COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF NATURAL SCIENCES		
ACADEMIC UNIT	DEPARTMENT OF BIOLOGY		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	**BIO_ZE01**	SEMESTER	5/7
COURSE TITLE	IMMUNOBIOLOGY		

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	WEEKLY TEACHING HOURS	CREDITS
LECTURES	2	
LABORATORY EXERCISES	3	
		6
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	**Specialised general knowledge**
PREREQUISITE COURSES:	**None. However, it is desirable that the students have acquired basic knowledge in the fields of Cell Biology, Molecular Biology, Genetics and Biochemistry.**
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	**Greek**
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes [English]
COURSE WEBSITE (URL)	**http://www.biology.upatras.gr/index.php?option=com_content&view=article&id=785&Itemid=376**

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

The aim of the course is the understanding of the organization and function of the immune system, both in molecular and cellular level. Upon completion of the course, the students will be able to understand the mechanisms involved in both normal and abnormal functions of the immune system.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations
Decision-making
Working independently
Project planning and management
Respect for difference and multiculturalism
Respect for the natural environment
Showing social, professional and ethical responsibility and sensitivity to gender issues

Team work *Working in an international environment* *Working in an interdisciplinary environment* *Production of new research ideas*	*Criticism and self-criticism* *Production of free, creative and inductive thinking* *……* *Others…* *…….*

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Team work
- Production of new research ideas

(3) SYLLABUS

- The immune system
- Innate and adaptive immune responses
- Antigens and antibodies
- Antigen processing and presentation
- Structure of the antigen receptors
- Antigen recognition and signal transduction
- Cell-mediated immune responses
- Humoral immune responses
- The complement system
- The Major Histocompatibility Complex [MHC]
- Immune responses against tumours and transplants
- Congenital and acquired immunodeficiencies
- Immunological tolerance and autoimmunity
- Hypersensitivity reactions

(4) TEACHING and LEARNING METHODS - EVALUATION

<table>
<tr><td>DELIVERY
Face-to-face, Distance learning, etc.</td><td>Face-to-face</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
Use of ICT in teaching, laboratory education, communication with students</td><td>Yes</td></tr>
<tr><td>TEACHING METHODS
The manner and methods of teaching are described in detail.
Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.

The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</td><td>
<table>
<tr><th>Activity</th><th>Semester workload</th></tr>
<tr><td>Lectures</td><td>26</td></tr>
<tr><td>Laboratory Practice</td><td>12</td></tr>
<tr><td>Study and analysis of bibliography
Tutorials
Essay writing
Private study hours</td><td>112</td></tr>
<tr><td>Course total
[25 hours of work-load per ECTS credit]</td><td>150</td></tr>
</table>
</td></tr>
<tr><td>STUDENT PERFORMANCE EVALUATION
Description of the evaluation procedure

Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other

Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</td><td>Written examination at the end of the semester, which includes:
Multiple choice questionnaires
Short-answer questions
Open-ended questions
Problem solving</td></tr>
</table>

(5) ATTACHED BIBLIOGRAPHY

1. **Lippincott – Immunology [2η edition, 2012]**
2. **Janeway's Immunobiology [9th edition, 2016]**
3. **E. Rosmaraki – Immunobiology [https://eclass.upatras.gr/courses/BIO372/]**