



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



International Master of Science on Cyber Physical Systems

Report on the Delivery of the First run of the Master Program

D5.5

Project Acronym	MS@CPS	Project Number	598750-EPP-1-2018-1-DE-EPPKA2-CBHE-JP
Date	19.04.2021	Deliverable No.	5.5
Contact Person	Ezzaldeen Edwan	Organisation	PTC
Phone	+970595189775	E-Mail	ezedwan@ptcdb.edu.ps
Version	1.0	Confidentiality level	Public



Version History

Version No.	Date	Change	Editor(s)
0.1	18.4.2021	First draft	Ezzaldeen Edwan
1.0	19.4.2021	General revision	Hamidreza Ahmadian

Contributors

Name	Organization
Ala' Khalifeh	GJU
Khalid Alemerien	TTU
Nadia Bouassida	USF
Bchira Ben Mabrouk	CU

Disclaimer

This project has been funded with support from the European Commission. This publication reflects the views only of the author(s), and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Table of Contents

- Version History 2
- Contributors 2
- Disclaimer 2
- Table of Contents 3
- 1 Introduction..... 4
 - 1.1 Abstract 4
 - 1.2 The scope of the document..... 4
 - 1.3 Objective..... 4
 - 1.4 Terminology..... 4
 - 1.5 Program Stakeholders 4
 - 1.6 Relation to other deliverables..... 5
 - 1.7 Relation to work packages 5
- 2 Delivery of the first run of the MSc program 5
 - 2.1 Progress in getting accreditation for MS@CPS program 5
 - 2.2 Progress running the first round of MS@CPS 6

1 Introduction

1.1 Abstract

The deliverable D5.5 reports on the delivery of the first run of the Master Program on Cyber Physical Systems at the following universities in the partner countries:

- German Jordanian University (GJU), Jordan
- Al-Quds University, Palestine
- Palestine Technical College – Deir El-Balah, Palestine
- Sfax University, Tunisia
- Tafila Technical University, Jordan
- Carthage University, Tunisia

Furthermore, this document summarizes the start of first semester in those universities.

1.2 The scope of the document

This deliverable reports the first year of the launched MS@CPS Master program within the project.

1.3 Objective

The objective of the report on the delivery of the first run of the Master's program is to report on the start of first semester in all partners universities.

PTC, who is coordinating WP5 and this deliverable, has developed a google form to collect information from universities in partner countries. All project partners participated in filling the google form and data given constitute the source for the report.

1.4 Terminology

Accreditation: is a process of validation in which colleges, universities and other institutions of higher learning are evaluated. The standards for accreditation are set by a peer review board whose members include faculty from various accredited colleges and universities.

Partner Countries: Countries where the program to be implemented (Palestine, Tunisia, Jordan)

Program Countries: EU partners (Germany, Sweden, UK)

Program: The master program (CPS) to be implemented.

AQU: Al-Quds University

PTC: Palestine Technical College

GJU: German Jordanian University

TTU: Tafila Technical University

CU: Carthage University

USF: University of Sfax

1.5 Program Stakeholders

The MS@CPS master programs targets graduates in computer engineering, electronic engineering, mechatronics, information technology and computer science or other related by fields.

1.6 Relation to other deliverables

This deliverable is related to other deliverables in WP6. D5.6 reports on the progress of the accreditation of the MS@CPS in the partner countries (i.e., Palestine, Jordan, and Tunisia). The Master program was planned to start in September 2020 by all partners. D5.3 reports on the formal establishment of MS@CPS program in the partner countries.

1.7 Relation to work packages

Delivery of the first run of the Master program is the main goal of the program so it is dependent on all Work packages.

2 Delivery of the first run of the Master program

2.1 Progress in getting accreditation for MS@CPS program

To have a successful exploitation of the project results, consortium partners agreed to launch the programs independently, but harmonized and within 2020. This decision was in line with the EU recommendations to start the program before the last year of the project. Partners from Tunisia and Jordan managed to get the accreditation by September 2020. GJU has already a master program in computer engineering so incorporated the CPS master program within it. However, the partners from Palestine (PTC and AQU) were unable to meet this date due to the following reason. PTC faced accreditation issues that required accrediting the program through a cooperation agreement with a local university in Gaza. The choice to cooperate with Al-Aqsa university was influenced by the fact that Al-Aqsa University is the only governmental university in the Gaza Strip (like PTC) and both belong to the ministry of higher education and scientific research. AQU's accreditation was delayed because internal required approvals took longer time than expected. At this moment, the accreditation applications were submitted by the Palestinian partners and the start of program in Palestine is planned for September 2021. Table 1, Table 2 and Table 3 present the status of accreditation at the project partner universities.

