Faculty of Medicine in Rijeka

Curriculum
2026/2027

For course

Life- Threatening Plants and Animals of our Region

Study program:	**Medical Studies in English (R)** (elective) University integrated undergraduate and graduate study
Department:	**Department of Medical Biology and Genetics**
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.

[Ishodi učenja]:

The student will acquire knowledge of the characteristics and natural features of the Primorje-Gorski Kotar region, including the potential hazards posed by its plant and animal life. Such knowledge will be applied by future medical doctors both in the prevention and in the treatment of patients who have come into contact with potentially toxic plants and animals.

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.

Method of examination.:

The exam is oral and includes a discussion and the presentation of a specific topic.

Curriculum:

Seminars list (with titles and explanation):

Plan; literature; introduction

significance, plan, literature

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 species - clinical management

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

Mutagenicity and Genotoxicity

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

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

Hallucinogenic effects of plants/mushrooms

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

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

Natural History Museum Rijeka; botanical garden

recognition and description of native plants of our region

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

JGL Pharmacy Museum; history and exhibitions

Nature protection and the PGŽ museum's exhibits

Significance of toxic species and synthesis of knowledge about toxic action and treatment principles. Activities of institutions in the system of education and nature protection.

Lectures list (with titles and explanation):

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

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 2026/2027

Life- Threatening Plants and Animals of our Region

Lectures (Place and time or group)	**Seminars** (Place and time or group)
20.10.2026	
The natural features and biodiversity of PG county: • ONLINE (17:15 - 18:45) [317] ◦ L-TPaAooR Natural/toxic organic compounds of plant origin: • ONLINE (18:45 - 19:30) [317] ◦ L-TPaAooR	Plan; literature; introduction: • ONLINE (16:30 - 17:15) [317] ◦ L-TPaAooR
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. [317]	
22.10.2026	
Poisonous plants and mushrooms; Venomous animals: • ONLINE (16:15 - 17:45) [238] ◦ L-TPaAooR	
doc. dr. sc. Dolenec Petra, dipl. ing. biol., prof. biol. [238]	
23.10.2026	
	Invasive alien species: • ONLINE (14:30 - 16:00) [317] ◦ L-TPaAooR Hallucinogenic effects of plants/mushrooms: • ONLINE (15:30 - 17:00) [2773] ◦ L-TPaAooR
Stanković Matić Ivana, dr.med. [2773] · prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. [317]	
27.10.2026	
	Poisonous species - clinical management: • ONLINE (16:15 - 17:45) [469] ◦ L-TPaAooR
Tićac Mateo, dr. med. [469]	
29.10.2026	
	Mutagenicity and Genotoxicity: • ONLINE (16:10 - 17:40) [317] ◦ L-TPaAooR Nature protection and the PGŽ museum's exhibits: • ONLINE (17:40 - 18:25) [317] ◦ L-TPaAooR
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. [317]	
02.11.2026	

	Natural History Museum Rijeka; botanical garden: • Outdoor location (10:00 - 10:45) [317] ◦ L-TPaAooR Natural History Museum Rijeka; exhibitions: • Outdoor location (10:45 - 11:30) [317] ◦ L-TPaAooR
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. [317]	
03.11.2026	
	Poisonous plants: • ONLINE (16:30 - 18:00) [317] ◦ L-TPaAooR Poisonous mushrooms: • ONLINE (18:00 - 18:45) [317] ◦ L-TPaAooR
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. [317]	
09.11.2026	
	Toxins from fish and other marine organisms: • ONLINE (16:15 - 17:00) [317] ◦ L-TPaAooR Poisonous and venomous insects: • ONLINE (17:00 - 17:45) [317] ◦ L-TPaAooR Venomous snakes: • ONLINE (17:45 - 18:30) [317] ◦ L-TPaAooR
prof. dr. sc. Starčević Čizmarević Nada, dipl. ing. [317]	
10.11.2026	
	JGL Pharmacy Museum; history and exhibitions: • Outdoor location (16:15 - 17:45) [2773] ◦ L-TPaAooR
Stanković Matić Ivana, dr.med. [2773]	

List of lectures, seminars and practicals:

LECTURES (TOPIC)	Number of hours	Location
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	ONLINE

SEMINARS (TOPIC)	Number of hours	Location
Plan; literature; introduction	1	ONLINE
Invasive alien species	2	ONLINE
Poisonous species - clinical management	2	ONLINE
Mutagenicity and Genotoxicity	2	ONLINE
Poisonous plants	2	ONLINE

Poisonous mushrooms	1	ONLINE
Hallucinogenic effects of plants/mushrooms	1	ONLINE
Toxins from fish and other marine organisms	1	ONLINE
Poisonous and venomous insects	1	ONLINE
Venomous snakes	1	ONLINE
Natural History Museum Rijeka; botanical garden	1	Outdoor location
Natural History Museum Rijeka; exhibitions	2	Outdoor location
JGL Pharmacy Museum; history and exhibitions	2	Outdoor location
Nature protection and the PGŽ museum's exhibits	1	ONLINE

EXAM DATES (final exam):
