UNIVERSITY OF THESSALY
SCHOOL OF HEALTH SCIENCES
FACULTY OF MEDICINE

MSc in Public Health and Epidemiology.
Streams: (1) Public Health and Applied Epidemiology (2) Public Health and Maritime Transport

MODULE SPECIFICATION

Content

1 Semester 1 Module Specification - Streams 1 & 2

1.1 Principles in epidemiology and social research

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES		
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY		
STUDY LEVEL	MASTER		
MODULE CODE	**1.1**	**SEMESTER**	**1 (Streams 1 & 2)**
MODULE TITLE	Principles in epidemiology and social research		
TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
Lectures and workshops		3	12
MODULE TYPE	Background, general knowledge, skills development		
PRE-REQUIRED MODULE	NO		
LANGUAGE OF TEACHING AND EXAMS	ENGLISH		
AVAILABLE TO ERASMUS STUDENTS	YES		
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5		

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Identify research study designs by considering advantages and disadvantages of different types of study designs • Outline key principles that should be considered when designing, conducting and interpreting epidemiological studies • Define, calculate and interpret epidemiological indicators, bias, and confounders when interpreting epidemiological studies • Apply epidemiological principles when determining the prevalence of disease in a population • Explain concepts and applications of epidemiology and social research in understanding public health • Perform critical reviews of published study results • Describe the principles of ethics in research
General abilities
• Research, analysis and synthesis of data and information, using necessary technologies • Decision-making • Working in an international environment • Working in an interdisciplinary environment • Production of new research ideas

(3) MODULE CONTENT

1.1.1	Concepts and applications of epidemiology
1.1.2	Planning social science research (science, social science, framing a research question and research design)
1.1.3	Qualitative methods of data collection and analysis (qualitative research methods, interviewing, focus groups and other techniques, analysing qualitative data)
1.1.4	Epidemiological measures of health and disease: frequency, associations and impact
1.1.5	Cross-sectional studies: measurement and quantitative methods (questionnaire design, using surveys in cross-sectional research designs)
1.1.6	Ecological studies
1.1.7	Cohort studies
1.1.8	Case-control studies
1.1.9	Intervention studies
1.1.10	Interpretation of epidemiological study results (confounding and effect modification, causation, performing paper critiques)
1.1.11	Screening and diagnostic tests
1.1.12	Principles of ethics in research

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments. • Announcements, information for students and support are available online through the MSc programme's website. • Communication is conducted via e-mail. • Feedback is provided via email to all students in the virtual class as well as individually
TEACHING METHODS	

Learning activity	***Total semester workload (hours)***
Lectures	26
Assignment preparation	48
Exercises	11
Workshops/seminars/Q&A	2
Guided study hours	169
Non-guided study hours	102
SUM	**358**

STUDENT EVALUATION: Description of evaluation process	**Assessment language:** English **Assessment methods:**

Assessment type	Assessment length	Weighting (%)	Intended module learning outcomes tested
Online final written exam with a combination of multiple choice, short answer questions and problem solving	2 hours	60	All
Written individual assignment	1200 words	40	All

(5) RESOURCES

A. Self – study materials

Principles of epidemiology in public health practice; an introduction to applied epidemiology and biostatistics. 3rd ed. URL: https://stacks.cdc.gov/view/cdc/6914

B. Additional resources – reading and e-learning

- Bailey, L., et al., Introduction to Epidemiology. 2005: McGraw-Hill Education.
- Webb, P., Bain, C., & Page, A. (2019). Essential Epidemiology: An Introduction for Students and Health Professionals (4th ed.). Cambridge: Cambridge University Press. doi:10.1017/9781108766784
- Durand and Chantler (2014) Principles of Social Research, 2nd Edition. Open University
- Bernard, H. R. (2012). Social Research Methods: Qualitative and Quantitative Approaches. SAGE Publications
- Porta, M. (Ed.). A Dictionary of Epidemiology. Oxford University Press, 2014.

C. Additional resources – movies and documentaries

- Movie: "SNOW. Epidemiology begins": http://www.snowthemovie.com/index.html
- Short documentary by Harvard online: John Snow and the 1854 Broad Street cholera outbreak https://youtu.be/lNjrAXGRda4?si=I7ENSRqW5IjLHfaB

D. Relevant scientific journals

- Morbidity and Mortality Weekly Report
- Eurosurveillance
- European Journal of Epidemiology
- Emerging Infectious Diseases
- International Journal of Epidemiology
- Journal of Clinical Epidemiology
- Journal of Epidemiology and Community Health
- Journal of Epidemiology and Global Health
- American Journal of Preventive Medicine
- Clinical Epidemiology
- Annals of Epidemiology
- Epidemiology
- Journal of Epidemiology
- Epidemiology and health

1.2 Statistics for public health

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES			
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY			
STUDY LEVEL	MASTER			
MODULE CODE	**1.2**	**SEMESTER**	**1 (Streams 1 & 2)**	
MODULE TITLE	Statistics for public health			
	TEACHING ACTIVITIES	**TEACHING HOURS**	**ECTS CREDITS**	
	Lectures and workshops	3	8	
MODULE TYPE	Background, general knowledge, skills development			
PRE-REQUIRED MODULE	NO			
LANGUAGE OF TEACHING AND EXAMS	ENGLISH			
AVAILABLE TO ERASMUS STUDENTS	YES			
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5			

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Understand and compute the descriptive statistical measures that appear in medical scientific articles • Define how statistical methods are used in public health research • Conduct statistical analysis of simple datasets, using the appropriate statistical method • Communicate statistical analysis results, by presenting data in tables and figures • Understand the concept of sampling variation and the statistical methods used to quantify it • Interpret the findings of statistical analyses reported in the health literature • Conduct basic statistical analyses using Jamovi
General abilities
• Research, analysis and synthesis of data and information, using the necessary technologies • Working in an international environment • Generation of new research ideas

(3) MODULE CONTENT

1.2.1	Introduction to statistics and public health and introduction to Jamovi
1.2.2	Types of data, summary, and data presentation with practice in Jamovi
1.2.3	Probability and the normal distribution with practice in Jamovi
1.2.4	Sampling
1.2.5	Principles of statistical inference
1.2.6	Inference for numerical data: 2 and more samples with practice in Jamovi
1.2.7	Inference for categorical data with practice in Jamovi

1.2.8	Inference for categorical data II
1.2.9	Correlation and regression with practice in Jamovi
1.2.10	Multi-variable methods I with practice in Jamovi
1.2.11	Summary of the study unit
1.2.12	Practice with datasets in Jamovi

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments • Announcements, information for students and support are available online through the MSc programme's website. • Communication is conducted via e-mail. • Feedback is provided via email to all students in the virtual class as well as individually

TEACHING METHODS

Learning activity	*Total semester workload (hours)*
Lectures	24
Assignment preparation	48
Exercises	12
Workshops/Seminars/Q&A	2
Guided study hours	110
Non-guided study hours	42
SUM	**238**

STUDENT EVALUATION: Description of evaluation process

Assessment language: English

Assessment methods:

• Weekly quizzes, with multiple choice questions
• Assessment based on comments submitted by each student in online discussion fora
• Final exams with multiple choice questions

Assessment type	Assessment length	Weighting (%)	Intended module learning outcomes tested
Online final written exam with a combination of multiple choice, short answer questions and problem solving	2 hours	100	All

(5) RESOURCES

A. Self – study materials

Konstantinos I. Bougioukas. Introduction to Medical Statistics with Jamovi. 1st Edition. Thessaloniki 2022. https://bougioukas-medstatsjamovi.netlify.app/

B. Additional resources – reading and e-learning

- Jamovi: https://www.jamovi.org/
- Medical Statistics at a Glance by Aviva Petrie & Caroline Sabin [4th edition], published by Blackwell.
- Essentials of Medical Statistics by Betty Kirkwood & Jonathan Sterne [2nd edition], published by Blackwell.
- An introduction to Medical Statistics by Martin Bland, published by Oxford University Press.
- Epi Info™ URL: https://www.cdc.gov/epiinfo/index.html

C. Additional resources – movies and documentaries

D. Relevant scientific journals

- Morbidity and Mortality Weekly Report
- Eurosurveillance
- European Journal of Epidemiology
- Emerging Infectious Diseases
- International Journal of Epidemiology
- Journal of Clinical Epidemiology
- Journal of Epidemiology and Community Health
- Journal of Epidemiology and Global Health
- American Journal of Preventive Medicine
- Clinical Epidemiology
- Annals of Epidemiology
- Epidemiology
- Journal of Epidemiology
- Epidemiology and health

