



## **OBJECTIVES, RESEARCH GROUPS, METHOD AND EXPERIMENTAL EVALUATION OF WORK**

The experimental work is conceived as a small research project of 30 credits that students must develop during the academic year (second year for graduate students coming from non-related degrees). This is a very practical laboratory work aimed at consolidating, improving and completing the training acquired through the studies of subjects in the different modules. The experimental work can be performed in any laboratory at the University of Barcelona or any other research institution wherever it is endorsed by the signature of a mentor teacher at the University of Barcelona. It is also possible to perform experimental work in the scientific and technical services at the University of Barcelona.

### **■ General Objectives**

The objective of the experimental work is to implement the set of learning activities and competencies defined in the theoretical and practical programs, providing students with basic skills in experimental laboratory work, attained under the direct supervision of experts.

### **■ Specific objectives**

- 1) Provide a solid, comprehensive and consistent background to begin doctoral programs in oriented biomedical research.
- 2) Train students for the development of professional duties in the field of biomedical research and clinical analysis at pharmaceutical and biotechnology industries that do not require a Ph.D. or an official title of specialist in Health Sciences.

The student will demonstrate:

- 1) Understanding the value and limitations of scientific method
- 2) Training to act in accordance with the scientific methodology which makes reference to defining problems, formulating hypotheses, selecting the strategy and the experimental methodology, acquisition, evaluation and interpretation of results and developing conclusions.
- 3) Training to seek, obtain, organize and interpret information from biomedical databases and various sources.
- 4) Training for communicating results, using the different means at its disposal, with knowledge of its limitations.

## **PROCEDURE:**

### **1. Introduction**

Masters students will choose a scientific biomedicine adviser for experimental work from the participating research groups constituted by researchers from the University of Barcelona or any other research institution in the terms above mentioned.

This research will last 30 credits.

## 2. Research groups where experimental work can be performed

Students who do not have a director or research group where perform the experimental work can address themselves to the coordinators of the master for advice, guidance and suggestions on possible directors and research groups.

SPECIFIC AREAS AND COORDINATORS:

Molecular basis of cancer. Dr. Neus Agell [neusagell@ub.edu](mailto:neusagell@ub.edu)

Metabolism. Dr. Teresa Mampel [tmampel@ub.edu](mailto:tmampel@ub.edu)

Neuroscience. Dr. Gabriel Pons [gpons@ub.edu](mailto:gpons@ub.edu)

Scientific and technical services. Dr. Esther Castaño [mcastano@ub.edu](mailto:mcastano@ub.edu)

Other areas. Dr. Albert Tauler [tauler@ub.edu](mailto:tauler@ub.edu)

## 3. Experimental work form

Once the student has project and research group director must complete the corresponding form signed by the student and the tutor / director. It should be sent scanned via email or by regular mail to the secretary of the Master: Irene Erta, [ireneerta@ub.edu](mailto:ireneerta@ub.edu) Secr. Estud. i Docència Bellvitge. Pavelló de Govern 1a. Plta. C/ Feixa Llarga, s/n (08907 Hospitalet Llobregat)

**Date of delivery of the information: by mail and is posted on the website**

## 4. Research proposal

Students will prepare an investigation plan stating: job title, background, objectives, methodology and work plan. This proposal must be endorsed by an adviser from the participating research groups, showing the acceptance of students in their group, which will carry out the plan of work envisaged under his leadership. The proposal should include the experimental work allowed to present the final project. Finally, the Coordination Commission will approve the proposal.

## 5. Evaluation of experimental work

Memory:

The research work is finished with the preparation of a report of research work. This memory must meet the following requirements:

Digital memory, a maximum of 20 pages, in the period established. The report should have the following contents:

a.. General information:

- Student name and contact details (email and phone)
- Name of director
- Laboratory / Department / Centre where the work was done.

b. Specifics:

- Title I
- Background
- Objectives
- Methodology
- Results
- Discussion and conclusions

- References used

**Public presentation and defense of the report.**

Oral evaluation will be conducted and published before a committee consisting of two teachers who participate directly in the Master. The presentation will highlight the results obtained during the research, the knowledge of history and literature on the subject, and the critical sense in the results achieved. It must also demonstrate that the methodology used was appropriate from a technical standpoint, statistical and scientific logic.

There will be a single evaluation period in mid-July.

**Procedure of the exhibition:**

The public presentation to the board members shall not exceed 15 minutes plus question time members from the two Tribunal. Members

**Qualification of the experimental work:**

The experimental work developed by the pupil along the 30 experimental credits is very related with the credits worked on the several matters and subjects that the pupil has done to the master.

Consequently, the final qualification of the experimental work will come given by the sum of two values:

1. Appraisal of the presentation and defences of the experimental work: Memory and Oral presentation: 30% of the final qualification.
2. Mean score obtained in master's of biomedicine (teaching block 0,1,2,3,4):70% of the final score