Epidemiology

FACULTY	**Health Sciences**
DEPARTMENT	**NURSING**
LEVEL OF STUDIES	**UNDERGRADUATE**

CODE COURSE		SEMESTER OF STUDIES	
CODE COURSE	**0805.4.006.0**	**SEMESTER OF STUDIES**	**4th**
TITLE COURSE	**EPIDEMIOLOGY**		

SELF-ENDED TEACHING ACTIVITIES	TEACHING HOURS / WEEK	CREDIT UNITS
Theory	2	
Coaching school		
Laboratory		
Clinical exercise		
Total	2	3

COURSE TYPE:	**COMPULSORY**
PREREQUISITE COURSES:	**NO**
LANGUAGE OF TEACHING and EXAMINATIONS:	**Greek**
THE COURSE IS OFFERED TO ERASMUS STUDENTS:	**NO**
website COURSE	**https://eclass.hmu.gr/courses/NURS205/**

Learning results

After completing the course students will be able to:

• describe the subject of epidemiology and list its modern applications.
• analyze why diagnostic criteria and disease definitions are an important topic in epidemiology and describe the structure of the international classification of diseases.
• describe the epidemiological measures for the frequency of diseases and analyze which factors depend on which measure will be used in each case.
• explain the difference between mortality and death rate, analyze the content of the incidence rate and compare mortality rates with life expectancy.
• analyze why relative risk is a better comparison measure than difference in frequency measures.
• explain the importance of standardization for comparisons

• give examples of person, time and place in descriptive epidemiology, analyze the concept of epidemic.

- identify the difference between outbreaks and epidemics.
- explain why a negative result of a test with high sensitivity is more useful in the initial investigation of a disease.
- list the ethical limitations when conducting experimental research and explain the phases of clinical trials that must be completed before a new drug is approved for marketing.
- compare the disadvantages and advantages of surveys.
- explain when a patient-control study is chosen and when a cross-sectional study is chosen as an investigator design.

General Skills
Decision making, Autonomous work, Team work, Generating new research ideas, Project planning and management, Promoting free, creative and inductive thinking

Course content - Theory outline	
1st week	Introduction to epidemiology - Applications of epidemiology.
2nd week	Disease frequency measures I -prevalence (instantaneous and period).
3rd week	Measures of disease incidence II – incidence (cumulative incidence, incidence rate, relationship between prevalence and incidence, use of prevalence and incidence.
4th week	Absolute and relative measures of comparison, Direct and indirect sampling.
5th week	Descriptive epidemiology (patterns of disease occurrence according to characteristics of persons, place and time) – uses.
6th week	Epidemic outbreaks
7th week	Diagnostic test (Sensitivity and Specificity positive and negative predictive value of a test, ROC curves)
8th week	Introduction to clinical studies (research questions, sample size calculation, randomization) Experimental studies, observational studies, Contemporary and ecological research.
9th week	Experimental investigations
10th week	Cohort surveys (perspectives)
11th week	Case-Control Studies
12th week	Systematic error, confounding error, random error, hypothesis testing, and P values. estimation of confidence intervals.
13th week	Causality – epidemiological approach, ethics in human research.

TEACHING and LEARNING METHODS - EVALUATION	
TEACHING METHOD	Live teaching, use of power point software. Solving Exercises by students Presentation of data from representative types of modern epidemiological studies.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Electronic slide show. Use of the e-class electronic platform to store presentations in digital format for easy access by students. Simultaneously with the use of the same platform, frequent communication with students for actions related to the educational process.

TEACHING ORGANIZATION	Activity Semester Workload Lectures (total 13X2) Laboratory exercises Total Course: 90
STUDENT EVALUATION	**Theoretical part of the course** 60% from a written final exam. 40% from the midterm written assessment. The mid-term assessment may also include group assignments.

RECOMMENDED BIBLIOGRAPHY (INTO GREEK LANGIAGE)

1. Επιδημιολογία. Aschengrau A. Έκδοση: 1η έκδ./2011. Διαθέτης (Εκδότης): BROKEN HILL PUBLISHERS LTD. ISBN: 9789604891719.Κωδικός Βιβλίου στον Εύδοξο: 13256989
2. ΕΠΙΔΗΜΙΟΛΟΓΙΑ. LEON GORDIS. Έκδοση: 5/2016. Διαθέτης (Εκδότης): ΓΚΟΤΣΗΣ ΚΩΝ/ΝΟΣ & ΣΙΑ Ε.Ε. ISBN: 9789609427531.Κωδικός Βιβλίου στον Εύδοξο: 59362432
3. Ιατρική επιδημιολογία. Raymond S.Greenberg, Stephen R.Daniels,W.Dana Flanders,John William Eley, John R.Boring .έκδοση 4η 2011. Διαθέτης (Εκδότης): ΠΑΡΙΣΙΑΝΟΥ ΑΝΩΝΥΜΗ ΕΚΔΟΤΙΚΗ ΕΙΣΑΓΩΓΙΚΗ ΕΜΠΟΡΙΚΗ ΕΤΑΙΡΙΑ ΕΠΙΣΤΗΜΟΝΙΚΩΝ ΒΙΒΛΙΩΝ. ISBN: 978-960-394-855-1. Κωδικός Βιβλίου στον Εύδοξο: 12840486
4. Γενική και Κλινική Επιδημιολογία. Δ. ΤΡΙΧΟΠΟΥΛΟΣ, Π.Δ. ΛΑΓΙΟΥ. Έκδοση: 2η/2011. Διαθέτης (Εκδότης): ΠΑΡΙΣΙΑΝΟΥ ΑΝΩΝΥΜΗ ΕΚΔΟΤΙΚΗ ΕΙΣΑΓΩΓΙΚΗ ΕΜΠΟΡΙΚΗ ΕΤΑΙΡΙΑ ΕΠΙΣΤΗΜΟΝΙΚΩΝ ΒΙΒΛΙΩΝ. ISBN: 978-960-394-727-1. Κωδικός Βιβλίου στον Εύδοξο: 12537351