



Teaching Guide				
Identifying Data				2019/20
Subject (*)	Advanced Cardiopulmonary Rehabilitation	Code	651516007	
Study programme	Mestrado Universitario en Discapacidade e Dependencia (plan 2015)			
Descriptors				
Cycle	Period	Year	Type	Credits
Official Master's Degree	2nd four-month period	First	Optional	6
Language	SpanishGalician			
Teaching method	Face-to-face			
Prerequisites				
Department	Ciencias Biomédicas, Medicina e FisioterapiaFisioterapia, Medicina e Ciencias Biomédicas			
Coordinador	Gonzalez Doniz, Maria Luz	E-mail	luz.doniz@udc.es	
Lecturers	Gonzalez Doniz, Maria Luz Lista Paz, Ana Souto Camba, Sonia	E-mail	luz.doniz@udc.es ana.lista@udc.es sonia.souto@udc.es	
Web				
General description	The study of this subject pretends that the student purchases advanced knowledge and shows an understanding of the theoretical and practical issues and of the methodology of work in the dysfunctions of the system cardiopulmonar.			

Study programme competences / results	
Code	Study programme competences / results
A10	CERF5. Ser capaz de integrar coñecementos avanzados no ámbito da disfunción cardiorrespiratoria
A11	CERF6. Capacidade para deseñar e executar proxectos de investigación nas disfuncións cardiorrespiratorias.
B2	CB7. Que os estudantes saiban aplicar os coñecementos adquiridos e a súa capacidade de resolución de problemas en ámbitos novos ou pouco coñecidos dentro de contextos máis amplos (ou multidisciplinares) relacionados coa súa área de estudo
B5	CB10. Que os estudantes posúan as habilidades de aprendizaxe que lles permitan continuar estudando dun modo que haberá de ser en boa medida autodirixido ou autónomo.
B7	CG2 Identificar, avaliar e resolver os problemas derivados da presenza de discapacidade e dependencia
B9	CG4 Ser capaz de intervir na problemática derivada da discapacidade e da dependencia
B10	CG5 Capacidade para integrar coñecementos científicos de carácter avanzado ligados ao ámbito da discapacidade e a dependencia
C6	CT6. Valorar críticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas aos que deben enfrontarse
C7	CT7. Ser capaz de valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade?

Learning outcomes			
Learning outcomes	Study programme competences / results		
Reach the acquisition of knowledges advanced and show an understanding of the theoretical and practical appearances and of the methodology of work in the dysfunctions of the system cardiopulmonar with a depth that arrive until the avant-garde of the knowledge	AR10 AR11		
Be able of predict and control the evolution of complex situations, realising a systematic approximation to the assessment and treatment of the problems of the complex cardiopulmonar by means of the development of methodologies of work adapted to said field of knowledge, in his scientific slopes/researcher and professional.	AR11	BR2 BR7 BR9 BR10	
Capacity of clinical reasoning applied to the diagnosis capacity that guarantee the taking of safe clinical decisions and based in the evidence, as well as the critical analysis of the existent therapeutic procedures for the handle of the patient with dysfunction cardiorrespiratoria	AR10	BR2 BR7 BR9	CR6
Be able to evaluate and select the suitable scientific theory and the precise methodology to develop, implement and evaluate the plans of attention and/or the guides of clinical practice in patients cardiorrespiratorios	AR10	BR5	CR7



Have developed skills for the multidisciplinary work asistencial and/or of investigation in the dysfunction cardiorrespiratoria	AR11	BR2	
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Contents	
Topic	Sub-topic
Module 1: I Handle advanced of the respiratory dysfunction	<ol style="list-style-type: none"> 1. Bases of the respiratory pathophysiology and of the assessment of the respiratory patient. 2. Integral and multidisciplinary attention of the respiratory patient (control of factors of risk, nutritional support, pharmacology, physiotherapy, other therapeutic boardings). 3. Bases of treatment of the chronic pulmonary patient: programs of pulmonary rehabilitation, guides of clinical practice and scientific evidence. 4. Bases of treatment of the neuromuscular patient: guides of clinical practice and scientific evidence of the intervention fisioterápica. 5. Bases of treatment of the critical patient: guides of clinical practice and scientific evidence of the intervention fisioterápica. 6. The disability in the respiratory patient. Evaluation of the quality of life.
Module 2: I Handle advanced of the cardiovascular dysfunction	<ol style="list-style-type: none"> 1. Bases of the pathophysiology cardiovascular and of the assessment of the cardiovascular patient. 2. Integral and multidisciplinary attention of the cardiovascular patient: guides of clinical practice and available scientific evidence. 3. Programs of cardiovascular rehabilitation: available scientific evidence. 4. The disability in the cardiovascular patient. Evaluation of the quality of life.

