

SYLABUS

Concerning the cycle of education **2024-2030**
Academic year 2025/2026

1. BASIC INFORMATION ABOUT THE SUBJECT/MODULE

Subject	Research methodology
Subject code	MBN/B
Faculty	Faculty of Medicine, University of Rzeszow
Unit	Faculty of Medicine, University of Rzeszow
Field of study	Medicine
Level of education	Uniform Master's Degree Studies
Profile	Stationary / non-stationary
Form of study	Full-time and part-time studies
Year and semester of studies	II Year, III semester
Type of subject	Obligatory
Language	English
Coordinator	Dr Andrii Pozaruk
Lecturers' names	Dr Andrii Pozaruk

1.1. Form of didactic classes

Lect.	Exerc.	Classes	Lab.	Seminars	Pract. classes	Practice	Other	ECTS
-	-	-	-	15	-	-	-	1

1.2. Method of implementation

Classes in traditional form

1.3. Form of getting credit for the subject

Credit (with a grade)

2. PREREQUISITES

Basics of computer science

3. GOALS, EDUCATIONAL OUTCOMES, CURRICULUM CONTENT, EDUCATIONAL METHODS

3.1. Goals

C ₁	Preparing the student to interpret and understand knowledge about the research process, research methods and tools as well as methodologies for preparing scientific papers and principles conducting medical research.
C ₂	Preparing the student in the field of writing skills for scientific articles. Preparation of the student in the field of writing skills.
C ₃	Shaping the student's attitude to deepen knowledge of the principles of writing scientific papers.

3.2. Outcomes for the course

EK (the effect of education)	The content of learning outcomes defined for the class (module)	Reference to directional effects ¹
EK_01	can use databases, including the Internet, and search for necessary information using the available tools	B. U10
EK_02	understands the differences between prospective and retrospective, randomized and case-control studies, case reports and experiments and ranks them according to the reliability and quality of evidence	B. U12
EK_03	can plan, perform and interpret simple scientific research results and draw conclusions	B. U13
EK_04	knows the principles of conducting scientific, observational and experimental research and in vitro research for the development of medicine	B. W29
EK_05	is able to critically analyze medical literature and draw conclusions	D.U17
EK_06	knows the basics of evidence-based medicine	D.W.23
EK_07	understands legal regulations, basic methods of a medical experiment and conducting other medical research, including basic data analysis	G. W8
EK_08	uses objective sources of information	K.07

3.3. Content Curriculum

No	Title
1	Introduction to Clinical Research Methodology
2	History and Evolution of Clinical Research
3	Research Questions and Hypotheses
4	Study Design: Overview of Experimental and Observational Methods
5	Randomized Controlled Trials: Design and Execution
6	Cohort and Case-Control Studies
7	Bias, Confounding, and Effect Modification
8	Sampling Methods and Sample Size Calculations
9	Data Collection Techniques and Tools
10	Data Management and Quality Control
11	Introduction to Biostatistics in Clinical Research
12	Statistical Analysis Methods
13	Ethics in Clinical Research: Consent and Approval
14	Regulatory Framework for Clinical Research
15	Understanding Causation and Association
16	Systematic Reviews and Meta-Analyses
17	Implementation of Evidence-Based Medicine
18	Interpreting Clinical Research Results
19	Communicating Research Findings: Writing a Research Paper
20	Common Pitfalls in Clinical Research
21	Case Studies in Clinical Research Methodology

3.4. Didactic methods

Lecture with multimedia presentation with the use of office 365, case analysis

4. METHODS AND EVALUATION CRITERIA

4.1. Methods of verification of learning outcomes

Symbol of effect	Methods of assessment of learning outcomes (Eg.: tests, oral exams, written exams, project reports, observations during classes)	Form of classes
B. U ₁₀	PROJECT REPORTS, OBSERVATIONS DURING CLASSES	SEMINARS
B. U ₁₂	WRITTEN EXAM	SEMINARS
B. U ₁₃	PROJECT REPORTS, WRITTEN EXAM, OBSERVATIONS DURING CLASSES	SEMINARS
B. W ₂₉	WRITTEN EXAM	SEMINARS

D.U17	PROJECT REPORTS, WRITTEN EXAM, OBSERVATIONS DURING CLASSES	SEMINARS
D.W.23	PROJECT REPORTS, WRITTEN EXAM, OBSERVATIONS DURING CLASSES	SEMINARS
G. W8	WRITTEN EXAM	SEMINARS
K.07	PROJECT REPORTS, OBSERVATIONS DURING CLASSES	SEMINARS

4.2. Course completion requirements (evaluation criteria)

Seminars:

Written exam

Grade (EO_o1 – EO_o4):

5.0 – demonstrates knowledge of each level of education content in 90%-100%

4.5 – demonstrates knowledge of each level of education content in 84%-89%

4.0 – demonstrates knowledge of each level of education content in 77%-83%

3.5 – demonstrates knowledge of each level of education content in 70%-76%

3.0 – demonstrates knowledge of each level of education content in 60%-69%

2.0 – demonstrates knowledge of each level of education content below 60%

5. THE TOTAL STUDENT WORKLOAD NEEDED TO ACHIEVE THE INTENDED RESULTS IN HOURS AND ECTS POINTS

Activity	Hours needed
Class hours according to the schedule	15
Others with teacher participation (participation in consultations)	2
student's own work (preparation for classes, exam, writing paper etc.)	8
Total	25
TOTAL NUMBER OF ECTS	1

6. APPRENTICESHIPS

Total hours	-
Forms	-

7. LITERATURE

1. Teaching Clinical Research Methodology by Example Jack Hirsh Eurospan, 2017
2. Introduction to Research Methodology for Specialists and Trainees P. M. Shaughn O'Brien, Fiona Broughton Pipkin Cambridge University Press, 2017
3. Doing a Research Project in Nursing and Midwifery: A Basic Guide to Research Using the Literature Review Methodology Carroll Siu, Huguette Comerasamy SAGE Publications, 2013

Approved by the Head of the Department or an authorised person