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CLINICAL MASTER PROGRAM IN REHABILITATION SCIENCES AT JUST (JUST – CRS)

COURSE INFORMATION PACKAGE (COURSE CATALOGUE)

COURSE INFORMATION

Course title	Code	Semester	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	National Credit	ECTS
Advanced Theories and Practice in Neurological Rehabilitation II	CRS 725	II, III	2	2		3	5
Prerequisites	Advanced theories and application in motor learning and motor control						
Course language	English						
Course type	Elective						
Mode of delivery (face to face, distance learning, blended**)**	• Blended • Face to face						
Learning and teaching strategies	• Lecture • Discussion • Case study • Preparing and/or Presenting Reports • Clinical simulation • Self-directed learning • Online environment						
Instructor (s)							
Course description	The course aims to build on the existing knowledge of neurological rehabilitation theory and practice from an evidence-based perspective. The course will enable students to deepen their understanding of the neuroplasticity concepts underpinning functional recovery in the use of various neurological rehabilitative approaches. Advanced clinical reasoning and clinical skills to the development of safe, effective & specific rehabilitation programs and exercise prescription for adults with neurological disorders in an interdisciplinary context will be also included in the course.						
Course objective	To apply deep knowledge of adults' neurorehabilitation using the interdisciplinary paradigm. Additionally, this course aims at developing the clinical appraisal skills that help building clinical decision making including assessment plans and intervention.						
Learning outcomes	Students will be able to 1- Demonstrate deep understanding of neuroplasticity concepts underpinning functional recovery in the use of various neurological rehabilitative approaches. 2- Critically evaluate and discuss the use of interdisciplinary concepts in the settings of adults'						

	neurological rehabilitation. 3- Critically evaluate and discuss the use of different outcome measures in the settings of adults' neurological rehabilitation. 4- Critically analyze and apply evidence for neurological rehabilitation approaches and techniques. 5- Demonstrate advanced skills to plan, implement and evaluate rehabilitation plans in a client-centered framework for people with neurological rehabilitation.
Course Content	• Neurological rehabilitation in adults, adult neurology
References	• Neurological Rehabilitation, Darcy et al , 6 Edition, 2013 • Additional reading will be in the form of papers and or text references that will be provided prior to or during each session • Shumway Cook (2016) Motor Control> translating research into clinical practice. • Fahn & Janokovi (2011) Principles and Practice movement disorders. • Winson, Wilson & Bateman (2016)The Brain Injury Rehabilitation Workbook.

COURSE OUTLINE-WEEKLY

Weeks	Topics (Theoretical, Practice – Lab & hands on skills [P])
1.	Integrated interdisciplinary care in adults' neurorehabilitation
2.	Outcome measures in adults' neurological rehabilitation Application: Apply the use of interdisciplinary care into case-scenarios in adults' neurological rehabilitation
3.	Neuroplasticity and functional recovery in neurological disorders Application: Outcome measures in adults neurological rehabilitation
4.	Application: fundamentals of exercise prescription in neurological rehabilitation
5.	Therapeutic approaches within neurorehabilitation: motor/ movement dysfunction Application: Applications of Neurodevelopmental Therapy
6.	Therapeutic Techniques within neurorehabilitation for movement dysfunction recovery of motor function. Application: Applications of intervention approaches for movement dysfunction within neurorehabilitation
7.	Proprioceptive Neuromuscular Facilitation Theory and Assessments Application: Applications of Proprioceptive Neuromuscular Facilitation
8.	Contemporary approaches: for example: Task orientated and CIMT Application: CIMT, task oriented , virtual reality, bilateral training
9.	Cognitive, visual and perceptual neurorehabilitation Application: Models of cognition, perception and vision
10.	Assessment of Cognitive , visual and perceptual impairments
11.	Impact of Cognitive, visual and perceptual interventions on neurorehabilitation Application: Applications of cognitive, visual and perceptual interventions in neurorehabilitation
12.	Spasticity management Application: Applications of spasticity management approaches
13.	Principles of Postural management Postural management **[P]**
14.	Advances in adults' neurological rehabilitation Application: Applications of advances in adults' neurological rehabilitation
15.	Case studies' discussion
16.	Final exam week

**In accordance with the structure of the course, activities such as presentations, projects, seminars, and portfolios can be used in the evaluation system as a midterm exam.*

ASSESSMENT METHODS

Course activities	Number	Percentage**
Attendance		
Laboratory -practical exam (mid term)	1	30
Application		
Field activities		
Specific practical training		
Assignments (written assignment defending a therapeutic approach)	1	20
Presentation		
Discussion		
Project		
Seminar		
Portfolio		
Online environment* (quizzes online)	5	10
Midterms		
Final exam (written exam)	1	40
Total		100
Percentage of semester activities contributing grade success		
Percentage of final exam contributing grade success		
Total		100

WORKLOAD AND ECTS CALCULATION

Activities	Number	Duration (hour)	Total Work Load
Course Duration (x14)	14	2	28
Laboratory			
Application	14	2	28
Specific practical training			
Field activities			
Study Hours outside the classroom context (Preliminary work, reinforcement, self-directed learning etc.)	14	3	42
Presentation / Seminar Preparation			
Project			
Online environment	1	14	14
Homework assignment	1	10	10
Portfolio			
Midterms	1	14	14
Final Exam (Theoretical and Practical)	1	14	14
Total Workload			150

MATRIX OF THE COURSE LEARNING OUTCOMES VERSUS PROGRAM OUTCOMES

Program Outcomes	Contribution level*				
	1	2	3	4	5
1. Design and implement autonomously a professional approach based on analysis of complex rehabilitation science knowledge					x
2. Design, deliver and evaluate educational process adapted or customize to different inter-professional contexts (academic/professional/community) using an effective pedagogical approach	x				
3. Provide and disseminate new evidence in accordance with research ethics using updated and integrated knowledge of research methods			x		
4. Develop, manage and organize strategic planning and decision making within the scope of the quality assurance, ethical rules, team development and cooperation			x		
5. Integrate health advocacy at an individual, community and policy levels to promote citizenship and inclusive development of communities	x				
6. Communicates effectively within multidisciplinary clinical or scientific contexts, based on collaborative approach.			x		
7. Plan, implement and advocate interdisciplinary healthcare services within deep understanding of health care systems to promote better networking, and comprehensive patient care.			x		

***1 Lowest, 2 Low, 3 Average, 4 High, 5 Highest**