

Faculty of Medicine in Rijeka

**Curriculum  
2026/2027**

For course

**Health Ecology**

|                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| Study program:      | <b>Medical Studies in English (R)</b><br>University integrated undergraduate and graduate study |
| Department:         | <b>Department of Health Ecology</b>                                                             |
| Course coordinator: | <b>izv. prof. dr. sc. Tomić Linšak Dijana, dipl. sanit. ing.</b>                                |
| Year of study:      | <b>5</b>                                                                                        |
| ECTS:               | <b>2.5</b>                                                                                      |
| Incentive ECTS:     | <b>0 (0.00%)</b>                                                                                |
| Foreign language:   | <b>Possibility of teaching in a foreign language</b>                                            |

## Course information:

The course offered by the Department of Health Ecology focuses on understanding the interrelationships between the environment and human health. Through an interdisciplinary approach, students are introduced to key concepts of ecological science, epidemiology, toxicology, and public health. The objective of the course is to equip students with the skills necessary to analyze and address issues that arise at the intersection of health and the environment.

Within the course framework, students investigate the impact of various environmental factors, including air, water, and soil pollution, on human health. Special attention is given to the analysis of specific diseases associated with ecological conditions, as well as strategies for their prevention and control. Through lectures, seminars, and practical exercises, students develop the necessary skills for conducting research and risk assessments.

In addition to theoretical knowledge, the course includes practical aspects such as field studies and case analyses. Students have the opportunity to participate in projects addressing current issues in the field of health ecology, allowing them to apply their acquired knowledge in real-world situations. The course also emphasizes the importance of interdisciplinary collaboration and communication among various sectors and professionals.

Ultimately, the course encourages critical thinking and analytical skills, enabling students to develop their own perspectives and solutions to challenges in the field of health ecology. Considering global changes and challenges such as climate change and urbanization, the course focuses on sustainable approaches and strategies that can enhance community health.

## [Ishodi učenja]:

Upon successful completion of this course, students will be able to:

1. **Explain fundamental ecological principles**  
Describe the structure and function of ecosystems, including biochemical cycles, and understand the relationship between environmental factors and human health.
2. **Assess environmental pollution and its impact on health**  
Identify major sources and types of pollutants, explain their behaviour and persistence in the environment, and evaluate their effects on ecosystems and human populations.
3. **Analyse the influence of environmental changes on disease and genetics**  
Explain the role of environmental factors in the development of diseases, including the impact of climate change and pollutants on infectious diseases and genetic material, as well as methods of genotoxicity assessment.
4. **Evaluate the role of nutrition and food safety in public health**  
Understand the ecological aspects of nutrition, assess food quality and safety, recognize food fraud, and apply basic principles of risk assessment.
5. **Examine the impact of pollutants on physiological systems**  
Describe how environmental pollutants affect human biological systems, particularly the immune system, and assess risks related to long-term exposure.
6. **Apply environmental health principles to quality of life and public health programs**  
Identify and evaluate health protection measures and programs, and analyse environmental determinants that influence quality of life in living and working environments.

Upon successful completion of the seminar component, students will be able to:

1. **Evaluate environmental media and their impact on health**  
Describe the characteristics of air and water in natural and polluted conditions, explain major environmental processes such as the hydrological cycle, and assess their importance for human health.
2. **Assess water quality and wastewater management**  
Identify sources and types of water pollution, interpret physical, chemical, and biological indicators of water quality, and explain the principles and stages of wastewater treatment and drainage systems.
3. **Analyse waste management and associated health risks**  
Define different types of waste, particularly medical waste, and evaluate the health risks related to improper handling, as well as methods for safe disposal.
4. **Evaluate food composition, safety, and everyday exposure risks**  
Identify food components and methods for their analysis, recognize harmful substances in food and items of general use, and explain mechanisms for their monitoring and control.
5. **Explain the relationship between nutrition and health**  
Describe the role of nutrients in growth and development, and assess the health consequences of inadequate, excessive, or unbalanced nutrition.

**List of assigned reading:**

1. M. Kaštelan Macan, M. Petrović: Kemija okoliša, HINUS i FKIT, 2013
2. Valić F. Zdravstvena ekologija, Medicinski fakultet Sveučilišta u Zagrebu, Zagreb, 2001
3. Handbook for students: attached in Merlin

**List of optional reading:**

Additional literature:

1. C. Baird: Environmental Chemistry, 2 Ed., W.F. Friedman & Comp, 2003
2. R. Beaglehole, R. Bonita, T. Kjellstrom: Basic Epidemiology, WHO Geneva, 1993
3. Lecture notes

**Method of examination.:**

Final exam is oral exam with one of the lecture teachers or course leader.

