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|  | UNIVERSITY OF EAST SARAJEVO | |  | | | |
| | Faculty of Technology Zvornik | | | | | |
| | Study program: <i>Chemical Engineering and Technology / Food Technology</i> | | | | | |
| | Cycle I | III year of study | | | | |
| Course title | FOOD MICROBIOLOGY 2 | | | | | |
| Department | Department of Food Technology - Faculty of Technology Zvornik | | | | | |
| Course code | Status | Semester | ECTS | | | |
| TF-1-1-HIT-04-1-103-6-7-3-3 | Obligatory | VI | 5 | | | |
| Teacher | Dragan Vujadinović, PhD, Associate Professor | | | | | |
| Teaching assistant | Vesna Gojković Cvjetković, PhD, Assistant Professor | | | | | |
| teaching hours / teaching load (per week) | | Individual workload (in hours per semester) | | Student workload coefficient So | | |
| P | AV | LV | P | AV | LV | S_o |
| 2 | 0 | 2 | 45 | 0 | 45 | 1.50 |
| total workload (in hours, the term) 2 * 15 + 0 * 15 + 2 * 15 = 60 h | | | total student workload (in hours, semester) 2 * 15 * 1.50 + 0 * 15 * 1.50 + 2 * 15 * 1.50 = 90 | | | |
| Total workload of the course (teaching + student): 60 + 90 = 150 hours per semester | | | | | | |
| Learning outcomes | <p>After finishing the course, students will be able to:</p> <ol style="list-style-type: none"> 1. understand the basic principles of food microbiology; 2. explain how external and internal factors in food and storage affect the survival and growth of microorganisms; 3. understand the occurrence of spoilage of food products of animal and plant origin; 4. distinguish pathogens from non-pathogenic microorganisms in food by isolation and Identification procedures; 5. identify sources and determine pathogens as well as microorganisms that cause food spoilage; 6. describe methods of protection of foodstuffs from microbiological spoilage; 7. establish corrective procedures for the control of pathogenic microorganisms and microflora of food products. | | | | | |
| Prerequisites | | | | | | |
| Teaching methods | Lectures, laboratory exercises | | | | | |
| Syllabus outline per week | <ol style="list-style-type: none"> 1. Introduction and historical development of food microbiology. Sources of microorganisms in food. Characteristics of dominant groups of microorganisms in food: bacteria, viruses, yeasts and molds. 2. Microbial ecology of food. Typical spoilage processes. Determination of microorganisms in foods. 3. Characteristics of pathogenic microorganisms important for food safety <i>Staphylococcus aureus</i>, <i>Clostridium botulinum</i>, <i>Listeria monocytogenes</i>, <i>E. Coli</i>, <i>Campylobacter sp.</i>, <i>Salmonella spp.</i>, etc. 3. Microbiological diseases originating from food: intoxications, mycotoxicosis, toxicoinfections, infections. 4. Suppression of microbiological spoilage - principles and methods of protection. Natural protection of food from microbiological spoilage. 5. Microbiological indicators of food quality and safety, standards. 6. Microbiological spoilage of basic groups of food products. Microbiology of drinking water. 7. Microbiology of fermented foods, milk and dairy products. 9. Microbiology of meat and meat products. 10. Microbiology of poultry, eggs and egg products. Microbiology of fish and seafood. | | | | | |

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| | 11. Microbiology of fruits and vegetables. 12. Microbiology of spices, oilseeds and cereals. 13. Microbiology of canned foods. 14. Application of starter cultures in food production. 15. Mycotoxicogenic molds and mycotoxins in food products. | | | |
| Required literature | | | | |
| Author / s | Title of publication, publisher | Year | Pages (from-to) | |
| Duraković S., Delaš F., Stilinović B., Duraković L. | Modern food microbiology - book one. University textbook (ed. S. Duraković). Kugler d.o.o., Zagreb. | 2002 | 1-450 | |
| Duraković S., Delaš F., Duraković L | Modern food microbiology - book two. University textbook (ed. S. Duraković). Kugler d.o.o., Zagreb. | 2002 | 1-400 | |
| Sanchias, AV, Allaert, VC, As- Almenar, I. VI., Sala, MN, Torres, GM | Practicum in Food Microbiology, University of Lleida, Catalonia-Spain, University of Banja Luka, University of Tuzla | 2001 | 1 -113 | |
| Additional literature | | | | |
| Author / s | Publication title, publisher | Year | Pages (from-to) | |
| Microbes. Info | http://www.microbes.info/resources/General%20Microbiology/ | - | - | |
| Fernandes, R. | Microbiology handbook, Fish and seafood, Leatherhead Food International Ltd and Royal Society of Chemistry, UK | 2009 | 1-270 | |
| Roberts, D., Greenwood, M. | Practical Food Microbiology, third edition, Blackwell Publishing Ltd, USA | 2003 | 1-290 | |
| Obligations, forms of knowledge assessment and grading | Type of student work evaluation | | Grade points | Percentage |
| | Pre-examination obligations | | | |
| | Attendance at lectures / exercises | | 6 | 6% |
| | Mid-term test (Colloquium) 1 | | 20 | 20% |
| | Mid-term test (Colloquium) 2 | | 20 | 20% |
| | Laboratory exercises | | 24 | 24% |
| | Final exam | | | |
| | Final exam (oral) | | 30 | 30% |
| TOTAL | | 100 | 100% | |
| Website | www.tfzv.tfzv.ues.rs.ba | | | |
| date | 2023 | | | |