

Co-funded by the
Erasmus+ Programme
of the European Union



Establishment of an Interdisciplinary Clinical Master Program in Rehabilitation Sciences at JUST

573758-EPP-1-2016-1-JO-EPPKA2-CBHE-JP

Mohammad Nazzal, JUST, Jordan

Antonio Alves Lopes, ESSA, Portugal

& JUST-CRS Working Group

OXFORD
BROOKES
UNIVERSITY



ESCOLA SUPERIOR
DE SAÚDE DO ALCOITÃO
SANTA CASA da Misericórdia de Lisboa





Project Objective

- The overall objective of this project is to reform the rehabilitation sciences' higher education in Jordan through the establishment of a new master interdisciplinary program in rehabilitation sciences at JUST
 - linking academia, clinical practice and research
 - benchmarked to high quality similar programs in Europe;
 - and is responsive to national and regional needs and to the labor job market.



Specific Objectives

1. To improve the quality of higher education in rehabilitation sciences through the establishment of an **interdisciplinary** master program in rehabilitation sciences at JUST.
2. To improve the delivery of **evidence-based clinical rehabilitation practice** in Jordan.
3. To build the rehabilitation sciences **teaching capacity** at JUST and consortium members.
4. To reform rehabilitation sciences' educational pedagogies through the establishment of an **online clinical education system**.
5. To build an **international network** of specialized and highly qualified rehabilitation sciences' professionals, through mobility of instructors, clinicians and students.

Our Partners

JUST-CRS Consortium
Jordan University of Science & Technology (Grant Holder)
Oxford Brookes University (OBU)
Hacettepe University
ESSA University
University of Jordan
Hashemite University

Project period: Oct 2016- April 2020

JUST-CRS Project at a Glance!

Preparation	WP1: National, Rehabilitation Needs Assessment
Development	WP2: Establishment of an interdisciplinary curriculum
	WP3: Establishment of 2 main teaching laboratories
	WP4: Capacity building training on interdisciplinary clinical education
	WP5: Online el-earning and Continuing education system
	WP6: Teaching (implementation of the master Program)
Quality	WP7: Selection of students
	WP8: Quality
Dissemination	WP9: Dissemination
Management	WP10: Project Management



Co-funded by the
Erasmus+ Programme
of the European Union



What had been done?

Achievements

- National Rehabilitation Gaps Analysis
- Setting up Curriculum
 - Whole new curriculum
 - 8 compulsory courses
 - 15 Elective Courses
 - 2 Clinical courses & Thesis Course

Achievements

- Approval of program & national accreditation
 - Fits both Jordan and Europe standards (Bologna Process)
 - External Curriculum Quality evaluator
 - First Program in Jordan and Arab World

Co-funded by the
Erasmus+ Programme
of the European Union



New Master Degree in Clinical Rehabilitation Sciences

Faculty of Applied Medical Sciences is now open at JUST



Co-funded by the
Erasmus+ Programme
of the European Union





Achievements

- Implementation of program (teaching)
 - Collaborative method of teaching
 - More than 70 mobility of EU/ local professors (teaching only)
 - Students clinical training in Europe
 - Thesis supervision



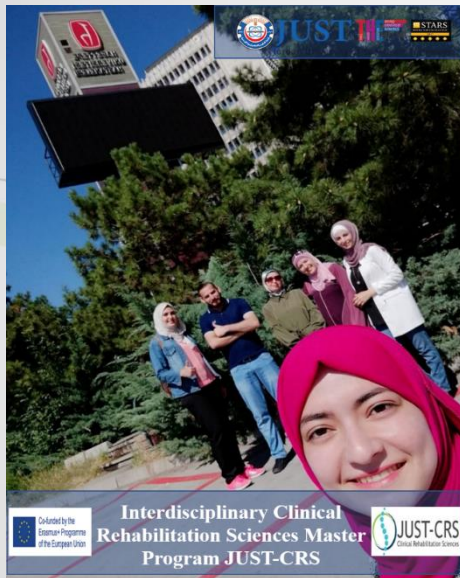
Co-funded by the
Erasmus+ Programme
of the European Union

