

SYLLABUS

1. COURSE DESCRIPTION

Degree:	Biotechnology
Course:	Immunology
Module:	Fundamentals of Biology, Microbiology and Genetics.
Department:	Physiology, Anatomy and Cell Biology
Academic Year:	2016/17
Term:	First
ECTS credits:	4,5
Year:	4th year
Type:	Compulsory
Language:	Spanish

Course Model:	A2	
a. Basic learning (EB):		70%
b. Practical learning (EPD):		15%
c. Guided Academic Activities (AD):		15%



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2. LECTURERS

Coordinator	
Name:	Guillermo López Lluch
School:	School of Experimental Sciences
Department:	Physiology, Anatomy and Cell Biology
Area:	Cell Biology
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3. TOPICS

BASIC LEARNING (EB)

1. Introduction to immunology.
2. Cellular components of the immune system.
3. Concept of antigen and haptén.
4. Immunoglobulins.
5. Specific lymphocyte receptors.
6. Cytokines and their receptors.
7. Lymphocytes differentiation and activation.
8. The inflammatory response.
9. Diseases associated with malfunction of the immune system.
10. Vaccines.
11. Transplant immunology.
12. Immunity and tumors.

PRACTICAL LEARNING (EPD):

Students will conduct experimentation in immunology in order to determine the efficacy of techniques that use immunology as a tool for diagnosis (ELISA) or methods for the determination of cell populations in the immune system (characterization of subpopulations by immunolabeling).

The practices will be complementary to the basic learning. These practices include:

- 1 practice of substance determination with ELISA.
- 1 practice of characterization of populations with immunolabeling.

GUIDED ACADEMIC ACTIVITIES (AD)

The guided activities will be integrated both in the basic learning and in the practical learning. This type of activities include:

- Questionnaires, problems and reading of texts related to the EB.
- Activities for learning and carrying out the analysis and interpretation of the results obtained in practical learning.
- Activities for the learning and realization of the scientific edition of the results obtained in the EPDs and the approach of scientific bibliography.
- Work-teams for the preparation of seminars, which should be exposed by one of the members. The other students will make an evaluation under a list of criteria.



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- Observation of documentaries related to the subject in order to discuss and work in class.