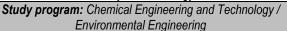
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UNIVERSITY OF EASTERN SARAJEVO

Faculty of Technology





I cycle of studies IV year of study

Course title FUNDAMENTALS OF SANITARY MICROBIOLOGY

Department Department of Food Technology - Faculty of Technology

Course code	Status	Semester	ECTS
TF-1-1-HIT-04-2-078-7-4-2-1	elective	VII	4
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Teacher	Dragan Vujadinović, PhD, Assistant Professo
Teaching assistant	Vesna Gojkovir, M.Sc, Assistant Professor

Number of clast (per week)	sses/ teaching w	orkload	Indiv	vidual workloa	ad (in ho	ours term)	Student workload coefficient S _o
Р	AV	LV	Р	A'	V	LV	So
2	1	1	45	22	.5	22.5	1.50
total	workload (in with	that a, semester)		tot	al stude	nt workload (in ho	urs, semester)
	2 * 15 + 1 * 15 + 1	l * 15 = 60 h		2 * 15	* 1.50 +	- 1 * 15 * 1.50 + 1	* 15 * 1.50 = 90 h

Total course workload (teaching + student): 60 + 90 = 150 hours per semester

Learning outcomes

student will demonstrate knowledge / ability to:

- 1. understand the importance of hygiene and the impact of ecosystems on maintaining human health;
- 2. distinguishes basic groups and the role of microorganisms in ecosystems;
- 3. understand the ways of contamination with the most important pathogens and know the ways to control the

most important pathogens;

- 4. correctly applies the basic principles of work in the microbiological laboratory;
- 5. knowledge of microorganisms as living components of bioprocesses;

Conditionality

Teaching methods Lectures, auditory exercises, laboratory exercises

- 1. Introduction. Microorganisms in the ecosystem: archaea, bacteria, protists, fungi, algae, viruses.
- 2. The role of microorganisms in ecological systems producers, consumers and reducers. Extremophiles.
- 3. Physiological groups of microorganisms.
- 4. Influence of ecological factors on the growth of microorganisms part one.
- 5. Influence of ecological factors on the growth of microorganisms second part.
- 6. Research methods of environmental microbiology.

Syllabus outline per week

- 7. Microbial biofilms.
- 8. Basics of hygiene and sanitation in the function of protecting human health.
- 9. Microorganisms in nature: distribution, role.
- 10. Microbiology of surface water and drinking water.
- 11. Wastewater microbiology.
- 12. Air microbiology.
- 13. Soil microbiology.
- 14. Biogeochemical cycles of carbon, oxygen, nitrogen, sulfur, phosphorus.
- 15. Application of microorganisms in environmental protection.

	Required literature				
Author / s	Title of publication, publisher	Year	Pages (from-to)		
Đukić, D.A., Gajin, S., Matavulj, M., Mandić, L.	Water microbiology. Prosveta, Belgrade	2000	1-275		
Šubarić, D., Babić, J., Ačkar, Đ.	Hygiene and sanitation, PTF, Osijek	2012	1-177		
Đukić AD, Jemcev TV	General and Industrial Microbiology, Stylos, Belgrade	2004	1-167		
Supplementary literature					
Author / s	Publication title, publisher	Year	Pages (from-to)		
McKinney, RE	Environmental Pollution Control Microbiology, Marcel Dekker, Inc., New York	2004	1-453		
Bitton, G.	Wastewater microbiology, Third Edition, John Wiley & Sons, Inc., New Jersey.	2005	1-765		
Mitchell, R., Gu, JD.	Environmental Microbiology, Second Edition John Wiley & Sons, Inc., Hoboken, New Jersey.	2010	1-389		

	Type of student work evaluation	Points	Percentage		
	Pre-examination obligations				
Obligations, assessment methods and grading system	attendance at lectures / exercises	6	6%		
	colloquium 1	20	20%		
	colloquium 2	20	20%		
	Laboratory exercises	14	14%		
	Auditory exercises	10	10%		
	Final exam (oral)	30	30%		
	TOTAL	100	100%		
Website	www.tfzv.ues.rs.ba				
Date					