



UNIVERSITÀ DI PAVIA

Anno Accademico 2021/2022

BLOOD SCIENCES

Enrollment year	2020/2021
Academic year	2021/2022
Regulations	DM270
Department	DEPARTMENT OF MOLECULAR MEDICINE
Course	BIOMEDICAL LABORATORY TECHNIQUES
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	1st semester (04/10/2021 - 21/01/2022)
ECTS	6
Language	Italian

The activity is split

503646 - LAB HAEMATOLOGY

501627 - ENDOCRINOLOGY

503645 - IMMUNOLOGY AND IMMUNOHAEMATOLOGY



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Anno Accademico 2021/2022

LAB HAEMATOLOGY	
Enrollment year	2020/2021
Academic year	2021/2022
Regulations	DM270
Academic discipline	MED/15 (BLOOD DISEASES)
Department	DEPARTMENT OF MOLECULAR MEDICINE
Course	BIOMEDICAL LABORATORY TECHNIQUES
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	(04/10/2021 - 21/01/2022)
ECTS	2
Lesson hours	16 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	BERNASCONI PAOLO (titolare) - 2 ECTS
Prerequisites	
Learning outcomes	
Course contents	
Teaching methods	
Reccomended or required readings	
Assessment methods	
Further information	
Sustainable development goals - Agenda 2030	



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ENDOCRINOLOGY	
Enrollment year	2020/2021
Academic year	2021/2022
Regulations	DM270
Academic discipline	MED/13 (ENDOCRINOLOGY)
Department	DEPARTMENT OF MOLECULAR MEDICINE
Course	BIOMEDICAL LABORATORY TECHNIQUES
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	(04/10/2021 - 21/01/2022)
ECTS	2
Lesson hours	16 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	CHIOVATO LUCA - 2 ECTS
Prerequisites	No preparatory exams are required. However students must possess or acquire a proper preparation in physiology and pathology
Learning outcomes	The course aims to provide students with the fundamental notions of physiopathology and clinical diseases of the endocrine system necessary to correctly interpret the results of laboratory tests regarding the different hormonal dosages. The main hormonal dosing methods and the possible dosing errors that can occur for each technique will be discussed. In addition, some clinical examples of particular interest are presented with interactive discussion with students.
Course contents	Neuroendocrine system Pituitary adenomas Hyperprolactinemia Acromegaly Cushing's disease

	Hypopituitarism Pathophysiology of the hypothalamus-pituitary-thyroid axis Hyperthyroidism - Hypothyroidism - Markers of thyroid tumors Pathophysiology of the adrenal gland - Adrenal hypocorticism - Cushing's syndrome Female and male reproductive endocrinology Immunometric assay techniques - Mass spectrometry
Teaching methods	The course includes classroom lectures and interactive teaching activities through discussion of clinical cases and attendance at the Laboratory for the study of Endocrine Disruptors (ICS Maugeri, Pavia). The teachers are available, during reception hours, for clarification on the topics covered in class.
Reccomended or required readings	J. Larry Jameson, Anthony S. Fauci, Dennis L. Kasper, Stephen L. Hauser, Dan L. Longo, Joseph Loscalzo (Eds). Harrison's Principles of Internal Medicine: Volumes 1 and 2, 20e, Mc Graw-Hill, 2018. D. Gardner, D. Shoback (Eds). Greenspan's Basic and Clinical Endocrinology, 10th Edition. Mc Graw-Hill, 2017. L. Goldman, Al. Schafer (Eds). Goldman's Cecil Medicine, 26th Edition. Saunders Elsevier, 2015. A. Lenzi, G. Lombardi, E. Martino, R. Vigneri (Eds.). Endocrinologia Clinica, Minerva Medica, 2011.
Assessment methods	The exam is oral and will focus on the topics covered in class. During the exam, the ability to integrate the knowledge acquired during the course, the achievement of the training objectives of the course and the appropriate medical-scientific language will be assessed.
Further information	The exam is oral and will focus on the topics covered in class. During the exam, the ability to integrate the knowledge acquired during the course, the achievement of the training objectives of the course and the appropriate medical-scientific language will be assessed.
Sustainable development goals - Agenda 2030	\$lbl_legenda_sviluppo_sostenibile



IMMUNOLOGY AND IMMUNOHAEMATOLOGY

Enrollment year	2020/2021
Academic year	2021/2022
Regulations	DM270
Academic discipline	MED/46 (LABORATORY MEDICINE TECHNIQUES)
Department	DEPARTMENT OF MOLECULAR MEDICINE
Course	BIOMEDICAL LABORATORY TECHNIQUES
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	(04/10/2021 - 21/01/2022)
ECTS	2
Lesson hours	16 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	INVERNIZZI ROSANGELA - 2 ECTS
Prerequisites	An adequate knowledge of cellular biology is needed.
Learning outcomes	The course will provide the student with basic knowledge on the human immune system and on the mechanisms of the immune response in both physiological and pathological conditions; moreover information on blood groups and how to prepare and use the blood components
Course contents	Natural immunity: phagocytosis, complement, NK cells, the inflammatory response. Acquired immunity: humoral and cell-mediated. Antigens. Antibodies and their structure. Antigen-antibody interaction. Lymphoid organs: lymph nodes, spleen, mucosa-associated lymphoid tissue. T and B lymphocytes and their receptors. The major histocompatibility complex. Cytokines.

	Transplantation immunology and cancer. Immunity to microorganisms. Hypersensitivity reactions. Autoimmunity and immunodeficiencies. Production of monoclonal antibodies. Blood groups. The ABO system. The Rh system. Other blood groups. Hemolytic disease of the newborn. Donation of blood and preparation of blood components. Blood components and plasma products: characteristics, indications, preparation and storage. Stem cells from peripheral blood. Complications of transfusion therapy. Hemapheresis. Compatibility tests. Direct and indirect Coombs test.
Teaching methods	Lectures
Reccomended or required readings	Del Gobbo V. Immunologia per le lauree sanitarie. Piccin
Assessment methods	Oral examination
Further information	/
Sustainable development goals - Agenda 2030	\$lbl_legenda_sviluppo_sostenibile