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Critical bibliographical	B5 C6	2	30	32
Laboratory practice	B7 B9	2	2	4
Supervised projects	A10 A11 B10 B5 C6	6	60	66
Mixed objective/subjective test	A10 B2 B7	1	6	7
Field trip	A10 B2	4	9	13
Guest lecture / keynote speech	A10 A11 B2 B7 B9 B10 C7	24	0	24
Personalized attention		4	0	4

(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies	
Methodologies	Description
Critical bibliographical	The bibliographic reviewing supposes a process of critical reading of a book, of an article, of a thesis or of a communication to a congress. As such process comprises the reading of the work, the analysis of his content and a criticism and assessment of the same in relation to the existent literature on the subject. A reviewing does not suppose a summary of the work, neither a mere analysis of the content, as what awards him sense and scientific academic dimension is the criticism that deserves to trial of the author of the reviewing, in relation to other works known of the same field or in relation to his own experience.
Laboratory practice	Methodology that allows that the students learn sure enough through the realisation of activities of practical character, such like demonstrations, exercises, experiments and investigations.



Supervised projects	<p>Methodology designed to promote the autonomous learning of the students, under the tutela of the professor and in stages varied (academic and professionals). It is referred prioritariamente to the learning of the "how do the things". It constitutes an option based in the assumption by the students of the responsibility by his own learning.</p> <p>This system of education bases in two basic elements: the independent learning of the students and the follow-up of this learning by the professor-tutor.</p>
Mixed objective/subjective test	<p>Proof that integrates ask type of proofs of essay and ask type of objective proofs.</p> <p>Regarding questions of essay, collects open questions of development. Besides, in what objective questions, can combine questions of multiple answer, of ordenación, of brief answer, of discrimination, to complete and/or of association.</p>
Field trip	<p>Activities developed in an external context to the university academic surroundings (companies, institutions, organisms, monuments, etc.) related with the field of study of the matter. These activities centre in the development of capacities related with the direct and systematic observation, the collected of information, the development of products (outlines, designs, etc.), etc.</p>
Guest lecture / keynote speech	<p>Oral exhibition complemented with the use of audiovisual means and the introduction of some questions headed to the students, with the purpose to transmit knowledges and facilitate the learning.</p> <p>The masterclass is also known as %or201Cconferencia%or201D, %or201Cmétodo expositivo%or201D or %or201Clección magistral%or201D. This last modality is used to reserve to a special type of lesson given by a professor in special occasions, with a content that supposes an original preparation and based in the almost exclusive use of the word like road of transmission of the information to the audience.</p> <p>During the session magistral will integrate of punctual way the methodologies of discussion directed and aprendizajo based in problems.</p>

Personalized attention

Methodologies	Description
<p>Mixed objective/subjective test</p> <p>Supervised projects</p>	<p>supervised work: it recommends the personalised attention to help to the student to elaborate his work, from the selection of the bibliographic sources, until his structuring and development.</p> <p>Mixed proof: it recommends the personalised attention to help to the student to resolve the doubts arisen of the preparation of the matter in his group.</p> <p>In the case of the student with reconocimieto of dedication part time and dispenses academician of exemption of asistencial, will realise a tutorización each fifteen days, in base to the reading of texts recommended and the preparation of infomres by part of the student that guarantee the suitable follow-up of the program.</p>

Assessment

Methodologies	Competencies / Results	Description	Qualification
Mixed objective/subjective test	A10 B2 B7	Mixed proof type test with question develop	40
Critical bibliographical	B5 C6	Assessment of the reviewings contributed by the student along the cuatrimestre.	20
Supervised projects	A10 A11 B10 B5 C6	Assessment of the supervised work presented by the student.	30



Field trip	A10 B2	It will be evaluated the reports derived of the exit of field, in which the student will show his capacity of integration of the theoretical knowledges in the clinical context. It will put special attention, amongst other, to: <ol style="list-style-type: none">1. The description of the methodologies of evaluation, intervention employed in the real clinical context.2. The establishment of the diagnostics and the typification of the dysfunction of origin cardiorrespiratorio.3. The connection of the concepts tackled in the classroom and the appearances observed in the real surroundings.	10
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Assessment comments

The percentages assigned to each proof can suffer small modifications of a course to another in function of the needs of the subject. Nevertheless, the value of the mixed objective/subjective test will be situated between the 30 and 40%, the critica bibliographical between a 20 and 30%, the supervised projects between a 20 and 30% and the field trip between a 10 and 20%

The criteria of evaluation of first and second opportunity will be the same.

The students enrolled part time will have of personalised attention along the course, with a tutoría twice-weekly. They must demonstrate assistance up to 50% of the presencial activities.

