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| **Title and Code** of the subject:  **Technologies of animal origin foods, MTBE7026A** | **ECTS Credit Points:3** |
| **Type** of the subject: compulsory / optional | |
| **Ratio of theory and practice: 100/0** (credit%) 2 theory/ week | |
| **Type and number of classes per semester**:28 hour(s) lecture and 0 hour(s) practice per **semester**  Number of teaching hours / week : eg.:2+0 (lecture and practice) | |
| **Type of exam**: exam / practical course mark: exam | |
| **Subject in the curriculum:** semester 5 | |
| Preliminary requirements:- | |

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| **Summary of content - theory**: In the course students learn about the importance of meat consumption, the current state of meat production in the world. They get to know the factors that affect meat quality. They learn the technology of meat processing, the optimal use of additives used in the production process. They get a picture of egg production, fish farming, and fish processing, as well. |
| **Schedule:**  Week 1: Meat production and meat consumption of the world and Hungary. Week 2: The chemical composition of the meat, its nutritional and physiological significance. Week 3: The physiology of slaughtering and the processes in the meat. Week 4:, Sensory, nutritional quality of meat, food safety and technological factors. Week 5: Qualification of slaughtered animals. Week 6: Production and processing of large slaughter animals. Week 7: Production and processing of small slaughter animals. Week 8.: Technologies for whole-muscle brine-injected products, cooked sausages.,  Week 9: Technologies for raw fermented salami, non-fermented salami,  Week 10.: Technologies for burgers, patties and crumbed products Week 11: Packing of meat and meat products. Week 12 Quality assurance in meat production and processing Week 13: Production and industrial processing of eggs. Week 14: Fish production and fish consumption. Industrial processing of fish. |
| **Literature, handbooks in English** |
| 1. **Meat Science: An Introductory Text 2 nd edition ISBN 9780851994246** 2. **Muscle Development of Livestock Animals: Physiology, Genetics and Meat Quality,** [**Marinus Te Pas**](https://www.amazon.co.uk/s/ref=dp_byline_sr_book_1?ie=UTF8&text=Marinus+Te+Pas&search-alias=books-uk&field-author=Marinus+Te+Pas&sort=relevancerank)[**Henk Haagsman**](https://www.amazon.co.uk/s/ref=dp_byline_sr_book_2?ie=UTF8&text=Henk+Haagsman&search-alias=books-uk&field-author=Henk+Haagsman&sort=relevancerank)[**Maria Everts**](https://www.amazon.co.uk/s/ref=dp_byline_sr_book_3?ie=UTF8&text=Maria+Everts&search-alias=books-uk&field-author=Maria+Everts&sort=relevancerank)**, CABI Publishing, , ISBN-10: 9780851998114** 3. **Meat products handbookPractical science and technology, G. Feiner, , eBook ISBN: 9781845691721, Woodhead Publishing, 2006.** |
| **Competencies gained** *(acc. to the Regulation on training and outcome requirements)* |
| **a) knowledge** Students can learn about the importance and technology of meat processing. They get a picture of egg production, fish farming, and fish processing.  **b) ability:**  They carry out a detailed analysis of the various ideas that make up the knowledge system of the given field, synthesizes the comprehensive and special contexts and performs an adequate evaluation activity with them. It identifies specific professional problems with a versatile, interdisciplinary approach, explores and formulates a detailed theoretical and practical background to their solution. **c) attitude** - Credentially conveys summary and detailed problems of your profession. - Deciding on a new, complex approach to strategic decision-making situations and unexpected life situations, taking full account of legislation and ethical standards. **d) autonomy and responsibility** - Engage in research and development projects, autonomously in the project team to mobilize theoretical and practical knowledge and skills in collaboration with other members of the group. - In a variety of complex and varyingly predictable contexts, apply a wide range of methods and techniques in practice. |

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| **Responsible lecturer: Zsófia Rózsáné Várszegi PhD** |

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| **Terms of course completion:** |
| 1. Completing assignments / exercises 2. Submitting essay 3. Giving presentation |
| **Form of examination:** |
| oral exam |
| **Requirement(s) to get signature:** |
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| **Exam questions:** |
| 1.The biochemistry of meat  Elements of meat quality: water holding capacity, color, texture 2. Types of post-mortem pH reduction, extreme meat quality 3. Factors influencing meat quality: species and varieties, transport, slaughtering methods, etc. 4. Tissues of meat 5. Methods for determining the slaughter value of cattle and sheep 6. Methods for the determination of pig slaughter value 7. Primary processing: stunning, bleeding, skin removal 8. Primary processing: demolition, cleavage, removal of adipose tissue, cooling 9. Physical preservation of meat 10. Chemical preservation of meat 11. Meat processing aids: additives 12. Meat processing aids: coating materials 13. Manufacture of cooked sausages 14. Manufacture of cured products 15. Production of raw fermented meat products 16. Process of spreadable liver sausage  17. Process of nuggets  18. Production and industrial processing of eggs. 19. Industrial processing of fish. |