Palestine

Table 1: Progress in actions for accreditation in Palestine

Action	Progress (PTC)	Progress (AQU)
<ul style="list-style-type: none"> Accreditation application 	Accepted (Jointly with Al-Aqsa University – Gaza)	The program is offered as a track of a master program in computer science.
<ul style="list-style-type: none"> Program start 	September 2021	September 2021

Jordan

Table 2: Progress in actions for accreditation in Jordan

Action	Progress (GJU)	Progress (TTU)
<ul style="list-style-type: none"> Accreditation 	The program is offered as a track of a master program in	Achieved

	computer Engineering	
• Program start	September 2020	September 2020

Tunisia

Table 3: Progress in actions for accreditation in Tunisia

Action	Progress (USF)	Progress (CU)
• Accreditation	Achieved	Achieved
• Program start	September 2020	September 2020

2.2 Progress running the first round of MS@CPS

An online questionnaire was circulated among the partners to collect information about running the first year of the master program (cf. Annex II)¹

Error! Reference source not found. summarises the results for the questionnaires for the four participant universities. The Palestinian partners are excluded from the table because of not launching the master program yet.

Table 4 : Summary of the results from the questionnaire

Action	GJU	TTU	USF	CU
Number of students who applied to join the program	30 in the comp Eng. program. We still do not know how many will choose the CPS as their main track.	11	102	35
Number of students admitted in the program	25 in the comp Eng. program. (All tracks) CPS as main track unknown	7	-	25

¹ https://docs.google.com/forms/d/1OFgyR3T2SLtUHCvLQHR9lCeI9uN5koI4wQkaoqyz_IA

Action	GJU	TTU	USF	CU
Number of students who enrolled in the program	25 in the comp Eng. program. (CPS as their main track not clear)	7	28	20
Scientific disciplines for enrolled students	B.Sc. computer science, B.Sc. Electrical and comp. Eng.	Computer Science and related fields	Computer Science, embedded systems	Computer Sciences and computer engineering
Number of courses offered during the first semester	4	2	12	12
Titles of the courses that were offered during the first semester	Probability and Stochastic Modelling, Big Data, Embedded Systems Network Design and Security	Security and Privacy, IoT	Theory and Algorithms, Optimization, Big Data Analytics, Software engineering, Cloud Computing, Wireless Communication Networks, Real time systems, Sensors and actuators, Project Management, Communication Skills, Cyber Security (privacy and data integrity), Dependability (Safety, reliability, availability)	Dependability (Safety, reliability, availability), Cyber Security (privacy and data integrity), Communication Skills, Project Management, Theory and Algorithms, Optimization, Big Data Analytics, Software engineering, Cloud Computing, Wireless Communication Networks, Real time systems, Sensors and actuators,
Please, upload the file	Click	Click	Click	Click

Action	GJU	TTU	USF	CU
description of the courses offered during the first semester				
Number of lecturers in the first semester	4	2	11	10
Names of the lecturers in the first semester with their academic ranks	Probability and Stochastic Modelling: Dr. Osamah Badarneh. Full Professor 2. Big Data Analysis. Dr. Waleed ALSitt, Associate Prof. 3. Embedded Systems: Dr. Omar Hiari, Associate Prof. 4. Network Design and Security: Dr. Ammar Gharaibeh. Assistant Professor	Ass. Prof. Khalid Alemerien and Ass. Prof. Zaid Alhalhouli	Ktari Raida, Taktak Raouia, Jamoussi Salma, Taggougui Najiba, Bakkour Leila, Fourati Lamia, Ben Elhadj Hadda, Miladi Mohamed, Sallemi Asma, Saida Raoudha	Bchira Ben Mabrouk, Aicha Ben Salem, Haykel Ben Frej, Amine Chouchene, Tarek Bchini, Hafedh Hrizi, Akrem Hkiri, Mehdi Hajji, Anouar Mahfoudh, Mohamed Cherif Zorai (ALL Assistant Professors)

