

COURSE OUTLINE “Biostatistics-Epidemiology”

GENERAL

SCHOOL	School of Health Sciences		
ACADEMIC UNIT	Faculty of Medicine		
LEVEL OF STUDIES	Postgraduate		
COURSE CODE	BBE-103	SEMESTER	A'
COURSE TITLE	Biostatistics-Epidemiology		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	WEEKLY TEACHING HOURS	CREDITS	
Lectures & Workshops	3 2 5	7	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (4).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	General Background		
PREREQUISITE COURSES:	NO		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS			
COURSE WEBSITE (URL)			

LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i> 																			
<ul style="list-style-type: none"> • Be critical consumers of the public health and medical literature. • Be able to interpret descriptive epidemiologic results in order to develop hypotheses about possible risk factors for a disease. • Be able to design valid and efficient studies to address public health and clinical problems. • Be comfortable with statistical methods for calculating summary estimates, measures of variability, and confidence intervals. 																			
<p>General Competences</p> <p><i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p> <table border="0"> <tr> <td><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td><i>Project planning and management</i></td> </tr> <tr> <td><i>Adapting to new situations</i></td> <td><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td><i>Decision-making</i></td> <td><i>Respect for the natural environment</i></td> </tr> <tr> <td><i>Working independently</i></td> <td><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td><i>Team work</i></td> <td><i>Criticism and self-criticism</i></td> </tr> <tr> <td><i>Working in an international environment</i></td> <td><i>Production of free, creative and inductive thinking</i></td> </tr> <tr> <td><i>Working in an interdisciplinary environment</i></td> <td><i>.....</i></td> </tr> <tr> <td><i>Production of new research ideas</i></td> <td><i>Others...</i></td> </tr> <tr> <td></td> <td><i>.....</i></td> </tr> </table>		<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>	<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>	<i>Team work</i>	<i>Criticism and self-criticism</i>	<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>	<i>Working in an interdisciplinary environment</i>	<i>.....</i>	<i>Production of new research ideas</i>	<i>Others...</i>		<i>.....</i>
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SYLLABUS

Biostatistics

1. Type of variables
2. Probability
3. Descriptive statistics
4. Probability distributions
5. Correlation and linear regression
6. Comparison of continuous variables
7. Comparison of categorical variables
8. Logistic regression
9. Survival analysis
10. Analysis of diagnostic research data
11. Special topics in data analysis

Epidemiology

1. Measures of disease frequency
2. Measures of association
3. Study designs
4. Systematic errors
5. Literature search
6. Effect modification
7. Therapeutic interventions
8. Vaccines and epidemics
9. Diagnostic research
10. Systematic review and meta-analysis
11. SARS CoV 2 infection

TEACHING and LEARNING METHODS - EVALUATION

<p>DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	Face-to-face															
<p>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	Yes															
<p>TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i></p> <p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<table border="1"> <thead> <tr> <th data-bbox="676 497 1011 584">Activity</th> <th data-bbox="1016 497 1337 584">Workload of each students group (two groups per semester)</th> </tr> </thead> <tbody> <tr> <td data-bbox="676 591 1011 622">Lectures</td> <td data-bbox="1016 591 1337 622">42</td> </tr> <tr> <td data-bbox="676 629 1011 660">Seminars</td> <td data-bbox="1016 629 1337 660">10</td> </tr> <tr> <td data-bbox="676 667 1011 698">Workshops</td> <td data-bbox="1016 667 1337 698">12</td> </tr> <tr> <td data-bbox="676 705 1011 736">bibliography</td> <td data-bbox="1016 705 1337 736">21</td> </tr> <tr> <td data-bbox="676 743 1011 775">Self-study</td> <td data-bbox="1016 743 1337 775">90</td> </tr> <tr> <td data-bbox="676 781 1011 813">Total</td> <td data-bbox="1016 781 1337 813">175</td> </tr> </tbody> </table>		Activity	Workload of each students group (two groups per semester)	Lectures	42	Seminars	10	Workshops	12	bibliography	21	Self-study	90	Total	175
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<p>STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>Language of evaluation: Greek.</p> <p>Methods of evaluation: summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving.</p> <p>Specifically-defined evaluation criteria given: Yes (Explanatory note in the summative evaluation document)</p>															

ATTACHED BIBLIOGRAPHY

Epidemiology: An Introduction, Kenneth J. Rothman Oxford University Press, 2012

Bonita R, Beaglehole R, Kjellstrom T. Basic epidemiology. 2nd edition. Geneva: World Health Organization, 2006. [Full text also here.](#)

Basic Statistics and Epidemiology: A Practical Guide, Antony Stewart Radcliffe Publishing, 2010

Clinical Epidemiology: How to Do Clinical Practice Research, R. Brian Haynes Lippincott Williams & Wilkins, 2012