



CLASS FORM

Degree:	Biology
Name of the class:	Physiopathology
Number of Credits:	6
Semester:	II
Teacher:	Francesco Maria Pacifico
PhD students/research assistants that support teaching activities:	
Office hours:	By appointment
Address:	DST - Università degli Studi del Sannio

OUTLINE OF THE CLASS

The course of Physiopathology aims to transfer the main knowledges about cellular and molecular physiopathology and its applications to the biomedical research area and to the diagnosis of human diseases.

Main topics:

1. Immunopathology
2. Physiopathology of thermoregulation
3. Physiopathology of blood and endothelial cells
4. Physiopathology of lipids and atherosclerosis
5. Cellular and molecular oncology

TEACHING GOALS

The course gives the main instruments to understand physiopathologic modifications at molecular and cellular level in tissues and organs.

After completing the course, the student should have acquired the ability:

- to identify the main physiopathological mechanisms underlying disorders;

- to identify scientific methodologies to understand physiopathologic processes in cells, tissues and organs;
- to use knowledges acquired during the course in the field of biomedical research and diagnostics.

PRELIMINARY REQUIREMENTS

No preliminary requirements.

ATTENDANCE AT THE CLASS

The attendance at the class is strongly recommended because the teacher is committed to facilitate learning and comprehension of Physiopathology through the integration of the textbooks with slides and additional explanations.

CLASS PROGRAM

IMMUNOPATHOLOGY. Hypersensitivity reactions; tolerance and autoimmunity; transplantation and rejection; immunodeficiencies.

PHYSIOPATHOLOGY OF THERMOREGULATION. Hyperthermias, hypothermias and fever.

PHYSIOPATHOLOGY OF BLOOD. Blood composition; haematopoiesis and erythropoiesis; haemoglobin and haemoglobinopathies; anemias.

PHYSIOPATHOLOGY OF ENDOTHELIAL CELLS. General aspects. Endothelial cells and extracellular matrix. Endothelial cells functions. Angiogenesis and vasculogenesis.

PHYSIOPATHOLOGY OF LIPID METABOLISM. General aspects. Hyperlipoproteinemias and hypolipoproteinemias.

ATHEROSCLEROSIS. General aspects. Atheroma and dynamic of plaque formation.

ONCOLOGY. Oncogenes, oncogene addiction and tumor suppressors. Cancerogenesis. Tumor etiology, epidemiology and heritable predisposition. Solid and haematopoietic tumors Principles of cancer radiotherapy and chemotherapy. Tumor targeted therapy and immunotherapy. Cancer-related inflammation.

TEACHING TOOLS

Frontal lessons.

TEXTBOOKS

G. Pontieri, Patologia generale, Piccin Editore

AA.VV., Patologia generale, Idelson-Gnocchi Editore

Robbins e Cotran, Le basi patologiche delle malattie, Piccin Editore

F. Celotti, Patologia generale e fisiopatologia, Edises

A. Abbas, Immunologia Cellulare e Molecolare, Piccin Editore

Janeway's, Immunobiologia, Piccin Editore

P. Parham, Il sistema immunitario, Edises

EXAMS

Written exam of 30 minutes. Written test consist of 30 multiple choice questions, with only one correct answer. Each correct answer yields one point, and each wrong or missing answer yields zero points. Students who get 18 or more points pass the test. They could register the exam or ask for take the oral exam to try to improve the score. Students who get 17 do not pass the exam, but could be admitted to the oral exam if desired. The final score will be the mean of the scores of the written and oral exams. Students who get less than 17 do not pass the exam and could not be admitted to the oral exam.

DATE OF EXAMS

Go to the link

RESERVATIONS OF EXAMS

Go to the link

SYLLABUS

Topics	Hours	Textbooks	Type of lessons
Introduction to the course General concepts	2	Textbooks listed above Slides	Frontal
Immunopathology Hypersensitivity Autoimmunity Transplantation Immunodeficiencies	10	Textbooks listed above Slides	Frontal
Physiopathology of thermoregulation Hyperthermias Hypothermias Fever	4	Textbooks listed above Slides	Frontal
Physiopathology of blood General aspects Haematopoiesis and erythropoiesis Anemias and haemoglobinopathies	4	Textbooks listed above Slides	Frontal
Physiopathology of endothelial cells General aspects Endothelial cells functions Angiogenesis	4	Textbooks listed above Slides	Frontal
Physiopathology of lipid metabolism General aspects Hyperlipoproteinemias Hypolipoproteinemias Atherosclerosis	6	Textbooks listed above Slides	Frontal
Oncology Oncogenes Tumor suppressors	6	Textbooks listed above Slides	Frontal

Oncology Cancerogenesis Tumor epidemiology Tumor etiology Heritable predisposition	4	Textbooks listed above Slides	Frontal
Oncology Anti-cancer therapies	4	Textbooks listed above Slides	Frontal
Oncologia Cancer-related inflammation	4	Textbooks listed above Slides	Frontal