



Universidad
Politécnica
de Cartagena

Campus
de Excelencia
Internacional

ETHICS AND PROFESSIONALISM IN SCIENCE

ÈTICA Y PROFESIONALIDAD EN LA CIENCIA

**Actividades Transversales de Doctorado
Universidad Politécnica de Cartagena
Curso 2022/23**

1. Información general de la actividad /General course information					
Nombre/ Name		Ethics and professionalism in science.			
Nivel /Level		Doctorado			
Modalidad de impartición / Teaching mode		Online			
Lengua impartición/ Language		Español/English			
ECTS	1	hours / ECTS	30	Total hours	30

2. Datos del profesorado / Lecture data			
Profesor /Lecturer in charge		Juan Ruiz Álvarez	
Departamento o Servicio/ Department/Service		Departamento de Matemática Aplicada y Estadística	
Area de conocimiento /Knowledge area		Matemática Aplicada/Applied Mathematics	
Despacho /Office location		Escuela de Civil/Navales 2.07	
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URL / WEB		https://personas.upct.es/perfil/juan.ruiz	
Horario de Atención /Office hours		Disponible en: https://personas.upct.es/perfil/juan.ruiz#docencia Available at: https://personas.upct.es/perfil/juan.ruiz#docencia	

3. Fechas por edición / Dates	
1ª edición / 1st edition-	Online
Fecha/Date	01/11/2022-31/01/2023
Horario/Hours	
2ª edición / 2nd edition	Online
Fecha/Date	01/02/2023-30/04/2023
Horario/Hours	
3ª edición / 3rd edition-	Online
Fecha/Date	01/05/2023-10/07/2023
Horario/Hours	

4. Objetivos del curso/Course objectives
<p>The main objective of this course is helping the future researchers to increase their ethical sensitivity, ethical knowledge, to improve their ethical judgment and to enhance their ethical behaviour in publication and research.</p> <p>This course is an introduction to the philosophical study of morality, including the theory of right and wrong behaviour, the theory of value (goodness and badness), and the theory of virtue and vice. Besides providing familiarity with the primary questions addressed within moral philosophy and the most influential answers given by well-known philosophers, this course is designed to help students develop their abilities to read, explain, analyse, and evaluate philosophical literature, write and express themselves well about their own ethical positions, and think critically and analytically about ethical issues, particularly related to science and the scientific publication process.</p> <p>The most important points of the course are:</p> <ul style="list-style-type: none"> • Excellence, integrity, and honesty in all aspects of research. • Personal accountability in the conduct of research and the dissemination of the results. • Professional courtesy and fairness when working with other colleagues. • Unselfish cooperation in research. • Legal compliance in all aspects of research, including intellectual property.

5. Contenidos teóricos / Theory programme

1. Introduction.

What are professional standards? Which rules should be universally subscribed to by scientists? Are there any specific ethical principles to be followed by scientists?

2. Ethics: A framework for dealing with ethical problems in research.

In this point we will discuss about the convenience of having an ethical code for every branch of research or for every profession.

3. Methodology and reporting.

This section is dedicated to exploring, through some famous cases that have appeared in the media, the ethical questions related to reproducibility, falsification, fabrication, plagiarism, redundant publication, or text recycling.

4. Practical applications in reporting and peer review.

This point of the course is devoted to expose the usual conventions of authorship: for example, the order of listing of the authors and who to include (and exclude) as an author on a publication (honorary authorship, phantom authorship, etc..). We will also analyse what predator journals are and how to detect them, explain the conflicts of interest that can arise from the peer review system, describe the responsibilities of reviewers of publications and grants, or expose how modern applications like Turnitin can help.

5. Institutional responsibility.

In this section we will explain institutional and governmental regulations and policies (including policies on misconduct) that are related to the practice of scientific research. We also describe the control mechanisms for the detection of possible misconduct or bad practices in science and research.

6. The scientist in society. Conclusions.

In this last point of the course, we will analyze the obligations of scientists with the society and their social responsibility.

6. Contenidos prácticos / Practical programme

Students will write essays to analyse cases or case scenarios of their interest related to each point of the theoretical programme. Their essays will include discussions about the ethical issues raised by the cases chosen. Faculty will participate in the discussions and assist the students to understand aspects of the case that they may have missed.

7. Sistema de evaluación/ System of evaluation

Students will be assessed through exercises and assignments. The assignments will consist in writing essays that cover the main points of the course and to discuss with the professor the more important points.

8. Distribución horaria de los contenidos, incluyendo las tareas de los alumnos / Hours distribution

Activity	Location	Hours
Study the documentation of the course and revise all the material provided. This part also includes some online sessions where the students will be able to discuss with the professor the different aspects of the course.	Online	10
Research about the topics suggested for every point of the subject.		10
Prepare different essays that cover all the points of the course and discuss with the professor the ethical aspects that might rise.		10
		30