



CARDIOLOGY

Enrollment year	2017/2018
Academic year	2020/2021
Regulations	DM270
Academic discipline	MED/11 (CARDIOVASCULAR DISEASES)
Department	DEPARTMENT OF MOLECULAR MEDICINE
Course	MEDICINE AND SURGERY (IN ENGLISH LANGUAGE) (ENGLISH LANGUAGE)
Curriculum	PERCORSO COMUNE
Year of study	4°
Period	1st semester (01/10/2020 - 15/01/2021)
ECTS	4
Lesson hours	32 lesson hours
Language	English
Activity type	ORAL TEST
Teacher	PRIORI SILVIA GIULIANA (titolare) - 1 ECTS GNECCHI MASSIMILIANO - 1 ECTS LEONARDI SERGIO - 1 ECTS VANOLI EMILIO - 1 ECTS
Prerequisites	Fluency in English
Learning outcomes	At the end of the course students will know: - Carry out a clinical examination of the patient with suspected diagnosis setting - What are the most common imaging studies support the clinical examination and what is their diagnostic significance - For each of the pathological histories to know: . what is (definition) . how important it is (epidemiology) . why and how it is produced (etiology, pathophysiology) . what are the clinical and instrumental and how is it diagnosed . to what you can bring (natural history, complications) . what to do and where (therapeutical notes, homecare and hospital) . possible stages of the disease requiring urgent action (how to recognize the urgency, how to

treat it) - In which advanced stages is necessary to resort to surgery - What are the methods needed for open-heart surgery (cardiopulmonary bypass, myocardial protection, hypothermia) - Basic knowledge for the management of patients with heart transplantation, heart-lung and pulmoneisolato. - Basic knowledge for the management of patients with pulmonary hypertension.

Course contents

Cardiology: - Basis of ECG - Physiology of the coronary circulation and pathophysiology of coronary artery disease - Chronic ischemic heart disease - Invasive and non-invasive diagnosis of chronic ischemic heart disease - Acute coronary syndrome: NSTEMI – STEMI and treatment - Molecular and cellular therapies for ischemic heart disease - Myocarditis - Pericarditis - Basis of electrophysiology and genetics - Electrophysiological study and trans-catheter ablation - Ventricular tachyarrhythmias - QT Long Syndrome and CPVT - Brugada Syndrome and short QT Syndrome - Atrial fibrillation and TPSV - Pharmacological therapy of arrhythmias - Bradyarrhythmias - Implantable cardiac defibrillators and pace makers - Syncope - Physiology and physiopathology of autonomic nervous system - Physiopatology, epidemiology, clinical presentation and treatment of heart failure - Treatment of chronic heart failure - Acute heart failure and Cardiogenic Shock - Valvulopathies - Endocarditis - Acute right ventricular failure - Chronic pulmonary hypertension and right ventricular catheterization - Hypertrophic cardiomyopathy and ARVD - Congenital heart diseases Cardiac surgery: - Extracorporeal circulation and myocardial protection - Surgery for ischemic heart disease and its complications - Surgery for the aortic valve and thoracic aorta - Mitral valve surgery - Surgery for congenital heart defects - Heart transplantation and ventricular assist devices - Lung and heart-lung transplantation - Surgery for pulmonary embolism and chronic thromboembolic pulmonary hypertension

The theoretical and practical lessons will be conducted at the Cardiac Departments of the Policlinico San Matteo, Fondazione Maugeri e Istituto di Cura Città di Pavia. The exercises will follow the activities carried out within the structures. The theoretical and practical lessons will be conducted at the Cardiac Surgery Department, the surgeries, the halls of hemodynamics and operating rooms of Cardiac Surgery of the Policlinico San Matteo. The exercises will follow the activities carried out within the structure.

Teaching methods

The course is organized in: Theoretical lessons, conducted with presentations (PowerPoint projected on Screen) through which the learner will acquire the theoretical knowledge necessary for the identification of the main symptomatic heart diseases, their medical history; pharmacological and surgical treatments/methods) and practical exercises in the hospital course where the student will have the opportunity to put into practice, under the expert supervision of the Teacher, what I have learned in lectures.

Recommended or required readings

Patologia, diagnosi e trattamento delle malattie vascolari di interesse chirurgico. F. Benedetti Valentini. Ed. Minerva Medica. Cardiology: - Harrison's Principles of Internal Medicine: Volumes 1 and 2, 18th Edition - Braunwald's Heart Disease: 9th edition Cardiac surgery : ?

	<p>Malattie del Cuore e dei Vasi - De Caterina, Dal Palù, Finardi, Venco -Piccin, 2010 ? Cardiac Surgery in the Adult, 4th Edition – Cohn -McGraw-Hill, 2011 ? Kirklin/Barratt-Boyes Cardiac Surgery, 4th Edition - Kouchoukos, Blackstone, Hanley, Kirklin - Saunders, 2012 ? Operative Cardiac Surgery, 5th Edition - Gardner, Spray - Hodder Arnold, 2004 ? Heart and Lung Transplantation, 2nd Edition - Baumgartner, Reitz, Kasper, Theodore - Saunders, 2002 ? Encyclopédie Médico-Chirurgicale - Techniques Chirurgicales – Thorax - Elsevier Masson, 2012</p>
Assessment methods	<p>The conduct of the test: oral - Commission: Prof. D'Armini, - Prof. Emilio Vanoli - Prof.ssa Silvia Priori; Dr. Massimiliano Gneccchi; Dr. Sergio Leonardi; – Dr. Marone; Dr. Carlo Napolitano – Dr. Andrea Mazzanti</p>
Further information	
Sustainable development goals - Agenda 2030	<p>\$lbl legenda sviluppo sostenibile</p>