

**DESCRIPTION OF COURSE UNIT FOR DOCTORAL STUDIES
AT VILNIUS UNIVERSITY**

Scientific Area/eas, Field/ds of Science	Medical and health sciences (M 000): Public Health (M 004)			
Faculty, Institute, Department/Clinic	Faculty of Medicine Institute of Health Sciences Department of Public Health			
Course unit title (ECTS credits, hours)	Occupational Health 5 credits (135 hours)			
Study method	Lectures	Seminars	Consultations	Self-study
Number of ECTS credits	-	-	1	4
Method of the assessment (in 10 point system)	Final test, oral assessment, 3 questions from the main topics			
PURPOSE OF THE COURSE UNIT				
To gain knowledge about occupational health problems and health promotion.				
THE MAIN TOPICS OF COURSE UNIT				
<p>The Concept of the Health of Workers, the Historical Evolution of Workers' Health Research. Health concept, global and national health strategies. WHO Health Policy Recommendations. The main goals of the health strategy in Lithuania. Health promotion strategies.</p> <p>Health information. Legal protection of the health of workers, basic documents on health and safety at work.</p> <p>Work environment. Work. Classification of jobs and occupations. Workplace. General regulations for the installation of workplaces.</p> <p>Domestic, sanitary and hygienic facilities. Fatigue Performance dynamics. Breaks in work. Shorter working hours. Shift work. Work and nutrition.</p> <p>Risk factors in the working environment. Physical factors. Thermal environment, noise, infra, ultrasound, vibration (general vibration, vibration transmission through hands), electromagnetic waves -non-ionizing radiation (static electric and magnetic fields, low frequency electromagnetic radiation, radio frequency and microwave electromagnetic radiation, infrared radiation, visual radiation, ultraviolet radiation). Ionizing radiation.</p> <p>Chemical factors (chemicals, dust). Biological factors. Ergonomic factors. Psychosocial factors.</p> <p>Workplace toxicology. Sources of Toxicological Information. Toxicometric parameters. Chemical substance toxicity studies. The metabolism of toxic substances in the body. Toxicology of body systems (Respiratory, Nervous, Cardiovascular, Blood, Immune, Elimination). Liver Toxicology. Substances toxic for reproduction. Occupational carcinogens. Professional mutagens. Occupational allergens.</p> <p>Workplace Ergonomics. Ergonomic research methodology. Workplace adaptation based on employee's capabilities. Physical activity and energy consumption. Design of physical work. Manual risk handling management.</p> <p>Occupational diseases, their prevalence in the countries of the European Union and in Lithuania are the most common risk factors. Work-related illnesses. Occupational Diseases. Occupational diseases list. Occupational diseases caused by chemical agents. Occupational diseases caused by physical factors (cochlear neuropathy, vibrational disease). Occupational diseases caused by ergonomic factors.</p> <p>Cumulative - Trauma Disorders. Occupational diseases caused by biological agents (tick-borne diseases, brucellosis, tuberculosis, viral hepatitis).</p>				

