

Course Unit	Ecotoxicology and Environmental Health	Field of study	Environmental Protection Technology
HPTC in	Environmental Management	School	School of Agriculture
Academic Year	2020/2021	Year of study	2
Type	Semestral	Semester	1
Level	0-2	ECTS credits	6.0
Code	4068-576-2001-00-20		
Workload (hours)	162	Contact hours	T - TP - PL - TC - S - E - OT 60 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 Eugénia Madureira Gouveia, Maria Sameiro Ferreira Patrício

Learning outcomes and competences

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

1. Know, understand and interpret the mechanisms of toxicity.
2. Know toxicity assessment methodologies.
3. Identify, evaluate and monitor the potential occupational and environmental risk factors for human health.
4. Calculate and interpret the most used indicators in epidemiology
5. Understand the effects of environmental pollution on human health.

Prerequisites

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

Course contents

Mechanisms of toxicity; methods of assessing toxicity Ecotoxicology and environmental toxicology. Some technologies to reduce pollution in the environment. Environmental health: environmental agents and vectors that cause disease; Environmental epidemiology; Health and environment indicators; Occupational health; Environment and Public Health - Case studies.

Course contents (extended version)

1. Ecotoxicology
 - Dose-response relationship in toxicology
 - Mechanisms of toxicity
 - Assessment methods of toxicity: acute toxicity, chronic toxicity, carcinogenesis, mutagenesis
 - Methods of evaluation of toxicity in ecotoxicology.
 - Evaluation of ecotoxicological parameters in aquatic, terrestrial and ecosystem environments
 - Technologies to reduce pollution in the environment
2. Environmental health
 - Introduction, concepts and definitions
 - Main environmental agents and vectors of diseases
 - Basic concepts of Environmental Epidemiology
 - Environmental health risk assessment
 - Health and environment indicators
 - Occupational health
 - Environment and Public Health - Case Studies

Recommended reading

1. Klaassen, Curtis D. ; Watkins, B. , John (2001). Toxicologia A Ciência Básica dos Toxicos De Casarett & Doull's. Mcgraw-Hill de Portugal, Lda. 5ª Edição.
2. Honeycutt, R. C. , Day, Jr. , E. (2001). Worker Exposure to Agrochemicals. Methods for monitoring and assessment. CRC Press LLC.
3. Moeller, D. W. (2005). Environmental health. Third Edition. Cambridge: Harvard University Press.
4. Beaglehole, R. , Bonita, R. Kjellström, T. (2010) Epidemiologia Básica-Livraria. 2ª Ed. São Paulo
5. "Scientific opinion", "Scientific Report" and "Technical Report" of EFSA, EEA, OECD e outras organizações internacionais

Teaching and learning methods

Classes' subjects are first presented to students, which are then assisted in developing class works and research activities.

Assessment methods

1. Alternative 1 - (Regular, Student Worker) (Final)
 - Intermediate Written Test - 75%
 - Work Discussion - 25%
2. Alternative 2 - (Regular, Student Worker) (Final, Supplementary, Special)
 - Final Written Exam - 100%

Language of instruction

Portuguese

Electronic validation

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11-11-2020	13-11-2020	13-11-2020