Sources of information



Basic

- Hyatt, Robert E. (2014). Interpretation of pulmonary function test. Philadelphia: Lippincott Williams and Wilkins

- Giraldo Estrada, Horacio (2008). EPOC : Diagnóstico y tratamiento integral con énfasis en la rehabilitación pulmonar. Buenos Aires: Médica Panamericana

- Booth S, Dudgeon D (2006). Dyspnoea in advanced disease. Oxford

- Chiappero G, Villarejo F (2010). Ventilación mecánica : libro del Comité de Neumonología Crítica de la SATI. Buenos Aires: Panamericana

- Patiño, JF (2015). Gases sanguíneos, fisiología de la respiración e insuficiencia respiratoria aguda . Bogotá: Panamericana

- West J (2008). Fisiología y fisiopatología pulmonar. Estudio de casos. Philadelphia: Lippincott Williams and Wilkins

- Houg, A (2014). Physiotherapy in respiratory and cardiac care : an evidence-based approach. Stanford : Cengage Learning

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- Reid, W D (2004). Clinical Management notes and case histories in cardiopulmonary physical therapy. Thorofare, NJ : Slack

- Badia X, Alonso J (2007). La medida de la salud: guía de escalas de medida en español. Barcelona : Edittec

- Pryor J, Prasad AS (2016). Physiotherapy for respiratory and cardiac problems : adults and paediatrics . Edinburgh : Elsevier

- Harden B (2009). Respiratory physiotherapy : an on-call survival guide. Edinburgh : Churchill Livingstone/Elsevier

- López Chicharro, J (2013). Fisiología del entrenamiento aeróbico : una visión integrada . Madrid: Panamericana

- Seco J (2018). Sistema Respiratorio: Afecciones Médico-Quirúrgicas. Métodos de intervención. Fisioterapia Clínica. Madrid: Editorial Médica Panamericana

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GUÍA DE PRÁCTICA CLÍNICA PARA EL DIAGNÓSTICO Y TRATAMIENTO DE PACIENTES CON EPOC - Guía Española de la EPOC (GesEPOC-2012) Grupo de trabajo de GesEPO. Disponible en http://issuu.com/separ/docs/gu_a_gesepoc?e=3049452/6072699

DISFUNCIÓN MUSCULAR DE LOS PACIENTES CON ENFERMEDAD PULMONAR OBSTRUCTIVA CRÓNICA (2015) Esther Barreiro, Víctor Bustamante, Pilar Cejudo, Joan B. Gáldiz, Joaquim Egea, Pilar de Lucas, Juana Martínez-Llorens, Francisco Ortega, Luis Puente-Maestu, Josep Roca, José Miguel Rodríguez González Moro. Disponible en https://issuu.com/separ/docs/normativa_67?e=3049452/31015859

REHABILITACIÓN RESPIRATORIA (2014) María Rosa Güell, Salvador Díaz, Gema Rodríguez, Fátima Morante, Marta San Miguel, Pilar Cejudo, Francisco Ortega, Alejandro Muñoz, Juan Bautista Galdiz, Almudena García, Emilio Servera. Disponible en <https://www.dropbox.com/s/ouhxfcbmb5sdaje/Normativa%2064.pdf?dl=0>

MANEJO DE LAS COMPLICACIONES RESPIRATORIAS DE LOS PACIENTES CON ENFERMEDAD NEUROMUSCULAR (2012) Eva.Farrero, Antonio Antón, Carlos J.Egea, M.José Almaraz, J.Fernando Masa, Isabel Utrabo, Miriam Calle, Héctor Vereá, Emilio Servera, Luis Jara, Emilia Barrot, Vinyet Casolívé Arch Bronconeumol. 2013;49:306-13. Disponible en <http://issuu.com/separ/docs/normativa59?mode=window&backgroundColor=%23222222>

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https://goldcopd.org/wp-content/uploads/2017/11/GOLD-2018-v6.0-FINAL-revised-20-Nov_WMS.pdfThe European Lung White Book. European Respiratory Society. Disponible en <https://www.erswhitebook.org/>An Official American Thoracic Society/European Respiratory Society Policy Statement: Enhancing Implementation, Use, and Delivery of Pulmonary Rehabilitation. Am J Respir Crit Care Med Vol 192, Iss 11, pp 1373-1386, Dec 1, 2015. An official European Respiratory Society statement on physical activity in COPD. Eur Respir J 2014; 44: 1521-1537 An Official American Thoracic Society/European Respiratory Society Statement: Key Concepts and Advances in Pulmonary Rehabilitation. Am J Respir Crit Care Med. 2013; 188: e13-e64



Complementary	
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Recommendations

Subjects that it is recommended to have taken before

Research Methodology/651516001

Multimedia Tools in Research/651516002
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Subjects that are recommended to be taken simultaneously

Resource Management in Health and Social Care in Disability and Dependency Situations/651516009

Subjects that continue the syllabus
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Other comments

To help to achieve some sustainable immediate surroundings and fulfil with the strategic aims of the Plan Green Campus of the Faculty of Physiotherapy, the documentary works that realise in this matter will be able to request so much in format paper like virtual or computer support. To realise in paper, will be still in the measure of the possible the following general recommendations:- They will not use plastic.- They will realise impressions to double expensive.- It will employ paper recycled.- It will avoid the realisation of drafts

(*The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.
