No.CZ.1.07/2.2.00/15.0122) (allowance 2/0)
8. Food sweeteners and production of sucrose (allowance 2/0)
9. Production of chocolate and no-chocolate sweeties (allowance 2/0)
10. Starch technology and products from starch (allowance 2/0)
11. Technology of food oils and their next processing (allowance 2/0)
12. Professional excursion during the second study year of bachelor study grade. (allowance 0/10)
13. Focus on obligatory professional practice (allowance 0/10)

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22. IMHSSARBT IMHS Applied Plant Biotechnology

Course supervisor: Ing. Aleš Eichmeier, Ph.D. (Mendeleum - Institute of Genetics and Plant Breeding)
Teachers: Ing. Aleš Eichmeier, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 6
Level of course: master

Aim of the course and learning outcomes: Main goal of this subject is to teach the students using practical applications of plant biotechnology methods and their use in plant growing practice. On the base of conveniently selected laboratory exercises students will handle experiments based on up-to-date principles (restriction enzymes, PCR, Real Time PCR, reverse transcription, in vitro multiplication, in vitro thermotherapy ...).

Course content:

1. **Classical breeding methods** (allowance 2/2)
2. **The main trends in the utilization of biotechnology in horticulture, the relationship of biotechnology and classical breeding** (allowance 2/2)
3. **Methods of molecular genetics not manipulating the genetic information of studied organism** (allowance 12/32)
   a. Isolation of DNA from plant tissues
   b. Polymerase chain reaction (PCR) and its preparation
   c. The molecular genetic methods based on fragmentation analysis
   d. Use of DNA markers for assessment of genetic relatedness
   e. Use of SSR markers in identifying varieties
   f. Use of Real Time PCR for quantification of GMO material in an unknown sample
   g. The use of molecular genetics in identifying of viral pathogens
   h. Sequencing DNA; public databases within molecular biology studies
4. **Genetic manipulations to improve the performance of plants** (allowance 2/0)
5. **Tissue culture and their use** (allowance 10/16)
   a. Elimination of viral pathogens using in vitro, legislation
   b. Isolation of meristem, meristem culture, micrografting
   c. The use of in vitro techniques in plant breeding (in vitro selection, somaclonal variation, genetic manipulation)
   d. Micropropagation of horticultural plant species
6. **Excursion in the private biotechnological company** (allowance 0/4)

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23. IMHSTOD IMHS Technology of Fruit Distillates

Course supervisor: prof. Ing. Josef Balík, Ph.D. (Department of Post-Harvest Technology of Horticultural Products)
Teachers: prof. Ing. Josef Balík, Ph.D., Ing. Hana Dočekalová
Semester: S
Mode of delivery and timetable classes: full-time, 1/1 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 4
Level of course: master

Aim of the course and learning outcomes: The objective of this course is to inform students about basic processes used in the field of production of fruit distillates and about practical aspects of their application. Students will have an opportunity to understand principles of controlled fermentation of fruit mashes as well as of distillation and rectification processes. They will also learn about quality parameters of some selected kinds of fruit distillates and about requirements concerning their sensory evaluation.

Course content:

1. Principles of the preparation of fruit mashes and methods of fermentation control (allowance 2/0)
2. Technologies and equipment used for control of distillation and rectification (allowance 4/0)
3. Treatment, storage and ageing of distillates (allowance 2/0)
4. Production of individual kinds of fruit distillates (allowance 4/0)
5. Requirements concerning quality parameters of fruit distillates (allowance 2/0)
6. Practical training (allowance 0/6)
7. Visit to a distillery (allowance 0/6)

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24. IMHSZMII IMHS Horticultural Machinery

Course supervisor: prof. Ing. Patrik Burg, Ph.D. Department of Horticultural Machinery (FH)
Teacher: prof. Ing. Patrik Burg, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: bachelor; master

Aim of the course and learning outcomes: The aim of the subject is to introduce the students to the division, construction, and principles of operation of machines used in horticultural production during soil preparation, treatment of stands and harvesting.

