

## KARTA PRZEDMIOTU

<b>Course code</b>	<b>0912-7LEK-B2.9-Mbm</b>	
<b>Name of the course in</b>	<b>Polish</b>	Metodologia badań naukowych z elementami biostatystyki w medycynie
	<b>English</b>	Methodology of scientific research with elements of biostatistics in medicine

### 1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

<b>1.1. Field of study</b>	Medical
<b>1.2. Mode of study</b>	Full-time
<b>1.3. Level of study</b>	Uniform Master's studies
<b>1.4. Profile of study*</b>	Practical
<b>1.5. Person preparing the course description</b>	dr hab. Beata Kręcisz prof. UJK
<b>1.6. Contact</b>	Wnoz_inm@ujk.edu.pl

### 2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

<b>2.1. Language of instruction</b>	Polish
<b>2.2. Prerequisites*</b>	lack

### 3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

<b>3.1. Form of classes</b>	Lecture -5, classes- 10	
<b>3.2. Place of classes</b>	Traditional classes in the classroom WLiNoZ UJK	
<b>3.3. Form of assessment</b>	Credit with grade	
<b>3.4. Teaching methods</b>	Information lecture	
<b>3.5. Bibliography</b>	<b>Required reading</b>	<p>1) Supino P. G. Borer J.S., Principles of Research Methodology: A Guide For Clinical Investigators, Springer New York Heidelberg Dordrecht London</p> <p>2) Brink H, Walt C van der, Rensburg G van. Fundamental of Research Methodology for Healthcare Professionals 4th ed. edition. Juta &amp; Company Ltd; 2018.</p> <p>3) Hanna M. How to Write Better Medical Papers. Springer International Publishing; 2019. doi:10.1007/978-3-030-02955-5</p>
	<b>Further reading</b>	<p>1) Scientific Journals</p> <p>2) Medical databases</p>

### 4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED LEARNING OUTCOMES

#### 4.1. Course objectives (including form of classes)

- C1 – Learning the principles of practical application of Evidence Based Medicine.  
 C2 – Preparation for critical appraisal of scientific studies and reports  
 C2 – Stimulating awareness of the significance and impact of scientific research on guiding decisions in clinical practice.

#### 4.2. Detailed syllabus (including form of classes)

##### Lecture

1. Methodological scientific approach- definitions
2. Types of scientific studies and their application in medicine
3. Quantification in scientific studies. Choosing a study sample.
4. Copyright protection and ethical principles in scientific research.
5. Types of scientific publications.
6. Application of evidence based medicine in clinical practice.

##### Classes

1. Principles of medical publication preparation in medicine, healthcare systemic and public health. The structure of scientific publication, language, presentation, editing, Critical appraisal of current guidelines, thesis and scientific publications.
2. Principles of scientific empirical study. Stages of research development and implementation
3. Aims and research ideas, variables, hypotheses- definitions and study development principles.
4. Collecting scientific data- methods, techniques and tools. Implementation of quantification methods in medical research. Preparation of questionnaires. Picking a sample.
5. Conducting research and data preparation. Building databases and statistical analysis.
6. Principles of scientific publication preparation. Analysis of scientific publications and publishing guidelines in international journals.

#### 4.3 Intended learning outcomes

Code	A student, who passed the course	Relation to learning outcomes
within the scope of <b>KNOWLEDGE:</b>		
W01	knows the principles of conducting scientific research, observational and experimental and in vitro studies aimed at the development of medicine.	B.W34.
W02	knows the foundations of evidence-based medicine.	D.W20.
W03	knows and understand the causes, symptoms, principles of diagnosis and therapeutic management of common diseases and specific problems in general practice;	E.W36.
within the scope of <b>ABILITIES :</b>		
U01	plans and performs basic scientific research, interprets the results and draws conclusions.	B.U14.
U02	is responsible for improving his/her skills and transfers knowledge to others;	D.U15.

#### 4.4. Methods of assessment of the intended learning outcomes

Teaching outcomes (code)	Method of assessment (+/-)																				
	Exam oral/written*			Test*			Project*			Effort in class*			Self-study*			Group work*			Others*		
	Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes		
	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...
W01				+																	
W02				+																	
W03				+																	
U01				+																	
U02				+																	

\*delete unnecessary

<b>4.5. Criteria of assessment of the intended learning outcomes</b> – the final grade will be based on the test result		
<b>Form of classes</b>	<b>Form of classes</b>	<b>Form of classes</b>
<b>lecture (L)</b>	<b>3</b>	61%-68% Test. Mastering the program content at the basic level
	<b>3,5</b>	69%-76% Test- Mastering the program content at the basic level, systematized answers
	<b>4</b>	77%-84% Test. Mastering the program content at the basic level, systematized answers. Problem solving in typical situations.
	<b>4,5</b>	85%-92% Test The scope of the presented knowledge goes beyond the basic level, based on the supplementary and provide literature. Problem solving in new and complex situations.
	<b>5</b>	93%-100% Test The scope of the presented knowledge goes beyond the basic level based on self-acquired scientific sources of information.
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#### 5. BALANCE OF ECTS CREDITS – STUDENT’S WORK INPUT

<b>Category</b>	<b>Student's workload</b>
	<b>Full-time studies</b>
<b>NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/</b>	<b>15</b>
<i>Participation in lectures*</i>	<b>5</b>
<i>Participation in classes, seminars, laboratories*</i>	<b>10</b>
<i>Preparation in the exam/ final test*</i>	
<i>Others*</i>	
<b>INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/</b>	<b>10</b>
<i>Preparation for the lecture*</i>	<b>5</b>
<i>Preparation for the classes, seminars, laboratories*</i>	<b>5</b>
<i>Preparation for the exam/test*</i>	
<i>Gathering materials for the project/Internet query*</i>	
<i>Preparation of multimedia presentation</i>	
<i>Others (please specify e.g. e-learning)*</i>	
<b>TOTAL NUMBER OF HOURS</b>	<b>25</b>
<b>ECTS credits for the course of study</b>	<b>1</b>

\*delete as appropriate

Accepted for execution (date and legible signatures of the teachers running the course in the given academic year)

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