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| **Title and Code** of the subject: **Food hygienie MTBE7030A** | **ECTS Credit Points: 3** |
| **Type** of the subject: compulsory | |
| **Ratio of theory and practice: 50-50%** (credit%) | |
| **Type and number of classes per semester**: 14 hour(s) lecture and 14 hour(s) practice per **semester**  Number of teaching hours / week : 1+1 (lecture and practice) | |
| **Type of exam**: written exam | |
| **Subject in the curriculum:** semester VI. | |
| Preliminary requirements:- | |

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| **Summary of content - theory**: |
| Course objectives:  The importance and development of food hygiene has been continuously growing in the last few decades. One of the most important priorities in the European Union is to provide healthy and safe food to the citizens. The aim of this subject is: 1. enable food engineer students to go over the food industry’s judicial and theoretical background. 2. make them realize how big influence animal health has on consumers’ health through foods of animal origin. After the introductory and general lessons, the main topics are milk and meat hygiene. Another further aim of the subject is to present the zoonotic diseases, and the impact of food on the pathogenesis of chronic diseases.  **Schedule:**  :   1. Basic definitions. History of food hygiene. 2. Connection between food hygiene, food health and quality inspection. 3. Food safety and it’s authorities. 4. Food hygiene regulations. Food-borne diseases.   5. Primary production. Establishing food producing works.  6. General hygienic terms, regulations in food manufacturing.  7. Characteristics of milk and phisiology of milk production from the point of view of animal health.  8. Hygienic milking and milk handling. Mastitis, and its impact on milk production.  9. Cleaning and sterilising milking equipment and devices. Milk handling in the farms. Ranking of raw milk.  8. Milk-borne diseases, zoonozes.  9. Definition and attributes of meat, veterinary inspection of meat production.  10. Definition and steps of veterinary meat inspection. Meat-borne human diseases.  11. Animal wellbeing regulations in connection with meat-producing animals and slaughterhouses. Meat inspection of mammals.  12. Septicaemias. Disorders of meat (flavour, colour, texture and smell).  13. Meat inspection in poultry and other animals. Technological hygiene (poultry, rabbit, game animals).  14. Micotoxins. The role of food in pathology of chronic diseases. |
| **Summary of content - practice**: |
| Skills to be learnt: The aim of this subject’s practical part is: 1. enable food engineer students to look through the food industry’s practical background. 2. make them realize how big influence the animal health has on the consumers’ health through foods of animal origin. The subject contains several farm, slaughterhouse, food factory visits with the opportunity of examining hygienic production in the primary production and the processing area.  **Schedule:**   1. Basic agricultural knowledge: primary production (meat and milk) 2. Raw milk and processed milk products’ quality inspection. 3. Animal hygiene from the milk producers’ point of view. 4. Somatic cell and standard plate and coliform number count of the raw milk with Lactoscan combo 5. Raw meat and processed meat quality inspection. 6. Inspection of trichinellosis in meat with a trichioscope. 7. Hygienie of egg production. 8. Egg inspection with a lamp. 9. Farm visit. 10. Farm visit 11. Slaughterhouse visit (poultry) 12. Slaughterhouse visit (mammals) 13. Consultation. 14. Consultation |
| **Literature, handbooks in English** |
| The most important is to make notes during the lessons and practices: exam questions are going to be composed according to the knoledge based ont he lectures and practices.  1. H. L. M. Lelieveld, John Holah, Domagoj Gabric: Handbook of Hygiene Control in the food industry (second edition)  2. Yasmine Motarjemi, Huub Lelieveld: Food safety management, a practical guide for the food industry  3. Jim McLauchlin, Christine Little, Betty C. Hobbs: Food poisoning and food hygiene, seventh edition  4. Neelam Khetarpaul: Food microbiology |
| **Competencies gained** *(acc. to the Regulation on training and outcome requirements)* |
| 1. **Knowledge:**  * xx * xx  1. **Skills:**  * xx * xx  1. **Attitude:**  * xx  1. **Autonomy and responsibility:**  * xx |

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| **Responsible lecturer: Dr. Nora Vass Palfyne** |

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| **Terms of course completion:** |
| 1. Taking part in the lectures and practices (as written below) 2. Keeping a presentation on a chosen topic in connection with food hygiene. |
| **Form of examination:** |
| written exam |
| **Requirement(s) to get signature:** |
| Attendance at **lectures** is recommended, but not compulsory.  Participation at **practice** is compulsory. Students must attend the practice classes and may not miss more than three times during the semester. In case a student does so, the subject will not be signed and the student must repeat the course. Attendance at practice classes will be recorded by the practice leader. Being late is counted as an absence. In case of further absences, a medical certificate needs to be presented. Missed practices should be made up for at a later date, being discussed with the tutor. Active participation is recommended and evaluated by the teacher. All of the students have to keep an oral presentation from a chosen topic at the end of the semester (compulsory).  Anyone, who got a signature is allowed to take the written exam. The written exam consists of 10 questions (10 points each, 100 points all together), with the following Score Grade  0-60 fail (1)  61-70 pass (2)  71-80 satisfactory (3)  81-90 good (4)  91-100 excellent (5) |

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| **Exam questions:** |
| 1. Describe the basics of the history of food hygiene from the ancient times until now! 2. Explain the phrase: food safety! 3. What is primary production? 4. Explain from farm to table European food safety legislation! 5. Describe the most important food borne diseases! 6. Describe the most important bacterial food-borne diseases! 7. Describe the most important viral food-borne diseases! 8. Describe the most important food-borne diseases caused by prions! 9. Describe the most important food-borne diseases caused by parasites! 10. What is food quality? 11. Explain the steps of hygienic milking and milk handling! 12. What is somatic cell number? 13. What are the most important quality characteristics of milk? 14. Explain the most important zoonotic diseases in connenction with milk consumption! 15. Clinical and subclinical signs of mastitis. 16. Explain the physiology of muscle tissue contraction! 17. Explain DFD and PSE meat! 18. Describe the steps of meat inspection of mammals! 19. What are micotoxins? 20. Explain the most important zoonotic diseases in connenction with meat consumption! 21. Describe the hygienic production and handling of eggs! |