

**Applied Physiology**

Code: 102916  
ECTS Credits: 3

Degree	Type	Year	Semester
2502442 Medicine	OT	3	0
2502442 Medicine	OT	4	0
2502442 Medicine	OT	5	0
2502442 Medicine	OT	6	0

**Contact**

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**Use of Languages**

Principal working language: catalan (cat)  
Some groups entirely in English: No  
Some groups entirely in Catalan: Yes  
Some groups entirely in Spanish: No

**Prerequisites**

Mian basic human physiology knowlege is needed. Maximal students: 80.

**Objectives and Contextualisation**

Applied Physiology " Fisiologia Aplicada " is a subject whose main purpose is to introduce the student in the integrative knowledge of the different organic systems of the body. Basically to understand the whole body response to different physiological status, such as bes rest, circadian rhythm, exercise, different diets, 0 gravity, high altitude, ...

**Competences**

- Medicine
- Use information and communication technologies in professional practice.

**Learning Outcomes**

1. Use information and communication technologies in professional practice.

**Content**

Lung mechanics. Surfactant.  
Pulmonary circulation.

Lung and bronchial inflammation

Respiratory failure

Chronophysiology

Heart electrophysiology

Endothelial function

Adaptation to acute and chronic exercise

Diet and heart disease

General and cardiovascular aging

Cardiovascular monitoring

Lung ventilation monitoring

Stress test

Bed Resting

## Methodology

Theoretical lectures:

Main concepts of the different subjects will be explained..

Laboratory classes:

Mainly clinical laboratory in-hospital sessions to understand and apply the theoretical concepts.

Tutorials:

Supervised practical problems

## Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Theoretical lessons	15	0.6	
Type: Supervised			
Practical cases	15	0.6	
Type: Autonomous			
Paper writing	10	0.4	1
Personal learning, article reading	32	1.28	1

## Assessment

Acquired knowledge will be evaluated:

- Multiple choice test (70% of final score)
- Continuous evaluation through cases (20% of final score)
- Practical laboratory knowledge (10% of final score).

All 3 evaluations are needed

Recovery examination will be offered if needed

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Evaluation by means of theoretical and practical cases	20%	1	0.04	1
Multiple choice examination	80%	2	0.08	1

## Bibliography

- BERNE R, LEVY M. Fisiología (4ª ed.). Elsevier-Mosby, 2009.
- GUYTON AC, HALL JE. Tratado de Fisiología Médica (12ª ed.). Elsevier-Saunders, 2009.
  - TRESGUERRES JAF. Fisiología Humana (4ª ed.). Mc Graw Hill-Interamericana, 2010.