

# Introduction to Research Activities

## Synopsis

The topics covered will allow getting knowledge in main aspects the scientific method applied to the study of environmental contamination. Students will develop critical thinking and will be aware of the main mistakes produced in scientific research.

## Aims

- to introduce the students to the wide range of sampling techniques applicable to operational oceanography

## Objectives

At the end of the Unit, you should:

1. Understand the current topics in environmental contamination and toxicology research.
2. Identify most active research groups in environmental pollution research
3. Identify the main research groups working in applied environmental research
4. Science communication Critical way of thinking Wide perspective of research issues.

## Key Skills Acquired

At the end of the Unit, you should be able to:

1. Apply fundamental techniques for the culture of animal tissues
2. Produce functional analysis in cell cultures.

## Syllabus

The following issues are addressed:

1. The Theory of Knowledge
2. Research, Ethics and Society
3. Basic Research Methods
4. Scientific Documentation
5. Communication: Oral and Written
6. Creativity and Problem Solving
7. Research Funding
8. Research Outside the Academic World

## Learning & Teaching

- Lectures: 24 hr
- Tutorials: 11 hr
- Seminars: 5 hr

## Teaching Staff

Nestor Extebarria (Coord.)

**Semester:** 2

**Timetable slot:** To be advised

**ECTS:**4

**Level:** Optional

## Bibliography

- Montello, D.R., Sutton, P. 2012. An Introduction to Scientific Research Methods in Geography and Environmental Studies (2nd edition). SAGE Publishing. ISBN 9781446200742
- Valiela, I. 2009. Doing Science: Design, Analysis and Communication of Scientific Research. Oxford University Press. ISBN 978-0195385731
- Staddon, J. 2017. Scientific Method: How science works, fails to work, and pretends to work. CRC Press. ISBN 9781138295360

## Assessment

- Written theory examination (50%)
- Seminar and oral presentation (50%)

## Course Evaluation

By completion of University Unit Evaluation Questionnaire by students, annual assessment by Unit Co-ordinator