

**COURSE OF MEDICINE AND SURGERY**  
**Student Handbook a.y. 2014-2015**

**SYSTEMATIC PATHOLOGY I**

III Year	Scientific Field	DISCIPLINE	TUTOR
<b>Systematic Pathology I</b>	MED/21	<i>Thoracic Surgery</i>	<b>Tommaso Claudio Mineo</b>
	MED/10	<i>Respiratory Diseases</i>	<b>Paola Rogliani</b>
	MED/10	<i>Respiratory Diseases</i>	<b>Ermanno Puxeddu</b>
<b>ECM 8</b> <b>Coordinator</b> Francesco Romeo	MED/23	<i>Cardiac Surgery</i>	<b>Carlo Bassano</b>
	MED/23	<i>Cardiac Surgery</i>	<b>Antonio Pellegrino</b>
	MED/11	<i>Heart Diseases</i>	<b>Francesco Romeo</b>
	MED/11	<i>Heart Diseases</i>	<b>Gianpaolo Ussia</b>
	MED/22	<i>Vascular Surgery</i>	<b>Lorenzo Di Giulio</b>

**PROGRAM**

**HEART DISEASES:**

OBJECTIVES. Understand the pathophysiology and the clinical pictures of acquired and congenital heart disease. Fundamentals of non- invasive and invasive diagnostics.

Overview of the most updated medical and interventional transcatheter therapies

Epidemiology of Cardiovascular Diseases The History and Physical Examination: Principles of Cardiovascular Genetics and Genomics

Pathophysiology of Heart Failure, Clinical Assessment and Heart Failure, Diagnosis and Management of Acute Heart Failure with Reduced Ejection Fraction and with Normal Ejection Fraction

Genesis of Cardiac Arrhythmias:, Diagnosis of Cardiac Arrhythmias Therapy for Cardiac Arrhythmias

The Vascular Biology of Atherosclerosis, Risk Factors and the Prevention of Coronary Heart Disease. Systemic Hypertension: Mechanisms and Diagnosis Therapy; Coronary Blood Flow and Myocardial Ischemia, ST-Elevation Myocardial Infarction: Pathology, Pathophysiology, and Clinical Features, Management of Unstable Angina and Non-ST Elevation Myocardial Infarction. Coronarography and Percutaneous Coronary Intervention Congenital Heart Disease, Valvular Heart Disease, Infective Endocarditis, Cardiomyopathies (Dilated, Restrictive, and Infiltrative, Hypertrophic Cardiomyopathies, Myocarditis). Pulmonary Embolism, pulmonary Hypertension, Pericardial Diseases

**CARDIAC SURGERY:**

CARDIAC ANATOMY AND TERMINOLOGY

CARDIOPULMONARY BYPASS

MYOCARDIAL PROTECTION

CONGENTITAL HEART DISEASES

CHD with flow obstruction

CHD with left-to-right shunt

ISCHEMIC HEART DISEASE

Clinical features and diagnostic criteria

Natural history

Techniques of myocardial revascularization

Indications and results

Mechanical complications of IHD

Left ventricular aneurysm

Post-infarction ventricular septum and free wall rupture

Post-infarction mitral valve regurgitation

**ACQUIRED HEART VALVE DISEASE**

Morphology

Clinical features and diagnostic criteria

Natural history

Principles of operative techniques

Indications and results

**CARDIAC RHYTHM DISORDERS OF SURGICAL INTEREST**

Bradycardia

Morphology

Clinical features and diagnostic criteria

Natural history

Operative techniques

Indications and results

Tachycardia (paroxysmic supraventricular arrhythmias, WPW syndrome)

Morphology

Clinical features and diagnostic criteria

Natural history

Operative techniques

Indications and results

**CARDIAC TUMOURS**

**CONSTRICTIVE PERICARDITIS**

**PRIMARY CARDIOMYOPATHIES AND HEART TRANSPLANTATION**

**THORACIC AORTA DISORDERS**

Chronic degenerative aneurysms of the thoracic and thoraco-abdominal aorta

Acute aortic dissection

**RESPIRATORY DISEASES**

**OBJECTIVES.** to understand the pathophysiology and the clinical pictures of respiratory diseases with particular regard to non- invasive and invasive diagnostic algorithms.