Course content:

1. Introduction, growing technologies, work operations (allowance 2/2)
2. Tractors (different types of tractors) (allowance 2/2)
3. Primary tillage (allowance 2/2)
4. Manure spreader, mineral fertilizer spreader (allowance 2/2)
5. Machines for chemical protection (sprayers, mist blowers) (allowance 2/2)
6. Machinery for berry fruits harvesting (allowance 2/2)
7. Machinery for stone fruits harvesting (allowance 2/2)
8. Machinery for pome fruits harvesting (allowance 2/2)
9. Machinery for grape harvesting (allowance 2/2)
10. Machinery for vegetables harvesting (allowance 4/4)
11. Sorting machines of horticultural products (allowance 2/2)

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25. IMHSVIN IMHS Wine production

Course supervisor: prof. Ing. Mojmír Baroň, Ph.D. (Department of viticulture and enology)
Teacher: prof. Ing. Mojmír Baroň, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 6
Level of course: bachelor; master

Aim of the course and learning outcomes: Introduction of winemaking basics and technological and microbiological aspects of wine production.

Course content:

1. Composition and ripening of grapes (allowance 2/2)
2. Pre-fermentation adjustments (allowance 2/2)
3. Metabolism of yeasts (allowance 4/4)
4. Biochemistry of alcoholic fermentation (allowance 2/2)
5. Sulphur dioxide (allowance 2/2)
6. Malolactic fermentation (allowance 2/2)
7. Production of white wine (allowance 4/4)
8. Methods of red wines production (allowance 2/2)
9. Technology of special wines (allowance 4/0)
10. Sensory analysis (allowance 4/8)

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26. IMHSSVP IMHS Sophisticated Vegetable Production

Course supervisor: prof. Ing. Robert Pokluda, Ph.D. (Department of Vegetable Growing and Floriculture)
Teacher: prof. Ing. Robert Pokluda, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 1/3 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: master

Aim of the course and learning outcomes: The aim of this course is to acquaint students with methods of protected vegetable cultivation in controlled conditions, with focus on mechanisation and automation of the production process.

Course content:

1. Climate in vegetable production (allowance 1/3)
2. Computer technologies in production systems (allowance 1/3)
3. Automation in irrigation and fertilisation (allowance 1/3)
4. Nutritional status evaluation (allowance 2/6)
5. Nutritional value of vegetable - evaluation (allowance 2/6)
6. Vegetable pathogens (allowance 1/3)
7. Bioagens in vegetable production (allowance 1/3)
8. Extension service, advisory in production (allowance 1/3)

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27. IMHSPPE IMHS Stone Fruit Production

Course supervisor: Ing. Ivo Ondrášek, Ph.D. (Department of Fruit Science)
Teachers: Ing. Tomáš Kiss, Ph.D., Ing. Ivo Ondrášek, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 6
Level of course: master

Aim of the course and learning outcomes: Students will be taught the basic principles of growing stone fruits, enabling them to subsequently work on commercial fruit farms, in government institutions or in specialised teaching establishments. This course covers cultivation techniques and training systems for stone fruits, and new developments both in the Czech Republic and abroad. This includes: required growing conditions, pruning and modern training systems, commercially popular varieties and promising new varieties, harvesting and the major pests and diseases.

Course content:

1. **The current world situation in the production and breeding of apricots and peaches, cherries and plums** (allowance 0/0)
2. **Significant botanical species of stone fruits and their importance in the breeding and cultivation of commercial species.** (allowance 0/0)
3. **Requirements of individual species of stone fruit for the environment.** (allowance 0/0)
4. **Adaptability, differentiation of flowers and process of dormancy of stone fruits** (allowance 0/0)
   a. fruit thinning (fruit set, fruit drop, biennial cropping and fruit quality)
5. **Flower biology of individual species of stone fruit, the issue of flowering in relation to dormancy.** (allowance 0/0)
   a. Pollination and fertilization in production plantings of stone fruit
6. **Prunning specifics for each species of stone fruit** (allowance 0/0)
   a. Problems of fruit thinning in commercional orchards
7. **Modern stone fruit growing systems** (allowance 0/0)
8. **Stone fruit varieties, domestic and foreign situation, main varieties of stone fruit production** (allowance 0/0)
9. **The main diseases and pests of stone fruits** (allowance 0/0)

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28. EATEHP Current trends in European horticultural production

Course supervisor: doc. Ing. Tomáš Kopta, Ph.D. (Department of Vegetable Growing and Floriculture)
Teachers: Ing. Jana Burgová, Ph.D., Ing. Aleš Eichmeier, Ph.D., Ing. Pavel Híc, Ph.D., Ing. Tomáš Kiss, Ph.D., doc. Ing. Tomáš Kopta, Ph.D., Ing. Vladimír Mašán, Ph.D., doc. Ing. Jarmila Neugebauerová, Ph.D., prof. Ing. Robert Pokluda, Ph.D., Ing. Radek Sotolář, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 2/0 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: bachelor; master

Aim of the course and learning outcomes: The aim of the course is to introduce with new trends in horticultural production in relation to a number of topics. There will be discussed topics as drought issues, development of new pathogens, new trends in food processing, sustainable production and waste reduction in horticultural production, fruit production and viticulture in northern areas.