## Curriculum:

### Lectures list (with titles and explanation):

#### **L1, L2. Introduction, Ecology, ecosystems: structure and function**

Students will be introduced to the content of the course, literature, and the method of assessment. To define the structure and function of ecosystems and explain the role of elements in the biochemical cycle.

The lectures will be given by the course leader Dijana Tomić Linšak, PhD, Associate Professor

#### **L3, L4 Human impact on ecosystem. Environmental factors and their effects on the environment and man**

To define the factors that affect the mode of spread and the lifespan of pollutants in the environment and state the causes of environmental pollution. Human impact on the environment and visible consequences through time. To list the most common groups of chemical compounds - pollutants (metals, chlorinated hydrocarbons, polycyclic aromatic hydrocarbons) and explain their effects on the environment and man.

The lectures will be given by the course leader Dijana Tomić Linšak, PhD, Associate Professor

#### **L5, L6 Impact of urbanization on increased environmental pollution**

This lecture provides a structured approach to understanding the complex relationship between chemical genotoxic agents and urbanization-driven environmental pollution.

The lectures will be given by the Associate Professor Dijana Tomić Linšak, PhD

#### **L7, L8 Climate change and the consequences caused by the emergence of infectious diseases.**

This lecture provides a detailed framework for understanding the complex relationship between climate change and the emergence of infectious diseases.

The lectures will be given by the course leader Associate Professor Dijana Tomić Linšak, PhD

#### **L9, L10 Environmental diseases**

To explain the effect of pollutants on genetic material and to describe the methods of genotoxicity testing.

The lectures will be given by the Associate Professor Dijana Tomić Linšak, PhD

#### **L11, L12 Ecotoxicological influence of pollutants on the human immune system**

To clarify the impact of global anthropogenic sources of pollution and the impact of major environmental pollutants on changes in the functioning of certain aspects of the immune system in humans.

The lectures will be given by the Associate Professor Dijana Tomić Linšak, PhD

#### **L13, L14 Food frauds and Risk assessment**

To define food fraud and its various forms (e.g., adulteration, mislabelling...). Identify the common types of food fraud and their impact on public health, economy, and brand reputation. Explain the principles of risk assessment in the context of food safety.

The lectures will be given by the Associate Professor Dražen Lušić, PhD

#### **L15, L16. Health - ecological aspects of nutrition**

To explain eating habits and the importance of nutrition for human health, to understand the problems of proper modern nutrition, to understand the nutritional profile of food and the physiologically functional ingredients of food.

The lectures will be given by the Assistant Professor Gordana Kendel Jovanović, PhD

#### **L17, L18 Health care programs**

To identify programs of measures in the field of health care.

The lectures will be given by the Associate Professor Iva Sorta Bilajac Turina, MD, PhD

#### **L19, L20 Quality of life in the environment**

To define and identify those aspects of research of environmental factors that directly affect the maintenance of the quality of life in the immediate work and/or ambient environment.

The lectures will be given by the Associate Professor Iva Sorta Bilajac Turina, MD, PhD

#### **Practicals list (with titles and explanation):**

##### **E1, E2 Air quality control methods**

During the exercises, students will be presented with the performance of analytical procedures for determining the parameters that are the basis for the assessment of the safety of drinking water, the level of organic and inorganic pollutants in water, determination of the parameters on the basis of which the microbiological and chemical safety of food and general use items are assessed as well as the physicochemical methods of air pollution monitoring, method of their collection, processing, and presentation to the public.

The exercises will be given by the course leader Dijana Tomić Linšak, Associate Professor, PhD

##### **E3, E4 Drinking water control**

During the exercises, students will be presented with the performance of analytical procedures for determining the parameters that are the basis for the assessment of the safety of drinking water, the level of organic and inorganic pollutants in water, determination of the parameters on the basis of which the microbiological and chemical safety of food and general use items are assessed as well as the physicochemical methods of air pollution monitoring, method of their collection, processing, and presentation to the public.

The exercises will be given by the Associate Professor, Dražen Lušić, PhD

##### **E5-E7 Wastewater control**

During the exercises, students will be presented with the performance of analytical procedures for determining the parameters that are the basis for the assessment of the safety of drinking water, the level of organic and inorganic pollutants in water, determination of the parameters on the basis of which the microbiological and chemical safety of food and general use items are assessed as well as the physicochemical methods of air pollution monitoring, method of their collection, processing, and presentation to the public.

