

**Incoming student mobility****UNIOS University Unit: Faculty of Medicine Osijek****COURSES OFFERED IN FOREIGN LANGUAGE  
FOR ERASMUS+ INDIVIDUAL INCOMING STUDENTS**

Department or Chair within the UNIOS Unit	<b>Department of Public Health</b>
Study program	Medicine
Study level	Integrated undergraduate and graduate university study
Course title	Environmental Health
Course code (if any)	
Language of instruction	English
Brief course description	<p>Lectures:</p> <p>Environment and health. Changes of the environment and human development. Health effects of environmental factors. Definition and tasks of health ecology. Ecological concept of health. Health-ecological standards.</p> <p>Development of ecological ideas in medicine. Historical development of ecological ideas in medicine. Historical development of health ecology in Croatia.</p> <p>Ecological anamnesis and examination. Reasons for taking an ecological anamnesis and its significance. Method of taking ecological anamnesis. Physical examination in case of suspicion of exposure to harmful effects of environmental factors.</p> <p>Ecological research method. Basic characteristics of ecological research method. Types of ecological research</p>

	<p>methods. Advantages and disadvantages of ecological research methods.</p> <p>Fundamentals of ecotoxicology. Modes of the entrance of ecological toxins into the body and their fate in the organism. Peculiarities of the ecological toxin's activity. Types of toxicity. Determination of the threat to health caused by ecological toxins. Dose-effect ratio.</p> <p>Biological monitoring and biological markers. Environmental monitoring and biological monitoring. Objectives and tasks of biological monitoring. Features of the implementation of biological monitoring programs. National biomonitoring programs. Limitations of biological monitoring. Benefits of biological monitoring. Biological markers. Interpretation of the biomonitoring results. The future of biomonitoring.</p> <p>Risk analysis in health ecology. Danger or harm. Risk. Risk analysis - definition and division. Risk assessment - definition, degrees, basic task. Risk management - definition, basic steps, role. Risk communication - definition and meaning.</p> <p>Organization of health ecology in Croatia, current situation and perspectives. Legislative and institutional framework of health ecology in Croatia. Organization and work of health ecology in Croatia - assessment of the situation and perspectives.</p> <p>Ethical issues in health ecology research. Basic ethical principles of all scientific research. Ethical doubts related to the detection and impact of toxic substances in the human environment on the health of the population. Ethical issues related to biomonitoring. New threats to scientific integrity during the conduction of health ecology research.</p> <p>Seminars:</p> <p>Chemical factors of the environment. Toxic metals. Gases and vapours. Pesticides. Polycyclic aromatic</p>
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	<p>hydrocarbons. Polychlorinated biphenyls. Dioxins and furans. Phthalates. Environmental mutagenesis. Environmental carcinogenesis. Environmental impact on reproduction.</p> <p>Physical factors of the environment. Thermal factors. Atmospheric pressure. Electromagnetic radiation.</p> <p>Biological factors of the environment. Biological factors in water. Biological factors in food. Biological factors in the air. Biological factors in soil.</p> <p>Psychosocial factors of the environment. Socio-economic status. Education. Employment. Marital status and family. Housing and urbanization. Health and quality of health services.</p> <p>Water and health. Water as a prerequisite for life and health on Earth. Available quantities of drinking water and water consumption. Types and characteristics of water in nature. Sources and types of water pollution. Water classification. Drinking water supply - water sources, protection of water sources, drinking water supply facilities, bottled water. Croatia and water. Drainage and wastewater treatment.</p> <p>Air pollution and health. Air composition and atmosphere. Air pollution. Indoor air pollution. Effects of air pollution. Air quality control. Reduction of air pollution.</p> <p>Waste management and health. Waste and human health. Collection, removal and final disposal of solid waste. Health waste.</p> <p>Soil contamination and human health. Sources of soil pollution. Effects of soil contamination on health and routes of uptake. Reduction of soil pollution.</p> <p>Housing and health. Housing functions. Determinants of healthy living. Sick building syndrome. Home accidents. Residential environment. Housing and global</p>
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	<p>urbanization.</p> <p>Food and health. Microbiological food contaminants and the HACCP system. Chemical food contaminants - nitrates, nitrites and N-nitrosamines, mycotoxins, toxic metals, pesticides, polycyclic aromatic hydrocarbons, polychlorinated biphenyls and dioxins, veterinary drugs, histamine, food additives, acrylamide, melamine, bisphenol A, genetically modified organisms, and genetically modified food: sources, effects on human health.</p> <p>Global health ecological issues. Global climate change. Ozone depletion. Greenhouse effect. Far-reaching transboundary air pollution. Transboundary movement of hazardous waste. Biodiversity.</p> <p>Ecological incidents and disasters. Natural disasters. Anthropogenic disasters. Ecological catastrophes in Croatia. Overcoming of ecological disasters.</p>
Form of teaching	20 lectures + 20 seminars
Form of assessment	Oral exam
Number of ECTS	3.0 ECTS
Class hours per week	20
Minimum number of students	3
Period of realization	winter semester
Lecturer	Professor Maja Miskulin, PhD; Nika Pavlovic, PhD