Course content:

1. Introduction to the horticultural production, presentation of topics. (allowance 2/0)
2. Innovative ways of vegetable production – aquaponics and hydroponic systems. (allowance 2/0)
3. Negative consequences of conventional farming, possibilities of using of bioadatives in horticultural production. (allowance 2/0)
4. Cultivation and use of green spices, sprouted seeds and edible flowers. (allowance 2/0)
5. Other methods of fruit processing – production of fruit ciders. (allowance 2/0)
6. Utilization of secondary raw materials and disposal of horticultural waste. (allowance 2/0)
7. Growing systems of stone fruits in the regions of Central Europe, current trends. (allowance 2/0)
8. Current situation of development of pathogens of horticultural crops (fungal diseases) in relation to globalisation and climate change. (allowance 2/0)
9. Current situation of development of pathogens of horticultural crops (bacterial diseases) in relation to globalization and climate change. (allowance 2/0)
10. Vine production in northern wine regions. (allowance 2/0)
11. Influence of climate change on the cultivation of ornamental plants. (allowance 2/0)
12. Presentation and evaluation of seminar works. (allowance 2/0)

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29. IMHSSOV IMHS Fruit Storage

Course supervisor: Ing. Pavel Híc, Ph.D. (Department of Post-Harvest Technology of Horticultural Products)
Teachers: Ing. Pavel Híc, Ph.D., Ing. Miroslav Horák, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 6
Level of course: master

Aim of the course and learning outcomes: To teach the basic principles of storing fruit for extended periods. The physiological and biochemical changes which take place during storage are discussed for each of the main fruit crops. Specific responses to controlled atmosphere storage systems when used in conjunction with cold storage.

Course content:

1. Biological factors involved in deterioration (allowance (1/0) (allowance 1/0)
2. Physiological breakdown and physical damage (allowance (2/0) (allowance 2/0)
3. Physiological breakdown and physical damage (allowance (2/0) (allowance 2/0)
4. Enviromental factors influencing deterioration (allowance (2/0) (allowance 2/0)
5. Suplements to temperature and humidity management(allowance (2/0) (allowance 2/0)
6. Postharvest procedure, estimating maturity (allowance 2/0) (allowance 2/0)
7. Harvesting systems , mechanical harvesting problems (allowance (2/0) (allowance 2/0)
8. Coolings methods , forced-air evaporative cooling (allowance (2/0) (allowance 2/0)
9. Storage systems, refrigeration, evaporators,refrigerants, (allowance 2/0) (allowance 2/0)
10. Controlled atmosphere storage, simple CA systém,pressure test allowance (2/0) (allowance 2/0)
11. Ethylene in postharvest technology (allowance 2/0) (allowance 2/0)
12. Quality and safety factor,components quality, methods for evaluating quality (allowance 2/0) (allowance 2/0)

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30. ESOM Sommelier

Course supervisor: Ing. Kamil Prokeš, Ph.D. (Department of viticulture and enology)
Teacher: Ing. Kamil Prokeš, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 2/0 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 4
Level of course: master

Aim of the course and learning outcomes: Understanding the principles of submission, and his preparation before serving. Servicing the parameters for tasting. Combination of foods with different wines.

Course content:

1. History and meaning of the word sommelier function sommelier, sommelier and utility outfit, the history of the vine, vine main varieties of gastronomic
2. Wine regions in the world, types of international wines
3. Tasting, tasting glasses and various types, the balance of wine, appropriate to wine tasting, order samples for tasting, ranking systems
4. Submission and service of wine, sparkling, white and pink, red, decantation.
5. Bar - basic bar equipment, bar basic materials, types of mixed drinks, glasses for mixed drinks, spirits, and distillates - their distribution, the production, whiskey, calvados, cognac. Armagnac, water - the division, a glass of water, other non-alcoholic drinks
6. Combination of foods and beverages, options combination, combination aspects, traditional and nontraditional combination (allowance 28/0)