Program Implementation



Co-funded by the
Erasmus+ Programme
of the European Union

Program Implementation



Achievements

- Online Platform System (teaching)
 - Online System (set up, training & use for all courses)
- CRS Professors and Students
 - **Archiving** of lectures & courses content
- Local partners and community of therapists
 - 13 **MOOC** Courses
 - > 3500 learners



CRS Laboratories

Clinical Neurodevelopmental Laboratory

Movement Science Laboratory

- Based on curriculum and program courses
- List of equipment needed → Procurement → Installation → Training



Examples of CRS Graduates' Publications

Original Article

CLINICAL
REHABILITATION

Efficacy of an innovative smartphone application for office workers with chronic non-specific low back pain: a pilot randomized controlled trial

Khader A Almhawi¹, Donia Saleh Obeidat¹,
Saddam F Kanaan¹, Alaa O Oteir²,
Zaid Modhi Mansour³ and Hassan Alrabbaei¹

Clinical Rehabilitation
1-10
© The Author(s) 2020
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/0269215520937757
journals.sagepub.com/home/cr
SAGE

NeuroRehabilitation 47 (2020) 153-160
DOI:10.3233/NRE-200131
IOS Press

153

The clinical correlates of participation levels in people with multiple sclerosis

Eman Allataifeh^a, Hanan Khalil^{a,*}, Khader Almhawi^a, Alham Al-Shorman^a, Ziad Hawamdeh^b,
Khalid El-Salem^c and Gonca Bumin^d
^aDepartment of Rehabilitation Sciences, Faculty of Applied Medical Sciences, Jordan University of Science and Technology, Irbid, Jordan
^bFaculty of Medicine, The University of Jordan, Amman, Jordan
^cDepartment of Neurosciences, Faculty of Medicine, Jordan University of Science and Technology, Irbid, Jordan
^dSchool of Rehabilitation, Hacettepe University, Ankara, Turkey

Melatonin and dopamine serum level associations with motor, cognitive, and sleep dysfunctions in patients with Parkinson's disease: A cross-sectional research study

Cite

Article type: Research Article

Authors: Hadoush, Hikmat^a; Lababneh, Tamara^a; Banihani, Saleem A.^b; Al-Jarrah, Muhammed^c; Jamous, Mohammed^d

Affiliations: [a] Department of Rehabilitation Sciences, Faculty of Applied Medical Sciences at Jordan University of Science and Technology, Irbid, Jordan | [b] Department of Medical Laboratory Sciences, Faculty of Applied Medical Sciences at Jordan University of Science and Technology, Irbid, Jordan | [c] Department of Physiotherapy, Fatima College of Health Sciences, Abu Dhabi, UAE | [d] Department of Neurosurgery, Faculty of Medicine, Jordan University of Science and Technology, Irbid, Jordan

Correspondence: [*] Address for correspondence: Hikmat Hadoush RPT, PhD, Department of Rehabilitation Sciences, Faculty of Applied Medical Sciences, Jordan University of Science and Technology, P.O. Box 3030, Irbid 22110, Jordan. Tel.: +962 (0) 2 7201000. Ext: 26882; Fax: +962 (0) 2 7095123; E-mail: hmhadoush@just.edu.jo.

Quality of Life Research (2021) 30:1165-1172
https://doi.org/10.1007/s11136-020-02714-z

Post-stroke fatigue level is significantly associated with mental health component of health-related quality of life: a cross-sectional study

Khader A. Almhawi¹, Hanan B. Jaber¹, Hanan W. Khalil¹, Saddam F. Kanaan¹, Awni A. Shyyab²,
Zaid M. Mansour³, Alza H. Alazrai¹

Accepted: 15 November 2020 / Published online: 2 January 2021
© Springer Nature Switzerland AG 2021



frontiers
in Neurology

ORIGINAL RESEARCH
published: 05 March 2021
doi: 10.3389/fnro.2021.582611

817

Exploring the Relationship Between Sleep Quality, Sleep-Related Biomarkers, and Motor Skill Acquisition Using Virtual Reality in People With Parkinson's Disease: A Pilot Study

Alham Al-Sharman¹, Ismail Alhaj Ismaiel¹, Hanan Khalil¹ and Khalid El-Salem²

¹ Department of Rehabilitation Sciences, Faculty of Applied Medical Sciences, Jordan University of Science and Technology, Irbid, Jordan; ² Department of Neurosciences, Faculty of Medicine, Jordan University of Science and Technology, Irbid, Jordan

