

Course Unit	Epidemiology	Field of study	Health
Bachelor in	Dietetics and Nutrition	School	School of Health
Academic Year	2022/2023	Year of study	3
Type	Semestral	Semester	1
Workload (hours)	135	Contact hours	T - TP 50 PL 20 TC - S - E - OT 3 O -
Level	1-3	ECTS credits	5.0
Code	8149-501-3105-00-22		

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) Isa Cristina Ricardo Rodrigues Madaleno

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Understand concepts and know the scope of action of epidemiology.
2. Understand the importance of epidemiology for the analysis of health problems.
3. Understand the different epidemiological measures and be able to calculate them.
4. Understand the different types of epidemiological studies, comparing them, knowing how to discuss their advantages and disadvantages.
5. Detect different sources of error in epidemiological studies and the most appropriate way to circumvent them.
6. Describe the process of infectious and non-infectious diseases, as well as, understanding the research and measures of control.
7. Understand and interpret epidemiological research and apply the results to the practice of Health Sciences.
8. Acquire skills for critical reflection on the main aspects of the epidemiologic surveillance and its application in planning, assessing, and engaging in decision-making process in health.

Prerequisites

Before the course unit the learner is expected to be able to:
Not applicable.

Course contents

Definition, objectives; Evolution of epidemiological thinking; demographic, epidemiological and nutritional transition; epidemiological method and epidemiological profile; health indicators; epidemiological measures of frequency, association and impact; inference and causality; investigation errors; epidemiological studies; screening programs; application of epidemiology on nutritional field; infectious and non-infectious diseases; epidemiological surveillance; epidemiology and health policies.

Course contents (extended version)

1. Epidemiology: Definition and objectives.
2. Historical perspective and development of epidemiological thinking.
3. The demographic transition, epidemiological transition, and nutritional transition.
4. Epidemiological method and epidemiological profile (person, time, place).
5. Health indicators and standardization of rates.
6. Use of health information sources through database access.
7. Calculation, analysis, interpretation of epidemiological measures of frequency, association, impact.
8. Inference and causality.
9. Investigation errors, random error, bias, confounding factor.
10. Classification of different types of epidemiological studies.
11. Epidemiological studies: case-control, cohorts, cross-sectional, ecological, and clinical trials.
12. Screening programs: application criteria and measures of validity of screening tests.
13. Nutritional epidemiology: the application of epidemiologic studies on nutritional field.
14. Epidemiology of infectious and non-infectious diseases.
15. Epidemiological surveillance.
16. Epidemiology and health policies: planning, assessing health care services to help decision-making.

Recommended reading

1. Hernández-Aguardo, I., Miguel, A., Rodríguez, M., Montrull, F., Benavides, F., Serra, M., Díaz, C., López, J. (2011). Manual de Epidemiología y Salud Pública. 2.^a Edición, Madrid: Panamericana
2. Gordis, L., Celentano, D., Szklo, M. (2018). Gordis Epidemiology. 6th Edition, Saunders Elsevier.
3. Bonita, T., Beaglehole, R., Kjellstrom, T. (2010). Epidemiologia Básica. 2.^a Edição, São Paulo: Santos Editora.
4. Medronho, R., Bloch, K., Luiz, R., Werneck, G. (2009). Epidemiologia. 2.^a Edição, São Paulo: Editora Atheneu.

Teaching and learning methods

This course unit consists of theoretical-practical (TP) classes, where concepts are exposed and their resolution is accompanied by application exercises in practical-laboratory classes (PL). The study is also guided through tutorial guidance (OT), in the critical analysis of cases and scientific articles. Learning is complemented with individual non-face-to-face work by the student.

Assessment methods

1. Continuous Assessment - 100% - (Regular, Student Worker) (Final)
 - Intermediate Written Test - 70% (Theoretical test (Multiple choice test))
 - Intermediate Written Test - 30% (Practical test)
2. Final Written Exam - 100% - (Regular, Student Worker) (Supplementary, Special)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

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03-11-2022	09-11-2022	09-11-2022	09-11-2022