

Epidemiology

Educational subject description sheet

Basic information

Department Faculty of Medicine Field of study Medical Program Study level long-cycle master's degree program Study form full-time Education profile general academic Disciplines Medical science Subject related to scientific research Yes		Didactic cycle 2016/17 Realization year 2018/19 Lecture languages English Block obligatory for passing in the course of studies Mandatory obligatory Examination graded credit Standard group G. Law and organizational aspects of medicine
Subject coordinator	Aleksander Gałaś	
Lecturer	Aleksander Gałaś, Małgorzata Bała, Elżbieta Sochacka-Tatara, Katarzyna Zawisza, Katarzyna Szczerbińska, Dorota Mrożek-Budzyn, Renata Majewska, Agnieszka Pac	
Periods Semester 5, Semester 6	Examination graded credit Activities and hours seminar: 25	Number of ECTS points 2.0

Goals

C1	-to teach students about methods of the assessment of population health status, and to provide knowledge about modifiable and non-modifiable determinants of health
C2	-to provide knowledge about research methods to identify and/or confirm risk the role of risk factors in the disease prevalence
C3	-to disseminate knowledge about communicable disease epidemiology, including methods to identify communicable disease outbreaks, guidelines to control outbreaks and methods to prevent outbreak development and spread
C4	-to create awareness about issues related to epidemics of communicable and non-communicable disease
C5	-to provide students with up-to-date trends in epidemiology development, including the role of molecular epidemiology
C6	-to show the role of epidemiology in the preparation of recommendations

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge - Student knows and understands:			
W1	the identification and testing of risk factors, the advantages and disadvantages of different types of epidemiological studies and measures demonstrating the presence of cause and effect relationships	G.W2	written examination, test
W2	epidemiology of infectious and chronic diseases, ways of preventing their occurrence at various stages of the natural history of the disease and the role of epidemiological surveillance	G.W3	written examination, group assessment, test
W3	ethical, social and legal conditions for practicing the medical profession and the principles of health promotion, based on scientific evidence and accepted standards	O.W4	written examination, test
W4	methods of conducting scientific research	O.W5	written examination, group assessment, test
W5	legal regulations and basic methods of medical experimentation and other medical research, including basic methods of data analysis	G.W8	written examination, test
W6	methods of individual and population health assessment, different systems of disease classification and medical procedures	G.W1	written examination, group assessment, test
Skills - Student can:			
U1	plan own learning activities and constantly learn in order to update own knowledge	O.U5	classroom observation, group assessment
U2	inspire the learning process of others	O.U6	classroom observation, group assessment
U3	communicate and share knowledge with colleagues in a team	O.U8	classroom observation, group assessment
U4	critically evaluate the results of scientific research and adequately justify the position	O.U9	classroom observation, group assessment

U5	describe the demographic structure of the population, and based on that assess the health problems of the population	G.U1	written examination, classroom observation, group assessment
U6	collect information on the presence of risk factors for communicable and chronic diseases and plan prevention activities at different levels of prevention	G.U2	classroom observation, group assessment
U7	interpret the measures of the incidence of diseases and disabilities	G.U3	written examination, classroom observation, group assessment, test
U8	assess the epidemiological situation of diseases commonly found in the Republic of Poland and in the world	G.U4	classroom observation, group assessment
Social competences - Student is ready to:			
K1	promote health-promoting behaviors	O.K6	classroom observation, group assessment
K2	use objective sources of information	O.K7	classroom observation, group assessment
K3	formulate conclusions from own measurements or observations	O.K8	classroom observation, group assessment

Calculation of ECTS points

Activity form	Activity hours*
seminar	25
preparation for classes	15
preparation for examination	7
preparation of multimedia presentation	5
information collection	3
consultations with lecturer	2
kształcenie samodzielne	3
Student workload	Hours 60
Workload involving teacher	Hours 25

* hour means 45 minutes

Study content

No.	Course content	Subject's learning outcomes	Activities
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1.	The basics of demography. Demographic measures. The role of demography in epidemiology. Demographic determinants of disease prevalence.	W1, W2, U5, K2, K3	seminar
2.	Aims and tasks of epidemiology. The role of epidemiology in the assessment of risk factors responsible for health status of the populations and individuals. The assessment of prevalence and size health related outcomes in human populations. Methods of population health status diagnosis. Source of information. Descriptive epidemiology of non-communicable disease in Poland and worldwide. Communicable and non-communicable disease epidemics.	W2, U6, U7, U8, K2, K3	seminar
3.	Communicable disease epidemiology. Epidemiological process and epidemiological triangle. Types of epidemic. The rules to control communicable disease outbreak.	W1, W2, W6, U1, U6, U7, U8, K2, K3	seminar
4.	The rules and the roles of surveillance. The role of epidemiological research in communicable disease prevention. Epidemiology of hospital acquired infections.	W1, W2, W6, U1, U6, U7, U8, K2, K3	seminar
5.	Epidemiological investigation. The control of communicable disease outbreak in practice.	W1, W2, U1, U2, U3, U6, U7, K2, K3	seminar
6.	The strategy of research in epidemiology. The role of epidemiologic descriptive studies in hypothesis generating about disease etiology and to verify cause-effect relationship. Planning, realization and interpretation of results in case-control studies.	W1, W4, W5, W6, U1, U2, U4, U6, U7, K2, K3	seminar
7.	Planning, realization and interpretation of results in cohort studies. Randomized controlled trials in epidemiology and clinical medicine. Epidemiologic studies in disease of unknown origin.	W1, W4, W5, W6, U1, U2, U3, U4, U7, K2, K3	seminar
8.	Basics of molecular epidemiology. The role of molecular epidemiology in the disease risk assessment. The role of biomarkers.	W1, W3, U1, U6, K2, K3	seminar
9.	The role of epidemiology in the preparation of recommendations in the area of prevention and treatment.	W1, W2, W4, W6, U1, U2, U3, U4, U5, U6, U7, U8, K1, K2, K3	seminar

