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| **Subject** | **Diary Processing Technology** | | | |
| **Type** | **Semester** | **ECTS** | **Code** |
| O | 5 | 5 | 130DPT312 |
| **Course Lecturer** | **Prof. Ass. Dr. Mergim MESTANI** | | | |
| **Course Assistant** |  | | | |
| **Course Tutor** |  | | | |
| **Aims and Objectives** | The Module of Milk Processing Technology is a modular program focused on studying various aspects of milk production and processing. The course provides information on milk production technology and aims to create a strong foundation for the basic concepts and principles of milk processing technology. Through the completion of this module, students will be equipped with the knowledge and skills necessary to work in the dairy industry, ranging from milk production and quality control to the production and packaging of dairy products. The course is designed to offer a comprehensive understanding of the science, technology, and management principles that are part of the dairy sector. Through it, students are aimed to be prepared for successful challenges in the field of milk production and processing, providing them with deep knowledge and necessary skills to excel in this sector. | | | |
| **Learning outcomes** | **Upon completion of this module, students will be able to:**   * to explain the formation of milk and its components; * to explain the sensory and physical properties of milk and list the pre-treatments and mechanical treatments of milk; * to explain the importance of UHT and pasteurization processes of milk; * to define the pasteurized milk and sterilized milk; * to demonstrate knowledge and understanding of Milk products processing and laboratory work in this area, such as production of cheese, butter, fermented milk products, and ice cream; * to apply the acquired knowledge in dairy science and technology for solving diverse tasks in a dairy plant, enhancing the quality of milk products, and addressing challenges related to hygienic industrial milk production, processing, and preservation. | | | |
| **Content** | **Weekly plan** | | | **Week** |
| Milk production/facts and factors affecting the quantity and quality of milk | | | 1 |
| Hygiene in milk production and processing | | | 2 |
| * Milk and its characteristics | | | 3 |
| Treatment of milk after milking: Filtering, Cooling, Collection, Transport, Reception, Depositing and Storage | | | 4 |
| Microbiology of milk | | | 5 |
| Heat treatment of milk (pasteurization and sterilization) | | | 6 |
| Presentation of seminars (individual or group) | | | 7 |
| Mechanical processing of milk (fat removal or skimming, standardization, homogenization, filtration, evaporation); | | | 8 |
| Milk processing technology for consumption | | | 9 |
| Cheese production technology | | | 10        11    12 |
| Butter production technology | | | 11 |
| Fermented/Cultured Milk Products Technology | | | 12 |
| Yogurt Production Technology | | | 13 |
| Presentation of assignments and projects (group) | | | 14 |
| **F**inal exam | | | 15 |
| **Literature/References** | * Deeth, H., & Kelly, P. (Eds.). (2020). Processing and Technology of Dairy Products. MDPI-Multidisciplinary Digital Publishing Institute. * Agrawal, A. K., & Goyal, M. R. (2007). Processing technologies for milk and milk products: methods, applications, and energy usage (Vol. 74, No. 3, pp. 197-206). * Mehta, B. M. (2015). Dairy Technology: Volume 1–Milk and Milk Processing; Volume 2–Dairy Products and Quality Assurance (2014), edited by S. Singh, New India Publishing Agency, New Delhi, India. Vol. 01: ISBN 978‐93‐83305‐08‐7. Price£ 40; Vol. 02: ISBN 978‐93‐83305‐09‐4. Price£ 40. * Bylund, G. (1995): Dairy processing handbook, Tetra-Pak, Processing Systems AB, Lund, Sweeden; * Skript interne e teknologjisë së përpunimit të qumështit  (2022) (ligjerata të autorizuara) * Tratnik, Lj., Božanić, R. (2012): Mlijeko i mliječni proizvodi, Hrvatska mljekarska udruga, Zagreb; * Božanić, R., Jeličić, I., Bilušić, T. (2010): Analiza mlijeka i mliječnih proizvoda. Priručnik, Plejada, Zagreb; * Early, R. (1998): The technology ofdairy products, Blackie Academic and Professional, London; * Encyclopedia of Dairy Science (2oo3): Academic Press, (Vol. 1.- 5.), Animprint of Elsevier Science, London; * Goff,D.: Dairy Science and Technology. http://www.foodsci.uoguelph.ca/dairyedu/home.html. * The College of Agriculture, Food and Rural Enterprise (CAFRE); https://www.cafre.ac.uk/training-courses/dairy-technology/ * Tamime, A.Y. ed., 2008. Brined cheeses. John Wiley & Sons. * Mestani, M., Ramadani, X., Gjergji, T.M., Dizdarevic, T. and Mehmeti, I., 2017. Influence of brine concentration and ripening temperature on quality of sharri cheese. * Mergim Mestani1, Xhavit Ramadani1, Tahire Maloku Gjergji2, Hajrip Mehmeti 1, Arsim Ademi 3 and Ibrahim Mehmeti1,3\*. (2017). The effect of saline concentration and storage temperature in the quality of Sharri cheese. Journal of Food, Agriculture & Environment, vol.15 (1): 12-17. 2017. * Ajazi, F.C., Kurteshi, K., Ehrmann, M.A., Gecaj, R., Ismajli, M., Berisha, B. and Vehapi, I., 2018. MICROBIOLOGICAL STUDY OF TRADITIONAL CHEESE PRODUCED IN RUGOVA REGION OF KOSOVO. Bulgarian Journal of Agricultural Science, 24(2). | | | |
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