1.3 Management of Health Services

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES		
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY		
STUDY LEVEL	MASTER		
MODULE CODE	**1.3**	**SEMESTER**	**1 (Streams 1 & 2)**
MODULE TITLE	Management of Health Services		
TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
Lectures and workshops		3	10
MODULE TYPE	Background, general knowledge, skills development		

PRE-REQUIRED MODULE	NO
LANGUAGE OF TEACHING AND EXAMS	ENGLISH
AVAILABLE TO ERASMUS STUDENTS	YES
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Describe disease prevention strategies; • Describe theories and concepts related to the health policy framework focusing in environmental and global health policy • Describe the context of health services and management in health services provision; • Define and analyse the key functions involved in funding and purchasing health services; • Describe the management and development of people in health services, and human resources management; • Apply the principles of performance management and methods for measurement, assessment and improvement of performance and quality; and • Review strategies for managing change in the health context and discuss the nature of leadership and issues of power and culture.
General abilities
• Research, analysis and synthesis of data and information, using the necessary technologies • Working in an international environment • Generation of new research ideas

(3) MODULE CONTENT

1.3.1	Disease prevention strategies
1.3.2	Health systems and services
1.3.3	Politics and health policy
1.3.4	Environmental health policy
1.3.5	Global health policy
1.3.6	Research and policy making
1.3.7	Health services management - The leadership role of managers
1.3.8	Financing health care, healthcare insurance and the government's role in healthcare
1.3.9	Human Resources Management
1.3.10	Performance evaluation
1.3.11	Change management
1.3.12	Evaluation of public health interventions

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and the provision of supplementary learning material to students. In particular:

<table>
<tr><td>COMMUNICATION TECHNOLOGIES</td><td>

Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos.
The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform.
Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/
Software (e.g., MS Excel) is used to statistically process student assessments.
Announcements, information for students and support are available online through the MSc website.
Communication is conducted via e-mail.
Feedback is provided via email to all students in the virtual class as well as individually

</td></tr>
<tr><td>TEACHING METHODS</td><td>
<table>
<tr><th>Learning activity</th><th>Total semester workload (hours)</th></tr>
<tr><td>Lectures</td><td>24</td></tr>
<tr><td>Workshops/Seminars/Q&A</td><td>2</td></tr>
<tr><td>Guided study hours</td><td>182</td></tr>
<tr><td>Non-guided study hours</td><td>90</td></tr>
<tr><td>SUM</td><td>298</td></tr>
</table>
</td></tr>
<tr><td>STUDENT EVALUATION: Description of evaluation process</td><td>
Assessment language: English
Assessment methods:
<table>
<tr><th>Assessment type</th><th>Assessment length</th><th>Weighting (%)</th><th>Intended module learning outcomes tested</th></tr>
<tr><td>Online final written exam with a combination of multiple choice, short answer questions and problem solving</td><td>2 hours</td><td>100</td><td>All</td></tr>
</table>
</td></tr>
</table>

(5) RESOURCES

A. Self – study materials

Managing Health Services by Nick Goodwin, Reinhold Gruen and Valerie Iles. McGraw-Hill Education (UK), 2005. Open University Press https://books.google.gr/books?id=UwyYCgiZXmsC&printsec=copyright&hl=el#v=onepage&q&f=false

B. Additional resources – reading and e-learning

C. Additional resources – movies and documentaries

D. Relevant scientific journals

- *Globalization and Health*
- *BMJ Global Health*
- *Milbank Quarterly*
- *American Journal of Infection Control*

- *International Journal for Equity in Health*
- *Diagnosis*
- *Biosafety and Health*
- *Journal of Global Health*
- *Journal of Transport and Health*
- *Preventing chronic disease*
- *Public Health Research and Practice*
- *Journal of Health Economics*
- *Journal of Public Health Policy*
- *Perspectives on Sexual and Reproductive Health*
- *International Journal of COPD*
- *Journal of Evaluation in Clinical Practice*
- *Journal of Occupational Medicine and Toxicology*
- *Statistical Methods in Medical Research*
- *American Journal of Biological Anthropology*
- *Clinical Social Work Journal*
- *Community Dentistry and Oral Epidemiology*
- *Global Health Action*

2 Semester 2 Module Specification - Streams 1 & 2

2.1 Environment and health, principles of occupational health

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES			
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY			
STUDY LEVEL	MASTER			
MODULE CODE	**2.1**	**SEMESTER**	**2 (Streams 1 & 2)**	
MODULE TITLE	Environment and health, principles of occupational health			
	TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
	Lectures and workshops		4	14
MODULE TYPE	Background, general knowledge, skills development			
PRE-REQUIRED MODULE	NO			
LANGUAGE OF TEACHING AND EXAMS	ENGLISH			
AVAILABLE TO ERASMUS STUDENTS	YES			
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5			

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to:

- To provide the currently available knowledge and information regarding the environmental hazards affecting health, including chemical hazards, water contamination, poor hygiene, air pollution, transport, waste management, or disasters
- To shed light on the interaction between health, exposures (environmental/ occupational) and sustainable development. In this context, to discuss the role of equity and sustainability in environmental health risk management
- To discuss policy actions, exploring also how environmental issues are addressed in today's health practice
- To describe the most common diseases affecting workers in different occupational environments, and factors associated with the occurrence of disease
- To present the essential elements of the Health and Safety at Work Act (HASAWA) 1974, and the responsibilities of workers, managers, and employers
- To explain the major aspects of recognition, evaluation and control/ prevention phases of an Occupational Health and Safety (OH&S) program

General abilities

- Research, analysis and synthesis of data and information, using the necessary technologies
- Decision-making
- Working in an international environment
- Working in an interdisciplinary environment
- Generation of new research ideas

(3) MODULE CONTENT

2.1.1 The impact of the environment on people and their health, and the impact of human actions on the environment
2.1.2 The concepts of environment, health and sustainable development, and frameworks for assessing how the environment, health and sustainable development relate to each other
2.1.3 An exploration of the environmental hazards affecting health: air pollution, chemicals, water and sanitation, waste
2.1.4 An exploration of the environmental hazards affecting health: the natural environment, the built environment and transport
2.1.5 An exploration of the environmental hazards affecting health: disasters and climate change
2.1.6 One Health: ecosystems, humans and animals
2.1.7 Introduction, occupational epidemiology and exposure assessment, occupational safety and ergonomics
2.1.8 Physical, chemical and biological hazards at work and risk assessment
2.1.9 Occupational injuries, musculoskeletal disorders and occupational diseases
2.1.10 Hazard control
2.1.11 Health protection, health promotion, and disease prevention in the workplace
2.1.12 Stress and psychological factors

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)

<table>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</td><td>Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular:
Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos.
The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform.
Information about the course, module and instructors are available through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/
Software (e.g., MS Excel) is used to statistically process student assessments.
Announcements, information for students and support are available online through the MSc programme's website.
Communication is conducted via e-mail.
Feedback is provided via email to all students in the virtual class as well as individually</td></tr>
<tr><td>TEACHING METHODS</td><td><table><tr><th>Learning activity</th><th>Total semester workload (hours)</th></tr><tr><td>Lectures</td><td>36</td></tr><tr><td>Assignment preparation</td><td>40</td></tr><tr><td>Exercises</td><td>12</td></tr><tr><td>Workshops/Seminars/Q&A</td><td>2</td></tr><tr><td>Guided study hours</td><td>218</td></tr><tr><td>Non-guided study hours</td><td>110</td></tr><tr><td>SUM</td><td>418</td></tr></table></td></tr>
<tr><td>STUDENT EVALUATION: Description of evaluation process</td><td>Assessment language: English<table><tr><th>Assessment type</th><th>Assessment length</th><th>Weighting (%)</th><th>Intended module learning outcomes tested</th></tr><tr><td>Online final written exam with a combination of multiple choice, short answer questions and problem solving</td><td>2 hours</td><td>60</td><td>All</td></tr><tr><td>Written individual assignment</td><td>1200 words</td><td>40</td><td>2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.5, 2.1.6</td></tr></table></td></tr>
</table>

(5) RESOURCES

A. Self – study materials

Luigi Vimercati, Antonio Caputi, Luigi De Maria, Stefania Sponselli. **Insights in occupational health and safety: 2022.** Frontiers Media SA

e-book available here: https://www.frontiersin.org/books/Occupational_Health_and_Safety

B. Additional - reading and e-learning

- US CDC Environmental Public Health Online Courses (EPHOC). 2023. URL: https://www.cdc.gov/nceh/ehs/elearn/ephoc.htm#print
- Oxford Handbook of Occupational Health. Third Edition. 2022. URL: https://global.oup.com/academic/product/oxford-handbook-of-occupational-health-3e-9780198849803?cc=gr&lang=en&
- Frontiers in Environmental Health Journal, Research topics. URL: https://www.frontiersin.org/journals/environmental-health/research-topics