OPEN ACCESS

Work 67 (2020) 817-827
DOI:10.3233/WOR-203334
IOS Press

Prevalence and predictors of return to work among stroke survivors in Jordan

Huda A. Yousef^a, Hanan W. Khalil^{a,*}, Mohammad S. Nazzal^a, Khalid I. El-Salem^b,
Ziad M. Hawamdeh^c and Patricia Almeida^d

AJOT

The American Journal of Occupational Therapy

Poster Session
Issue Date: August 2020
Published Online: August 01, 2020
Updated: September 09, 2020

Factors Associated With Functional Recovery After Distal Radius Fractures (DRF)

Mohammad Nazzal, PhD, OTR/L; Sabreen Obeid, MS; Cigdem Oksuz, PhD; Maria Rosado, PhD, PT; Ziad Hawamdeh, MD

+ Author Affiliations & Notes

American Journal of Occupational Therapy, August 2020, Vol. 74,
1411505110. https://doi.org/10.5014/ajot.2020.74S1-PO2315



Neuropsychological Rehabilitation
An International Journal

ISSN: 0960-2011 (Print) 1464-0694 (Online) Journal homepage: https://www.tandfonline.com/loi/ncrj20

Post-stroke depression, anxiety, and stress symptoms and their associated factors: A cross-sectional study

Khader A. Almhawi, Alza Alazrai, Saddam Kanaan, Awni A. Shyyab, Alaa O. Oteir, Zaid Modhi Mansour & Hanan Jaber

To cite this article: Khader A. Almhawi, Alza Alazrai, Saddam Kanaan, Awni A. Shyyab, Alaa O. Oteir, Zaid Modhi Mansour & Hanan Jaber (2020): Post-stroke depression, anxiety, and stress symptoms and their associated factors: A cross-sectional study, Neuropsychological Rehabilitation, DOI: 10.1080/09602011.2020.1760893

To link to this article: https://doi.org/10.1080/09602011.2020.1760893

Koutouge
Taylor & Francis Group

AJOT

The American Journal of Occupational Therapy

Updated: September 09, 2020

Return to Work (RTW) Among Individuals Poststroke in Jordan: Prevalence and Predictors

Mohammad Nazzal, PhD, OTR/L; Huda Yousef, MS; Hanan Khalil, PhD, PT; Khalid El-Salem, MD; Ziad Hawamdeh, MD; Patricia Almeida, PhD

+ Author Affiliations & Notes

American Journal of Occupational Therapy, August 2020, Vol. 74,
1411505099. https://doi.org/10.5014/ajot.2020.74S1-PO1901



ToT Program

- Aim: to build capacity of academic and clinical Jordanian staff on teaching/clinical methodologies
 - Training needs identified.
 - Customized training workshop conducted in Europe
 - Training in Jordan (> 1000 trainees)
 - Face-to-face
 - Online Webinars

ToT - Europe





Co-funded by the
Erasmus+ Programme
of the European Union



JUST-CRS
Clinical Rehabilitation Sciences

CRS Webinars- Jordan

Co-funded by the Erasmus+ Programme of the European Union

Webinar # 5: Outcome Measurement in Rehabilitation Sciences
Monday April 13 2020 2-4 pm
This training course aims to introduce to the use of outcome measures individuals with neurological conditions through explanation of psychometric assessment including validity, reliability and responsiveness.
Presenter: Dr. Afia Jaber
Assistant professor, Department of Rehabilitation Sciences and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
afjaber@just.edu.jo

Webinar # 3: Brachial Plexus Injury: Evidence-Based Management
Monday April 13 2020 2-4 pm
This webinar will discuss BPI mechanism of injury as well as evidence-based multidisciplinary rehabilitation.
Presenter: Mrs. Rana Hammad
Teacher assistant at Jordan University of Science and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
rhammad@just.edu.jo

Webinar # 7: Theory and Application of Sensory Processing in Children with ASD
Tuesday April 14 2020 2-4 pm
It aims to introduce case-providers (occupational and speech language pathologists) to the framework in serving children with ASD. It evaluates children's sensory processing based on the framework.
Presenter: Dr. N. Alshabari
Assistant professor of occupational therapy, Department of Rehabilitation Sciences and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
alshabari@just.edu.jo

