[Medicinski fakultet u Rijeci]

Curriculum
2025/2026

[Za kolegij]

Introduction to Scientific Research

Study programme:	**Medical Studies in English (R)** [Sveučilišni integrirani prijediplomski i diplomski studij]
Department:	**[Katedra za društvene i humanističke znanosti u medicini]**
Course coordinator:	**izv. prof. dr. sc. Pupovac Vanja, prof.**
Year of study:	**2**
ECTS:	**1**
Incentive ECTS:	**0 (0.00%)**
Foreign language:	**Possibility of teaching in a foreign language**

Course information:

The course “Introduction to Scientific Research” is mandatory for the 2nd year of the Integrated Undergraduate and Graduate University Study of Medicine in English program, encompassing 6 hours of lectures and 14 hours of seminars and enabling the acquisition of one (1) ECTS credit.

After taking the course, students will be able to critically interpret medical research and independently assess the credibility of scientific information.

List of assigned reading:

1. Presentations (PPT);

2. Hulley SB Cummings SR, Browner W S Grady DG, Newman TB, ed., Designing Clinical Research. 4th ed., Philadelphia, USA: Lippincott Williams & Wilkins, A Wolters Kluwer Business; 2013.

3. Matko Marušić, ed., Principles of Research in Medicine, 2nd ed., Zagreb: Medicinska naklada, 2015.

List of optional reading:

Evans I, Thornton H, Chalmers I and Glasziou P. Testing Treatments, 2nd Edition; London: Pinter and Martin. 2011. Available from: http://www.testingtreatments.org/

Curriculum:

Lectures list (with titles and explanation):

L1 Introductory lecture

Definition of basic characteristics of medical research

L2 Research designs lecture

distinguish basic types of medical research

L3 Population and sample lecture

Understanding the importance of a representative sample in scientific research.

L4 Variables and data lecture

distinguish types of variables, data and methods of measurement

L5 Basics of scientific research ethics

Understand the basic types of dishonesty and bias

L6 Basics of research integrity

Understand the concept of scientific research ethics and describe ethical doubts in the implementation process and data collection, and understand and explain the importance of adhering to ethical principles in scientific research work. Recognize the forms of plagiarism, discuss prevention methods, and analyze the consequences of fraud in science.

Seminars list (with titles and explanation):

S1 Basic concepts of medical research

recognize the basic components of the research using examples

S2 Research designs

distinguish research designs in medical research

S3 Population and sample

define the basic characteristics of the sample and recognize sampling errors and biases

S4 Variables

recognize different types of variables and methods of measurement

S5-S7 Analysis of scientific paper 1

critically interpret parts of a scientific paper

S8-S10 Analysis of scientific paper 2

critically interpret parts of a scientific paper

S11-S14 Design of a research plan

create a research plan on a given topic

Student obligations:

Regular class attendance (excused absence of 30% from each form of class is allowed (1 out of 6 lectures; 4 out of 14 seminars).

The student will complete the course if he collects 50% of the points that he can collect in the following way:

Four online quizzes (4x7% = 28%),

Critical analysis of scientific paper 1 (max 28%),

Critical analysis of scientific paper 2 (max 22%),

Design of a research plan (max 20%).

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

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

Absence from classes up to 30% (1 lecture and 4 seminars) assumes a justified reason and cannot be compensated (the exception is a discharge letter from hospital treatment). An absence of more than 30%, regardless of the reasons, entails re-enrollment during the following academic year.

It is impossible to "reject" a positive grade obtained on the final exam, but only act per Article 46 of the Regulations on Studies of the University of Rijeka (a student dissatisfied with the grade submits a written appeal to the dean within 24 hours).

COURSE HOURS 2025/2026

Introduction to Scientific Research

Lectures (Place and time or group)	**Seminars** (Place and time or group)
02.03.2026	
L1 Introductory lecture: • [ONLINE] (13:00 - 14:00) [420] ○ ITSR	S1 Basic concepts of medical research: • [ONLINE] (14:00 - 15:00) [420] ○ ITSR
izv. prof. dr. sc. Pupovac Vanja, prof. [420]	
04.03.2026	
L2 Research designs lecture: • [ONLINE] (14:00 - 15:00) [420] ○ ITSR	S2 Research designs: • [ONLINE] (15:00 - 16:00) [420] ○ ITSR
izv. prof. dr. sc. Pupovac Vanja, prof. [420]	
12.03.2026	
	S5-S7 Analysis of scientific paper 1: • [P07] (10:00 - 13:00) [2739] ○ Intro S1
Depope Ana [2739]	
13.03.2026	
	S5-S7 Analysis of scientific paper 1: • [P05] (10:00 - 13:00) [2739] ○ Intro S2
Depope Ana [2739]	
16.03.2026	
L3 Population and sample lecture: • [ONLINE] (13:00 - 14:00) [420] ○ ITSR	S3 Population and sample: • [ONLINE] (14:00 - 15:00) [420] ○ ITSR
izv. prof. dr. sc. Pupovac Vanja, prof. [420]	
23.03.2026	
L4 Variables and data lecture: • [ONLINE] (13:00 - 14:00) [420] ○ ITSR	S4 Variables: • [ONLINE] (14:00 - 15:00) [420] ○ ITSR
izv. prof. dr. sc. Pupovac Vanja, prof. [420]	
26.03.2026	
	S8-S10 Analysis of scientific paper 2: • [P08] (09:00 - 12:00) [2739] ○ Intro S2
Depope Ana [2739]	
27.03.2026	

	S8-S10 Analysis of scientific paper 2: • [P15 - VIJEĆNICA] (09:00 - 12:00) [420] ◦ Intro S1
izv. prof. dr. sc. Pupovac Vanja, prof. [420]	
30.03.2026	
L5 Basics of scientific research ethics: • [P08] (13:00 - 14:00) [142] ◦ ITSR L6 Basics of research integrity: • [P08] (14:00 - 15:00) [142] ◦ ITSR	
prof. dr. sc. Muzur Amir, dr. med. [142]	
20.04.2026	
	S11-S14 Design of a research plan: • [Z6] (08:00 - 12:00) [420] ◦ Intro S2
izv. prof. dr. sc. Pupovac Vanja, prof. [420]	
22.04.2026	
	S11-S14 Design of a research plan: • [Z6] (10:00 - 14:00) [2739] ◦ Intro S1
Depope Ana [2739]	

List of lectures, seminars and practicals:

LECTURES (TOPIC)	Number of hours	Location
L1 Introductory lecture	1	[ONLINE]
L2 Research designs lecture	1	[ONLINE]
L3 Population and sample lecture	1	[ONLINE]
L4 Variables and data lecture	1	[ONLINE]
L5 Basics of scientific research ethics	1	[P08]
L6 Basics of research integrity	1	[P08]

SEMINARS (TOPIC)	Number of hours	Location
S1 Basic concepts of medical research	1	[ONLINE]
S2 Research designs	1	[ONLINE]
S3 Population and sample	1	[ONLINE]
S4 Variables	1	[ONLINE]
S5-S7 Analysis of scientific paper 1	3	[P05] [P07]
S8-S10 Analysis of scientific paper 2	3	[P08] [P15 - VIJEĆNICA]
S11-S14 Design of a research plan	4	[Z6]

EXAM DATES (final exam):

1.	10.06.2026.
2.	07.07.2026.
3.	14.09.2026.