

## MASTER BIOTECHNOLOGIES

### PARCOURS MASTER INTERNATIONAL EN BIOTECHNOLOGIES MARINES

#### semestre 10

## Research project and industrial placement

### Présentation

This unit will provide students with a broad knowledge in research project realisation and management. Research project will be carried out either in academic laboratories or will be hosted in industrial and start-up biotech companies.

30 crédits ECTS

### Objectifs

The objectives of this unit are:

1. To introduce students to key writing skills necessary for research including techniques and guidelines for producing research reports, presenting and publishing research findings and writing review articles.
2. To provide students with examples of successful research writing
3. To enhance to masters level the intellectual, professional and personal skills necessary for high quality work, problem solving and project management in a scientific environment.
4. To enable students to initiate, design, conduct and report on research that makes a contribution to scientific knowledge
5. To develop the students' critical awareness of current knowledge in a specific area of aquatic applied biology.

### Pré-requis nécessaires

None

### Compétences visées

On successful completion of this unit, students should be able, at threshold level, to:

1. Professionally plan, organise and carry out a substantive project activity with the breadth, scope and discrimination appropriate to a Master of Science award
2. Perform an extensive literature search relevant to a research area;
3. Utilise a range of research techniques;
4. Critically analyse experimental results and present data in an appropriate form;
5. Produced a detailed critique of scientific papers that demonstrates an understanding of the structure of scientific writing
6. Present a logical, clear and critical synopsis of an extensive scientific study;
7. Report the work orally and in writing.

### Descriptif

The topics covered in the unit will include:

1 - Research methods with :

- Writing skills for scientific (grants), industrial and consultancy reports ; Journal articles, posters and academic book chapters, journalism ; Review articles ; Research proposal (including PhD proposals) ; Critiques of scientific papers or other writing.
- Oral research presentations: communication issues ; effect deliveries ; audio-visuals aids ; structuring presentations ; summaries and ending ; dealing with questions ; criticism and feedback

2 - The Research Project for which there is no formal syllabus, but the content of the project must be such as to meet the programme learning outcomes.

- The project must cover: problem specification, literature searching and review, design and performance of scientific experiments, testing and critical evaluation of solutions and conclusions.

- Allocation - The project is allocated by interview resulting in the joint completion of an Agreed Postgraduate Study Plan by the student, supervisor and moderating supervisor.

- Monitoring - The project progress is monitored through regular meetings with the supervisor and industrial mentor (in case of the project is done in the industry) and by means of interim reports.

Assessment and Moderation - The supervisor, *in consensus* with the moderating supervisor, will provide the mark based on the work undertaken during the project, the oral presentation, the interim report and the final report. In case of the placement is done outside the university (Erasmus or industrial placements), the local supervisor will provide a commentary but will not assess the performance.

## Bibliographie

Berry, R., 2000, The Research Project: How to Write It, Routledge (ISBN: 0415205204).

Maimfors, B. et al., 2000, Writing and presenting scientific papers, Nottingham University Press.

Pechenik, J. and Lamb, B., 1994, How to write about Biology, Harper Collins

Walliman, N. 2006. Your Research Project. 2nd Ed. Sage. California.

Swernam, D. 2000. Writing your dissertation. 3rd Ed. How To Books Ltd. Oxford.

## Modalités de contrôle des connaissances

### Session 1 ou session unique - Contrôle de connaissances

| Nature de l'enseignement | Modalité | Nature                | Durée (min.) | Coefficient | Remarques |
|--------------------------|----------|-----------------------|--------------|-------------|-----------|
| UE                       | CT       | Ecrit - devoir maison |              | 20%         |           |
| UE                       | CT       | Ecrit - rapport       |              | 60%         |           |
| UE                       | CT       | Oral - exposé         | 30           | 20%         |           |

### Session 2 : Contrôle de connaissances

| Nature de l'enseignement | Modalité        | Nature                | Durée (min.) | Coefficient | Remarques       |
|--------------------------|-----------------|-----------------------|--------------|-------------|-----------------|
| UE                       | Report de notes | Ecrit - devoir maison |              | 20%         | report session1 |
| UE                       | Report de notes | Ecrit - rapport       |              | 60%         | report session1 |
| UE                       | Report de notes | Oral - exposé         |              | 20%         | report session1 |