UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# COURSE SYLLABUS

# Cardiological Rehabilitation

**2021-2-I0201D138-I0201D215M**

## Aims

**- At the end of the course the student must be able to:**

**General Objectives**

**Recognize the leading cadres of Respiratory Disability arising from obstructive and restrictive diseases. Knowing how to use the techniques and technical tools of pulmonary rehabilitation. Understand the indications for rehabilitation treatment following the most reliable information shared and guidelines, if any. Improving the**

**Being able to observe a patient with heart disease and distinguish the different traits. Know the stages of heart muscle contractility during exercise. Knowing how to recognize and differentiate the various heart conditions treated. Know and be able to set up a cardiac rehabilitation program.**

## Contents

## Detailed program

**- PULMONARY ALTERATION: know to work in the frameworks that are the basement of respiratory disability with the aim to improve alveolar ventilation, in the thoracic rehabilitation and the effort training in the respiratory rehabilitation field: - bronchial disobstruction - Pulmonar parenchymal expansion (also using support ventilation) - Thoracic wall expansion (also using support ventilation) - Effort training - Education at the patient care and long term follow up**

**- CARDIOLOGIC ALTERATION: - inspection, assessment, observation of the patient with cardiac alteration - postures assessment - physiologic and pathologic breathing - muscular contractility - muscular fatigue - muscular exhaustion - physiology of cardiac activities during training - basic aspects of cordiological specific rehabilitative techniques used in the recovery after an acute/chronic event - absolute/relative contraindications**

## Prerequisites

## Teaching form

Lectures

During the Covid-19 emergency period, the lessons will take place in a mixed mode asynchronous / synchronous video-recorded lectures

## Textbook and teaching resource

**1. Lazzeri M. ed all. «Esame clinico e valutazione in riabilitazione respiratoria « Editor: Masson 2006.**

**2. Bonsignore G., Bellia V. «MALATTIE DELL'APPARATO RESPIRATORIO» Editore: McGraw-Hill**

**3. Levitzky M. G. «Fisiologia polmonare» Editore: McGraw-Hill**

**Myocardial function defined by strain rate and strain during alterations in inotropic states and heart rate Frank Weidemann, Fadi Jamal, George R. Sutherland, Piet Claus, Miroslaw Kowalski, Liv Hatle, Ivan De Scheerder, Bart Bijnens, and Frank E. Rademakers Vol. 283, Issue 2, H792-H799, August 2002**

**Comparison of hospital-based versus home-based exercise training in patients with heart failure: effects on functional capacity, quality of life, psychological symptoms, and hemodynamic parameters Hale Karapolat Æ Emre Demir Æ Yasemin Turan Bozkaya Æ Sibel Eyigor Æ Sanem Nalbantgil Æ Berrin Durmaz ÆMehdi Zoghi Received: 24 February 2009 / Accepted: 7 July 2009**

**Why patients afte acute coronary syndromes do not participate in an early outpatient rehabilitation programme? Ewa Deskur-Smielecka, Slawomira Borowicz-Bienkowska, Aleksandra Brychcy, Malgorzata Wilk, Izabela Przywarska, Piotr Dylewicz, Kardiol Pol 2009; 67: 632-638**

**Effects of an inspiratory muscle rehabilitation program in the postoperative period of cardiac surgeryFERREIRA, Paulo Eduardo Gomes; RODRIGUES, Alfredo José and EVORA, Paulo Roberto Barboza.. Arq. Bras. Cardiol. [online]. 2009, vol.92, n.4, pp. 275-282.**

**Remix: Exercise Training and Cardiac Resynchronization Therapy in Heart Failure Stanley A. Rubin MD, aAvailable online 16 June 2009**

**Changes in cardiorespiratory fitness, psychological wellbeing, quality of life, and vocational status following a 12 month cardiac exercise rehabilitation programme L D Dugmore,a R J Tipson,a M H Phillips,a**

**E J Flint,b N H Stentiford,b M F Bone,c W A Littlerd 10 November 1998**

**Effects of cardiac rehabilitation in patients with metabolic syndrome after coronary artery bypass grafting Tomo Onishi MS accepted 14 January 2009.**

**Compatibility of concurrent aerobic and resistance training on maximal aerobic capacity in sedentary males. Shaw BS, Shaw I. Cardiovasc J Afr. 2009 Mar-Apr;20(2):104-6**

**Effect of guideline based computerised decision support on decision making of multidisciplinary teams: cluster randomised trial in cardiac rehabilitation. Goud R, de Keizer NF, ter Riet G, Wyatt JC, Hasman A, Hellemans IM, Peek N. BMJ. 2009 Apr 27;338:b1440. doi: 10.1136/bmj.b1440. Erratum in: BMJ. 2009;338:b1880**

**Cardiac rehabilitation programs. A statement for healthcare professionals from the American Heart Association. Balady GJ ,Fletcher BJ , Froelicher ES, et AL: Circulation 1994; 90: 1602-1610**

**Clinical guidelines part II. Risk stratification after myocardial infarction. Peterson Ed, Shaw Lj, Califf R: Ann Intern Med 1997; 126: 561-582.**

**Cardiac rehabilitation guidelines and recommendations. Monpere C: Dis Manage Health Outcomes 1998; 4: 143-156**

## Semester

2nd semester

## Assessment method

Described in the subject's syllabus

In the Covid-19 emergency period, written exams will be carried out on the ESAMI-ONLINE platform, with a proctoring system (RESPONDUS).

## Office hours

By appointment