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| **STUDY PROGRAMME:** | **Professional Undergraduate Study Programme *Agriculture*** Specific field of study: Plant production |
| **Course:** | **GRAIN LEGUMES** |
| **Course code:** 239973**Course status**: compulsory  | **Semester: IV** | **ECTS credits: 3,5** |
| **Course holder:**  | **Renata Erhatić,** Ph.D., professor of professional studies |
| **Course associates:**  | **Martin Bužić**, M.Eng.Agr., assistant |
| **Modes of delivery:** | **Number of hours**  |
| **Lectures** | 30 |
| **Excersises,** | 8 |
| **Seminars** | 7 |
| **Practical training** | 8 |

**Course objectives:** train students for independent production of grain legumes

**Course content**

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|  |  | **Modes of delivery:** | **Places of delivery** |
|  | **Course units**  | **L, E, S, PT** |
|  | Introduction to the subject. | L 1 | Lecture hall |
|  | Importance, use, surface and nature of grain legumes | L 2 | Lecture hall |
|  | Common properties and differences in the morphology of grain legumes | L 4E 1S 1 | Lecture hall, testing ground |
|  | Chemical composition of grain legumes | L 2S 1 | Lecture hall |
|  | Peas - cultivation technology (tillage, fertilization, choice of variety or hybrid, sowing, care measures, harvesting). | L 2S 1 | Lecture hall, testing ground |
|  | Lentils - cultivation technology (tillage, fertilization, choice of variety or hybrid, sowing, care measures, harvesting). | L 2 | Lecture hall, testing ground |
|  | Broad beans - cultivation technology (tillage, fertilization, choice of variety or hybrid, sowing, care measures, harvesting). | L 2 | Lecture hall, testing ground |
|  | Chickpea - cultivation technology (tillage, fertilization, choice of variety or hybrid, sowing, care measures, harvesting). | L 2 | Lecture hall, testing ground |
|  | Soybeans - cultivation technology (tillage, fertilization, choice of variety or hybrid, sowing, care measures, harvest). | L 4E 2S 1 | Lecture hall, testing ground |
|  | Lupin bean - cultivation technology (tillage, fertilization, choice of variety or hybrid, sowing, care measures, harvesting). | L 3 | Lecture hall, testing ground |
|  | Spring beans - cultivation technology (tillage, fertilization, choice of variety or hybrid, sowing, care measures, harvesting). | L 2S 1 | Lecture hall, testing ground |
|  | Beans - cultivation technology (tillage, fertilization, choice of variety or hybrid, sowing, care measures, harvesting). | L 2 | Lecture hall, testing ground |
|  | Groundnut - cultivation technology (tillage, fertilization, choice of variety or hybrid, sowing, care measures, harvesting). | L 2S 2 | Lecture hall, testing ground |
|  | Field trip: visit to agricultural holdings engaged in the production of grain legumes | E 5 | Outside of the Križevci University of Applied Sciences |
|  | Exercises - establishing a botanical garden, monitoring the phenological stages of growth and development, participating in observations and measurements in experiments with grain legumes | PT 2 | Testing ground |
|  | Practical training - participation in agrotechnical measures in the cultivation of grain legumes | PT 2 | Testing ground |
|  | Integrated project task - participate in production from sowing to harvest and monitor the impact of different production methods or different assortments on the yield of grain legumes, making your own conclusions | PT 4 | Testing ground |
| **In total** | **53** |  |

**L=Lectures, E=Excersises, S=Seminars, PT=Practical training**

**Learning outcomes (LO)**

LO 1. Argue the importance of the production of grain legumes for food and crop rotation

LO 2. Assess the stages of growth and development and to determine the morphological and biological properties of certain grain legumes

LO 3. Assess the possibility of growing certain grain legumes with regard to agroecological conditions

LO 4. Choose the agrotechnics for the production of certain grain legumes in terms of yield and quality

Course holder:

Renata Erhatić, Ph.D., professor of professional studies

Križevci, July 2024