



## Pomorski Uniwersytet Medyczny w Szczecinie

### SYLABUS ZAJĘĆ Informacje ogólne

Module title: Public health with epidemiology and hygiene 2023/2024	
Module type	Obligatory
Faculty PMU	Faculty of Medicine and Dentistry
Major	Medicine
Level of study	long-cycle (S2J)
Mode of study	full-time studies
Year of studies, semester	Year II, semester IV
ECTS credits (incl. semester breakdown)	3
Type/s of training	lectures: 12 hours e-learning lectures: 3 hours seminars: 15hours, workshops: 5hours Σ: 35 hours
Form of assessment*	<input checked="" type="checkbox"/> graded assessment: <input type="checkbox"/> descriptive <input checked="" type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral  <input type="checkbox"/> non-graded assessment  <input checked="" type="checkbox"/> final examination <input type="checkbox"/> descriptive <input checked="" type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral
Head of the Department/ Clinic, Unit	Ass. Prof. Tomasz Olszowski, PhD, MSc e-mail: tomasz.olszowski@pum.edu.pl
Tutor responsible for the module	Ass. Prof. Tomasz Olszowski, PhD, MSc e-mail: tomasz.olszowski@pum.edu.pl
Department's/ Clinic's/ Unit's website	<a href="https://www.pum.edu.pl/uniwersytet/dydaktyka_i_leczenie/kliniki_katedry_zaklady_i_pracownie/wmis/zakad_higieny_i_epidemiologii/">https://www.pum.edu.pl/uniwersytet/dydaktyka_i_leczenie/kliniki_katedry_zaklady_i_pracownie/wmis/zakad_higieny_i_epidemiologii/</a>
Language	English

\* replace  into  where applicable

### Detailed information

<b>Module objectives</b>		The student knows the broad range of the determinants of population health, including access to healthcare, lifestyle factors, environmental factors (physical, chemical and biological factors). The student describes different types of epidemiological studies: descriptive, cross-sectional, cohort, case-control, ecological and their goals, advantages and disadvantages of each study design. Student knows the rules and methods of selecting research samples, sample representativeness. The concepts of randomization, blinding, placebo, confounders. The student is able to apply Hills criteria for causation which are used to prove causative association in epidemiology. Student critically evaluates the medical literature. Student knows the concept of "knowledge and practice based on scientific evidence" (evidence based medicine). Principles and formulation of research hypotheses in epidemiology.
Prerequisite /essential requirements	Knowledge	1. Knows the basic methods of statistical analysis used in population studies.
	Skills	1. Independent calculation of mean values and evaluation of data distribution from biomedical measurements of quantitative and qualitative features. 2. Conduct a comparative analysis of biomedical data.
	Competences	1. Preparation for team work in health care and at different levels of health care organization.

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	methods of assessing the health of an individual and population, various disease classification systems and medical procedures,	G.W1	ET, K, O
W02	ways of identifying and examining risk factors, advantages and disadvantages of various types of epidemiological studies and measures proving the presence of a cause-and-effect relationship,	G.W2	ET, K, O
W03	epidemiology of infectious and chronic diseases, ways of preventing their occurrence at different stages of the natural history of the disease and the role of epidemiological surveillance;	G.W3	ET, K, O
W04	the concept of public health, its goals, tasks, the structure and organization of the health care system at the national and global level, the impact of economic determinants on the possibilities for health protection;	G.W4	ET, K, O
W05	basic legal regulations regarding the organization and financing of the health care system, universal health insurance and the principles of organization of medical entities,	G.W6	ET, K, O
U01	describing the demographics and assessing the	G.U1	

	health problems of a population		ET, K, O
U02	collecting the information about the probability of the presence of infectious or chronic disease factors' occurrence and planning prophylactic activities on different prevention levels.	G.U2	ET, K, O
U03	interpreting the measures of occurrence of diseases and disabilities	G.U3	ET, K, O
U04	assessing the epidemiological situation of commonly occurring diseases in Poland and in the world	G.U4	ET, K, O
U05	explaining to those who receive medical benefits their basic rights and the legal basis of the benefits.	G.U5	ET, K, O
U06	choosing a treatment that minimizes the social consequences for the patient	D.U3	ET, K, O
K01	noticing and recognizing one's own limitations and self-assessment of educational deficits and needs	K5	O
K02	using objective sources of information	K7	O

**Table presenting LEARNING OUTCOMES in relation to the form of classes**

No. of learning outcome	Learning outcomes	Type of training						
		Lecture	Seminar	Practical classes	Clinical classes	Simulations	E-learning	Other...
W01	G.W1	x	x					
W02	G.W2	x	x					
W03	G.W3	x	x					
W04	G.W4	x	x					
W05	G.W5	x	x					
U01	G.U1		x	x				
U02	G.U2		x	x				
U03	G.U3			x				
U04	G.U4		x	x				
U05	G.U5		x	x				
U06	D.U3			x				
K01	K.5			x				
K02	K.7		x	x				

