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| **STUDY PROGRAMME:** | **Professional Undergraduate Study Programme *Agriculture*** Specific field of study: Plant production, Zootechnics or Management in agriculture |
| **Course:** | **HOP GROWING AND BERRIES** |
| **Course code: 96736****Course status:** elective | **Semester:** **V** | **ECTS credits: 4** |
| **Course holder:** | **Siniša Srečec**, Ph.D.,professor of professional studies |
| **Course associates:** | **Iva Šikač,** M.Eng.Agr.,lecturer |
| **Modes of delivery:** | Number of hours |
| Lectures | 30 |
| Excersises | 20 |
| Seminars | 10 |

**COURSE OBJECTIVES:** Enable students to independently organize production or provide advice on the production of hops and berries.

**COURSE CONTENT**

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|  | **Course units** | **Modes of delivery:** | **Places of delivery** |
| **L** | **E** | **S** |
| 1. | History of hop growing and hop acreage worldwide | 1 |  |  | Lecture hall |
| 2. | Systematics of hops | 1 |  |  | Lecture hall |
| 3. | Morphology of hops | 1 |  |  | Lecture hall |
| 4. | Phenology of hops | 1 |  |  | Lecture hall |
| 5. | Agroecological conditions for hop growing | 5 |  |  | Lecture hall |
| 6. | Global hop varieties (production and morphological characteristics of Slovenian, American, English, and Czech hop cultivars) | 1 |  |  | Lecture hall |
| 7. | Hop planting material (production of virus-free seedlings with A and B certificates through micropropagation) | 1 |  |  | Lecture hall |
| 8. | Overview of appropriate equipment for hop production | 1 |  |  | Lecture hall |
| 9. | Specifics of hop protection from plant diseases and pests (particularities of the American and German hop protection programs) | 1 |  |  | Lecture hall |
| 10. | Hop quality – global standards of hop market value | 2 |  |  | Lecture hall |
| 11. | Determination of cone moisture Determination of conductometric valueIntroduction to analytical methods for determining hop quality |  | 10 | 5 | Laboratory Practicum |
|  | Knowledge test (written) on Hop Growing |  |  |  |  |
| 12. | Morphology and phenology of different berry species (Strawberries, Blackberries, Raspberries, Gooseberries, Currants, Blueberries, Cranberries, Aronia) | 2 |  | 1 | Lecture hall |
| 13. | Agroecological conditions for cultivation (Strawberries, Blackberries, Raspberries, Gooseberries, Currants, Blueberries, Cranberries, Aronia) | 3 |  | 1 | Lecture hall |
| 14. | Propagation methods and categories of planting material (Strawberries, Blackberries, Raspberries, Gooseberries, Currants, Blueberries, Cranberries, Aronia) | 2 |  | 1 | Lecture hall |
| 15. | Suitable varieties and cultivation systems (Strawberries, Blackberries, Raspberries, Gooseberries, Currants, Blueberries, Cranberries, Aronia) | 4 |  | 1 | Lecture hall |
| 16. | Preparation for establishing and establishment of plantations (Strawberries, Blackberries, Raspberries, Gooseberries, Currants, Blueberries, Cranberries, Aronia) | 2 |  | 1 | Lecture hall |
| 17. | Agrotechnical measures in cultivation and their importance in human consumption (Strawberries, Blackberries, Raspberries, Gooseberries, Currants, Blueberries, Cranberries, Aronia) | 2 | 5 |  | Lecture HallPracticum/Orchard |
| 18. | Field teaching (visit to berry plantations), and field teaching report |  | 5 |  | Outside the University of Applied Sciences |
|  | Knowledge Test (Written) on Berry Fruits |  |  |  |  |
|  | **In total** | 30 | 20 | 10 |  |

**L=Lectures, E=Excersises, S=Seminars**

**Learning outcomes (LO)**

LO 1. Argue the importance of hop cultivation and berry fruits in human consumption

LO 2. Present the structure, function of organs, environmental growing conditions, propagation methods, and categories of planting material for hops and berry fruits

LO 3. Present the specificities of hop production and plan the process of storing and processing hops into hop products

LO 4. Organize the establishment and cultivation of various berry species and select suitable agrotechnics

LO 5. Assess the optimal harvest time and suitable varieties of hops and different types of berry fruits

LO 6. Evaluate the quality of hops to meet quality standards and consumer needs

Course holder:

Siniša Srečec, Ph.D., professor of professional studies

Križevci, July 2024