Topics:

Approach to the Patients with disease of the Respiratory System

Diagnostic Procedures in Respiratory Disease

Respiratory Failure: clinical picture and principles of treatment

Obstructive diseases:

-Asthma

-Chronic Obstructive Pulmonary Disease (COPD)

Bronchiectasis

Interstitial Lung Disease (ILD):

-Idiopathic Pulmonary Fibrosis and other IIPs

-Sarcoidosis

-Hypersensitivity Pneumonitis

Pulmonary Arterial Hypertension

Pulmonary Tromboembolism

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Disorders of the Pleura

Disorders of Ventilation and Sleep Apnea

**THORACIC SURGERY**

Principles of surgical anatomy: chest wall, pleura, lung, mediastinum Lung cancer: epidemiology, classification, staging, principles of treatment Pneumothorax, pleural effusion, empyema, thoracic trauma Myasthenia gravis: definition, pathophysiology, staging, principles of treatment Mediastinal diseases: superior vena cava syndrome, thymomas Malignant mesothelioma: epidemiology, classification, staging, principles of treatment Esophageal diseases: achalasia, diverticula, esophageal cancer Other thoracic malignancies: carcinoid, pulmonary metastases Most common surgical accesses and procedures (basic knowledge): thoracotomy, median sternotomy, videoassisted thoracoscopy (VATS), mediastinoscopy, flexible bronchoscopy, rigid bronchoscopy Principles of surgical anatomy: chest wall, pleura, lung, mediastinum Lung cancer: epidemiology, classification, staging, principles of treatment Pneumothorax, pleural effusion, empyema, thoracic trauma Myasthenia gravis: definition, pathophysiology, staging, principles of treatment Mediastinal diseases: superior vena cava syndrome, thymomas Malignant mesothelioma: epidemiology, classification, staging, principles of treatment Esophageal diseases: achalasia, diverticula, esophageal cancer Other thoracic malignancies: carcinoid, pulmonary metastases Most common surgical accesses and procedures (basic knowledge): thoracotomy, median sternotomy, videoassisted thoracoscopy (VATS), mediastinoscopy, flexible bronchoscopy, rigid bronchoscopy

**VASCULAR SURGERY**

Clinical anatomy, physiopathology and semeiology of vascular diseases.

Principles and semeiology of vascular imaging.

Current prevention strategies and prophylactic therapies of vascular diseases.

Congenital and autoimmune vascular diseases.

Acquired, degenerative and infectious vascular diseases.

Vascular diseases of the supraortic vessels.

Neurovascular syndromes of the upper extremities (*Thoracic Outlet Syndromes*).

Artero-venous malformations and fistulas.

Acute limb ischemia and embolic disease of cardiac and peripheral origin.

Aortic coartations.

Aortic dissections.

Visceral ischemic syndromes, acute and chronic.

Aneurysms of the aorta and its branches.

Aneurysms of the peripheral arteries.

Peripheral arterial disease.

Renal vascular diseases and secondary arterial hypertension.

Vascular traumas.

Chronic venous insufficiency of the inferior limbs.

Deep vein thrombosis and pulmonary embolism.

Post-thrombotic syndrome.

Lymphoedema.

Basics of vascular and endovascular surgical techniques.

Elements of complications related to current vascular therapies.

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### Textbooks

#### Heart Diseases:

Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine, 9th edition. Elsevier 2012 ISBN 978-1-4377-0398-6  
 Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine 10th edition, Elsevier 2014, ISBN 978-1-4557-5134-1

#### Respiratory Diseases:

Harrison's Principles of Internal Medicine, 18th edition. Mc Graw Hill 2011 ISBN 978-0-07-159991-7

#### Vascular Surgery:

Rutherford's Vascular Surgery. By Jack L. Cronenwett MD, K. Wayne Johnston MD FRCS. ISBN-13: 978-1455753048 ISBN-10: 1455753041 Edition: 8th.

Chirurgia Vascolare Setacci C. et Al. Official textbook of the Società Italiana di Chirurgia Vascolare ed Endovascolare (SICVE) Edition: 2nd (2012). ISBN-13 978-88-7711-752-6; Language: Italian.

Didactic material will be provided to the Students.

### EXAM METHOD

Oral Exam.

### EXAM COMMISSION

<b>Francesco Romeo (President)</b>			
<b>Antonio Pellegrino</b>			
<b>Carlo Bassano</b>			
<b>Paola Rogliani</b>			
<b>Ermanno Puxeddu</b>			
<b>Lorenzo Di Giulio</b>			
<b>Federico Tacconi</b>			
<b>Gianpaolo Ussia</b>			



#### Tutor

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