The exercises will be given by the Associate Professor, Dražen Lušić, PhD

##### **E8-E10 Microbiological control of food and the environment**

During the exercises, students will be presented with the performance of analytical procedures for determining the parameters that are the basis for the assessment of the safety of drinking water, the level of organic and inorganic pollutants in water, determination of the parameters on the basis of which the microbiological and chemical safety of food and general use items are assessed as well as the physicochemical methods of air pollution monitoring, method of their collection, processing, and presentation to the public.

The exercises will be given by the Associate Professor, Dražen Lušić, PhD

##### **E11, E12 An overview of analytical techniques used in environmental analysis**

During the exercises, students will be presented with the performance of analytical procedures for determining the parameters that are the basis for the assessment of the safety of drinking water, the level of organic and inorganic pollutants in water, determination of the parameters on the basis of which the microbiological and chemical safety of food and general use items are assessed as well as the physicochemical methods of air pollution monitoring, method of their collection, processing, and presentation to the public.

The exercises will be given by the Assistant Professor, Igor Dubrović, PhD

##### **E13-E15 Control of foodstuffs and articles of general use**

During the exercises, students will be presented with the performance of analytical procedures for determining the parameters that are the basis for the assessment of the safety of drinking water, the level of organic and inorganic pollutants in water, determination of the parameters on the basis of which the microbiological and chemical safety of food and general use items are assessed as well as the physicochemical methods of air pollution monitoring, method of their collection, processing, and presentation to the public.

The exercises will be given by Sanja Klarić, M.sc

## **Seminars list (with titles and explanation):**

### **S1, S2 Air**

To list the chemical characteristics of clean and polluted atmosphere, local and global air pollution problems and to explain the impact of air pollution on the environment and human health.

The seminar will be given by the course leader Dijana Tomić Linšak, Associate Professor, PhD

### **S3, S4 Waters in nature**

To explain the concept of water circulation in nature, phases of the hydrological cycle, distribution of water on earth. To define the types of water used as sources of drinking water, their origin, basic characteristics and methods of use.

The seminar will be given by the Associate Professor Dražen Lušić, PhD

### **S5, S6 Waste**

To define the generation and distribution of medical waste, to explain the risks to health due to improper management of the same, and the ways of its proper disposal.

The seminar will be given by the Associate Professor Luka Traven, PhD

### **S7, S8 Wastewaters**

To list the types and sources of water pollution in nature and water for human consumption. To define types of wastewater (municipal, industrial, precipitation, cooling), and wastewater quality indicators (physical, chemical, biological). To describe the methods of wastewater treatment (stages of treatment - levels of treatment) and introduction to the drainage system.

The seminar will be given by the Associate Professor Dražen Lušić, PhD

### **S9, S10 Food and food safety**

To list the individual ingredients of foods and to list the chemical methods for their determination.

The seminar will be given by the Assistant Professor Gordana Kendel Jovanović, PhD

### **S11-S13 Articles of general use**

To list the harmful substances that can be found in items of general use and explain how they are being controlled.

The seminar will be given by the Assistant Professor Gordana Kendel Jovanović, PhD

### **S14, S15 Nutrition and health**

To list the types of foods and food ingredients and to explain their impact on the growth, development and maintenance of organisms as well as the diseases which can occur due to improper, insufficient or excessive intake of certain nutrients.

The seminar will be given by the Assistant Professor Gordana Kendel Jovanović, PhD

## **Student obligations:**

Students are required to attend regularly and to actively participate in all forms of classes. A student that has not fulfilled his / her obligations prescribed by the study program if he/she has missed more than 30% of teaching hours of all forms of teaching (lectures, seminars, exercises) according to the Ordinance on student assessment at the Medical Faculty in Rijeka. According to the recommendation of the University, the student can reject a positive grade on the exam, but must sign a specific form accepting an insufficient grade with one of the three possible exams used. The colloquium can also be repeated but the date of the corrective colloquium will be after the first exam period.

**Exam (exam taking, description of the written/oral/practical part of the exam, point distribution, grading criteria):**

*ECTS credit grading system:*

Student assessment is carried out according to the current Rulebook on Studies at the University of Rijeka and according to the Ordinance on student assessment at the Medical Faculty in Rijeka (adopted by the Faculty Council of the Medical Faculty in Rijeka on June 12, 2018).