Webinar # 4: Advances in Pain Neuroscience & Pain Education
Monday April 13 2020 4-6 pm Amman (+3 GMT)
We will examine the contemporary understanding of pain, how it is processed, what happens in the nervous system? How it becomes a persistent problem. And what we can do about it. During the seminar we will share some amazing pain stories that are expected to change the way you think about pain.
Presenter: Dr. Mohammad Madi, PT
Dr. Madi is an Assistant Professor at the Department of Physical & Occupational Therapy at The Hashemite University. Earned a Master's degree in Manual Therapy from the University of Western Australia in Perth, and completed his PhD studies at the University of Birmingham, United Kingdom.
m.madi@hu.edu.jo

Webinar # 6: Neck Pain Assessment: Evidence-Based Guidelines
Monday April 13 2020 8-10 pm
The main aim of this presentation is to gain evidence-based guidelines in the management of neck pain.
Presenter: Dr. Saddam Khan
Dr. Khan is an assistant professor in Rehabilitation Science and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
sfkanan@just.edu.jo

Webinar # 1: Occupational Therapy Rehabilitation
Sunday April 12 2020 8-10 pm
This workshop will discuss theoretical and practical occupational therapy task-oriented approach to rehabilitation, mainly principles of evaluation and intervention.
Presenter: Dr. Khader Alshabari
Dr. Alshabari is an associate professor in Rehabilitation Sciences at Jordan University of Science and Technology (JUST), Amman, Jordan. He has a Master's degree from the University of Minnesota, USA.
khader@just.edu.jo

Webinar # 2: Sleep disturbances and fatigue in neuro-rehabilitation
Tuesday April 14 2020 6-8 pm Amman
The focus of this workshop is to provide rehabilitation professionals with knowledge about the importance of assessing and addressing sleep and fatigue issues. This workshop covers a review of sleep and fatigue as critical components of presentation, rehabilitation among people with various neurological conditions.
Presenter: Dr. M. Alshabari
Assistant Professor in the Department of Rehabilitation Sciences at Jordan University of Science and Technology, Amman, Jordan.
mahmoud@just.edu.jo

Webinar # 8: Gross Motor Function Development
Tuesday April 14 2020 4-6 pm Amman
The GMFM has evolved over the years. The most common GMFM are GMFM-68 to GMFM-66. However, they are not suitable for use in children with severe motor impairment. A new version has been developed and called GMFM-Itemset (GMFM-I). Also, a new version has been developed and called GMFM-Itemset (GMFM-I). Also, a new version has been developed and called GMFM-Itemset (GMFM-I).
Presenter: Dr. Hikmat Hammad
Associate professor in pediatric & physical therapy, Jordan University of Science and Technology, Amman, Jordan.
hhammad@just.edu.jo

Webinar # 9: Sleep disturbances of neuro-rehabilitation
Tuesday April 14 2020 6-8 pm Amman
The focus of this workshop is to provide rehabilitation professionals with knowledge about the importance of assessing and addressing sleep and fatigue issues. This workshop covers a review of sleep and fatigue as critical components of presentation, rehabilitation among people with various neurological conditions.
Presenter: Dr. N. Alshabari
Assistant professor of occupational therapy, Department of Rehabilitation Sciences and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
alshabari@just.edu.jo

Webinar # 3: Gross Motor Function Development
Tuesday April 14 2020 4-6 pm Amman
The GMFM has evolved over the years. The most common GMFM are GMFM-68 to GMFM-66. However, they are not suitable for use in children with severe motor impairment. A new version has been developed and called GMFM-Itemset (GMFM-I). Also, a new version has been developed and called GMFM-Itemset (GMFM-I). Also, a new version has been developed and called GMFM-Itemset (GMFM-I).
Presenter: Dr. Hikmat Hammad
Associate professor in pediatric & physical therapy, Jordan University of Science and Technology, Amman, Jordan.
hhammad@just.edu.jo

