

INTEGRATED COURSE: VASCULAR REHABILITATION

CFU: 6

SSD: MED/48

COORDINATOR: SIMONETTA ROSSI

E-MAIL: simonetta.rossi@unicamillus.org

MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

CFU: 2

SSD: MED/48

PROFESSOR: PROF. SIMONETTA ROSSI

e-mail : simonetta.rossi@unicamillus.org

MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

CFU: 2

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PROFESSOR: PROF. MASSIMO MENCARINI

e-mail : massimo.mencarini@unicamillus.org

MODULR: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

CFU: 2

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PROFESSOR: PROF. CATERINA GRUOSSO

e-mail : caterina.gruosso@unicamillus.org

PREREQUISITES

Although there are no preparatory prerequisites, notions of physiology, pathophysiology and anatomy in the respiratory field are necessary. It is also necessary to have a good basic knowledge of human anatomy and physiology in particular of the cardiovascular system.

LEARNING OBJECTIVES

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Learning objective is the knowledge of the principles, evaluation and treatment techniques in respiratory rehabilitation. These objectives will be achieved through lectures practical exercises aimed at improving the ability to address and resolve the main issues of this field.



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Learning objective is the knowledge of principles, protocols indications and contra-indications in cardiovascular rehabilitation. In addition, knowledge and management of pain, oedema and scars.

Introduction to Basic Life Support

These objectives will be achieved through lectures aimed at improving the ability to address and resolve the main issues of this area.

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Knowledge of the theoretical basis of the physiopathology in cardiovascular disease and related semeiotic system, knowledge of tools and indicators of cardiovascular function. Knowledge the basis of training in cardiac rehabilitation, learn assessment skills related to cardiovascular function tests and pragmatic rehabilitation treatment. Get to know multiprofessional paths and how to evaluate the results of the most indicative vital parameters for prognostic stratification. These objectives will be achieved through lectures and problem-solving workshop.

LEARNING OUTCOMES

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knowledge and understanding

At the end of this course the student will have to know:

- Recognize the main obstructive and restrictive respiratory diseases.
- Knowing how to use assessment techniques in the field of respiratory physiotherapy
- Knowing how to use the treatment techniques and technical tools of respiratory rehabilitation.
- Understand the indications for rehabilitation treatment by following the most accredited shared indications and guidelines, where present.
- Acquire skills in the physiotherapy assessment and treatment of acute and chronic respiratory dysfunctions originating from obstructive and / or restrictive pathologies

Applying knowledge and understanding

At the end of the course the student will be able to:

- Use the acquired knowledge to autonomously deepen aspects related to the specific field to which the student will devote his professional activity.

communication skills

At the end of the course, the student should know:

- Use specific scientific terminology appropriately.

making judgements

At the end of the course, the student should know:

- Carry out general assessments relating to the topics covered.



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knowledge and understanding

At the end of this course the student will have to know:

- Identify and administrate cardiovascular risk factors
- Acquire skills in physiotherapeutic taking care of cardiovascular patients
- Understand the indications for rehabilitation treatment by following the most accredited shared indications and guidelines, where present
- Manage the main consequences after a surgical intervention: pain, oedema, scars
- Know the principles of Basic Life Support

Applying knowledge and understanding

At the end of the course the student will be able to:

- Use the acquired knowledge to autonomously deepen aspects related to the specific field to which the student will devote his professional activity.

communication skills

At the end of the course, the student should know:

- Use specific scientific terminology appropriately.

making judgements

At the end of the course, the student should know:

- Carry out general assessments relating to the topics covered.

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knowledge and understanding

At the end of this course the student will have to know:

- Detailed and critical understanding of the pathophysiology of heart disease and its implications for exercise training.
- Plan, deliver and evaluate exercise prescription
- Evaluate critically the literature examining risk factors management
- Undertake a risk assessment
- Demonstrate an understanding of the methodology and interpretation of various tests
- Demonstrate a detailed and critical understanding of the psychosocial issues

Applying knowledge and understanding

Al termine dell'insegnamento lo studente sarà in grado di:

- Utilizzare le conoscenze acquisite per l'approfondimento autonomo di aspetti relativi al campo specifico al quale lo studente si dedicherà nell'ambito dell'attività professionale;

communication skills

At the end of the course, the student should know:

- Use specific scientific terminology appropriately.



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making judgements

At the end of the course, the student should know:

- Carry out general assessments relating to the topics covered.