The table shows an excellent turnout at most partner universities. The number of enrolled students of 7 at TTU might be low but it can be explained due to the late announcement of the program until accreditation was achieved. So, the time was limited to advertise for the program properly. As noted, GJU plans to incorporate the CPS master program within its computer engineering master program so it is not clear the number of students who will choose the CPS as their track. Clearly USF has the most competitive selection rate of applicants 27.4% and at the same time it has the highest number of admitted students. The academic background of most applicants is either computer engineering or computer science. Regarding academic staff, the Tunisian universities is employing the largest number of lecturers for teaching at the program and they offer a variety of courses.

Some scenes from teaching are shown in (Annex I: Figure 1, Figure 2, Figure 3. And Figure 4)

Annex I: Photos from the Launch of the Program in Partner Universities



Figure 1 Online teaching at the USF

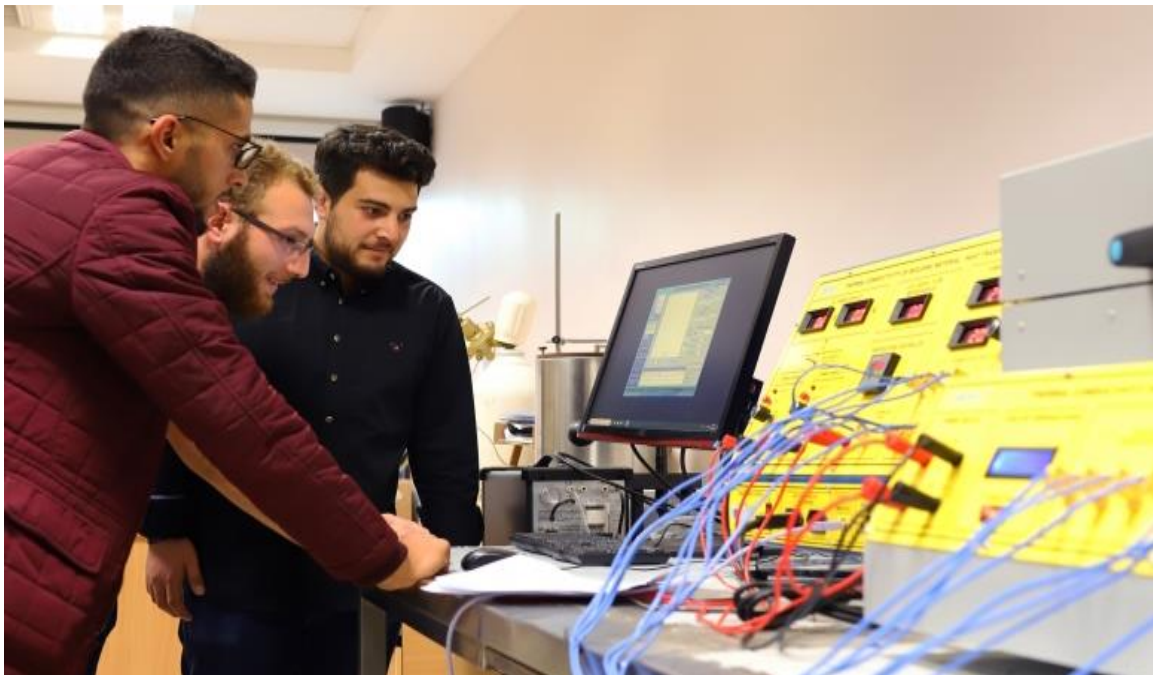


Figure 2 teaching at the GJU labs



Figure 3 Teaching at the CU

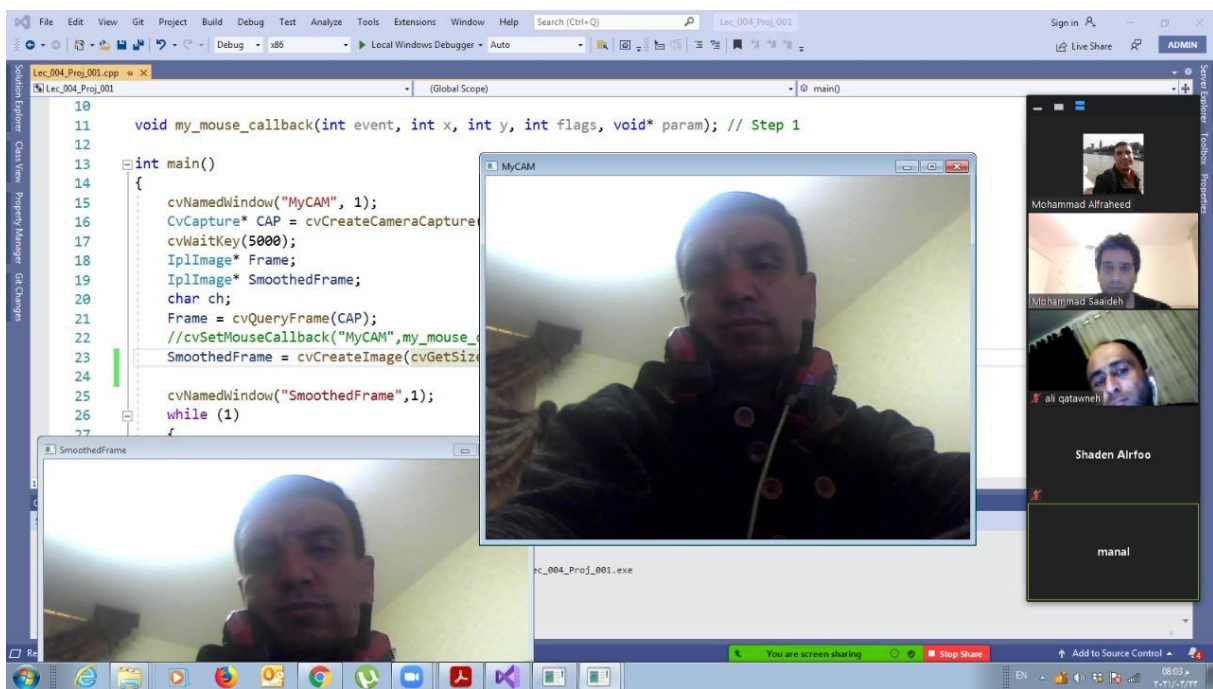


Figure 4 Online teaching at the TTU

Annex II: Screen Shot of the Questionnaire

D 5.5 Delivery of the first run of the MSc program

The name and photo associated with your Google account will be recorded when you upload files and submit this form.

* Required

