



Pomorski Uniwersytet Medyczny w Szczecinie

SYLABUS ZAJĘĆ Informacje ogólne

Module title: Public health with epidemiology and hygiene	
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	seminars (30h), workshops (5h)
Form of assessment*	<input checked="" type="checkbox"/> graded assessment: <ul style="list-style-type: none"> <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 <ul style="list-style-type: none"> <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	https://www.pum.edu.pl/wydzialy/wydzial-medycyny-i-stomatologii/zaklad-higieny-i-epidemiologii
Language	English

* replace ☐ into ☒ where applicable

Detailed information

Module objectives		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	knows consequences of malnutrition, incl. permanent starving, excessive alimentation and non-balanced diet	K_B.W19	ET, K, O
W02	knows bases for disinfection, sterilization and aseptic procedures	K_C.W19	ET, K, O
W03	zna uwarunkowania środowiskowe i epidemiologiczne najczęstszych chorób	K_E.W1	ET, K, O
W04	knows methodology of evaluating health state of individuals and populations, and also different classification systems for diseases and medical procedures	K_G.W1	ET, K, O
W05	knows methods for identification and examination of risk factors, advantages and disadvantages of different types of epidemiologic investigation and measures confirming cause-and-effect relationship,	K_G.W2	ET, K, O
W06	knows the epidemiology of contagious and chronic diseases, prevention of their occurrence in different phases of the natural	K_G.W3	ET, K, O

	history of disease and importance of epidemiological supervision		
W07	Knows concept of public health and its objectives, structure and organization of health care system on national and global levels and influence of economic conditions on health care system capacity	K_G.W4	ET, K, O
W08	Knows rules of promotion of health, its objectives and modes of action, in particular, knowledge of importance of elements of whole some lifestyle	K_G.W5	ET, K, O
W09	knows basic laws governing organization and financing of health service, general health insurance and organizational principles of health service entities	K_G.W7	ET, K, O
W10	interprets parameters of disease and disability occurrence frequency, estimates epidemiologic situation in terms of most common diseases occurring nationwide	K_G.W13	ET, K, O
U01	uses databases, incl. on-line bases and searches for information required by means of available tools	K_B.U11	ET, K, O
U02	selects appropriate statistical tests, conducts basic statistical analyses and uses selected methods to present results, interprets results of meta-analysis, and performs analyses of survival probability	K_B.U12	ET, K, O
U03	explains differences between prospective and retrospective, randomized and clinical-follow up study, case studies and experimental investigation and prioritizes them according to the credibility and quality of research evidence	K_B.U13	ET, K, O
U04	designs and conducts simple research projects and interprets their outputs and draws conclusions	K_B.U14	ET, K, O
U05	reviews medical literature, incl. English literature and draws conclusions on the basis of available literature	K_D.U17	ET, K, O
U06	describes demographic structure of population and evaluates health issues on such a basis	K_G.U1	ET, K, O
U07	collects information on the occurrence of risk factors for contagious and chronic diseases and plans preventive actions to be carried out at different levels	K_G.U2	ET, K, O
U08	explains basic rights of persons provided with health care and legal bases for medical services	K_G.U3	ET, K, O
K01	accepts the need for standards of conduct	K_K01	O
K02	Demonstrates the awareness for self-education, understands the need for continuing professional education, can inspire and organize learning processes in others	K_K03	O
K03	is aware of cultural and social differences affecting individual interpretations of living standards	K_K08	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	K_B.W19		x					
W02	K_C.W19		x					
W03	K_E.W1		x					
W04	K_G.W1		x					
W05	K_G.W2		x					
W06	K_G.W3		x					
W07	K_G.W4		x					
W08	K_G.W5		x					
W09	K_G.W7		x					
W10	K_G.W13		x					
U01	K_B.U11		x	x				
U02	K_B.U12		x	x				
U03	K_B.U13		x	x				
U04	K_B.U14		x	x				
U05	K_D.U17		x					
U06	K_G.U1		x	x				
U07	K_G.U2		x	x				
U08	K_G.U3		x					
K01	K_K01		x					
K02	K_K03		x	x				
K03	K_K08		x					

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	Teaching programme	No. of hours	References to learning outcomes
Winter semester			
Seminars			
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.	3	W03; W04; W10; U01; U06; K02
TK02	Introduction to Public Health. Public health definitions. Health determinants. Health security in Poland and other EU countries. Healthcare systems in EU.	3	W07; W09
TK03	Rules of proper nutrition. Methods of assessment of nutrition status. Principles of nutrition in the prevention of civilization diseases.	3	W01; K03
TK04	Environmental health problems. Noise, air pollution, tobacco smoke. Water hygiene. Environmental toxicology.	3	W03

TK05	Types of epidemiological studies. Observational studies: descriptive studies and analytical studies. Measures of association in analytical studies.	3	W05; U02; U03; U04; K02
TK06	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.	3	W05; U03; U04; U05; U08; K01; K02
TK07	Causation in epidemiology. Hill's criteria of causation.	3	W05; U02, U05
TK08	Screening. Sensitivity, specificity, predictive values, likelihood ratio.	3	W05; U02; U03; U08
TK09	Hospital hygiene. Preventive surveillance of infectious diseases, prevention strategies. Epidemiological investigation. Prophylaxis and health promotion. Prophylactic programs.	3	W02; W05; W06; W08; U07; K02
TK10	Basics of clinical epidemiology. The European cardiovascular disease risk assessment model: The SCORE risk charts. Critical evaluation of medical literature.	3	W10; U02; U05; U07; K03
	Practical classes		
TK01	Measures of health – calculation of indexes. Analytical studies: calculation and interpretation of measures of association.	2	U01; U02; U03; U04; U06; K02
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 reduction (RRR), odds ratio (OR). Calculation and interpretation of parameters of screening test. Written test.	3	U01; U02; U03; U04; U07; K02

Booklist
Obligatory literature:
1. Bonita, Ruth, Beaglehole, Robert, Kjellström, Tord & World Health Organization: Basic epidemiology, 2nd ed. World Health Organization 2006.
2. Roger Detels, Robert Beaglehole, Mary Ann Lansang, and Martin Gulliford (editors): Oxford Textbook of Public Health. Oxford University Press 2009.
Supplementary literature:
1. Ann Aschengrau, George R. Seage: Essentials of Epidemiology in Public Health. Jones & Bartlett Learning; 4th edition 2018.

Student's workload	
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 classess	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
ECTS credits for the subject (in total)	3
Remarks	

*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

RZC – 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