C. Additional resources – movies and documentaries

D. Relevant scientific journals

- Environmental Sciences: Processes and Impacts
- Indoor Air
- Environmental Health and Preventive Medicine
- One Health
- Occupational and Environmental Medicine
- Journal of Rural Health
- Preventive Medicine
- Public Health
- Journal of Public Health
- BMC Public Health
- International Journal of Industrial Ergonomics
- Food Production, Processing and Nutrition
- International Journal of Environmental Health Research
- Journal of Health and Pollution
- European Journal of Public Health
- Indoor and Built Environment
- Public Health Nutrition
- Journal of Environmental Health Science and Engineering
- International Journal of Environmental Research and Public Health
- Food and Nutrition Research
- Drug and Chemical Toxicology
- Disaster Medicine and Public Health Preparedness
- Environmental Epidemiology
- International Archives of Occupational and Environmental Health
- Journal of Preventive Medicine and Public Health
- Injury Prevention
- International Journal of Public Health

2.2 Health promotion and risk communication

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES			
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY			
STUDY LEVEL	MASTER			
MODULE CODE	**2.2**	**SEMESTER**	**2 (Streams 1&2)**	
MODULE TITLE	Health promotion and risk communication			
	TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
	Lectures and workshops		3	8
MODULE TYPE	Background, general knowledge, skills development			
PREREQUIRED MODULE	NO			
LANGUAGE OF TEACHING AND EXAMS	ENGLISH			
AVAILABLE TO ERASMUS STUDENTS	YES			
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5			

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Provide examples of different health promotion methods, and describe situations in which they may be used • Describe how various health promotion strategies can be used to reach individuals, communities, or entire populations • Critically analyze the development of multi-method health promotion programs • Describe important phases of designing, implementing and evaluating interventions for health promotion, and provide examples. • Critically analyze current debates in health promotion practice, considering their understanding of existing health promotion interventions.
General abilities
• Research, analysis and synthesis of data and information, using the necessary technologies • Decision-making • Working in an international environment • Working in an interdisciplinary environment • Generation of new research ideas

(3) MODULE CONTENT

2.2.1	Risk communication and health promotion
2.2.2	Basic principles and methods in health promotion

2.2.3	Basic principles and methods in risk communication
2.2.4	Guiding behaviour change in standard and emergency circumstances
2.2.5	Communicating risk in comprehensive health promotion programs
2.2.6	Behavioural and cultural insights for infection control
2.2.7	Evidence-based health promotion
2.2.8	WHO and international initiatives
2.2.9	Risk communication and health promotion for the travelling individuals and people on the move
2.2.10	Pandemics public health emergencies and risk communication lessons learned
2.2.11	Risk communication and health promotion in multinational groups
2.2.12	New technologies and risk communication

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and the provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments. • Announcements, information for students and support are available online through the MSc programme's website. • Communication is conducted via e-mail. • Feedback is provided via email to all students as well as individually
TEACHING METHODS	

Learning activity	Total semester workload (hours)
Lectures	24
Exercises	12
Workshops/seminars/Q&A session	2
Guided study hours	140
Non-guided study hours	60
SUM	238

STUDENT EVALUATION: Description of evaluation process

Assessment language: English

Assessment type	Assessment length	Weighting (%)	Intended module learning outcomes tested
Online final written exam with a combination of multiple choice, short	2 hours	100	All

	answer questions and problem solving			

(5) RESOURCES

A. Self – study materials

Health Promotion Practice, 2nd Edition, 0335264069 · 9780335264063, By Will Nutland, Liza Cragg, © 2015 | Published: May 16, 2015

A. Additional resources – reading and e-learning

- ECDC Training in qualitative research methods for disease prevention and control. URL: https://eva.ecdc.europa.eu/blocks/configurable_reports/viewreport.php?id=318

B. Addressing Online Vaccination Misinformation e-Learning. ECDC Virtual Academy (EVA). URL: https://eva.ecdc.europa.eu/enrol/index.php?id=659

C. Additional resources – movies and documentaries

D. Relevant scientific journals

- Health Promotion Perspectives
- Health Promotion International
- American Journal of Health Promotion
- Health Promotion Perspectives

2.3 Issues in public Health

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES			
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY			
STUDY LEVEL	MASTER			
MODULE CODE	**2.3**	**SEMESTER**	**2 (Streams 1 & 2)**	
MODULE TITLE	Issues in public health			
	TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
	Lectures and workshops		3	8
MODULE TYPE	Background, general knowledge, skills development			
PRE-REQUIRED MODULE	NO			
LANGUAGE OF TEACHING AND EXAMS	ENGLISH			

AVAILABLE TO ERASMUS STUDENTS	YES
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Describe the background that public health initiatives are based on, how it has changed over time, and how to use it to inform health policies • Explain how public health strategies make use of measurements of population health patterns and disease burden • Evaluate the effects of other sectors' policies on health • Recommend essential changes to current public health problems such as tobacco use, obesity, climate change, conflicts, and the evolving nature of infectious diseases • Describe health inequities including their causes, with examples, and suggest ways to mitigate them. • Discuss the main health risks and how they affect different populations, using examples from high-, middle- and low-income nations.
General abilities
• Research, analysis and synthesis of data and information, using the necessary technologies • Decision-making • Working in an international environment • Working in an interdisciplinary environment • Generation of new research ideas

(3) MODULE CONTENT

2.3.1 The emergence of public health
2.3.2 Data on populations and mortality
2.3.3 Understanding the burden of diseases
2.3.4 Global health
2.3.5 Inequalities in health
2.3.6 The impact of primary health care on populations
2.3.7 Determinants of health and disease
2.3.8 Economics and health economics
2.3.9 Health financing and economic evaluation
2.3.10 Tobacco use; food, trade and health; drains, dustbins and diseases
2.3.11 The changing nature of infectious disease
2.3.12 Principles of screening

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)

<table>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</td><td>Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and the provision of supplementary learning material to students. In particular:
Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos.
The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform.
Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/
Software (e.g., MS Excel) is used to statistically process student assessments.
Announcements, information for students and support are available online through the MSc programme's website.
Communication is conducted via e-mail.
Feedback is provided via email to all students in the virtual class as well as individually</td></tr>
<tr><td>TEACHING METHODS</td><td><table><tr><th>Learning activity</th><th>Total semester workload (hours)</th></tr><tr><td>Lectures</td><td>24</td></tr><tr><td>Exercises</td><td>12</td></tr><tr><td>Workshops/seminars/Q&A session</td><td>2</td></tr><tr><td>Guided study hours</td><td>140</td></tr><tr><td>Non-guided study hours</td><td>60</td></tr><tr><td>SUM</td><td>238</td></tr></table></td></tr>
<tr><td>STUDENT EVALUATION: Description of evaluation process</td><td>Assessment language: English<table><tr><th>Assessment type</th><th>Assessment length</th><th>Weighting (%)</th><th>Intended module learning outcomes tested</th></tr><tr><td>Online final written exam with a combination of multiple choice, short answer questions and problem solving</td><td>2 hours</td><td>100</td><td>All</td></tr></table></td></tr>
</table>

(5) RESOURCES

A. Self – study materials

Issues in Public Health: Challenges for the 21st Century (third edition) edited by Martin McKee and Alison Krentel.

B. Additional resources – reading and e-learning

C. Additional resources – movies and documentaries

D. Relevant scientific journals

- Preventive Medicine
- Public Health
- Journal of Public Health
- BMC Public Health
- One Health
- Journal of Rural Health
- Food Production, Processing and Nutrition
- International Journal of Environmental Health Research
- Journal of Health and Pollution
- European Journal of Public Health
- Public Health Nutrition
- International Journal of Environmental Research and Public Health
- Disaster Medicine and Public Health Preparedness
- Environmental Epidemiology
- Journal of Preventive Medicine and Public Health
- International Journal of Public Health

3 Semester 3 Module Specification

3.1 Stream 1 Public Health and Applied Epidemiology

3.1.1 Epidemiology and prevention of infectious diseases

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES		
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY		
STUDY LEVEL	MASTER		
MODULE CODE	**3.1.1**	**SEMESTER**	**3 (Stream 1)**
MODULE TITLE	Epidemiology and prevention of infectious diseases		
TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
Lectures and workshops		3	10
MODULE TYPE	Background, general knowledge, skills development		
PRE-REQUIRED MODULE	NO		
LANGUAGE OF TEACHING AND EXAMS	ENGLISH		
AVAILABLE TO ERASMUS STUDENTS	YES		
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5		