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31. ELROZ Medicinal plants in ornamental horticulture

Course supervisor: doc. Ing. Jarmila Neugebauerová, Ph.D. (Department of Vegetable Growing and Floriculture)
Teachers: Ing. Lucia Nedorost Ragasová, Ph.D., doc. Ing. Jarmila Neugebauerová, Ph.D.
Semester: S
Mode of delivery and timetable classes: full-time, 2/2 (hours of lectures per week / hours of seminars per week)
ECTS Credits: 5
Level of course: bachelor; master

Aim of the course and learning outcomes: Of gaining knowledge about medicinal, aromatic and spice plants-morphology, origin, cultivation, contain substances and used in ornamental horticulture, medicine, food and culinary.

Course content:

1. Botanical description, cultivation, substances of Ranunculaceae taxons (Aconitum, Nigella, Cimicifuga) and their use in pharmacy, food industry, cosmetics and ornamental horticulture.
   Practical exercises: Description of the medicinal plants; trade in the world trade and in the Czech Republic, possibilities of use of assortment ZF MENDELU (pot plants etc.), use of printed and electronic information resources for presentations. (allowance 2/2)
2. Fam. Papaveraceae (Papaver); Paeoniaceae (Paeonia); Hypericaceae (Hypericum), Ericaceae (Calluna, Ledum, Arctostaphyllos, Vaccinium)
   Practical exercises:
   Characteristic of spicy plants, their importance for the world and the Czech Republic, changes in product range, applicability of assortment ZF MENDELU (pot plants, samples of tea). Draft of deadlines for seminar works (.ppt presentations). (allowance 2/2)
3. Fam. Primulaceae (Primula), Crassulaceae (Rhodiola), Saxifragaceae (Bergenia), Rosaceae (Alchemilla, Fragaria).
   Practical exercises: Description of aromatic plants, trade in the world and the Czech Republic, the possibility of using samples of essential oils, essential oil distillation demonstration by ČL 2009. Students assing topics for their .ppt presentations. (allowance 2/2)
4. Fam. Linaceae (Linum), Araliaceae (Hedera, Aralia); Apiaceae (Eryngium), Valerianaceae (Centranthus)
   Practical exercises: .ppt presentation "Medicinal, aromatic and culinary plants in Bohemia, Moravia and Silesia in the historical development (monastery gardens)" (allowance 2/2)
5. Fam taxons of families Gentianaceae (Gentiana, Menyanthes); Boraginaceae (Pulmonaria)
   Practical exercises: .ppt presentation "Medicinal, aromatic and spicy plants in the historical development (herbarium)" (allowance 2/2)
6. Fam. Boraginaceae (Symphytum, Borago); Scrophulariaceae (Verbascum), Verbenaceae (Aloisia, Lippia, Phylla)
   Practical exercises: .ppt presentation "History and present of perfumes" (allowance 2/2)
7. Fam Lamiaceae I (Ajuga, Teucrium, Dracocephallum, Phlomis, Prunella)
   Practical exercises: .ppt presentation " History and present of spice plants" (allowance 2/2)

8. Fam Lamiaceae II (Mentha, Salvia)
   Practical exercises: .ppt presentation "The use of medicinal and spice plants in garden design and landscape architecture (annuals and biennials)" (allowance 2/2)
9. Fam. Lamiaceae III (Scutellaria, Lavandula, Origanum, Ocimum, Nepeta)
   Practical exercises: .ppt presentation "The use of medicinal and spice plants in garden design and landscape architecture (perennials, bulbs and tuberous plants)" (allowance 2/2)
10. Taxons of family Asteraceae (Echinops, Matricaria, Artemisia, Tanacetum, Santolina,Carthamus, Helichrysum)
    Practical exercises: .ppt presentation "The use of medicinal, aromatic and spice plants in floristics" (allowance 2/2)
11. Taxons of family Asteraceae II (Achillea, Bellis, Balsamita, Pyrethrum, Grindelia, Tussilago, Solidago)
    Practical exercises: .ppt presentation "Green (kitchen) spices (assortment, cultivation technologies, storage)" (allowance 2/2)
12. Taxons of families Alliaceae (Allium); Iridaceae (Iris)
    Practical exercises: .ppt presentation "Edible flowers (assortment, use, growers, the current supply in the Czech Republic)" (allowance 2/2)