Student work is evaluated and graded during classes and at the final exam. Out of a total of 100 points, during the classes, the student can achieve 50 points and 50 points in the final exam.

Student assessment is performed using ECTS (A-F) and the number system (1-5). Assessment in the ECTS system is performed according to the assessment criteria from the Decision on Amendments to the Rulebook on Studies of the University of Rijeka, Article 29.

Of the maximum 50 grade points that can be achieved during the course, the student must collect a minimum of 50% and more grade points out of the grade points that could be obtained during the course, as well as through forms of continuous monitoring and evaluation of students. In accordance with the rules and/or study program, this student can access the final exam. The Student who achieved from 0 to 49.9% of grades during classes, out of the grades that could be obtained during classes through forms of continuous monitoring and evaluation of students, in accordance with the rules and or study program, is graded F (unsuccessful), cannot acquire ECTS credits, and must re-enroll in the course.

A student may miss 30% of classes due to health reasons, which is justified by a medical certificate. Attendance at lectures is mandatory. If a student justifiably or unjustifiably misses more than 30% of classes, he/she cannot continue following the course and lose the opportunity to take the final exam.

I. During classes, the following are evaluated (maximum up to 50 points):

a) Obligatory written colloquium (up to 50 points) - the threshold of passing the colloquium is 50%, and points for the solved test below the threshold are not given. The written colloquium consists of 26 questions and is written after the first week of classes. Table 1 shows the conversion of correct answers on the colloquium into points.

Table 1. Converting the correct answers on the colloquium into points

| Number of correct answers on the Colloquium | Points |
|---------------------------------------------|--------|
| 13                                          | 25     |
| 14                                          | 27     |
| 15                                          | 29     |
| 16                                          | 31     |
| 17                                          | 33     |
| 18                                          | 35     |
| 19                                          | 37     |
| 20                                          | 39     |
| 21                                          | 41     |
| 22                                          | 43     |

|    |    |
|----|----|
| 23 | 45 |
| 24 | 47 |
| 25 | 49 |
| 26 | 50 |

#### **Final exam (up to 50 grades)**

The final exam is oral and is scored with a maximum of 50 points. The exam threshold at the final exam cannot be less than 50% of the successfully passed exam.

| Evaluation     | Points |
|----------------|--------|
| Sufficient (2) | 25-31  |
| Good (3)       | 32-38  |
| Very good (4)  | 39-45  |
| Excellent (5)  | 46-50  |

The final grade is formed in such a way that the points achieved in the final exam are added to the grade points achieved during the classes. Student assessment based on final achievement is performed as follows:

| Criterion  | Numerical grade  | ECTS grade |
|------------|------------------|------------|
| 90 - 100%  | 5 (excellent)    | A          |
| 75 - 89,9% | 4 (very good)    | B          |
| 60 - 74,9% | 3 (good)         | C          |
| 50 - 59,9% | 2 (sufficient)   | D          |
| 0 - 49,9%  | 1 (insufficient) | F          |

#### **Other notes (related to the course) important for students:**

As Lectures, seminars and exercises in Health Ecology take place in one group, please be aware that larger group of students in the laboratory is not permitted, so sometime students will be expected to take smaller groups while visiting laboratory.

