

**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
Applied Biostatistics	CRS 793	II	2	1	-	2	5
Prerequisites	Applied Biostatistics in Rehabilitation sciences						
Course language	English						
Course type	Mandatory						
Mode of delivery (face to face, distance learning, blended)	<ul style="list-style-type: none"> Blended 						
Learning and teaching strategies	<ul style="list-style-type: none"> Lecture Demonstration Problem solving Case study Self-directed learning 						
Instructor (s)	Mahmoud Alomari (Local coordinator) Johnny Collet (International coordinator) Khader Al Mhdawi Helen Dawes						
Course description	This course provides an understanding of statistical methods and the opportunity to develop rationale for the use of statistics within the broader field of public health research.						
Course objective	This course aims at giving the students an opportunity of hands-on practice of using SPSS for the most common statistical models used in rehabilitations sciences.						
Learning outcomes	Upon completion of the course, students will be able to: <ol style="list-style-type: none"> Translate scientific questions into appropriate hypotheses Understand, select and apply appropriate statistical methods, develop analysis plans for use in rehabilitation research Interpret and critique research data from published literature Evaluate the significance or impact of rehabilitation research and interventions Convey rehabilitation research results to non-scientific audiences in written and oral presentations 						
Course Content	Data analysis techniques Presenting statistical data Evaluating statistical data						
References	Primary: Julie Pallant, The SPSS Survival Manual: A Step by Step Guide to Data Analysis 4 th Edition. ALLEN&UNWIN, 2013.						



	<p>Supplementary: Gardner, Robert C. Psychological statistics using SPSS for Windows. Prentice Hall, 2001.</p> <p>Supplementary: Field, Andy. Discovering statistics using IBM SPSS statistics. Sage, 2013.</p> <p>Supplementary: Di Fabio, Richard P. Essentials of rehabilitation research: A statistical guide to clinical practice. FA Davis, 2012.</p>
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COURSE OUTLINE-WEEKLY

Weeks	Date	Topics	Instructor
1.		<ul style="list-style-type: none"> • Introduction • Getting started with SPSS • Creating and working with data files • Coding sheet 	Alomari
2.		<ul style="list-style-type: none"> • Descriptive statistics <ul style="list-style-type: none"> • Screening and cleaning data • Preliminary analysis • Choosing the right statistics <ul style="list-style-type: none"> • Continues versus categorical data 	Alomari
3.		<ul style="list-style-type: none"> • Comparison statistics <ul style="list-style-type: none"> • T-test • 1-way ANOVA • 2-way ANOVA (i.e. factorial design) • Posthoc 	Alomari
4.		<ul style="list-style-type: none"> • Special comparison statistics (ANCOVA) <ul style="list-style-type: none"> • 1-way ANCOVA • 2-way ANCOVA • Posthoc 	Alomari
5.		Pearson and partial correlations	Alomari
6.		Simple and multiple linear regression	Alomari
7.		Simple and multiple linear regression	Alomari
8.		Categorical data and Chi-Square Analysis of Frequency Data	Alomari
9		Chi-Square Analysis of Frequency Data Spearman correlation	Alomari
10		Logistic binary regression	Alomari
11		Logistic multinomial regression	Alomari
12.		Logistic multinomial regression	Alomari
13.		Validity and reliability tests	Dawes
14.		Problem solving and discussion	Collet
15.		Problem solving and discussion	Alomari
16.		Final exam	

**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		
Application		
Field activities		
Specific practical training		
Assignments	10-15	60
Presentation		
Discussion		
Project		
Seminar		
Portfolio		
Online environment*		
Midterms		
Final **	1	40
Presentation part of the final, could be presented when ready	1	10
Exam part of the final, could be presented when ready	1	30
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 (x15)	15	2	30
Laboratory			
Application			
Specific practical training			
Field activities			
Study Hours outside the classroom context (Preliminary work, reinforcement, self-directed learning etc.)	15	3	45
Presentation / Preparation	1	5	5
Project			
Homework assignment	10-15	3	30
Portfolio			
Midterms (Study duration)			
Final Exam (Study duration)	2	10	20
Course Duration (x15)	1	20	20
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**