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Describe key ideas, definitions and epidemiological indicators that are used to describe frequency, distribution and transmissibility of infectious diseases, as well as how these measurements are actually calculated • Develop a plan, conduct, examine and report on an outbreak investigation • Describe the basic ideas behind the use of epidemiological data in simple mathematical models of infectious diseases • Describe metrics used to assess the effectiveness of vaccines and variables affecting the effectiveness of various vaccination approaches • Using examples from high-, middle- and low-income countries, discuss key aspects of the epidemiology and management of infectious diseases of global importance such as: COVID-19 and other emerging infections, malaria, TB, and HIV
General abilities
• Research, analysis and synthesis of data and information, using the necessary technologies • Decision-making • Working in an international environment • Working in an interdisciplinary environment

- Generation of new research ideas

(3) MODULE CONTENT

3.1.1.1 Epidemiological surveillance (principles, implementation, examples)
3.1.1.2 Outbreaks and epidemiological investigation, analytical approaches
3.1.1.3 Vaccines (assessing need for immunization, evaluation of new vaccines, delivery of immunization programmes, efficacy, effectiveness, surveillance of vaccination programmes, role of mass media)
3.1.1.4 Norovirus gastroenteritis
3.1.1.5 Legionnaires' disease
3.1.1.6 Vaccine preventable diseases (varicella, rubella, measles, mumps, diphtheria, pertussis)
3.1.1.7 COVID-19
3.1.1.8 Influenza and other respiratory viruses
3.1.1.9 Vector-borne diseases (malaria, Zika virus disease, yellow fever, dengue fever)
3.1.1.10 Foodborne and waterborne diseases
3.1.1.11 Tuberculosis and hepatitis viruses
3.1.1.12 HIV and sexually transmitted diseases

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and the provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments. • Announcements, information for students and support are available online through the MSc programme's website. • Communication is conducted via e-mail. • Feedback is provided via email to all students as well as individually
TEACHING METHODS	

Learning activity	*Total semester workload (hours)*
Lectures	26
Exercises	12
Workshops/Seminars/Q&A	2
Guided study hours	168
Non-guided study hours	90
SUM	**298**

STUDENT EVALUATION: Description of evaluation process	**Assessment language:** English

Assessment type	Assessment length	Weighting (%)	Intended module learning outcomes tested
Online final written exam with a combination of multiple choice, short answer questions and problem solving	2 hours	100	All

(5) RESOURCES

A. Self – study materials

- Noah, N. Controlling Communicable Disease. Maidenhead: Open University Press; 2009.

B. Additional - reading and e-learning

- Cragg, L, Nutland, W, Rudge, J. Applied Communicable Disease Control. 2018
- Nelson, KE, Williams, CM. Infectious Disease Epidemiology: Theory & Practice. Sudbury, MA: Jones & Bartlett; 2007.
- Heymann, DL (Ed). Control of Communicable Diseases Manual 19th Ed. American Public Health Association: Washington, DC; 2008.

C. Additional resources – movies and documentaries

D. Relevant scientific journals

- Morbidity and Mortality Weekly Report
- Eurosurveillance
- Emerging Microbes and Infections
- European Journal of Epidemiology
- The Lancet HIV
- Travel Medicine and Infectious Disease
- Emerging Infectious Diseases
- Infectious Diseases of Poverty
- International Journal of Epidemiology
- Journal of Infection and Public Health
- Influenza and other Respiratory Viruses
- Preventive Medicine
- Epidemiology
- Journal of Epidemiology

3.1.2 Epidemiology and prevention of chronic diseases

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES			
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY			
STUDY LEVEL	MASTER			
MODULE CODE	**3.1.2**	**SEMESTER**	**3 (Stream 1)**	
MODULE TITLE	Epidemiology and prevention of chronic diseases			
	TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
	Lectures and workshops		2	6
MODULE TYPE	Background, general knowledge, skills development			
PRE-REQUIRED MODULE	NO			
LANGUAGE OF TEACHING AND EXAMS	ENGLISH			
AVAILABLE TO ERASMUS STUDENTS	YES			
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5			

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Describe how the burden of chronic diseases monitoring is implemented, and how risk factors can be considered in prevention policies • Appraise methods for measuring the burden of chronic diseases • Analyse the needs and ability of the health system to combat and manage global chronic conditions • Describe how health economics can be applied to the policymaking process, from risk factor modelling to the evaluation of prevention strategies • Examine the effectiveness of policies for prevention of chronic diseases at various levels.
General abilities
• Research, analysis and synthesis of data and information, using the necessary technologies • Decision-making • Working in an international environment • Working in an interdisciplinary environment • Generation'of new research ideas

(3) MODULE CONTENT

3.1.2.1 Epidemiology and prevention of chronic diseases: basic concepts, definitions and research challenges
3.1.2.2 Social determinants of chronic diseases
3.1.2.3 Epidemiology and prevention of major cancer sites

3.1.2.4	Epidemiology and prevention of cardiovascular diseases
3.1.2.5	Individual, familial, societal and global implications of mental disorders
3.1.2.6	Developmental origins of chronic diseases
3.1.2.7	Epidemiology and prevention of nutrition-related chronic diseases
3.1.2.8	Air pollution, climate change and chronic diseases
3.1.2.9	Tobacco smoking and chronic diseases
3.1.2.10	Alcohol consumption and chronic diseases
3.1.2.11	Physical activity, sedentary lifestyle and prevention of chronic diseases
3.1.2.12	Screening strategies

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and the provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments. • Announcements, information for students and support are available online through the MSc programme's website. • Communication is conducted via e-mail. • Feedback is provided via email to all students as well as individually
TEACHING METHODS	

Learning activity	***Total semester workload (hours)***
Lectures	13
Exercises	2
Workshops/Seminars/Q&A	3
Guided study hours	70
Non-guided study hours	54
Assignment preparation	36
SUM	**178**

STUDENT EVALUATION Description of the evaluation process

Assessment language: English

Assessment type	Assessment length	Weighting (%)	Intended module learning outcomes tested
Online final written exam with a combination of multiple choice, short	2 hours	60	All

		answer questions and problem solving			
		Written individual assignment	1700 words	40	All

(5) RESOURCES

A. Self – study materials

- Provided in the e-learning platform

B. Additional - reading and e-learning

- U.S. Preventive Services Task Force URL: https://www.uspreventiveservicestaskforce.org/
- Global Mental Health: Principles and Practice' (Oxford University Press 2013).

C. Additional resources – movies and documentaries

D. Relevant scientific journals

- Morbidity and Mortality Weekly Report
- European Journal of Epidemiology
- International Journal of Epidemiology
- Preventive Medicine
- Epidemiology
- Journal of Epidemiology
- Preventing chronic disease
- Journal of Clinical Epidemiology

3.1.3 Globalization and Public Health

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES		
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY		
STUDY LEVEL	MASTER		
MODULE CODE	**3.1.3**	**SEMESTER**	**3 (Stream 1)**
MODULE TITLE	Globalization and Public Health		
TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
Lectures and workshops		2	8
MODULE TYPE	Background, general knowledge, skills development		

PRE-REQUIRED MODULE	NO
LANGUAGE OF TEACHING AND EXAMS	ENGLISH
AVAILABLE TO ERASMUS STUDENTS	YES
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Define and provide examples of key terms in global health • Explain how global change is taking place • Provide examples of global issues that affect human health • Analyze obstacles for effective responses to global health problems, using examples related to global health governance • identify and explain key concepts and problems concerning policymaking, accountability and transparency in relation to global health, health systems and the political and social determinants of health; • discuss and account for health related effects and outcomes in relation to disasters, climate change, urbanisation and migration in a global context;
General abilities
• Research, analysis and synthesis of data and information, using the necessary technologies • Decision-making • apply concepts and perspectives to perform an analysis of selected aspects of health systems and policy from the local to the global level • Working in an international environment independently reflect on ethical issues encountered in the field of governing global health • Working in an interdisciplinary environment discuss and suggest how social sustainability can be taken into consideration in a global perspective • critically reflect on the relationship between health inequalities, resource allocation and sustainable development in a global context and in particular in low and middle-income countries • Generationof new research ideas assess and critically examine global health policies and practices, including their ability to contribute to health equity;

(3) MODULE CONTENT

3.1.3.1	How global change is taking place and key drivers of globalisation
3.1.3.2	The shift from national to global health
3.1.3.3	Global change impacts on the social and economic spheres
3.1.3.4	Global change impacts on the environmental and political spheres
3.1.3.5	Public health issues from a global perspective: infectious and non-infectious disease and pharmaceuticals
3.1.3.6	Public health issues from a global perspective: tobacco control, alcohol; food; and human rights
3.1.3.7	Policy areas and agendas outside the health sector impacting health at a global level
3.1.3.8	Analysing global health policy: research methods
3.1.3.9	Global health governance structures and forms of global health policies, institutional reforms, and international law and other forms of cooperation.