Webinar # 5: Outcome Measurement in Rehabilitation Sciences
Monday April 13 2020 2-4 pm
This training course aims to introduce to the use of outcome measures individuals with neurological conditions through explanation of psychometric assessment including validity, reliability and responsiveness.
Presenter: Dr. Afia Jaber
Assistant professor, Department of Rehabilitation Sciences and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
afjaber@just.edu.jo

Webinar # 7: Theory and Application of Sensory Processing in Children with ASD
Tuesday April 14 2020 2-4 pm
It aims to introduce case-providers (occupational and speech language pathologists) to the framework in serving children with ASD. It evaluates children's sensory processing based on the framework.
Presenter: Dr. N. Alshabari
Assistant professor of occupational therapy, Department of Rehabilitation Sciences and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
alshabari@just.edu.jo

Webinar # 4: Advances in Pain Neuroscience & Pain Education
Monday April 13 2020 4-6 pm Amman (+3 GMT)
We will examine the contemporary understanding of pain, how it is processed, what happens in the nervous system? How it becomes a persistent problem. And what we can do about it. During the seminar we will share some amazing pain stories that are expected to change the way you think about pain.
Presenter: Dr. Mohammad Madi, PT
Dr. Madi is an Assistant Professor at the Department of Physical & Occupational Therapy at The Hashemite University. Earned a Master's degree in Manual Therapy from the University of Western Australia in Perth, and completed his PhD studies at the University of Birmingham, United Kingdom.
m.madi@hu.edu.jo

Webinar # 6: Neck Pain Assessment: Evidence-Based Guidelines
Monday April 13 2020 8-10 pm
The main aim of this presentation is to gain evidence-based guidelines in the management of neck pain.
Presenter: Dr. Saddam Khan
Dr. Khan is an assistant professor in Rehabilitation Science and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
sfkanan@just.edu.jo

Webinar # 1: Occupational Therapy Rehabilitation
Sunday April 12 2020 8-10 pm
This workshop will discuss theoretical and practical occupational therapy task-oriented approach to rehabilitation, mainly principles of evaluation and intervention.
Presenter: Dr. Khader Alshabari
Dr. Alshabari is an associate professor in Rehabilitation Sciences at Jordan University of Science and Technology (JUST), Amman, Jordan. He has a Master's degree from the University of Minnesota, USA.
khader@just.edu.jo

Webinar # 2: Sleep disturbances and fatigue in neuro-rehabilitation
Tuesday April 14 2020 6-8 pm Amman
The focus of this workshop is to provide rehabilitation professionals with knowledge about the importance of assessing and addressing sleep and fatigue issues. This workshop covers a review of sleep and fatigue as critical components of presentation, rehabilitation among people with various neurological conditions.
Presenter: Dr. M. Alshabari
Assistant Professor in the Department of Rehabilitation Sciences at Jordan University of Science and Technology, Amman, Jordan.
mahmoud@just.edu.jo

Webinar # 8: Gross Motor Function Development
Tuesday April 14 2020 4-6 pm Amman
The GMFM has evolved over the years. The most common GMFM are GMFM-68 to GMFM-66. However, they are not suitable for use in children with severe motor impairment. A new version has been developed and called GMFM-Itemset (GMFM-I). Also, a new version has been developed and called GMFM-Itemset (GMFM-I). Also, a new version has been developed and called GMFM-Itemset (GMFM-I).
Presenter: Dr. Hikmat Hammad
Associate professor in pediatric & physical therapy, Jordan University of Science and Technology, Amman, Jordan.
hhammad@just.edu.jo

Webinar # 5: Outcome Measurement in Rehabilitation Sciences
Monday April 13 2020 2-4 pm
This training course aims to introduce to the use of outcome measures individuals with neurological conditions through explanation of psychometric assessment including validity, reliability and responsiveness.
Presenter: Dr. Afia Jaber
Assistant professor, Department of Rehabilitation Sciences and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
afjaber@just.edu.jo

Webinar # 7: Theory and Application of Sensory Processing in Children with ASD
Tuesday April 14 2020 2-4 pm
It aims to introduce case-providers (occupational and speech language pathologists) to the framework in serving children with ASD. It evaluates children's sensory processing based on the framework.
Presenter: Dr. N. Alshabari
Assistant professor of occupational therapy, Department of Rehabilitation Sciences and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
alshabari@just.edu.jo

