



Sveučilište u Rijeci
University of Rijeka



Sveučilište u Rijeci • Fakultet dentalne medicine
University of Rijeka • Faculty of Dental Medicine

Krešimirova 40/42 • 51000 Rijeka • CROATIA
Phone : + 385 51 559 200; 559 202, 559 203

Course: Introduction to Scientific Research

Course coordinator: Vanja Pupovac, PhD, Assistant professor

Course collaborator: Amir Muzur MD, MA, PhD, Full Professor

Department: Department of Social Sciences and Medical Humanities

Study program: Integrated Undergraduate and Graduate University Study of Dental Medicine in English

Study Year: 5nd

Academic year: 2025/2026

SYLLABUS

Course information (brief course description, general guidelines, location and organisation of instruction, required equipment, instructions regarding class attendance and preparation, students' obligations, etc.):

The course "Introduction to scientific research" is obligatory for the 2nd year of the Integrated Undergraduate and Graduate University Study of Medicine in English programme, encompassing 15 hours of lectures and 5 hours of seminars and enabling the acquisition of one (0,5) ECTS credit.

The course is expected to help students to gain insight into the laws of the scientific research process and to get acquainted with basics of science philosophy and theory, as well as to gain the skills of critical evaluation of scientific paper.

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.

Optional / additional 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/>

Course teaching plan:

The list of lectures (with titles and description)

- | |
|--|
| <ol style="list-style-type: none">1. Introductory lecture
Learning outcomes: to understand the purpose of the course2. Scientific medical publications: types
Outcomes: to differentiate medical information (primary, secondary, and tertiary publications)3. Scientific medical publications: basic characteristics
Outcomes: to differentiate medical information (primary, secondary, and tertiary publications)4. Bibliographic databases
Outcomes: to search bibliographic databases5. Citation databases
Outcomes: to search citation databases6. The structure of scientific paper
Outcome: to improve efficacy in reading scientific papers7. The social structure of science
Outcome: to name and describe basic organisations in science8. The social structure of science
Outcome: to understand influence of social structure on science9. Definitions of science (Schopenhauer, Shaw, Eccles, Marušić)
Outcomes: to understand the different approaches to understanding of science10. The importance of the historical development of science (developmental phases)
Outcomes: to understand the importance and laws of the historical development of science, to describe and interpret the phases of scientific development.11. The importance and the laws of the historical development of science ("migrating" of the scientific avant-garde, specificities of medicine)
Outcomes: to describe and interpret the specificities of medicine. to explain the most important views in science philosophy and to illustrate them by examples from science history.12. Scientific thinking
Outcome: to explain basics of scientific thinking13. The differences between medicine and alternative medicine
Outcome: to understand basic difference between medicine and alternative medicine14. Research ethics (research misconduct; frauds in science)
Outcome: to understand the concept of research ethics and the importance of ethical principles in science.15. Citation and referencing
Outcome: to recognize the forms of plagiarism and to discuss the ways of its prevention |
|--|

The list of seminars with descriptions:

Seminars (1-5) involve continuous verification of knowledge about content presented during lectures.
--

The list of practical with descriptions:

The course does not include practical.
--

Students' obligations:

Regular class attendance, participation in seminars and online quizzes.

Assessment (exam, description of written/oral/practical part, point distribution, grading criteria)

Students will be graded based on the five exams (20 points each) that will be performed during seminars.

Possibility of teaching in another language:

The course is offered in Croatian and English.

Other important information regarding the course:

Missing up to 30 % of the classes (with a presumed justified reason), does not require justification and cannot be made up for (the exception being provided by a hospital discharge letter). Missing more than 30 % of classes, no matter the reason, will prevent the student from taking the final exam and result in a repeated enrolment in the course the following academic year.

It is not possible to “**decline**” a positive mark, but students can appeal to the Dean in written form within 24 hours.

Any use of another's text or other form of author's work, as well as the use of ChatGPT or any of another tool whose functionality is based on artificial intelligence technology, without clear and unambiguous

citation of sources, is considered a violation of someone else's copyright and the principle of academic integrity and represents

serious violation of student obligations, which entails disciplinary responsibility and disciplinary measures accordingly

Rulebook on disciplinary responsibility of students.

Consultation time: Tuesday, 13:30-14:00h

COURSE SCHEDULE (for academic year 2025/2026)

Date	Lectures (time and place)	Seminars (time and place)	Practicals (time and place)	Instructor
11.11. 2025.	14.45 -18.30 L1-L5 (FZS Z5)			assist. prof. Vanja Pupovac
18.11. 2025.	14.45 -18.30 L6-L8 (online)	S1-S2 ONLINE		assist. prof. Vanja Pupovac
25.11. 2025.	14.45 -18.00 L9-L12 (FZS Z3)			prof. Amir Muzur
2.12. 2025.	14.45-18:30 L13-L15 (FZS Z4)	S3-S5 ONLINE		prof. Amir Muzur assist. prof. Vanja Pupovac

List of lectures, seminars and practicals:

	LECTURES (topic of lecture)	Teaching hours	Place
L1	Introductory lecture	1	Lecture room Z5
L2-3	Scientific medical publications	2	Lecture room Z5
L4-5	Bibliographic and citation databases	2	Lecture room Z5
L6-8	The social of science	3	online
L8	The structure of scientific articles		
L9	Definitions of science (Schopenhauer, Shaw, Eccles, Marušić)	1	Lecture room Z3
L10-11	The importance and the laws of the historical development of science (developmental phases, "migrating" of the scientific avant-garde, specificities of medicine)	2	Lecture room Z3
L12-13	Scientific thinking, differences between medicine and alternative medicine	2	Lecture room Z4
L14-15	Research ethics	2	Lecture room Z5
	Total number of lecture hours	15	

	SEMINARS (topic of seminar)	Teaching hours	Place
S1-2	Searching medical literature	2	online
S3-5	Working on research examples	3	online
	Total number of seminar hours	5	

	PRACTICALS (topic of practical)	Teaching hours	Place
V1	/	/	/
	Total number of practicals hours		

	EXAM DATES (final exam)
1.	
2.	
3.	

Subject

Teaching Format	Lectures	Seminars	Exercises	Total
Total Number of Hours	15	5	0	20
Number of Online Hours	6	3	0	9
Percentage	40%	60%	0%	45%