Viral hepatitis prevention and control measures. Occupational skin diseases. Occupational allergic diseases. Occupational health care. The importance of cross-sectoral cooperation in dealing with occupational health problems. External and internal occupational health services. Preventive health examinations. Project expertise. Occupational health monitoring. Premature mortality. Health Insurance. Accident and sickness costs. Types of economic analysis. Common risk assessment principles. Risk assessment steps. Risk factor identification: animal tests, in vitro tests on tissues and cells, epidemiological studies, chemical structures - activity analysis. Exposure estimation: analogue method, monitoring, exposure simulation. Dosage - Response Rating. Risk Identification. Qualitative, partially quantitative, quantitative methods. Risk of the whole life of the individual, population (public) risk, relative risk, shortening of life expectancy. Risk management. Providing information on risk (communication). Occupational risk assessment and prevention. Evaluation steps. Chemical Risk Assessment. Classification and Labeling of Hazardous Substances and Preparations. Safety data sheets, their components. Risk assessment of physical factors (noise, vibration, electromagnetic fields). Ergonomic risk assessment. Rollout of loads and carrying, working positions problem and its solution. Risk assessment of psychosocial factors. Physical risk assessment. Occupational epidemiology. Key epidemiological indicators. Sources of information. Epidemiological studies and their application in occupational health. Internal validity, accuracy and generalization. Specific Problems in Investigating Work-Related Diseases. Work planning: work protocol. Ethical aspects. Guidelines for evaluating epidemiological studies. Temporary incapacity for work, incidence, traumatism and occupational exposure. Insolvency control, incapacity control policy. Analysis of morbidity: basic statistical methods, direct and indirect standardization, possible miscalculations. Professional rehabilitation. International Labor Organization Convention 159. Basic vocational rehabilitation services. The role of the State Disability and Capacity Building Service in the process of vocational rehabilitation. Medical rehabilitation. Health Promotion at Work, Concepts, Major Emerging Problems. General worker health promotion programs. The assumptions of the health promotion programs of the workers. The cost benefit ratio for worker health promotion programs. Successful health promotion programs. Prospects for health promotion programs. The Importance of Leadership and Culture in Occupational Health. Vision and management abilities. Possible changes to the work process. Employer promotion. Cultural education. Increasing staff capacity. Increasing co-operation.

RECOMMENDED LITERATURE SOURCES

1. Barry S. Levy, David H. Wegman et al. 2011, *Occupational and Environmental Health: Recognizing and Preventing Disease and Injury. 6th Edition*, <https://global.oup.com/academic/product/occupational-and-environmental-health-9780195397888?cc=lt&lang=en&#>
2. Kompiuterizuotos darbo vietos rizikos veiksnių identifikavimas. Metodinės rekomendacijos. J. Tamašauskaitė, S. Vainauskas. Higienos institutas, Vilnius, 2019, 27 p. https://www.hi.lt/uploads/pdf/leidiniai/Rekomendacijos/Kompiuterizuotos_darbo_vietos_rekomendacijos_.pdf
3. Dirbančių asmenų, kuriems prieinamos profesinės sveikatos priežiūros paslaugos, dalies (procentais) rodiklio apskaičiavimas. Metodinės rekomendacijos. L. Pilipavičienė, S. Vainauskas

Higienos institutas, Vilnius, 2019, 15 p.
https://www.hi.lt/uploads/pdf/leidiniai/Rekomendacijos/Dirbanciu_asmenu_rekomendacijos.pdf

4. Mitybos ir fizinio aktyvumo žinių klausimyno taikymas siekiant darbe stiprinti sveikatą. Metodinės rekomendacijos. L. Pilipavičienė, S. Vainauskas. Higienos institutas, Vilnius, 2019, 15 p.
5. Darbuotojų atsvorį / nutukimą mažinančių individualaus konsultavimo intervencijų taikymas. Metodinės rekomendacijos. L. Pilipavičienė, S. Vainauskas. Higienos institutas, Vilnius, 2018, 19 p.
6. Saugos ir sveikatos kultūros gerinimas įmonėse. Metodinės rekomendacijos. L. Pilipavičienė, S. Vainauskas. Higienos institutas, Vilnius, 2017, 16 p.
7. Urbelis A. ir bendraut. Profesinė sveikata. Vadovėlis. Vilnius, UAB „Vaistų žinios“, 2008, 287 p.
8. Valstybinė darbo inspekcija. <http://www.vdi.lt>
9. Europos saugos ir sveikatos darbe agentūra. <http://osha.europa.eu>

CONSULTING LECTURERS

1. Coordinating lecturer: Saulius Vainauskas (Assist. Prof. Dr.).

2. Remigijus Jankauskas (Assist. Prof. Dr.).

3. Jelena Stanislavovienė (Assist. Prof. Dr.).

APPROVED:

By Council of Doctoral School of Medicine and Health Sciences at Vilnius University:
29th of September 2022

Chairperson of the Board: Prof. Janina Tutkuvienė