Webinar # 4: Advances in Pain Neuroscience & Pain Education
Monday April 13 2020 4-6 pm Amman (+3 GMT)
We will examine the contemporary understanding of pain, how it is processed, what happens in the nervous system? How it becomes a persistent problem. And what we can do about it. During the seminar we will share some amazing pain stories that are expected to change the way you think about pain.
Presenter: Dr. Mohammad Madi, PT
Dr. Madi is an Assistant Professor at the Department of Physical & Occupational Therapy at The Hashemite University. Earned a Master's degree in Manual Therapy from the University of Western Australia in Perth, and completed his PhD studies at the University of Birmingham, United Kingdom.
m.madi@hu.edu.jo

Webinar # 6: Neck Pain Assessment: Evidence-Based Guidelines
Monday April 13 2020 8-10 pm
The main aim of this presentation is to gain evidence-based guidelines in the management of neck pain.
Presenter: Dr. Saddam Khan
Dr. Khan is an assistant professor in Rehabilitation Science and Technology, Faculty of Applied Sciences, Jordan University of Science and Technology, Amman, Jordan.
sfkanan@just.edu.jo

Webinar # 1: Occupational Therapy Rehabilitation
Sunday April 12 2020 8-10 pm
This workshop will discuss theoretical and practical occupational therapy task-oriented approach to rehabilitation, mainly principles of evaluation and intervention.
Presenter: Dr. Khader Alshabari
Dr. Alshabari is an associate professor in Rehabilitation Sciences at Jordan University of Science and Technology (JUST), Amman, Jordan. He has a Master's degree from the University of Minnesota, USA.
khader@just.edu.jo

Webinar # 2: Sleep disturbances and fatigue in neuro-rehabilitation
Tuesday April 14 2020 6-8 pm Amman
The focus of this workshop is to provide rehabilitation professionals with knowledge about the importance of assessing and addressing sleep and fatigue issues. This workshop covers a review of sleep and fatigue as critical components of presentation, rehabilitation among people with various neurological conditions.
Presenter: Dr. M. Alshabari
Assistant Professor in the Department of Rehabilitation Sciences at Jordan University of Science and Technology, Amman, Jordan.
mahmoud@just.edu.jo

Webinar # 8: Gross Motor Function Development
Tuesday April 14 2020 4-6 pm Amman
The GMFM has evolved over the years. The most common GMFM are GMFM-68 to GMFM-66. However, they are not suitable for use in children with severe motor impairment. A new version has been developed and called GMFM-Itemset (GMFM-I). Also, a new version has been developed and called GMFM-Itemset (GMFM-I). Also, a new version has been developed and called GMFM-Itemset (GMFM-I).
Presenter: Dr. Hikmat Hammad
Associate professor in pediatric & physical therapy, Jordan University of Science and Technology, Amman, Jordan.
hhammad@just.edu.jo



Sustainability

- Program is continuing to attract new cohorts
- CRS alumni employability
- Curriculum is based on scientific methodology
- State of the art CRS laboratories
- MOU with local universities and European universities to ensure continued collaboration
- Future projects ongoing next year (CBHE & ICM).

(A good project idea speaks about itself)



JUST-CRS consortium

- Different cultures, systems, languages
- One goal

Challenges / risks

- A master program from scratch is not an easy task
 - Curriculum built in relatively short period
 - Difficult accreditation process
 - Travel/ Visa arrangements
 - Clinical student training arrangements



Co-funded by the
Erasmus+ Programme
of the European Union



Co-funded by the
Erasmus+ Programme
of the European Union

**Interdisciplinary Clinical Rehabilitation
Sciences Master Program JUST-CRS**





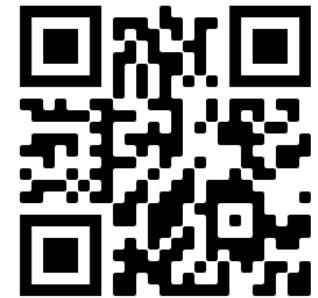
Co-funded by the
Erasmus+ Programme
of the European Union



Website



Project
Video



MOOCs

MSNAZZAL@JUST.EDU.JO

ft.antonio@gmail.com