Email address *

Your email

1. University Name (إسم الجامعة) *

Your answer

2. Name of the applicant (إسم مقدم الطلب) *

Your answer

3. Number of students who applied to join the program (عدد الطلبة الذين قدموا طلبات الالتحاق للبرنامج) *

Your answer

4. number of students admitted in the program (عدد الطلبة الذين حصلوا على القبول للالتحاق في البرنامج)

Your answer

5. Number of students who enrolled in the program (عدد الطلبة الذين التحقوا وتم البدء في) *
(الدراسة بالفعل في البرنامج)

Your answer

6. Scientific disciplines for enrolled students (التخصصات العلمية للطلبة الملتحقين) *

Your answer

7. Number of courses offered during the first semester (عدد المساقات المطروحة خلال) *
(الفصل الأول)

Your answer

8. Titles of the courses that were offered during the first semester (أسماء المساقات) *
(المطروحة خلال الفصل الأول)

Your answer

9. Please, upload the file description of the courses offered during the first semester (من فضلك، قم بتحميل ملف لوصف المساقات الذي يتم تدريسها خلال الفصل الأول) *

 Add file

10. Number of lecturers in the first semester (عدد المحاضرين في الفصل الأول) *

Your answer

11. Names of the lecturers in the first semester with their academic ranks (أسماء
المحاضرين في الفصل الأول مع الدرجات العلمية) *

Your answer

12. Please, upload photos of teaching and laboratories within the university (من
فضلك، قم بتحميل صور للتدريس والمختبرات للبرنامج بداخل الجامعة) *

[Add file](#)

Send me a copy of my responses.

Submit

Table 5 Screenshot of the Questionnaire