60064 - Transport, exposure and bioavailability of nanomaterials

Información del Plan Docente

Academic Year	2016/17
Academic center	100 - Facultad de Ciencias
Degree	544 - Master's in Environmental Nanotechnology
ECTS	7.0
Course	1
Period	Annual
Subject Type	Compulsory
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

5.2.Learning activities

5.3.Program

Program

1. **Transport of nanomaterials in aqueous media** . Diffusion, settling, advection. Relationship with colloidal stability and reactivity in natural waters and biological fluids. Transfer rates among water and atmosphere/geosphere

compartments.
2. **Transport of nanomaterials in the atmosphere.** Interaction with atmospheric aerosols. Dry and wet deposition. Relationship with physicochemical degradation processes.
3. **Transport of nanomaterials in soils, sediments and other solid matrices.** Percolation. Transfer rates to/from atmosphere and hydrosphere. Relationship with colloidal stability and reactivity in water.
4. **Quantitative models for the assessment of exposure** in natural waters, toxicological test media and working environments.
5. **Nanomaterials at the environment/organism interface. Bioavailability.**

5.4.Planning and scheduling

5.5.Bibliography and recomended resources