3.1.3.10	Global climate change and human health
3.1.3.11	Disasters
3.1.3.12	Urbanization and health

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments. • Announcements, information for students and support are available online through the MSc programme's website. • Communication is conducted via e-mail. • Feedback is provided via email to all students as well as individually • Peer assessment via different tools i.e rubrics, peer-challenger/opponent
TEACHING METHODS	

Learning activity	Total semester workload (hours)
Lectures	24
Workshops/seminars/Q&A session/self-assessment activity	4
Guided study hours	152
Non-guided study hours	40
Assignment preparation	20
SUM	**240**

STUDENT EVALUATION: Description of evaluation process

Assessment language: English

Assessment type	Assessment length	Weighting (%)	Intended module learning outcomes tested
Interim assignment	**Oral, proster presentation**	**40%**	**Interpret health data from different parts of the world and discuss their relationship to health systems and from a social cultural and environmental perspective**
Final assignment (analysing a health problem using a policy framework)	8 pages To be uploaded on Moodle	60%	**Critically reflect and motivate strategies to improve the health of**

				different population groups with regards to equity, and sustainability	

(5) RESOURCES

A. Self – study materials

Birn A-E, Pillay Y, Holtz T (2009) Textbook of International Health: Global Health in a Dynamic World. 3rd edition. Oxford University press, New York

Hanefeld J Globalisation and Health (ed). Open University press

Labonte R, Ruckert A (2019) Health Equity in a Globalizing era: Past Challenges, Future Prospects. Oxford University Press Oxford University Press, ebook

Youde, J. R. (2012). Global Health Governance. Cambridge: Polity Press.

B. Additional resources – reading and e-learning

Allen, T., & Heald, S. (2004). HIV/AIDS policy in Africa: what has worked in Uganda and what has failed in Botswana?. Journal of International Development, 16(8), 1141-1154.

Biehl, J. & Petryna, A. (eds.) (2013). When People Come First: Critical Studies in Global Health. Princeton: Princeton University Press.

Bjorkman Nyqvist, M. and Svensson, J. (2007). Power to the people: evidence from a randomized field experiment of a community-based monitoring project in Uganda. Quarterly Journal of Economics, 124(2), pp.735-769.

Carmalt, J. (2014). Prioritizing Health: A Human Rights Analysis of Disaster, Vulnerability, and Urbanization in New Orleans and Port-au-Prince. Health and Human Rights 16(1), 41-53.

Farmer, P., et al. (2013). Reimagining Global Health: An Introduction. Berkeley: University of California Press.

Rowe, A. K., Rowe, S. Y., Peters, D. H., Holloway, K. A., Chalker, J., & Ross-Degnan, D. (2018). Effectiveness of strategies to improve health-care provider practices in low-income and middle-income countries: a systematic review. The Lancet Global Health, 6(11), e1163-e1175.

Towse, A., Keuffel, E., Kettler, H. E., & Ridley, D. B. (2012). Drugs and vaccines for developing countries. Chap. 10 in Danzon, P. M., & Nicholson, S. (Eds.). The Oxford handbook of the economics of the biopharmaceutical industry. OUP USA.

C. Additional resources – movies and documentaries

- Masud T & Masud C A Kind of Childhood. ***https://www.youtube.com/watch?v=glmkrKTPXI4***
- The MDG Achievement Fund (MDG-F) Water and Sanitation governance in Angola
- http://mdgfund.org/program/governancewaterandsanitationangola%E2%80%99spoorneighbourhoods
- Blame Capitalism: Souring on the system https://open.spotify.com/episode/4spQ48cbnIYiHTzEfJKyUO?si=3a-TqeySSWW9zkK1d2PHXw&utm_source=brevo&utm_medium=email&nd=1&utm_campaign=Update%2019%20September%202023&_branch_match_id=1118190599053775728&_branch_referrer=H4sIAAAAAAAAA8soKSkottLXLy7IL8lMq9TLyczL1s%2FNcS50TQ4xM3JOsi8tyY0vzi8tSk61TSpKLctXAwkkJ%2BYWJGam59mGFqQklqRqG1pqB6cWlKTmJqUWaRsZGBmDVeWmpmSW5tqm5iZm5gAAYIfaImgAAAA%3D

D. Relevant scientific journals

- Globalization and Health
- Global Health Research and Policy
- BMJ Global Health
- Journal of Epidemiology and Global Health
- Journal of Global Health
- Global Public Health
- Global Health Action

3.1.4 Health economics

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES		
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY		
STUDY LEVEL	MASTER		
MODULE CODE	**3.1.4**	**SEMESTER**	**3 (Stream 1)**
MODULE TITLE	Health economics		
TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
Lectures and workshops		2	6
MODULE TYPE	Background, general knowledge, skills development		
PRE-REQUIRED MODULE	NO		

LANGUAGE OF TEACHING AND EXAMS	ENGLISH
AVAILABLE TO ERASMUS STUDENTS	YES
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Determine methods of economics that are used in public health • Describe characteristics that differentiate demand and supply of health services from demand and supply of other goods and services • Explain how economic methods are used to support public health policies • Analyze health care delivery and inform health sector reforms • Apply information from economic evaluations to health care interventions • Explain the strategic discussions on how market elements can be used to enhance health service performance, and how financial strategies can be used to support the health of populations
General abilities
• Research, analysis and synthesis of micro and macroeconomic concepts as well as economic theories to analyse health economics issues • Decision-making on the allocation of scarce resources motivating the use of the appropriate theories in supporting equity, among different population groups and settings • Working in an international environment demonstrating ability to perform a basic health economic evaluation • Working in an interdisciplinary environment critically assess, and reflect on the sociocultural aspects of health economic methods • Generation of new research ideas as well as skills to apply and interpret basic economic methods in analyzing data on health and population measures

(3) MODULE CONTENT

3.1.4.1 Definitions and methods of health economics
3.1.4.2 Supply and demand: model of demand, supply and price determination, elasticity of demand
3.1.4.3 Supply and demand: applying elasticity of demand in health policy
3.1.4.4 Supply and demand: production and costs, and the cost broader service perspective
3.1.4.5 Markets
3.1.4.6 Health financing: the charging world of health care finance
3.1.4.7 Health financing: private health insurance
3.1.4.8 Health financing: social health insurance
3.1.4.9 Economic evaluation: introduction
3.1.4.10 Economic evaluation: counting the costs
3.1.4.11 Economic evaluation: counting the outcomes, including QALY, DALY and EQ-5D
3.1.4.12 Economic evaluation: cost-effectiveness analysis

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments. • Announcements, information for students and support are available online through the MSc programme's website. • Communication is conducted via e-mail. • Feedback is provided via email to all students in the virtual class as well as individually • Peer assessment via different tools i.e rubrics, peer-challenger/opponent
TEACHING METHODS	

Learning activity	Total semester workload (hours)
Lectures	12
Exercises	12
Workshops/seminars/Q&A session	6
Guided study hours	90
Non-guided study hours	35
Assignment preparation	25
SUM	180

STUDENT EVALUATION: Description of evaluation process

Assessment language: English

Assessment type	Assessment length	Weighting (%)	Intended module learning outcomes tested
Final essay hand-in	4000 words	60%	All
Interim assignment - Hand-in exam with questions and answers, quiz	2000 words	20%	
Essay - Class presentations.	2000 words	20%	

(5) RESOURCES

A. Self – study materials

- Guinness L, & Wiseman V (2005). Introduction to Health Economics. Open University Press

B. Additional resources – reading and e-learning

- Gøtzsche P (2013) Deadly Medicines and Organised Crime. Radcliffe Publishing
- Henderson J (2014). Health economics and policy 5th Edition South-Western College Pub. Chapters 3, and 4
- Morris S, Devlin N, Parkin D, Spencer A (2012). Economic Analysis in Health Care. 2nd edition, John Wiley and Sons, chapters 2 and 6
- Olsen J A. (2017). Principles in health economics and policy. Oxford, Oxford University Press, Chapters 2, 9, and 10
- Pindyck R, Rubinfeld D (2009). Microeconomics (8th Edition) The Pearson Series in Economics
- European Observatory on Health Systems and Services. Funding health care: options for Europe https://eurohealthobservatory.who.int/
- WHO, Health financing policy http://www.who.int/health_financing/en/
- Mossialos E, Dixon A, Figueras J, Kutzin J (2002). Funding health care: options for Europe, European Observatory on Health Care Systems. http://www.euro.who.int/document/e74485.pdf
- The CORE team. The Economy (online resources). ***https://core-econ.org/the-economy/index.htm***

