University of Zagreb Faculty of Agriculture
Svetošimunska cesta 25, 10000 Zagreb
Phone: +385 (0)1 2393 777
E-mail: dekanat@agr.hr
Web: www.agr.unizg.hr

Processing technology of aquatic organisms and game meat (296557)

Course coordinator

Prof. Ana Gavrilović, PhD

Course description

The aim of the course is to introduce students to the processing technology of aquatic organisms and game meat, and to provide practical knowledge about the ways of their preservation and production. In addition, students acquire basic knowledge of the safety, quality and protection of these products on the market. The students are trained for understanding metabolic processes in fish and game meat, and modern technologies of processing of aquatic organisms and game meat with respect for all legal prescribed standards.

ECTS: **6.00**

Teaching hours: 58
Lectures: 34
Seminar: 12
Field exercises: 12

Lecturer

- Prof. Ana Gavrilović, PhD
- Prof. Nikica Šprem, PhD

Associate teacher for exercises

- Ivan Špelić, PhD

Grading

Sufficient (2):
Good (3):
Very good (4):
Excellent (5):

Conditions for obtaining signature

Written tests, oral exam, seminar and activity.

Type of course

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

General competencies

Completed BS study in the field of biotechnical or natural sciences, or biomedicine and healthcare

Developed by Superfluo d.o.o. • www.superfluo.hr

University of Zagreb Faculty of Agriculture
Svetošimunska cesta 25, 10000 Zagreb
Phone: +385 (0)1 2393 777
E-mail: dekanat@agr.hr
Web: www.agr.unizg.hr

Types of instruction

- Lectures
- Laboratory practice/exercises
- Field work
- Seminars
- Exercises

Learning outcomes

Learning outcome	Evaluation methods
Describe procedures with harvested aquatic organisms and game	
Describe the nutritional value of the aquatic organisms and game meat	
Describe the factors that influence the quality of the aquatic organisms and game meat	
Describe the legislation related to the processing technology of the aquatic organisms and game meat	
Provide insight into processing and preservation of the aquatic organisms and game meat	
Hygiene and food safety requirements	
Quality assessment of the aquatic and game meat products	
Use the abilities of theoretical and practical knowledge obtained in independent organization, and conduct of jobs in the field of processing of aquatic organisms and game meat	
Skilled for independent identification/assessment of qualitative and quantitative characteristics of aquatic organisms and game meat	

Working methods

Students' obligations

Attendance of the lectures and exercises.
Execution of work tasks.
Preparation and defense of seminar work.
Written knowledge tests.
Passing an oral exam.

Developed by Superfluo d.o.o. • www.superfluo.hr

University of Zagreb Faculty of Agriculture
Svetošimunska cesta 25, 10000 Zagreb
Phone: +385 (0)1 2393 777
E-mail: dekanat@agr.hr
Web: www.agr.unizg.hr

Weekly class schedule

1. Introduction - Market, Production and consumption trends of aquatic organisms and game meat products
2. Nutritional value - Benefits of consumption for each group of organisms individually
3. Freshness; postmortem changes - Specific changes for each individual group of organisms
4. Procedure with aquatic organisms and game after harvesting - Described in detail for each group separately
5. Preservation - Definition, basic processing technologies - physical, chemical, biological, combined; field exercise
6. Preservation by low temperatures, and by high temperatures - Description of basic methods
7. Other physical methods of preservation - Drying, new experimental methods
8. Chemical preservation methods - Description of each method
9. Biological preservation; combined methods - Description of each method
10. Development of new products - For each group of organisms individually
11. Product safety - Definitions, significance, basic hazards -biological, chemical, physical
12. • Pre-requisite programs, HACCP and traceability - Definition, basics of each program, specifics for individual product groups of products
13. Quality assurance and quality improvement - For each group of organisms individually
14. Assessment of the product quality - Description of each method: sensory, biochemical, chemical, physical and microbiological
15. Protection of products on the market, certification, brand development, food fraud - Definitions; Procedures; Description of different schemes Waste Management - Methods; Possibilities for inclusion of aquatic organisms and game processing into circular economy

Obligatory literature

1. Huss, H.H., Ababouch, l., Gram, L. (2004):Assessment and Management of Seafood Safety and Quality. FAO FISHERIES TECHNICAL PAPER 444.
2. Hasheider, P. (2017). The Complete Book Of Butchering, Smoking, Curing, And Sausage Making: How To Harvest Your Livestock And Wild Game - Revised And Expanded Edition. Voyageur Press, USA.

Recommended literature

1. Lawrie, R.A. (1985): Meat Science. Pergamon press.
2. Toldrá, F. (2010): Handbook of Meat Processing, Blackwell Publishing, USA.
3. Jensen W.K., Dawine C, Dikeman M. (2004): Encyclopedia of meat sciences, vol. 1,2,3. Elsevier Academic Press, UK.
4. Cesarettin, A., Kazuo, M., Fereidoon, S., Udaya, W. (2010) Handbook of Seafood Quality, Safety and Health Applications., Wiley-Blackwell, 576 pp.

Developed by Superfluo d.o.o. • www.superfluo.hr