



# Pomeranian Medical University in Szczecin

## SYLLABUS of the MODULE (SUBJECT) General Information

<b>Module title: Research methodology</b>	
Module type	Obligatory
Faculty PMU	Faculty of Dentistry
Major	Dentistry
Level of study	Long-cycle (S2J)
Mode of study	Full-time studies
Year of studies, semester	Year 1, semester II
ECTS credits (incl. semester breakdown)	1
Type/s of training	Lecture – 4h, lecture e-learning – 1h, seminars – 2h, practical classes – 8h
Form of assessment*	<input checked="" type="checkbox"/> graded assessment: <ul style="list-style-type: none"> <li><input type="checkbox"/> descriptive</li> <li><input checked="" type="checkbox"/> test</li> <li><input type="checkbox"/> practical</li> <li><input type="checkbox"/> oral</li> </ul> <input type="checkbox"/> non-graded assessment <ul style="list-style-type: none"> <li><input type="checkbox"/> final examination <ul style="list-style-type: none"> <li><input type="checkbox"/> descriptive</li> <li><input type="checkbox"/> test</li> <li><input type="checkbox"/> practical</li> <li><input type="checkbox"/> oral</li> </ul> </li> </ul>
Head of the Department/ Clinic, Unit	Prof. dr hab. n. zdr. Anna Grzywacz
Tutor responsible for the module	Dr n. med. Aleksandra Suchanecka e-mail: <a href="mailto:aleksandra.suchanecka@pum.edu.pl">aleksandra.suchanecka@pum.edu.pl</a>
Department's/ Clinic's/ Unit's website Samodzielna Pracownia Genetyki i Epigenetyki Behawioralnej al. Powstańców Wlkp 72, 70-111 Szczecin Budynek K, II piętro tel: 91 466 1491, 91 466 1498 <a href="https://www.pum.edu.pl/studia_iii_stopnia/informacje_z_jednostek/wmis/katedra_diagnostyki_laboratoryjnej/samodzielna_pracownia_genetyki_i_epigenetyki_behawioralnej/">https://www.pum.edu.pl/studia_iii_stopnia/informacje_z_jednostek/wmis/katedra_diagnostyki_laboratoryjnej/samodzielna_pracownia_genetyki_i_epigenetyki_behawioralnej/</a>	
Language	English

\* replace  into  where applicable

## Detailed information

<b>Module objectives</b>		Familiarizing the student with the basic methods of conducting scientific research
Prerequisite /essential requirements	Knowledge	-
	Skills	-
	Competences	-

## Description of the learning outcomes for the subject /module

No. of learning outcome	Student, who has passed the (subject) knows /is able to /can:	SYMBOL (referring the standards)	Method of verification of learning outcomes*
W01	knows and understands issues of genetics, molecular biology and regenerative medicine	B.W15.	K, O
W02	knows and understands the basic IT and biostatistical tools used in medicine, including medical databases, spreadsheets and basics of computer graphics	B.W23.	K, O
W03	knows and understands the basic methods of statistical analysis used in population and diagnostic tests	B.W24.	K, O
W04	knows and understands legal regulations concerning medical experiments and conducting scientific tests with participation of people	G.W19.	K, O
U01	is able to use databases, including online resources and search for necessary information by means of accessible tools	B.U10.	K, O
U02	is able to critically analyse medical literature, including English sources and draw conclusions	B.U11.	K, O
U03	is able to select the appropriate statistical test, conduct the basic statistical analyses, use the appropriate methods of presenting results and interpret meta analysis results	B.U12.	K, O
U04	is able to explain the differences between prospective and retrospective tests, randomized and clinical-control tests, descriptions of cases and intervention tests as well as group them according to reliability and quality of scientific evidence	G.U11	K, O
K01	is ready to notice and recognize own limitations, make self-assessment of educational deficits and needs	K.5.	O
K02	is ready to use reliable sources of information	K.7.	O
K03	is ready to draw conclusions from own measurements or observations	K.8.	O

Table presenting LEARNING OUTCOMES in relation to the form of classes								
No. of learning outcome	Learning outcomes	Type of training						
		Lecture	Seminar	Practical	Clinical classes	Simulations	E-learning	Other...
W01	B.W15.	x	x	x			x	
W02	B.W23.	x	x				x	
W03	B.W24.	x	x					
W04	G.W19.	x		x				
U01	B.U10.		x	x			x	
U02	B.U11.	x		x			x	
U03	B.U.12.	x		x				
U04	G.U11	x		x				
K01	K.5.	x	x	x			x	
K02	K.7.	x	x	x			x	
K03	K.8.	x	x	x			x	

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	Teaching programme	No. of hours	References to learning outcomes
<b>Summer semester</b>			
<b>Seminars</b>			
TK01	Analysis of genetics data bases.	2	B.W15., B.W23., B.U10., K.5., K.7., K.8.
<b>Lecture</b>			
TK01	Planning of scientific research in medicine.	2	B.W15., B.W23., B.W24., G.W19., B.U11., G.U11, K.5., K.7., K.8.
TK02	Basic biostatistical analyzes.	2	B.W15., B.W23., B.W24., B.U12., K.5., K.7., K.8.
<b>Lecture e-learning</b>			
TK01	Scientific data bases.	1	B.W15., B.W23., B.U10., B.U11., K.5., K.7., K.8.
<b>Practical classes</b>			
TK01	Literature analysis.	2	B.U10., B.U11., G.U11., K.5., K.7., K.8.

TK02	Planning the scientific research.	2	B.W15., B.W23., B.W24., G.W19., B.U10., B.U11., B.U12., K.5., K.7., K.8.
TK03	Molecular research in contemporary medicine.	2	B.W15., K.5., K.7., K.8.
TK04	Research methodology in contemporary dentistry – students projects.	2	B.W15., B.W23., B.W24., G.W19., B.U10., B.U11., B.U12., G.U11 K.5., K.7., K.8.

<b>Booklist</b>
Obligatory literature:
1. Research methodology. Methods and techniques. 2nd edition. C.R. Kothari. New Age International Publishers
Supplementary literature: -

<b>Student's workload</b>	
Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h]
	Tutor
Contact hours with the tutor	15
Time spent on preparation to seminars/ practical classess	5
Time spent on reading recommended literature	3
Time spent on writing report/making project	
Time spent on preparing to colloquium/ entry test	5
Time spent on preparing to exam	
Other .....	
Student's workload in total	28
<b>ECTS credits for the subject (in total)</b>	<b>1</b>
<b>Remarks</b>	

\* Selected examples of methods of assessment:

EP – written examination

EU – oral examination

ET – test examination

EPR – practical examination

K – colloquium

R – report

S – practical skills assessment

RZĆ – practical classes report, incl. discussion on results  
O – student's active participation and attitude assessment  
SL – lab report  
SP – case study  
PS - assessment of student's ability to work independently  
W – entry test  
PM – multimedial presentation  
other...