**Table presenting TEACHING PROGRAMME**

No. of a teaching	Teaching programme	No. of hours	References to learning
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programme			outcomes
<b>Summer semester</b>			
<b>Lectures 15 h</b>			
TK01	Introduction to Public Health. Public health definitions. Health determinants. Health security in Poland and other EU countries.	2	G.W1, G.W2, G.W3, G.W4, G.W6
TK02	Environmental health problems. Noise. Water hygiene. Environmental toxicology.	2	G.W1, G.W2, G.W3, G.W4
TK03	Air pollution; tobacco smoke. Public health consequences of smoking.	2	G.W1, G.W2, G.W3, G.W4
TK04	Rules of proper nutrition. Methods of assessment of nutrition status.	2	G.W1, G.W2, G.W3, G.W4
TK05	Healthcare systems in EU.	3	G.W1, G.W2, G.W3, G.W4, G.W6, G.U5
TK06	Screening. Sensitivity, specificity, predictive values, likelihood ratio.	2	G.W1, G.W2, G.W3, G.W4
TK07	Hospital hygiene. Preventive surveillance of infectious diseases, prevention strategies. Epidemiological investigation.	2	G.W1, G.W2, G.W3, G.W4
<b>Seminars 15 h</b>			
TK01	Measuring health and disease. Sources of information about the health status of the population. Positive and negative measures of health. Population age structures; demographic transformation.	2	G.W1, G.W2, G.W3, G.W4
TK02	Principles of nutrition in the prevention of civilization diseases.	2	G.W1, G.W2, G.W3, G.W4
TK03	Types of epidemiological studies. Observational studies: descriptive studies	2	G.W1, G.W2, G.W3, G.W4
TK04	Types of epidemiological studies: analytical studies. Measures of association in analytical studies.	2	G.W1, G.W2, G.W3, G.W4
TK05	Experimental studies: types of randomization, blinding, Intention to treat analysis (ITT). Interpretation of absolute and relative parameters in experimental studies: absolute risk reduction (ARR), number needed to treat (NNT), relative risk (RR), relative risk reduction (RRR), odds ratio (OR). Bias in epidemiology.	2	G.W1, G.W2, G.W3, G.W4
TK06	Causation in epidemiology. Hill's criteria of causation.	2	G.W1, G.W2, G.W3, G.W4
TK07	Major health problems in EU.	2	G.W1, G.W2, G.W3, G.W4, G.U1, G.U3, G.U4
TK08	Critical evaluation of medical literature. Basics of clinical epidemiology. The European cardiovascular disease risk assessment model.	1	G.W1, G.W2, G.W3, G.W4, K7
<b>Practical classes 5 h</b>			
TK01	Measures of health – calculation of indexes. Analytical studies: calculation and interpretation of measures of association.	2	G.U1, G.U2, G.U3, G.U4, D.U3
TK02	Calculation and interpretation of measures of risk in experimental studies: absolute risk reduction (ARR), number needed to treat (NNT), relative risk (RR), relative risk	2	G.U1, G.U2, G.U3, G.U4, D.U3

	reduction (RRR), odds ratio (OR).		
TK03	Calculation and interpretation of parameters of screening test.	1	G.U1, G.U2, G.U3, G.U4, G.U5

<b>Booklist</b>	
Obligatory literature:	
1. Ruth Bonita, Robert Beaglehole, Tord Kjellstrom. Basic epidemiology, WHO 2006.	
2. Roger Detels, Quarraisha Abdool Karim, Fran Baum, Liming Li, Alastair H. Leyland (ed.): Oxford Textbook of Global Public Health (7 edn), Oxford University Press 2021.	
Supplementary literature:	
1. Ann Aschengrau, George R. Seage: Essentials of Epidemiology in Public Health. Jones & Bartlett Learning; 4th edition 2018.	

<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	35
Time spent on preparation to seminars/ practical classes	20
Time spent on reading recommended literature	20
Time spent on writing report/making project	
Time spent on preparing to colloquium/ entry test	15
Time spent on preparing to exam	15
Other .....	
Student's workload in total	105
<b>ECTS credits for the subject (in total)</b>	3
<b>Remarks</b>	

\*Przykładowe sposoby weryfikacji efektów uczenia się:

EP – egzamin pisemny

EU – egzamin ustny

ET – egzamin testowy

EPR – egzamin praktyczny

K – kolokwium

R – referat

S – sprawdzenie umiejętności praktycznych

RZĆ – raport z ćwiczeń z dyskusją wyników

O – ocena aktywności i postawy studenta

SL – sprawozdanie laboratoryjne

SP – studium przypadku

PS – ocena umiejętności pracy samodzielnej

W – kartkówka przed rozpoczęciem zajęć

PM – prezentacja multimedialna i inne