INSTITUTO POLITÉCNICO DE BRAGANÇA

Course Unit	Epidemiology and Public Health	Field of study	Expertise Sciences
Bachelor in	Biomedical Laboratory Sciences	School	School of Health
Academic Year	2023/2024	Year of study	1	Level	1-1	ECTS credits	5.0
Type	Semestral	Semester	2	Code	9995-804-1204-00-23		

| Workload (hours) | 135 | Contact hours | T | - | TP | 30 | PL | - | TC | - | S | 5 | E | - | OT | 10 | O | - |

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s)	Maria Cristina Martins Teixeira

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. To understand the scope of public health and the role of this multidisciplinary science in improving the community health.
2. To understand the role of public health within the National Health Service in Portugal.
3. To read health status indicators and to understand such indicators as a result of interaction effects between the various levels of health determinants based on eco-epidemiology models.
4. To understand the role of health status and health determinants surveillance in improving public health intervention.
5. To understand the approach for assessing determinants of health and disease within specific populations.
6. To estimate and to read measures of occurrence of disease, as well as, the measures of association and measures of impact.
7. To describe the design of epidemiologic studies foreseeing their application, their strengths and their limitations.

Prerequisites

Before the course unit the learner is expected to be able to:
none

Course contents

Public health: history, scope and goal. Public health within Portuguese NHS Eco-epidemiology. Community health status indicators. Epidemiologic surveillance. Aims of epidemiology. Epidemiological approach. Measures of occurrence of disease. Standardized mortality rates. Measures of association and measures of impact. Design of epidemiologic studies. Deriving inferences from epidemiologic studies. Confounding and interaction. Sensitivity and specificity.

Course contents (extended version)

1. Public Health: goal, scope and history.
   - Public Health as a muldisciplinary science in improving community health.
   - Key domains of public health: health promotion health protection, health prevention.
   - The historical experience of health and illness from a population perspective.
   - Alma-Ata Declaration and Ottawa Charter in shaping public health views.
2. Public Health in Portugal.
   - National Health Service in Portugal: history and organization.
   - Public Health within the National Health Service in Portugal.
3. Multi-level approach to the community health.
   - Eco-epidemiology and chinese boxes paradigm in understanding the public health intervention
   - Levels of health determinants and interaction effects between and among the various levels.
4. Community health status indicators.
   - Social and demographic.
   - Measures of health.
5. Surveillance concerning community health indicators and their determinantes.
   - Who, when, where.
   - Surveillance in planning and evaluation of health policies.
6. Aims of epidemiology.
   - Epidemiological approach seeking the determinants of health and disease in the population.
7. Measures of occurrence of disease. Prevalence. Incidence. Risk.
   - Mortality rates. Crude and specific rates. Standardized mortality rates.
8. Design of epidemiologic studies.
   - Epidemiologists Studies: transversal lines, case-control, coorte, clinical and ecological assay.
   - Strengths and limitations of each study design.
   - Measures of association and impact.
9. Deriving inferences from epidemiologic studies. Bias. Confounding and interaction.
   - Causality criteria Types of bias.

Recommended reading

1. Gordis, L. (2010). Epidemiologia. Lusodidacta
2. Stanhope, M. , Lancaster, J. (2011). Enfermagem de Saúde Pública. Lusodidacta
3. JacGerstman, B. (2003) Epidemiology kept simple. Wiley-Liss

Teaching and learning methods

Theoretical-practical lessons are brief expositions of study subject with interactive methodology. Tutorial classes are based on the search of answers for proposal questions or discussion of scientific papers based on flipped classroom. The individual work of the pupil is based on working sheets about study subject.

Assessment methods

- Final written exam-100% - (Regular, Student Worker) (Final, Supplementary, Special)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Maria Cristina Martins Teixeira	Josiana Adelaide Vaz	Ana Maria Nunes Português Galvão	Adília Maria Pires da Silva Fernandes
24-03-2024	25-03-2024	25-03-2024	26-03-2024