## COURSE HOURS 2026/2027

Health Ecology

| Lectures<br>(Place and time or group)                                                                                                                                                                                                                                                                                                                                                                                                                                                | Practicals<br>(Place and time or group)                                                                                                                                                   | Seminars<br>(Place and time or group)                                                                                                                                                                                                                                                                                                             |
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| <b>24.05.2027</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |
| L1, L2. Introduction, Ecology, ecosystems: structure and function: <ul style="list-style-type: none"><li>• P17 NZZJZ (08:00 - 10:00) <sup>[1310]</sup><ul style="list-style-type: none"><li>◦ HE_403</li></ul></li></ul> L3, L4 Human impact on ecosystem. Environmental factors and their effects on the environment and man: <ul style="list-style-type: none"><li>• P17 NZZJZ (10:00 - 12:00) <sup>[1310]</sup><ul style="list-style-type: none"><li>◦ HE_403</li></ul></li></ul> |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |
| izv. prof. dr. sc. Tomić Linšak Dijana, dipl. sanit. ing. <sup>[1310]</sup>                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |
| <b>25.05.2027</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | E1, E2 Air quality control methods: <ul style="list-style-type: none"><li>• P17 NZZJZ (10:00 - 12:00) <sup>[1310]</sup><ul style="list-style-type: none"><li>◦ HE_403</li></ul></li></ul> | S1, S2 Air: <ul style="list-style-type: none"><li>• P17 NZZJZ (08:00 - 10:00) <sup>[1310]</sup><ul style="list-style-type: none"><li>◦ HE_403</li></ul></li></ul>                                                                                                                                                                                 |
| izv. prof. dr. sc. Tomić Linšak Dijana, dipl. sanit. ing. <sup>[1310]</sup>                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |
| <b>26.05.2027</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |
| L5, L6 Impact of urbanization on increased environmental pollution: <ul style="list-style-type: none"><li>• P17 NZZJZ (08:00 - 10:00) <sup>[1310]</sup><ul style="list-style-type: none"><li>◦ HE_403</li></ul></li></ul> L7, L8 Climate change and the consequences caused by the emergence of infectious diseases.: <ul style="list-style-type: none"><li>• P17 NZZJZ (10:00 - 12:00) <sup>[1310]</sup><ul style="list-style-type: none"><li>◦ HE_403</li></ul></li></ul>          |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |
| izv. prof. dr. sc. Tomić Linšak Dijana, dipl. sanit. ing. <sup>[1310]</sup>                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |
| <b>28.05.2027</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |
| L9, L10 Environmental diseases: <ul style="list-style-type: none"><li>• P17 NZZJZ (08:00 - 10:00) <sup>[1310]</sup><ul style="list-style-type: none"><li>◦ HE_403</li></ul></li></ul> L11, L12 Ecotoxicological influence of pollutants on the human immune system: <ul style="list-style-type: none"><li>• P17 NZZJZ (10:00 - 12:00) <sup>[1310]</sup><ul style="list-style-type: none"><li>◦ HE_403</li></ul></li></ul>                                                            |                                                                                                                                                                                           | S5, S6 Waste: <ul style="list-style-type: none"><li>• P17 NZZJZ (12:00 - 14:00) <sup>[415]</sup><ul style="list-style-type: none"><li>◦ HE_403</li></ul></li></ul> S3, S4 Waters in nature: <ul style="list-style-type: none"><li>• P17 NZZJZ (14:00 - 16:00) <sup>[1323]</sup><ul style="list-style-type: none"><li>◦ HE_403</li></ul></li></ul> |
| prof. dr. sc. Lušić Dražen, dipl. sanit. ing. <sup>[1323]</sup> · izv. prof. dr. sc. Tomić Linšak Dijana, dipl. sanit. ing. <sup>[1310]</sup> · prof. Traven Luka, dipl. ing. <sup>[415]</sup>                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |
| <b>31.05.2027</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                   |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| L13, L14 Food frauds and Risk assessment: <ul style="list-style-type: none"> <li>• P17 NZZJZ (08:00 - 10:00) <sup>[1323]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul> L15, L16. Health - ecological aspects of nutrition: <ul style="list-style-type: none"> <li>• P17 NZZJZ (10:00 - 12:00) <sup>[1745]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul> | E3, E4 Drinking water control: <ul style="list-style-type: none"> <li>• P17 NZZJZ (14:00 - 16:00) <sup>[1323]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                       | S7, S8 Wastewaters: <ul style="list-style-type: none"> <li>• P17 NZZJZ (12:00 - 14:00) <sup>[1323]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul>                                                                                                                                                                                                        |
| doc. dr.sc. Kendel Jovanović Gordana, dipl. ing. preh. bioteh. <sup>[1745]</sup> · prof. dr. sc. Lušić Dražen, dipl. sanit. ing. <sup>[1323]</sup>                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>01.06.2027</b>                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                       | E5-E7 Wastewater control: <ul style="list-style-type: none"> <li>• P17 NZZJZ (13:00 - 16:00) <sup>[1323]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                            | S9, S10 Food and food safety: <ul style="list-style-type: none"> <li>• P17 NZZJZ (08:00 - 10:00) <sup>[1745]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul> S11-S13 Articles of general use: <ul style="list-style-type: none"> <li>• P17 NZZJZ (10:00 - 13:00) <sup>[1745]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul> |
| doc. dr.sc. Kendel Jovanović Gordana, dipl. ing. preh. bioteh. <sup>[1745]</sup> · prof. dr. sc. Lušić Dražen, dipl. sanit. ing. <sup>[1323]</sup>                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>02.06.2027</b>                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                       | E8-E10 Microbiological control of food and the environment: <ul style="list-style-type: none"> <li>• P17 NZZJZ (10:00 - 13:00) <sup>[1323]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul> E11, E12 An overview of analytical techniques used in environmental analysis: <ul style="list-style-type: none"> <li>• P17 NZZJZ (13:00 - 15:00) <sup>[417]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul> | S14, S15 Nutrition and health: <ul style="list-style-type: none"> <li>• P17 NZZJZ (08:00 - 10:00) <sup>[1745]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul>                                                                                                                                                                                             |
| nasl. doc. dr. sc. Dubrović Igor, dipl. sanit. ing. <sup>[417]</sup> · doc. dr.sc. Kendel Jovanović Gordana, dipl. ing. preh. bioteh. <sup>[1745]</sup> · prof. dr. sc. Lušić Dražen, dipl. sanit. ing. <sup>[1323]</sup>                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>03.06.2027</b>                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                        |
| L17, L18 Health care programs: <ul style="list-style-type: none"> <li>• P17 NZZJZ (08:00 - 10:00) <sup>[1765]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul> L19, L20 Quality of life in the environment: <ul style="list-style-type: none"> <li>• P17 NZZJZ (10:00 - 12:00) <sup>[1765]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul>                   | E13-E15 Control of foodstuffs and articles of general use: <ul style="list-style-type: none"> <li>• P17 NZZJZ (12:00 - 15:00) <sup>[416]</sup> <ul style="list-style-type: none"> <li>◦ HE_403</li> </ul> </li> </ul>                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                        |
| nasl. asistentica, mr.sc. Klarić Sanja, dipl. sanit. ing. <sup>[416]</sup> · nasl. prof. dr. sc. Sorta-Bilajac Turina Iva, dr. med. <sup>[1765]</sup>                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                        |

