Study Plan

School: School of Sciences and Technology
Degree: Master
Course: One Health – Human and Animal Public Health (cód. 673)

1st Year - 1st Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
MVT13049M	Epidemiology I	Health Sciences	3	Semester	78
MVT13050M	Human wellbeing/animal welfare	Health Sciences	3	Semester	78
MVT13054M	Zoonosis and Food Security I	Health Sciences	3	Semester	78
MVT13047M	One Health "Concept"	Health Sciences	3	Semester	78
MVT13053M	Surveillance Systems	Health Sciences	6	Semester	156
PAO13052M	Environmental Sustainability I	Environment and Ecology Sciences	3	Semester	78
MAT13048M	Data Analysis and Health I	Mathematics	3	Semester	78
SOC13051M	Human Behavior and Health	Sociology	6	Semester	156

1st Year - 2nd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
MVT13063M	Zoonosis and Food Security II	Health Sciences	3	Semester	78
MVT13061M	Introduction to Research Methodology	Health Sciences	3	Semester	78
MVT13058M	Epidemiology II	Health Sciences	6	Semester	156
MAT13055M	Data Analysis and Health II	Mathematics	3	Semester	78
PAO13062M	Environmental Sustainability II	Environment and Ecology Sciences	3	Semester	78
BIO13057M	Biodiversity Conservation	Biological Sciences	3	Semester	78
MVT13060M	General Principles of Health Management	Health Sciences	3	Semester	78
FIL13059M	Ethics and Public Health	Philosophy	3	Semester	78
ECN13056M	General Theory of Human Rights	Legal-Political Theory and International Relations	3	Semester	78

2nd Year - 3rd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
Internship					
Dissertation					
Project Work					

2nd Year - 4th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
Internship					
Dissertation					
Project Work					

Conditions for obtaining the Degree:

*** TRANSLATE ME: Para aprovação na componente curricular deste Mestrado, é necessário a aprovação (através de avaliação ou creditação), das seguintes unidades curriculares:

1º Ano

{\}newline

1.º Semestre

- 8 UC Obrigatórias num total de 30 ECTS

2.º Semestre

- 9 UC Obrigatórias num total de 30 ECTS

2º Ano

3.º e 4.º Semestre

- Dissertação ou Relatório de Estágio ou Trabalho de Projeto de 60 ECTS

{\}newline

Para obtenção do grau, é necessário também a aprovação na Dissertação ou Relatório de Estágio ou Trabalho de Projeto, com um total de 60 ECTS, no 3.º e 4.º Semestre. ***

Program Contents

Back

Epidemiology I (MVT13049M)

Concept of epidemiology. Ecological concept of disease. The Agent-Environment and Host Interdependence.
Distribution and determinants of disease and health in populations. Incidence and prevalence.
Other measures used in epidemiology. Incidence Rates (Incidence Density)
Types of studies in epidemiology: Cases, Transversal, Case-control, Cohorts and Experimental studies.
Measures of association. Valorisation of risk.
Concept and criteria of causality. Perhaps bias and confusion
Sampling: Basic concepts.
Inquiries. Construction of a questionnaire.
Direct and indirect standardization. Interpretation of values resulting from standardization
The validity of a diagnostic method. Sensitivity and Specificity. Predictive values of the results of a diagnostic test.
Surveillance and monitoring. Prevention, control and eradication

Back

Human wellbeing/animal welfare (MVT13050M)

1. Issues:
Ethology and Ethics
1.2. Humans and the animal world.
1.3. Relations between humans, animals and the environment.
1.4. Concepts of animal welfare. Concepts of human well-being.

2. Problems:
2.1. Social and psychic challenges.
2.2. Victims of abuse; making the connection
2.3. Food, rest, emotional balance, social and economic progress
2.4. Case studies

3. Evaluation:
3.1. Patterns of behaviour.
3.2. Physiological parameters.
3.3. Preferences and motivations.
3.4 Practices and strategies for evaluating human well-being and animal welfare
3.5. Quality of human-animal relations;
3.5.1. Aversive practices.
3.5.2. Neutral practices.
3.5.3.Positive practices

4. Solutions:
4.1. Physical conditions
4.2.Environmental conditions
4.3. Interactions

Back

Zoonosis and Food Security I (MVT13054M)

Determining factors and risks associated with the food chain and the transmission of zoonoses.
Agriculture and Public Health
Climate change and zoonoses
Food Technology and Health
Health system
Behavior and Health
Microbial zoonoses
Parasitic zoonoses

Back

One Health "Concept"(MVT13047M)

Students should be able to:
-applying methodologies that allow a "One Health"approach to solve health problems.
-interpreting the signs and behaviors that limit the resolution of health problems in your workplace
- design proposals for action in specific cases of communicable diseases and in the food chain, adapted to the One Health concept.
- to select the working methods that are more adapted to the target populations, taking into account behaviors, uses and customs, justifying the decisions taken
- to critically collect and interpret relevant scientific information on the topics covered;
-provide measures for prevention, control / eradication and mitigation of emergent situations in a "One Health"
- to assess the consequences of the measures implemented, using indicators appropriate to the situation and the
- communicate ideas and scientific knowledge in oral and written form. -work in groups and form teams.