Course advanced

Teaching methods:

case study, brainstorm, classes / practicals, preclinical classes, discussion, lecture, problem solving method, case study method, presentation, group work, assignments solving, seminar, workshop

Activities	Examination methods	Credit conditions
seminar	written examination, classroom observation, group assessment, test	<p>The assessment of knowledge: based on the final exam. The cut-off criterion for the exam $\geq 50\%$. In a case if student failed any term of the final exam, he/she fails the course (grade: 2.0). The assessment of skills: based on: I. given presentation and discussion during the no 9 seminar - detailed criteria will be provided during the course, and II: written assignment about an investigation of communicable/or non-communicable disease outbreak – the assessment criteria: student should follow steps required in the investigation, correct identification of source, and should propose correct prevention measures (assessment scored in %, depending on the criteria fulfilment 0-100%). The skill part is passed if student receives $>50\%$ of the total score. The first term final exam is a MCQ test, 40 questions. The second term final exam is dated on the exam sessions for re-takers and consists of 5 (five) open questions. Answers for each question are scored from 0 to 5 points (with intervals of 0.5 pts) Final grade takes into account both, the skills and , the knowledge parts and is calculated as a weighting average (proportion 1:2 respectively) as a) The skills part being an average from I and II as aforementioned b) The knowledge part being the result from the final exam The final grading scheme: 50.0 - 59.9%:= satisfactory (3.0) 60.0 - 69.9%:= satisfactotry plus (3.5) 70.0 - 79.9%:= good (4.0) 80.0 - 89.0%:= good plus (4.5) 90.0 - 100%:= very good (5.0)</p>

Additional info

To be allowed to take the final exam student should fulfill the attendance criterion, meaning he/she should attend and actively participate in all of scheduled meetings (or make up for absence after the acceptance of the teacher responsible for the meeting). Student should also achieve $>50\%$ in the skills part. If the aforementioned criteria are not fulfilled student is not allowed to take the final exam and consequently the term is lost.

Student is obligated to come on time for course meetings. 2 lateness are allowed without punishment, otherwise student is committed to make up for one of the topic she/he has been late, the topic is drawn by the teacher.

Entry requirements

Attendance on the course is obligatory.

Literature

Obligatory

1. Charles H. Hennekens , Julie E. Buring. Epidemiology in Medicine. Publisher Lippincott Williams and Wilkins. ISBN10 0316356360, ISBN13 9780316356367

Optional

1. Kenneth J. Rothman, Sander Greenland and Timothy L. Lash. Modern Epidemiology. Published by Lippincott, Williams and Wilkins, Philadelphia, 3rd edition, 2012. ISBN-13:978-1-4511-9005-2, ISBN-10:1-4511-9005-0.

Standard effects

Code	Content
G.U1	describe the demographic structure of the population, and based on that assess the health problems of the population
G.U2	collect information on the presence of risk factors for communicable and chronic diseases and plan prevention activities at different levels of prevention
G.U3	interpret the measures of the incidence of diseases and disabilities
G.U4	assess the epidemiological situation of diseases commonly found in the Republic of Poland and in the world
G.W1	methods of individual and population health assessment, different systems of disease classification and medical procedures
G.W2	the identification and testing of risk factors, the advantages and disadvantages of different types of epidemiological studies and measures demonstrating the presence of cause and effect relationships
G.W3	epidemiology of infectious and chronic diseases, ways of preventing their occurrence at various stages of the natural history of the disease and the role of epidemiological surveillance
G.W8	legal regulations and basic methods of medical experimentation and other medical research, including basic methods of data analysis
O.K6	promote health-promoting behaviors
O.K7	use objective sources of information
O.K8	formulate conclusions from own measurements or observations
O.U5	plan own learning activities and constantly learn in order to update own knowledge
O.U6	inspire the learning process of others
O.U8	communicate and share knowledge with colleagues in a team
O.U9	critically evaluate the results of scientific research and adequately justify the position
O.W4	ethical, social and legal conditions for practicing the medical profession and the principles of health promotion, based on scientific evidence and accepted standards
O.W5	methods of conducting scientific research