### List of lectures, seminars and practicals:

| LECTURES (TOPIC)                                                                                     | Number of hours | Location  |
|------------------------------------------------------------------------------------------------------|-----------------|-----------|
| L1, L2. Introduction, Ecology, ecosystems: structure and function                                    | 2               | P17 NZZJZ |
| L3, L4 Human impact on ecosystem. Environmental factors and their effects on the environment and man | 2               | P17 NZZJZ |
| L5, L6 Impact of urbanization on increased environmental pollution                                   | 2               | P17 NZZJZ |
| L7, L8 Climate change and the consequences caused by the emergence of infectious diseases.           | 2               | P17 NZZJZ |

|                                                                              |   |           |
|------------------------------------------------------------------------------|---|-----------|
| L9, L10 Environmental diseases                                               | 2 | P17 NZZJZ |
| L11, L12 Ecotoxicological influence of pollutants on the human immune system | 2 | P17 NZZJZ |
| L13, L14 Food frauds and Risk assessment                                     | 2 | P17 NZZJZ |
| L15, L16. Health - ecological aspects of nutrition                           | 2 | P17 NZZJZ |
| L17, L18 Health care programs                                                | 2 | P17 NZZJZ |
| L19, L20 Quality of life in the environment                                  | 2 | P17 NZZJZ |

| PRACTICALS (TOPIC)                                                           | Number of hours | Location  |
|------------------------------------------------------------------------------|-----------------|-----------|
| E1, E2 Air quality control methods                                           | 2               | P17 NZZJZ |
| E3, E4 Drinking water control                                                | 2               | P17 NZZJZ |
| E5-E7 Wastewater control                                                     | 3               | P17 NZZJZ |
| E8-E10 Microbiological control of food and the environment                   | 3               | P17 NZZJZ |
| E11, E12 An overview of analytical techniques used in environmental analysis | 2               | P17 NZZJZ |
| E13-E15 Control of foodstuffs and articles of general use                    | 3               | P17 NZZJZ |

| SEMINARS (TOPIC)                | Number of hours | Location  |
|---------------------------------|-----------------|-----------|
| S1, S2 Air                      | 2               | P17 NZZJZ |
| S3, S4 Waters in nature         | 2               | P17 NZZJZ |
| S5, S6 Waste                    | 2               | P17 NZZJZ |
| S7, S8 Wastewaters              | 2               | P17 NZZJZ |
| S9, S10 Food and food safety    | 2               | P17 NZZJZ |
| S11-S13 Articles of general use | 3               | P17 NZZJZ |
| S14, S15 Nutrition and health   | 2               | P17 NZZJZ |

**EXAM DATES (final exam):**

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