

[Medicinski fakultet u Rijeci]

## Curriculum 2023/2024

[Za kolegij]

# Life- Threatening Plants and Animals of our Region

Study program: **Medical Studies in English (R)** (elective)  
[Sveučilišni integrirani prijediplomski i diplomski studij]  
Department: **[Katedra za medicinsku biologiju i genetiku]**  
Course coordinator: **prof. dr. sc. Starčević Čizmarević Nada, dipl. ing.**

Year of study: **3**  
ECTS: **1.5**  
Incentive ECTS: **0 (0.00%)**  
Foreign language: **Possibility of teaching in a foreign language**

**Course information:**

The aim of the elective course is to familiarise students with the biological features of our region, with special attention to poisonous and life-threatening plants and animals. Students are expected to learn about the characteristics of the Primorsko-Goran region, its natural features and potential hazards in the plant and animal world. In this way, natural resources can be better used, but the knowledge acquired will also be useful to future medical practitioners for prevention as well as therapy of patients who have come into contact with potentially poisonous plants and animals.

During the lectures and the design of the seminar activities, the natural features of Primorje-Gorski Kotar County will be discussed in joint discussions, with a special focus on sea and land, as well as flora and fauna. Snakes, insects, fish and other marine animals with toxic effects will be shown. Toxic plants and especially potentially toxic fungi found in our area will be given special attention. By elaborating on the possible mutagenic effects in nature and how to survive in nature, we conclude with the knowledge of the beauty but also the potential dangers that lurk in our region.

**List of assigned reading:**

Compulsory literature includes lecture and seminar presentations available to students via Merlin.

**List of optional reading:**

Supplementary literature consists of publications and websites available to students on Merlin.

## Curriculum:

### [Predavanja] list (with titles and explanation):

#### **Plan; literature; introduction**

significance, plan, literature

#### **The natural features and biodiversity of PG county**

to list the features of the PGŽ; define biodiversity

#### **Natural/toxic organic compounds of plant origin**

to list groups of toxic organic compounds in plants; to define the properties of the mentioned groups and their impact on the human body

#### **Poisonous plants and mushrooms; Venomous animals**

define the terms poisonous/toxic organisms; list the poisonous plants, mushrooms and animals of our region; describe the basic mechanisms of their action

#### **Mutagenicity and Genotoxicity**

define the terms mutagenicity and genotoxicity; describe the mechanisms of action and detection of mutagenic/genotoxic compounds; list examples

#### **Natural History Museum Rijeka; exhibitions**

familiarization with the activities of institutions in the system of education and nature protection; list and identify dangerous/poisonous plants and animals in our region

#### **Invasive alien species**

define invasive alien species; list the most significant invasive species of our region and describe their harmful/toxic effects in the environment and on humans

#### **Poisonous plants**

List the poisonous plants of our region; describe the mechanisms of their action and ways to prevent and treat poisoning

#### **Poisonous mushrooms**

List the poisonous mushrooms of our region; describe the mechanisms of their action and ways to prevent and treat poisoning

#### **Toxins from fish and other marine organisms**

List the poisonous marine organisms of our region; describe the mechanisms of their action and ways to prevent and treat

#### **Poisonous and venomous insects**

List the poisonous insects and spiders of our region; describe the mechanisms of their action and ways to prevent and treat poisoning

#### **Venomous snakes**

List the poisonous snakes of our region; describe the mechanisms of their action and ways to prevent and treat poisoning

#### **The final lecture and JGL Pharmacy Museum**

significance of toxic species and synthesis of knowledge about toxic action and treatment principles. Croatian and world history of pharmacy.

### [Seminari] list (with titles and explanation):

**Natural History Museum Rijeka; botanical garden**

recognition and description of native plants of our region

**Hallucinogenic effects of plants**

define and describe hallucinogenic action; describe examples of the effects of hallucinogenic plants

**Poisonous species - clinical management**

Describe the clinical approach to a patient with symptoms of poisoning; recognize examples from practice

**Student obligations:**

Attendance and active participation in all forms of teaching.

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

Preparation and presentation of the seminar paper.

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

A guided tour of the Natural History Museum in Rijeka and JGL Pharmacy Museum were organised as part of the course.

