University of Zagreb Faculty of Agriculture
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Production and processing of edible and medicinal mushrooms (296580)

Course coordinator

Assoc. Prof. Ivan Širić, PhD

Course description

Acquisition of basic theoretical and practical knowledge about the technology of mushroom production, the qualities of mushrooms and the methods of processing and quality control of mushroom products.

ECTS: **6.00**

E-learning: **L3**

Teaching hours: 60
Lectures: 40
Laboratory exercises: 6
Seminar: 6
Field exercises: 8

Lecturer

- Assoc. Prof. Ivan Širić, PhD
- Assoc. Prof. Sanja Radman, PhD
- Assoc. Prof. Jana Šic Žlabur, PhD

Associate teacher for exercises

- Assoc. Prof. Sanja Radman, PhD
- Assoc. Prof. Jana Šic Žlabur, PhD
- Assoc. Prof. Ivan Širić, PhD

Associate teacher for seminars

- Assoc. Prof. Ivan Širić, PhD

Grading

Sufficient (2): 60%
Good (3): 70%
Very good (4): 80%
Excellent (5): 90%

Conditions for obtaining signature

Monitoring of regular class attendance, good grade on seminar essay and preliminary exam, successful performance on oral exam.

Description

During the class students will be assessed through two preliminary tests, and final examination will be oral exam.

Type of course

- Graduate studies / MS Courses taught in English (Elective course, 1 semester, 1 year)

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General competencies

After successfully passing the course, students will be able to:
- state the economic importance of mushroom production in the world and in Croatia,
- name the most important characteristics of edible and medicinal mushrooms,
- describe the most important species of mushrooms for production and processing,
- describe technological processes in mushroom production and processing,
- list some products made from mushrooms,
- demonstrate the basic methods of traceability and quality control of products,
- be able to participate in teamwork and give presentations in seminars.

Types of instruction

- Lectures
- Seminars
- Exercises

Weekly class schedule

1. The economic importance of mushrooms production and processing - In introduction part, students will learn about the economic importance of the equine breeding, with special emphasis on mushrooms production as food products with high nutritional and medicinal value.
2. Mushrooms species for production and processing - Learn about some mushrooms species suitable for production and processing.
3. Selected chapters of anatomical and physiological characteristics of mushrooms, composting, culture and mycelium spawn - Students will get knowledge about anatomical and physiological characteristics of mushrooms. They will get knowledge about compost production, culture and mycelium spawn production.
4. Technological procedures in edible mushrooms production - Students will be familiar with the technologies of production in (cultivation methods, technological procedures, space for growing, harvesting mushrooms). The impact of mushrooms production on the eco system will be mentioned.
5. Technological procedures in medicinal mushrooms production - Students will be familiar with the organization of the technological procedures in medicinal mushrooms production (cultivation methods, technological procedures, space for growing, harvesting mushrooms).
6. Edible mushrooms products - Edible mushrooms products from the aspect of food industry and pharmaceutical industry (nutritive value of the product).
7. Medicinal mushrooms products - Medicinal mushrooms products from the aspects of pharmaceutical industry.
8. Traceability and product quality control - Basic methods of determining the nutritional value of the food and product safety.

Obligatory literature

1. Lectures and PowerPoint presentations (Merlin system of e-learning)

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Recommended literature

1. Chuna Zied, D., Padro-Gimenez, A., (2017): Edible and Medicinal Mushrooms: Technology and Applications. John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, UK
2. Zjalić, S., Reverberi, M., Ricelli, A., Fabbri, A., Fanelli, C. (2008) Medicinal Mushrooms. Science Publishers, Str. 299-339.
3. Stamets, P. (2000). Grownig Gourmet and Medicinal Mushrooms. Third Edition. Crow Publishing Group, New York.
4. Kavanagh, K. (2005). Fungi bilogy and applications. John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester.

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