C. Additional resources – movies and documentaries

D. Relevant scientific journals

- Journal of Health Economics
- American Journal of Health Economics
- PharmacoEconomics

3.2 Stream 2 - Public Health and Maritime Transport

3.2.1 Hygiene, environment and maritime transport sector

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES			
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY			
STUDY LEVEL	MASTER			
MODULE CODE	**3.2.1**	**SEMESTER**	**3 (Stream 2)**	
MODULE TITLE	Hygiene, environment and maritime transport sector			
TEACHING ACTIVITIES			**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
Lectures and workshops			3	10
MODULE TYPE	Background, general knowledge, skills development			
PRE-REQUIRED MODULE	NO			

LANGUAGE OF TEACHING AND EXAMS	ENGLISH
AVAILABLE TO ERASMUS STUDENTS	YES
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Describe legal and scientific backgrounds used for the development of hygiene standards currently implemented in the shipping industry • Be familiar with current legal requirements for health and hygiene plans that apply to various sectors of the shipping industry • Explain the value of an interdisciplinary approach that is essential to ensure a safe and hygienic environment on ships • Describe how shipping activities impact the environment, and strategies for limiting adverse impact
General abilities
• Research, analysis and synthesis of data and information, using the necessary technologies • Decision-making • Working in an international environment • Working in an interdisciplinary environment • Generation of new research ideas

(3) MODULE CONTENT

3.2.1.1 Infection control on ships, hygiene in medical facilities on ships and the medicine chest
3.2.1.2 Potable water safety
3.2.1.3 Recreational water safety
3.2.1.4 Food safety plans
3.2.1.5 Food safety and personal hygiene
3.2.1.6 Indoor air quality and ventilation on ships, lighting, facilities on ships, waste management, hazardous substances management from the public health perspective
3.2.1.7 Vector surveillance and control on ships and at ports
3.2.1.8 Introduction to shipping and the environment (man and the sea, ships and shipping, sustainability and shipping, ships and environmental impacts, challenges for sustainability)
3.2.1.9 Discharges to the sea (oil, wastewater, fouling, ship hull, ballast water, marine litter), emissions to the air, anthropogenic noise, infrastructure, marine spatial planning and shipwrecks
3.2.1.10 Environmental management, environmental assessment methods and tools
3.2.1.11 Energy efficiency, reducing discharges and emissions - improving environmental performance in shipping
3.2.1.12 Hygiene inspections programmes worldwide

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)

<table>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</td><td>Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular:
Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos.
The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform.
Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/
Software (e.g., MS Excel) is used to statistically process student assessments.
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<tr><td>TEACHING METHODS</td><td><table><tr><th>Learning activity</th><th>Total semester workload (hours)</th></tr><tr><td>Lectures</td><td>24</td></tr><tr><td>Assignment preparation</td><td>23</td></tr><tr><td>Exercises</td><td>11</td></tr><tr><td>Workshops/seminars/Q&A</td><td>2</td></tr><tr><td>Guided study hours</td><td>171</td></tr><tr><td>Non-guided study hours</td><td>67</td></tr><tr><td>SUM</td><td>298</td></tr></table></td></tr>
<tr><td>STUDENT EVALUATION: Description of evaluation process</td><td>Assessment language: English
Assessment methods:<table><tr><th>Assessment type</th><th>Assessment length</th><th>Weighting (%)</th><th>Intended module learning outcomes tested</th></tr><tr><td>Online final written exam with a combination of multiple choice, short answer questions and problem solving</td><td>2 hours</td><td>60%</td><td>All</td></tr><tr><td>Written assessment</td><td>1700 words</td><td>40%</td><td>3.2.1.12</td></tr></table></td></tr>
</table>

(5) RESOURCES

- ***Self – study materials***
  - **European Manual for Hygiene Standards and Communicable Disease Surveillance on Passenger Ships** https://www.shipsan.eu/Home/EuropeanManual.aspx
  - ***VSP Operations Manual*** *https://www.cdc.gov/vessel-sanitation/php/guidance/index.html*
  - ***VSP Construction Guidelines*** *https://www.cdc.gov/vessel-sanitation/php/guidance/index.html*

- **SHIPSAN e-learning course for port health officers** "Inspections of passenger ships according to the second edition of the European Manual (v2)" https://elearning.shipsan.eu/enrol/index.php?id=42 (access will be provided)

- ***Additional resources – reading and e-learning***
- SHIPSAN training materials for industry and port health officers (access will be provided)
- **WHO eLearning course for SSC - WHO eLearning course for SSC** https://extranet.who.int/hslp/training/course/index.php?categoryid=24
- US VSP training materials for industry https://www.cdc.gov/vessel-sanitation/php/training/index.html
- Food Safety Magazine. "Food Safety Leadership in the Business of Food Safety" – Published online 30 OCT 2023 – URL: http://digitaladmin.bnpmedia.com/publication/?i=805586
- Hazardous chemical substances materials:
  - IMO Carriage of chemicals by ship https://www.imo.org/en/ourwork/environment/pages/chemicalpollution-default.aspx
  - Active Substance Supplier List: https://echa.europa.eu/information-on-chemicals/active-substance-suppliers
  - Biocidal Active Substance https://echa.europa.eu/information-on-chemicals/biocidal-active-substances
  - List of Authorised Products https://echa.europa.eu/information-on-chemicals/biocidal-products
  - Search for chemicals: https://echa.europa.eu/advanced-search-for-chemicals?p_p_id=dissadvancedsearch_WAR_disssearchportlet&p_p_lifecycle=0
  - EU Chemical Legislation finder: https://echa.europa.eu/legislation-finder
  - ECHA Guidance on the BPR: Volume II Parts B+C, Version 6.0 August 2023. https://echa.europa.eu/documents/10162/2324906/bpr_guidance_assessment_evaluation_part_vol_ii_part_bc_en.pdf/ae2e9a18-82ee-2340-9354-d82913543fb9?t=1691738248873
- WHO International health regulations, 3rd Edition
- WHO, Handbook for Inspection of Ships and. Issuance of Ship Sanitation Certificates
- **Norovirus Disinfectants EPA Registered:**
  - https://www.epa.gov/pesticide-registration/list-g-epas-registered-antimicrobial-products-effective-against-norovirus
  - https://www.epa.gov/sites/production/files/2017-07/documents/20171207.listg_.pdf
- **U.S. Sailing - Health and Hygiene Resources - Surveillance and Outbreaks**
- **Foodborne:**
- https://wwwn.cdc.gov/foodborneoutbreaks/
- https://www.cdc.gov/foodnet/index.html
- https://www.cdc.gov/pulsenet/
- CDC: Solve the outbreak - https://www.cdc.gov/mobile/Applications/STO/ or https://play.google.com/store/apps/details?id=gov.cdc.sto

- ***Additional resources – movies and documentaries***
- https://www.cdc.gov/norovirus/reporting/calicinet/index.html

- https://www.pbslearningmedia.org/resource/spillover-zika-ebola-beyond/spillover-full-program/
- https://www.youtube.com/watch?v=0dA-Ls9Iw24&t=6s (spillover video on youtube)
- **CDC Division of Laboratory Systems – Fundamentals of Donning and Doffing PPE** https://www.youtube.com/watch?v=tB_u8EJt1iE (7:05 minutes)

- ***Relevant scientific journals***
- International Maritime Health
- Journal of Travel Medicine
- Travel Medicine and Infectious Disease
- International Journal of Travel Medicine and Global Health
- Tropical Diseases, Travel Medicine and Vaccines
- Journal of Infectious Diseases and Travel Medicine

Module 3.2.2.- Issues in maritime health

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES		
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY		
STUDY LEVEL	MASTER		
MODULE CODE	**3.2.2**	**SEMESTER**	**3 (Stream 2)**
MODULE TITLE	Issues in maritime health		
TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
Lectures and workshops		2	8
MODULE TYPE	Background, general knowledge, skills development		
PRE-REQUIRED MODULE	NO		
LANGUAGE OF TEACHING AND EXAMS	ENGLISH		
AVAILABLE TO ERASMUS STUDENTS	YES		
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5		

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Describe the burden from infectious and non-infectious diseases related to maritime transport and the travelling public, seafarers and communities • Distinguish health risks for each type of ship and voyage profile • Analyse the infection chain considering the entire voyage (home-to ship-home) and other transport modes , and list prevention and control measures that can be implemented • Describe frameworks used to define standards for seafarers' health and welfare, and the role of various actors

• Describe measures taken to limit the adverse impact of occupational health risks to seafarers
General abilities
• Research, analysis and synthesis of data and information, using the necessary technologies • Decision-making • Working in an international environment • Working in an interdisciplinary environment • Generation of new research ideas

(3) MODULE CONTENT

3.2.2.1 Seafarers' welfare, health requirements and fitness examination
3.2.2.2 Accidents and injuries on ships and at ports
3.2.2.3 Medical care on board, cruise medicine, first aid on board and Personal Protective Equipment
3.2.2.4 Chronic diseases related to exposure to physical, chemical and psychological hazards among seafarers, noise, vibration and motion sickness
3.2.2.5 Tobacco use, alcohol consumption and drug use, mental health of seafarers, psychosocial and organisational aspects
3.2.2.6 Epidemiology and prevention of infectious diseases in maritime transport sector: acute gastroenteritis and respiratory infections
3.2.2.7 Epidemiology and prevention of infectious diseases in maritime transport sector: other infectious diseases
3.2.2.8 Cardiovascular diseases
3.2.2.9 Nutrition
3.2.2.10 Piracy, violence and crime, shipwreck and survival at sea, diseases and injuries of the eyes, disorders of the skin and oral health, soft tissue and joint diseases, conditions caused by heat and cold
3.2.2.11 Port health, healthy ship design
3.2.2.12 Seafarers' vaccination & ethical practice in maritime health, accreditation, audit and quality assurance

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments.

