

		<b>UNIVERSITY OF EAST SARAJEVO</b> Faculty of Medicine					
		<b>Study program: medicine</b>					
		Integrated academic studies		VI study year			
<b>Full subject title</b>		Occupational medicine					
<b>Department</b>		Department for primary healthcare and public health, Faculty of Medicine Foca					
<b>Subject code</b>			<b>Subject status</b>		<b>Semester</b>		<b>ECTS</b>
ME-02-1-063-11			compulsory		XI		2
<b>Professor/-s</b>		Asst. Prof. Martin Popevic, MD, PhD					
<b>Associate/-s</b>		Dr Mirka Jojic, MD					
<b>Number of lectures/ teaching workload (per week)</b>			<b>Individual student workload (in hours per semester)</b>			<b>Coefficient of student workload <math>S_0^1</math></b>	
<b>L</b>	<b>E</b>	<b>SP</b>	<b>L</b>	<b>E</b>	<b>SP</b>	<b><math>S_0</math></b>	
2	1	0	2*15*0,3	1*15*0,3	0*15*0,3	0,3	
Total teaching workload (in hours, per semester) 2*15+1*15+0*15=45			Total student workload (in hours, per semester) 2*15*0,3+1*15*0,3+0*15*0,3=15				
Total subject workload (teaching + student): 45 + 15 = 60 hours per semester							
<b>Learning outcomes</b>		Mastering the subject, the student will be able to:					
		1. acquire necessary knowledge of basic tasks of occupational medicine, physiology and hygiene of work, as well as knowledge of the most important professional risks at work, occupational diseases and work-related diseases.					
		2. acquire knowledge of preventive health examinations.					
		3. acquire the skills related to: assessment of occupational hazard exposure, assessment of risk in the workplace, assessment of work ability.					
		4. acquire the skills related to: domestic regulations and EU directives associated with occupational injury prevention and absenteeism in the workplace.					
<b>General competences</b>		They possess broad fundamentals of theoretical knowledge and practical skills, preparing them for any type of postgraduate education as well as for collaboration with other medical professionals.					
		They have acquired a systemic thinking approach as well as a structured approach to medical problems during their education.					
		They are acquainted with a specific diagnostic algorithm.					
		They are acquainted with the structure, organisation and financing of health systems.					
		They are eager to dedicate themselves to the field of medicine and accept responsibility for the physical, mental and social well-being of their patients.					
		They are capable of expressing themselves and communicating in a manner that is both understandable and acceptable to the patient.					
		They are prepared for accepting responsibility and appropriate medical decision-making.					
		They are acquainted with health improvement and disease prevention and are eager to make medical professionals adopt more positive attitude towards it.					
<b>Preconditions</b>		They are eager to collaborate with other medical professionals.					
		They are eager to support quality assurance measures and periodic evaluation of their own medical competences and knowledge standards.					
<b>Teaching methods</b>		Methods used in teaching: lectures, auditory and demonstration exercises, Problem based learning (clinical vignettes, actual and actor patients), tests, teaching consultations, seminar papers and essays, assessment of acquired knowledge.					
<b>Subject content per weeks</b>		<b>Lectures</b>					
		1. Introduction to occupational medicine. Occupational medicine then and now. Tasks of modern occupational medicine. Specifics of occupational medicine in healthcare institutions (1 hour). 2. Basics of work physiology. Adaptation of the organism to the conditions of the working environment ( 2					

<sup>1</sup>The coefficient of student workload  $S_0$  is calculated as it follows:

a) for the study programs not going through the licensing process:  $S_0 = (\text{total workload in semester for all of the subjects } 900 \text{ hrs} - \text{total teaching workload } L+E \text{ in semester for all of the subjects } 870 \text{ hrs}) / \text{total teaching workload } L+E \text{ in semester for all of the subjects } \text{ hrs} = \text{ }.$  Consult form content and its explanation.  
b) for the study programs going through the licensing process, it is necessary to use form content and its explanation.