## COURSE HOURS 2023/2024

Life- Threatening Plants and Animals of our Region

<b>[Predavanja]</b> (Place and time or group)	<b>[Seminari]</b> (Place and time or group)
<b>07.11.2023</b>	
<p>Plan; literature; introduction:</p> <ul style="list-style-type: none"><li>• [ONLINE] (16:45 - 19:45) <sup>[317]</sup><ul style="list-style-type: none"><li>◦ L-TPaAooR</li></ul></li></ul> <p>The natural features and biodiversity of PG county:</p> <ul style="list-style-type: none"><li>• [ONLINE] (16:45 - 19:45) <sup>[317]</sup><ul style="list-style-type: none"><li>◦ L-TPaAooR</li></ul></li></ul> <p>Natural/toxic organic compounds of plant origin:</p> <ul style="list-style-type: none"><li>• [ONLINE] (16:45 - 19:45) <sup>[317]</sup><ul style="list-style-type: none"><li>◦ L-TPaAooR</li></ul></li></ul>	
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. <sup>[317]</sup>	
<b>08.11.2023</b>	
<p>Poisonous plants and mushrooms; Venomous animals:</p> <ul style="list-style-type: none"><li>• [Katedra za medicinsku biologiju i genetiku - Biblioteka] (15:00 - 17:00) <sup>[317]</sup><ul style="list-style-type: none"><li>◦ L-TPaAooR</li></ul></li></ul>	
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. <sup>[317]</sup>	
<b>09.11.2023</b>	
	<p>Poisonous species - clinical management:</p> <ul style="list-style-type: none"><li>• [ONLINE] (16:30 - 18:00) <sup>[353]</sup><ul style="list-style-type: none"><li>◦ L-TPaAooR</li></ul></li></ul>
Šuper-Petrinjac Erika, dr. med. <sup>[353]</sup>	
<b>10.11.2023</b>	
<p>Mutagenicity and Genotoxicity:</p> <ul style="list-style-type: none"><li>• [ONLINE] (16:30 - 19:30) <sup>[317]</sup><ul style="list-style-type: none"><li>◦ L-TPaAooR</li></ul></li></ul> <p>Invasive alien species:</p> <ul style="list-style-type: none"><li>• [ONLINE] (16:30 - 19:30) <sup>[317]</sup><ul style="list-style-type: none"><li>◦ L-TPaAooR</li></ul></li></ul>	
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. <sup>[317]</sup>	
<b>14.11.2023</b>	
<p>Toxins from fish and other marine organisms:</p> <ul style="list-style-type: none"><li>• [ONLINE] (17:45 - 20:00) <sup>[317]</sup><ul style="list-style-type: none"><li>◦ L-TPaAooR</li></ul></li></ul> <p>Poisonous and venomous insects:</p> <ul style="list-style-type: none"><li>• [ONLINE] (17:45 - 20:00) <sup>[317]</sup><ul style="list-style-type: none"><li>◦ L-TPaAooR</li></ul></li></ul> <p>Venomous snakes:</p> <ul style="list-style-type: none"><li>• [ONLINE] (17:45 - 20:00) <sup>[317]</sup><ul style="list-style-type: none"><li>◦ L-TPaAooR</li></ul></li></ul>	
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. <sup>[317]</sup>	

16.11.2023	
Poisonous plants: <ul style="list-style-type: none"> <li>• [ONLINE] (17:00 - 19:15) <sup>[317]</sup> <ul style="list-style-type: none"> <li>◦ L-TPaAooR</li> </ul> </li> </ul> Poisonous mushrooms: <ul style="list-style-type: none"> <li>• [ONLINE] (17:00 - 19:15) <sup>[317]</sup> <ul style="list-style-type: none"> <li>◦ L-TPaAooR</li> </ul> </li> </ul>	Hallucinogenic effects of plants: <ul style="list-style-type: none"> <li>• [ONLINE] (19:15 - 20:00) <sup>[317]</sup> <ul style="list-style-type: none"> <li>◦ L-TPaAooR</li> </ul> </li> </ul>
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. <sup>[317]</sup>	
17.11.2023	
Natural History Museum Rijeka; exhibitions: <ul style="list-style-type: none"> <li>• [Katedra za medicinsku biologiju i genetiku - Biblioteka] (09:30 - 11:00) <sup>[317]</sup> <ul style="list-style-type: none"> <li>◦ L-TPaAooR</li> </ul> </li> </ul> The final lecture and JGL Pharmacy Museum: <ul style="list-style-type: none"> <li>• [Katedra za medicinsku biologiju i genetiku - Biblioteka] (14:15 - 16:30) <sup>[317]</sup> <ul style="list-style-type: none"> <li>◦ L-TPaAooR</li> </ul> </li> </ul>	Natural History Museum Rijeka; botanical garden: <ul style="list-style-type: none"> <li>• [Katedra za medicinsku biologiju i genetiku - Biblioteka] (08:45 - 09:30) <sup>[317]</sup> <ul style="list-style-type: none"> <li>◦ L-TPaAooR</li> </ul> </li> </ul>
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. <sup>[317]</sup>	

### List of lectures, seminars and practicals:

[PREDAVANJA] (TOPIC)	Number of hours	Location
Plan; literature; introduction	1	[ONLINE]
The natural features and biodiversity of PG county	2	[ONLINE]
Natural/toxic organic compounds of plant origin	1	[ONLINE]
Poisonous plants and mushrooms; Venomous animals	2	[Katedra za medicinsku biologiju i genetiku - Biblioteka]
Mutagenicity and Genotoxicity	2	[ONLINE]
Natural History Museum Rijeka; exhibitions	2	[Katedra za medicinsku biologiju i genetiku - Biblioteka]
Invasive alien species	2	[ONLINE]
Poisonous plants	2	[ONLINE]
Poisonous mushrooms	1	[ONLINE]
Toxins from fish and other marine organisms	1	[ONLINE]
Poisonous and venomous insects	1	[ONLINE]
Venomous snakes	1	[ONLINE]
The final lecture and JGL Pharmacy Museum	3	[Katedra za medicinsku biologiju i genetiku - Biblioteka]

[SEMINARI] (TOPIC)	Number of hours	Location
Natural History Museum Rijeka; botanical garden	1	[Katedra za medicinsku biologiju i genetiku - Biblioteka]
Hallucinogenic effects of plants	1	[ONLINE]
Poisonous species - clinical management	2	[ONLINE]

**EXAM DATES (final exam):**

---