ENVIRONMENTAL AND OCCUPATIONAL HEALTH

CU characterization:

CU name:

Environmental and occupational health

Scientific area acronym:

SPTrop

Duration:

Semestral

Working hours:

56

Contact hours:

16 (12 T; 4 OT)

ECTS:

2

Observations:

Optional CU

Teacher in charge and respective teaching load in the CU:

Marta Pingarilho (12)

Other teachers and respective teaching load in the CU:

Victor Pimentel (2)

Sofia Seabra (2)

Intended learning outcomes (knowledge, skills and competences to be developed by the students):

After this unit, students should be able to:

1. To recognize the characteristics of the biological and ecological environment (water, sanitation, food, housing) most relevant for the exposure to disease agents and risks, particularly for communicable diseases.
2. To recognize the characteristics of the man-made environment (urbanization and non-biological disease agents / risk factors).
3. To analyse the usual competencies of the Health Sector (epidemiological surveillance networks) for the promotion of healthy environment.

Syllabus:

I. The concept of environmental health. The elements of the environment with an impact on health.

II. Emmerging, re-emmerging disaeses and the environment.

III. Water: the cycle and utilization; water quality and treatment.

IV. Food: the food supply system and contamination.

V. Sewage: sewage treatment and impact on health determinants and transmission of disease.

VI. Man-made habitat: a variety of risk factors (radiations, air pollution, food contamination, dioxins and chemical contamination); housing characteristics and their effects on health facilitation of exposures / protection.

VII. The working environment: risk factors and pathogens.

VIII. Other specific emerging themes on the environment: rapid urbanization; climate change.

Teaching methodologies (including assessment):

Classroom teaching; guided information search; tutorship of practical work on the utilization of concepts, data and methodologies.

The evaluation methods focus on: a) the integration of knowledge and capacities among the thematic contents; b) the application of knowledge to the study of specific situations and cases. The evaluation will consist of the presentation and discussion of an individual assignment (100%). The grade improvement will correspond to an individual written assignment (different from the previous one) which will correspond to 100% of the final grade.

References for consultation / mandatory existence:

- Portier CJ. Comprehensive Environmental Public Health. Public Health Rep. 2011;126 (Suppl 1):3–6.
- Friis, R. S. – Essentials of Environmental Health, 3rd Edition, Jones & Bartlett Learning. Ontario, 2012
- Frumkin H, Hess J, Luber G, Malilay J, McGeehin M. Climate Change: The Public Health Response. Am J Public Health. março de 2008;98(3):435–45.
- Fuller R, Landrigan PJ, Balakrishnan K, Bathan G, Bose-O'Reilly S, Brauer M, et al. Pollution and health: a progress update. Lancet Planet Health. 1 de junho de 2022;6(6):e535–47.
- Curtis V, Schmidt W, Luby S, Florez R, Touré O, Biran A. Hygiene: new hopes, new horizons. Lancet Infect Dis. abril de 2011;11(4):312–21
- Taka M, Ahopelto L, Fallon A, Heino M, Kallio M, Kinnunen P, et al. The potential of water security in leveraging Agenda 2030. One Earth. 19 de fevereiro de 2021;4(2):258–68
- Nieuwenhuijsen MJ. Urban and transport planning, environmental exposures and health-new concepts, methods and tools to improve health in cities. Environ Health. 8 de março de 2016;15(1): S38.
- Zhang Y, Liu N, Li Y, Long Y, Baumgartner J, Adamkiewicz G, et al. Neighborhood infrastructure-related risk factors and non-communicable diseases: a systematic meta-review. Environ Health. 5 de janeiro de 2023;22(1):2

- Destoumieux-Garzón D, Mavingui P, Boetsch G, Boissier J, Darriet F, Duboz P, et al. The One Health Concept: 10 Years Old and a Long Road Ahead. Front Vet Sci, 2018