<table>
<tr><td></td><td>

- Announcements, information for students and support are available online through the MSc programme's website.
- Communication is conducted via e-mail.
- Feedback is provided via email to all students as well as individually

</td></tr>
<tr><td>TEACHING METHODS</td><td>

Learning activity	Total semester workload (hours)
Lectures	24
Assignment preparation	23
Exercises	6
Workshops/seminars/Q&A	3
Guided study hours	145
Non-guided study hours	37
SUM	**238**

</td></tr>
<tr><td>STUDENT EVALUATION: Description of evaluation process</td><td>

Assessment language: English

Assessment methods:

Assessment type	Assessment length	Weighting (%)	Intended module learning outcomes tested
Online final written exam with a combination of multiple choice, short answer questions and problem solving	2 hours	60	All
Written assignment	1700 words	40	3.2.2.6, 3.2.2.7, 3.2.2.11

</td></tr>
</table>

(5) RESOURCES

A. Self – study materials

Available in the learning platform.

B. Additional resources – reading and e-learning

- SHIPSAN training materials for industry and port health officers
- US VSP training materials for industry

C. Additional resources – movies and documentaries

Shipping and the Environment Improving Environmental Performance in Marine Transportation
Karin Andersson · Selma Brynolf, J. Fredrik Lindgren, Magda Wilewska-Bien Editors

D. Relevant scientific journals

- International Maritime Health
- Journal of Travel Medicine

- Travel Medicine and Infectious Disease
- International Journal of Travel Medicine and Global Health
- Tropical Diseases, Travel Medicine and Vaccines
- Journal of Infectious Diseases and Travel Medicine

Module 3.2.3. - Introduction to shipping and trade, maritime law and shipping management

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES		
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY		
STUDY LEVEL	MASTER		
MODULE CODE	**3.2.3**	**SEMESTER**	**3 (Stream 2)**
MODULE TITLE	Introduction to shipping and trade, maritime law and shipping management		
TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
Lectures and workshops		4	6
MODULE TYPE	Background, general knowledge, skills development		
PRE-REQUIRED MODULE	NO		
LANGUAGE OF TEACHING AND EXAMS	ENGLISH		
AVAILABLE TO ERASMUS STUDENTS	YES		
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5		

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • Identify the regulatory and legal shipping environment • Recognize the role of international organizations and associations • Demonstrate knowledge and understanding in the field of shipping and maritime management, structure, and operation • Show a thorough understanding of the marine environment • Display knowledge of international law, including sources of the law, coastal state and flag state jurisdiction, environmental protection, and freedom of navigation • Identify, describe, and critically analyse the major issues in port management, cargo handling, and related documentation • Describe the responsibilities of the parties involved with the transportation of goods
General abilities

- Research, analysis and synthesis of data and information, using the necessary technologies
- Decision-making
- Working in an international environment
- Working in an interdisciplinary environment
- Generation of new research ideas

(3) MODULE CONTENT

3.2.3.1 Maritime geography (oceans and seas, continents, waterways, ports, geography of trade)
3.2.3.2 The shipping business (the theory of trade, shipping markets, who trades), the supply of ships (shipbuilding, ship operation, ship registration, port state control, ship classification)
3.2.3.3 The ship and the chartering, liner trades (tonnages, load lines, types of ships, types of cargo, tankers, containerisation, documentation, chartering)
3.2.3.4 Principles of management and special characteristics of ship management: strategic management, commercial management, human resource management, compliance management
3.2.3.5 Principles of management and special characteristics of ship management: port management
3.2.3.6 Maritime economics and maritime information systems
3.2.3.7 Categories of maritime law, legal concepts and terminology, marine insurance, international trade and shipping documents, cargo claims and bills of landing, carriage of passengers
3.2.3.8 The Maritime Labour Convention
3.2.3.9 Public international law aspects of shipping regulations, safety and compliance
3.2.3.10 Public international law aspects of shipping regulations on marine pollution from shipping activities
3.2.3.11 International Health Regulations - general provisions
3.2.3.12 International Health Regulations - points of entry

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments. • Announcements, information for students and support are available online through the MSc programme's website. • Communication is conducted via e-mail. • Feedback is provided via email to all students as well as individually

TEACHING METHODS	Learning activity	Total semester workload (hours)
	Lectures	24
	Assignment preparation	6
	Exercises	2
	Workshops/seminars/Q&A	2
	Guided study hours	90
	Non-guided study hours	54
	SUM	**178**

STUDENT EVALUATION: Description of evaluation process

Assessment language: English

Assessment methods:

Assessment type	Assessment length	Weighting (%)	Intended module learning outcomes tested
Online final written exam with a combination of multiple choice, short answer questions and problem solving	2 hours	60	All
Written assignment	1700 words	40	3.2.3.11, 3.2.3.12

(5) RESOURCES

A. Self – study materials

Maritime Economics by Martin Stopford, 3rd Edition.

B. Additional resources – reading and e-learning

C. Additional resources – movies and documentaries

D. Relevant scientific journals

Module 3.2.4. - Public health crisis management in maritime transport sector

(6) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES		
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY		
STUDY LEVEL	MASTER		
MODULE CODE	**3.2.4**	**SEMESTER**	**3 (Stream 2)**
MODULE TITLE	Public health crisis management in maritime transport sector		

TEACHING ACTIVITIES	WEEKLY TEACHING HOURS	ECTS CREDITS
Lectures and workshops	3	6
MODULE TYPE	Background, general knowledge, skills development	
PRE-REQUIRED MODULE	NO	
LANGUAGE OF TEACHING AND EXAMS	ENGLISH	
AVAILABLE TO ERASMUS STUDENTS	YES	
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5	

(7) LEARNING OUTCOMES

Learning outcomes

After the successful completion of this module, students will be able to:

- Determine the fundamental terms, procedures and ideas related to disasters, that serve as a common framework for teamwork when responding to a public health emergency
- Make use of resources that can assist in overcoming obstacles and resolving issues during emergencies
- Solve problems and find potential solutions and responses to these problems, analyse, evaluate, and interpret data
- Describe, analyse, and evaluate the environmental, social, cultural, economic, legal and organizational aspects influencing vulnerabilities and capacities to face disasters; the capacity to integrate knowledge and manage various public health aspects of disaster events at local and global levels, even when limited information is available

General abilities

- Research, analysis and synthesis of data and information, using the necessary technologies
- Decision-making
- Working in an international environment
- Working in an interdisciplinary environment
- Generation of new research ideas

(8) MODULE CONTENT

3.2.4.1 Risk assessment and management in shipping
3.2.4.2 All hazard approach: biological, chemical and radiological hazards in the different types of ships
3.2.4.3 Multi-disciplinary approach in public health event management
3.2.4.4 Public health emergency contingency planning on board ships
3.2.4.5 Public health emergency contingency planning at ports
3.2.4.6 Menu of public health measures and the decision-making process
3.2.4.7 Management of COVID-19 public health events in shipping
3.2.4.8 Management of public health events in shipping due to chemical agents
3.2.4.9 Inter-country communication in public health event management on ships
3.2.4.10 Mass casualties and evacuation
3.2.4.11 Exercises as part of preparedness (table top, simulation, drills)
3.2.4.12 In-action/ intra-action reviews, after-action reviews

(9) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments. • Announcements, information for students and support are available online through the MSc programme's website. • Communication is conducted via e-mail.
TEACHING METHODS	

Learning activity	***Total semester workload (hours)***
Lectures	24
Assignment preparation	12
Exercises	12
Workshops/seminars/Q&A	2
Guided study hours	80
Non-guided study hours	48
SUM	**178**