COURSE SYLLABUS

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- *Hints of history of Respiratory Rehabilitation.*
- *Functional evaluation of the patient with respiratory diseases (Physical examination of the chest, 6-minute Walking Test, Detection of dyspnoea, Oximetry and blood gas analysis, administration of questionnaires)*
- *Bronchial unblocking techniques (Chest Physical Therapy, ELTGOL, Autogenic Drainage, PEP-Mask, Active Cycle of Respiratory Techniques (ACBT))*
- *Interventions on the pump system and respiratory coordination (Relaxation, Stretching, Nose-blow coordination, Evidence-based practice)*
- *Oxygen therapy and mechanical ventilation*

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- Cardiovascular risk factors • General principles in cardiovascular rehabilitation
- Guide lines and scientific evidences in cardiovascular rehabilitation • Pain management • Management of lymphatic disorders • Scar management • Introduction to Basic Life Support

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INTRODUCTION • Cardiovascular system anatomy and physiology • Systolic / diastolic / pulse / mean arterial pressure • Cardiovascular response to exercise • DISEASES/DIAGNOSTIC TESTING AND INTERPRETATION • Different types of cardiomyopathy • Assessment and diagnosis of coronary artery disease • Heart failure and heart attack; systolic dysfunction, diastolic dysfunction, hypertension • Types of diabetes: benefits of exercise for patients with diabetes • Normal cardiac cycle as indicated on the ECG • Risk stratification • EXERCISE PRESCRIPTION IN PREVENTION AND REHANILITATION PROGRAMS • Phases of cardiac rehabilitation • Training principles • Exercise prescription principles • Inpatient rehabilitation guidelines • Outpatient rehabilitation guidelines • Core components and models: prevention and rehabilitation programs • Assessment of exercise capacity • Maximal test (Stress Test) • Borg perceived exertion scale • CR in Comorbidities • Psycosocial Rehab

COURSE STRUCTURE

The Course is structured in 60 hours of frontal teaching, divided into lessons of 2, 4 or 5 hours according to the academic calendar.

COURSE GRADE DETERMINATION INTEGRATED COURSE

The verification of the students' preparation will take place through a written preparatory test for access to the oral one. During the written and oral exam, the examining



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commission will evaluate the student's ability to apply the knowledge and will ensure that the skills are adequate to support and solve problems in the field of respiratory and cardiological rehabilitation. The following will also be assessed: making judgements, communication skills and learning skills as indicated in the Dublin descriptors.

For the attribution of the final grade, the following criteria will be adopted:

Unsuitable: Poor or lacking knowledge and understanding of the topics; limited capacity for analysis and synthesis, frequent generalizations of the required contents; inability to use technical language.

18-20: Just enough knowledge and understanding of topics, with obvious imperfections; just sufficient capacity for analysis, synthesis and independent judgement; poor ability to use technical language.

21-23: Sufficient knowledge and understanding of topics; sufficient capacity for analysis and synthesis with the ability to logically and coherently argue the required contents; sufficient ability to use technical language.

24-26: Fair knowledge and understanding of the topics; discrete capacity for analysis and synthesis with the ability to rigorously argue the required contents; discrete ability to use technical language.

27-29: Good knowledge and understanding of required content; good capacity for analysis and synthesis with the ability to rigorously argue the required contents; good ability to use technical language.

30-30L: Excellent level of knowledge and understanding of the requested contents with an excellent capacity for analysis and synthesis with the ability to argue the requested contents in a rigorous, innovative and original way; Excellent ability to use technical language.

READING MATERIALS

PROF. MASSIMO MENCARINI

- Clini E, Holland AE, Pitta F, Troosters T. Textbook of pulmonary rehabilitation. Springer International Publishing. 2018
- Lazzeri M. Esame clinico e valutazione in riabilitazione respiratoria. Elsevier. 2006

Walk-in appointments will be offered on Mondays from 15:30a.m. - 18:30 a.m., ground floor, Students' Counseling Office.

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- Riabilitazione Cardiologica Alfonso Galati, Carlo Vigorito Edi. Ermes 2012
- BACPR Cardiovascular Prevention and Rehabilitation Jennifer Jones, Gill Funze
John Wiley & Sons Inc 2020

Walk-in appointments will be offered on Saturday from 9:30a.m. - 12:30 a.m., ground floor, Students' Counseling Office.



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- Springer, Cardic Rehabilitation Manual, 2nd edition, Niebauer J., 2017
- - Linee guida, buone pratiche ed evidenze scientifiche in medicina fisica e riabilitativa (I e II vol), Valter Santilli, Università degli studi di Roma La Sapienza, 2018
- - [ESC Handbook of Cardiovascular Rehabilitation: A practical clinical guide](#) , Edited by Ana Abreu, Jean-Paul Schmid, and Massimo Piepoli, 2020