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| **Subject**   | **Introduction to Food Science**  |
| **Type**   | **Semester**  | **ECTS**  | **Code**  |
| O  | 1  | 5  | 130IFS103 |
| **Course Lecturer**  | **Prof. Ass. Dr. Mergim MESTANI**  |
| **Course Assistant**  |   |
| **Course Tutor**  |   |
| **Aims and Objectives**  | Food Science is a multidisciplinary field that intertwines chemistry, biochemistry, nutrition, biology, and microbiology with engineering. This module aims to equip students with multidisciplinary knowledge to study the nature of foods, the causes of food spoilage, the purpose of processing, and the improvement of food to meet consumer expectations. Another objective of the module is to develop practical skills in students, familiarizing them with methods used for the processing, packaging, and preservation of food products. This includes the ability to assess the quality of raw food materials, identify and prevent potential causes of food spoilage, and manage hygiene and safety processes in production. Through the study of this module, students learn to evaluate the environmental impact of food processing processes and acquire the ability to propose tools and strategies to reduce negative environmental effects. In addition to the scientific aspect, the module aims to prepare students to understand and address consumer expectations regarding the quality and origin of food products. This involves the ability to analyze the food market and create products that meet consumer standards and requirements.  |
| **Learning outcomes**  | **Upon completion of this module, students will be able to:** * to gain in-depth knowledge of various disciplines such as chemistry, biochemistry, biology, microbiology, and engineering, and to understand how they relate to the study of food processing processes;
* to have the ability to apply knowledge to improve food quality, including identifying and elucidating possible causes of food spoilage;
* to use various methods for food processing, including characterizing raw materials, production, packaging, and product storage;
* to have knowledge of hygiene and safety standards in food production, and to be able to apply proper practices to ensure a safe and clean environment in food processing;
* to have a deeper understanding of the impact of food processing processes on the environment and to be able to identify and propose methods to reduce negative impact;
* to understand consumer expectations regarding the quality and characteristics of food products, developing the ability to analyze the market and adapt production to these demands.
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| **Content**  | **Weekly plan**  | **Week**  |
| Introduction in food science/Food nutrients and their role in nutrition  | 1  |
| Hygiene, occupational safety and environmental protection  | 2  |
| * Quality and safety of food
 | 3  |
| Food products with vegetable origins-1  | 4  |
| Food products with vegetable origins-2    | 5  |
| Food products with animals origins 1  | 6  |
| Presentation of seminars (individual or group)  | 7  |
| Food products with animals origins 2   | 8   |
| Mixed food products and gratification foods   | 9   |
| Food additives   | 10    11  12  |
| Food poisonings   | 11  |
| The influence of technological processes on quality of food products  | 12  |
| Storage and packaging of food products  | 13  |
| Presentation of assignments and projects (group)  | 14  |
| **F**inal exam  | 15  |
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* Tatjana Mitevska, Biljana Jankullovska, Teknologjia Ushqimore, Shkup, 2014
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