STUDENT EVALUATION: Description of evaluation process

Assessment language: English

Assessment methods:

Assessment type	**Assessment length**	**Weighting (%)**	**Intended module learning outcomes tested**
Online final written exam with a combination of multiple choice, short answer questions and problem solving	2 hours	60	All
Written assignment		40	3.2.4.5, 3.2.4.7., 3.2.4.11 3.2.4.12

(10) RESOURCES

A. Self – study materials

B. Additional resources – reading and e-learning

- WHO learning platform
- ECDC

C. Additional resources – movies and documentaries

D. Relevant scientific journals

4 Semester 4 Module Specification - Streams 1 & 2

4.1.1 Research project with a master's thesis

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES		
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY		
STUDY LEVEL	MASTER		
MODULE CODE	**4.1.1** **4.2.1**	**SEMESTER**	**4 (Streams 1 7 2)**
MODULE TITLE	Research project with a master's thesis		
TEACHING ACTIVITIES		**WEEKLY TEACHING HOURS**	**ECTS CREDITS**
			30
MODULE TYPE	Background, general knowledge, skills development		
PRE-REQUIRED MODULE	YES –Only students who have completed all 10 modules will be allowed to take this module.		
LANGUAGE OF TEACHING AND EXAMS	ENGLISH		
AVAILABLE TO ERASMUS STUDENTS	NO		
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5		

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • demonstrate independent research skills; • demonstrate the ability to think critically and develop original ideas, develop a research question, formulate a hypothesis, critically evaluate the literature; • demonstrate an awareness of the practical aspects of planning and conducting a study, including potential challenges and pitfalls; carry out a risk assessment, be aware of intellectual property issues, be aware of ethical issues;

- apply public health research skills, including methodological, theoretical and analytical approaches, to a real world problem, based on knowledge gained throughout the MSc;
- formulate a high quality literature search to ensure effective identification of evidence
- analyse data or literature and formulate conclusions and recommendations based on analyses;
- demonstrate familiarity with the conventional research-reporting style, including project layout and referencing and writing a scientific report according to prescribed standards;
- produce an extended piece of writing that is clear and coherent, including introduction, synthesis of background literature, methodology, results, discussion, recommendations and conclusion;
- demonstrate the ability to present, interpret and discuss research findings, in relation to other studies, and make recommendations in a clear and systematic format;
- where appropriate, reflect on social or ethical issues relating to the research.

General abilities

- Research, analysis and synthesis of data and information, using the necessary technologies
- Decision-making
- Working in an international environment
- Working in an interdisciplinary environment
- Generation of new research ideas

(3) MODULE CONTENT

Research project with a master's thesis

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular: • Software (e.g., MS PowerPoint) is used for preparation of lecture materials, display slides and videos. • The student guide, case study and exercise materials, theory and protocols for exercises, lecture slides, as well as relevant videos and scientific articles are available electronically and online to students through the MSc programme's Moodle Platform. • Information about the course, module and instructors are available online through the MSc programme's website: https://mscpublichealthmaritime.med.uth.gr/ • Software (e.g., MS Excel) is used to statistically process student assessments. • Announcements, information for students and support are available online through the MSc programme's website. • Communication is conducted via e-mail.
TEACHING METHODS	

Learning activity	***Total semester workload (hours)***
Non-guided study hours	900
SUM	**900**

STUDENT EVALUATION: Description of evaluation process	**Assessment language:** English **Assessment methods:**

Assessment type	Assessment length	Weighting (%)	Intended module learning outcomes tested
Written master thesis	10.000	100	All

(5) RESOURCES

A. Self – study materials

- Aveyard H (2014). Doing a Literature Review in Health and Social Care: A Practical Guide. Open University Press; 3rd edition. ISBN 978-0-33-526307-3.
- Usherwood T (1996 [2007]). Introduction to Project Management in Health Research. Open University Press. ISBN 978-0-335-19707-1.
- Phelps R, Fisher K and Ellis AH (2007). Organizing and Managing Your Research: A Practical Guide for Postgraduates. Sage Publications Ltd. ISBN 978-1-412-92063-6.
- Thody A (2006 [2011]). Writing and Presenting Research. Sage Publications Ltd. ISBN 978-1-412-90293-9.

B. Additional resources – reading and e-learning

C. Additional resources – movies and documentaries

D. Relevant scientific journals

4.1.2 Applied research project with a master's thesis

(1) GENERAL DESCRIPTION

SCHOOL	SCHOOL OF HEALTH SCIENCES		
DEPARTMENT	FACULTY OF MEDICINE LABORATORY OF HYGIENE AND EPIDEMIOLOGY		
STUDY LEVEL	MASTER		
MODULE CODE	**4.1.2** **4.2.2**	**SEMESTER**	**4 (Streams 1 7 2)**
MODULE TITLE	Applied project with a master's thesis		

TEACHING ACTIVITIES	WEEKLY TEACHING HOURS	ECTS CREDITS
		30

MODULE TYPE	Background, general knowledge, skills development
PRE-REQUIRED MODULE	Only students who have completed all modules will be allowed to take this module.
LANGUAGE OF TEACHING AND EXAMS	ENGLISH
AVAILABLE TO ERASMUS STUDENTS	NO
WEBSITE (URL)	https://elearning.mscpublichealthmaritime.med.uth.gr/course/view.php?id=5

(2) LEARNING OUTCOMES

Learning outcomes
After the successful completion of this module, students will be able to: • develop skills while acquiring practical knowledge on the fields of epidemiology, public health and maritime transport • demonstrate independent research skills; • demonstrate the ability to think critically and develop original ideas, develop a research question, formulate a hypothesis, critically evaluate the literature; • demonstrate an awareness of the practical aspects of planning and conducting a study, including potential challenges and pitfalls; carry out a risk assessment, be aware of intellectual property issues, be aware of ethical issues; • apply public health research skills, including methodological, theoretical and analytical approaches, to a real world problem, based on knowledge gained throughout the MSc; • formulate a high quality literature search to ensure effective identification of evidence • analyse data or literature and formulate conclusions and recommendations based on analyses; • demonstrate familiarity with the conventional research-reporting style, including project layout and referencing and writing a scientific report according to prescribed standards; • produce an extended piece of writing that is clear and coherent, including introduction, synthesis of background literature, methodology, results, discussion, recommendations and conclusion; • demonstrate the ability to present, interpret and discuss research findings, in relation to other studies, and make recommendations in a clear and systematic format; • where appropriate, reflect on social or ethical issues relating to the research.
General abilities
• Research, analysis and synthesis of data and information, using the necessary technologies • Decision-making • Working in an international environment • Working in an interdisciplinary environment • Generation of new research ideas

(3) MODULE CONTENT

Applied project with a master's thesis

(4) TEACHING AND LEARNING METHODS - EVALUATION

Teaching Method	Distance learning (synchronous and asynchronous)

<table>
<tr><td></td><td></td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</td><td>Information and Communication Technologies (ICT) are used for the preparation of lecture materials, online exercises and provision of supplementary learning material to students. In particular:
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• Software (e.g., MS Excel) is used to statistically process student assessments.
• Announcements, information for students and support are available online through the MSc programme's website.
• Communication is conducted via e-mail.</td></tr>
<tr><td>TEACHING METHODS</td><td><table><tr><th>Learning activity</th><th>Total semester workload (hours)</th></tr><tr><td>Applied project</td><td>200</td></tr><tr><td>Non-guided study hours</td><td>700</td></tr><tr><td>SUM</td><td>900</td></tr></table></td></tr>
<tr><td>STUDENT EVALUATION: Description of evaluation process</td><td>Assessment language: English
Assessment methods:<table><tr><th>Assessment type</th><th>Assessment length</th><th>Weighting (%)</th><th>Intended module learning outcomes tested</th></tr><tr><td>Written master thesis</td><td>10.000</td><td>100</td><td>All</td></tr></table></td></tr>
</table>

(5) RESOURCES

A. Self – study materials

- Aveyard H (2014). Doing a Literature Review in Health and Social Care: A Practical Guide. Open University Press; 3rd edition. ISBN 978-0-33-526307-3.
- Usherwood T (1996 [2007]). Introduction to Project Management in Health Research. Open University Press. ISBN 978-0-335-19707-1.
- Phelps R, Fisher K and Ellis AH (2007). Organizing and Managing Your Research: A Practical Guide for Postgraduates. Sage Publications Ltd. ISBN 978-1-412-92063-6.
- Thody A (2006 [2011]). Writing and Presenting Research. Sage Publications Ltd. ISBN 978-1-412-90293-9.

B. Additional resources – reading and e-learning

C. Additional resources – movies and documentaries

D. Relevant scientific journals