Back

Surveillance Systems (MVT13053M)

Health surveillance, integrated health surveillance and "one health"surveillance: concept, scope, principles, objectives and types / methodologies / surveillance models.
Surveillance systems and surveillance networks.
Considerations in the planning and organization of a surveillance system.
Indicators, sources of information and instruments.
Information systems and technologies, data collection and management and information communication.
Performance and evaluation of surveillance systems.
"One Health"surveillance systems - from theory to practice: analysis and evaluation of the main surveillance systems and surveillance systems "One Health"; identification of indicators; advantages and limitations; dissemination and communication of information.
Case Study.

Back

Environmental Sustainability I (PAO13052M)

1. The socio-environmental picture on the planet, in Portugal and in rural communities.
2. Dimensions of ecodevelopment. Economicism vs. Environmentalism.
3. Agenda 21. Socio-environmental sustainability policies.

Back

Data Analysis and Health I (MAT13048M)

• Introduction to Biostatistics - fundamental concepts.
• Variable measurement scale
• Organization of information: tables and graphs
• Review of frequency distribution
• Descriptive measures of location, dispersion, asymmetry and flattening
• Outliers: concept and identification
• Pearson and Speraman correlation
• Association Measures (Phi coefficient)
• Introduction to the study of Probabilities: Some probability distributions: Binomial, Poisson, Student t, Chi-square and Normal.
• Introduction to statistical inference: statistical hypothesis, notion of paired and unpaired subjects, levels of significance, type I and type II errors, confidence intervals
• Hypothesis testing and its requirements

Back

Human Behavior and Health (SOC13051M)

1. Health Attitudes and Behaviors
2. Health and group processes
3. Perceived risk to health
4. Communication of risk and intervention in health promotion
5. Cultural and environmental dimensions of health and disease:
6. Study of the social and cultural dimensions that explain the contemporary causes of health and disease, and the development of strategies to overcome them.
7. Introductory characterization of cultural / social anthropology and health methodologies.

Back

Zoonosis and Food Security II (MVT13063M)

Determining factors and risks associated with the food chain and the transmission of zoonoses.
Risk Analysis and Decision Trees
Bacterial zoonoses. Main transmission cycles and possible monitoring and control points
Viral zoonoses. Main transmission cycles and possible monitoring and control points
Parasitic zoonoses. Main transmission cycles and possible monitoring and control points

Back

Introduction to Research Methodology (MVT13061M)

Public Health Research
What is research?
Goals
Methodologies
Protocol, Questionnaire, Databases
Case Definition, Health Indicators, Screening, Screening and Diagnostic Tests
Results presentation

Back

Epidemiology II (MVT13058M)

1. Definition of Risk.
2. Risk Characterization
3. Tools for decision making. Decision Trees. SWOT Analysis. Cost-Benefit Analysis.
4. Definition of geographic information systems
5. Data formats in geographic information systems
6. Geographical objects
7. Creation of geographic databases
8. Study of spatial analysis tools (reclassification, map algebra, filters, etc.)
9. Case study development
10. Evaluation of Results
11. Applicable legislation

Back

Data Analysis and Health II (MAT13055M)

Review of hypothesis tests: tests for two independent samples, tests for two paired samples, Chi-Square test, Fisher's exact test and McNemar test. Non-parametric tests for more than 2 independent samples (Kruskal-Wallis test) and related (Friedman test). Linear regression model: adjustment, residue analysis and interpretation. Logistic regression model: adjustment, residue analysis and interpretation. Cox regression model: adjustment, residue analysis and interpretation.

Back

Environmental Sustainability II (PAO13062M)

Agenda 21. Socio-environmental sustainability policies.
2. The 17 Objectives of Sustainable Development. Commitment of governments. Involvement of citizens.
3. Public Participation. Governance and environment
4. Environmental health assessment methodologies

Back

Biodiversity Conservation (BIO13057M)

1. Human population growth and environmental degradation
2. What is and what are the objectives of Conservation Biology
3. Biodiversity: what is it and what are the main threats
4. Biodiversity and ecosystem services as a fundamental pillar of human well-being and health
5. The role of the Human-Wildlife interface in the transmission of diseases and risks associated with nature conservation and human health
6. The importance of multidisciplinarity: Ecology, Sociology, Politics, Economics

Back

General Principles of Health Management (MVT13060M)

Management - principles and values
Concept, functions and levels of management.
Functions of Management: Planning, Organization, Control, Leadership, Motivation.
Management of Human Resources in Health.
Health organizations and their organizational culture.

Back

Ethics and Public Health (FIL13059M)

Genesis of Public Health Ethics
Ethics and the Law
Bioethics
Data protection and confidentiality
Ethics in Public Health Research
Precaution, Prevention and Ethics of Public Health
Ethics in Global Health
Ethics in "One Health", Public Environmental, Animal and Human Health

Back

General Theory of Human Rights (ECN13056M)

I. The problematic of a concept.
II. Historical genesis in the scope of legal-political Modernity.
III. Human rights and political ideologies.
IV. Analysis of the list of the main rights enshrined in the domestic and international legal-political plans.
V. Limits of human rights. SAW. The challenges to human rights in an era of global.