- hours).
3. Occupational ergonomics. Ergonomics in healthcare institutions (1 hour).
  4. Assessment of the quality of the working environment and the concept of a healthy workplace - Occupational (industrial) hygiene. Risk assessment (2 hours).
  5. Occupational injuries and prevention (1 hour).
  6. Occupational illnesses. Work related diseases (1 hour).
  7. Occupational exposure to physical hazards - occupational illnesses caused by noise (1 hour).
  8. Occupational exposure to physical hazards - occupational illnesses caused by vibrations, non-ionizing radiation (1 hour).
  9. Radiobiological effects of ionizing radiation. Acute and chronic radiation illness (2 hours).
  10. Occupational exposure to chemical hazards - introduction to professional toxicology. Toxicology of gases (2 hours).
  11. Occupational toxicology of metals - lead, cadmium, mercury (2 hours).
  12. Occupational toxicology of organic solvents/pesticides (2 hours).
  13. Occupational illnesses of the respiratory system: Pneumoconioses and pneumopathies - etiopathogenesis, characteristics and importance (1 hour).
  14. Immunoallergic illnesses of the respiratory tract caused by occupational exposure - etiopathogenesis, characteristics and significance (1 hour).
  15. Occupational exposure to biological hazards. Specifics of exposure of healthcare workers (2 hours).
  16. Occupational skin illnesses (1 hour).
  17. Carcinogens at the workplace and occupational malignant illnesses (1 hour).
  18. Occupational mental health. Stress at work - acute and chronic effects. Fatigue, Shiftwork, & Sleep Disorders (1 hour).
  19. Assessment of work ability - general principles. Temporary and permanent assessment of work ability Workers' Compensation. Disability Management & Prevention (1 hour).
  20. Assessment of work ability in internal medicine. Assessment of working ability in surgery (2 hours).
  21. Assessment of work ability in neurology and psychiatry (2 hours).

#### **Practical**

1. Occupational history. Approach to the patient from the aspect of occupational medicine (1 hour) .
2. Basics of occupational physiology - work difficulty, types of work, ergonomics, adaptation of the body to physical work (1 hour)
3. Case report: Evaluation of a patient with an occupational injury and filling out a injury at work report (1 hour)
4. Examination of the presence and measurement of air pollution in the working environment. Approach to the patient and functional tests in case of suspected health damage due to occupational exposure to air pollution (1 hour) .
5. Case report: patients with occupational respiratory diseases - pneumoconiosis, asthma (1 hour)
6. Examination of the presence and measurement of noise and vibrations in the working environment. Approach to the patient and functional tests in case of suspected damage to health due to occupational exposure to noise and / or vibrations (1 hour)
7. Examination of the presence and measurement of non-ionizing and ionizing radiation in the working environment. Approach to the patient and functional tests in case of suspected health damage due to occupational exposure to ionizing radiation (1 hour)
8. Examination of the presence and measurement of chemical agents in the working environment. Approach to the patient and functional tests in case of suspected health damage due to occupational exposure to chemical hazards (1 hour)
9. Examination of the presence and measurement of biological hazards in the working environment. Specifics of exposure in healthcare. Approach to the patient and functional tests in case of suspected occupational exposure to biological agents (1 hour) .
10. Case report: Occupational exposure to biological hazards. Occupational skin diseases (1 hour) .
11. Principles of assessment of work ability assessment. Temporary and permanent work ability assessment. Filling in the form for referring insured persons to the PIO employee fund (2 hours).
12. Significance and types of preventive examinations. Work ability assessment in specific circumstances - work at height, in the transport sector (road, rail, water and air traffic), handling of weapons (1 hour).

SEMINAR: Assessment of health risks at the workplace in a health institution (2 hours)			
<b>Compulsory literature</b>			
<b>Author/s</b>	<b>Publication title, Publisher</b>	<b>Year</b>	<b>Pages (from-to)</b>
LaDou J., Harrison R.J	Current Diagnosis and treatment: Occupational and Environmental Medicine, 6th edition. 2021. McGraw Hill	2021	
<b>Student responsibilities, types of student assessment and grading</b>	<b>Grading policy</b>		<b>Points</b>
	Pre-exam activities		<b>Percentage</b>
	Lecture/practical attendance		10
	Activity on practical/PBL		10
	Seminar presentation		10
	Mid-term exam		20
	Final exam		
	Written		50
	TOTAL		100
<b>Certification date</b>	June 17th 2024		