



**Project Title:** Modernising Undergraduate Renewable Energy Education:EU Experience for Jordan

**Acronym:** MUREE

**Project Number:** 530332-TEMPUS-1-2012-1-JO-TEMPUS-JPCR

**Funding Scheme:** TEMPUS (Joint Projects, Curricular Reform)

**Grant Agreement Number:** 2012-3324/001-001

**Duration** 3 Years Starting on 15/10/2012

**Coordinator:** Princess Sumaya University for Technology (PSUT), Jordan

**Project Manager:** Professor Abdallah Al-Zoubi

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**Project Website:** <http://muree.psut.edu.jo/Home.aspx>

|                              |                                       |                      |    |
|------------------------------|---------------------------------------|----------------------|----|
| <b>Deliverable Title</b>     | <i>Accreditation of New Curricula</i> |                      |    |
| <b>Author(s)</b>             | <i>Abdallah Al-Zoubi</i>              |                      |    |
| <b>Organisation Name(s)</b>  | PSUT                                  |                      |    |
| <b>Deliverable No.</b>       | 2.4                                   |                      |    |
| <b>Deliverable Type</b>      | Other Products                        |                      |    |
| <b>WP Number</b>             | 2                                     |                      |    |
| <b>WP Leader</b>             | Sapienza                              |                      |    |
| <b>Due Date of Delivery</b>  | 15/04/2014                            | <b>Project Month</b> | 18 |
| <b>Submission Date</b>       | 28/10/2014                            | <b>Project Month</b> | 25 |
| <b>Dissemination Level</b>   | Institution Level                     |                      |    |
| <b>Total Number of Pages</b> | 12                                    |                      |    |

A special meeting was held at Princess Sumaya University for Technology on 6 April 2014 to discuss accreditation of the selected 6 courses:

1. Electric Machines and Drives
2. Energy Conversion
3. Renewable Energy Systems
4. Wind Energy
5. Photovoltaic (eLearning format)
6. Solar Thermal (eLearning format)

The following partners attended the meeting:

1. Abdallah Al-Zoubi, Wejdan Abu-El-Haija, Princess Sumaya University for Technology
2. Ahmad Salaymeh, University of Jordan
3. Suhil Kiwan, Jordan University of Science and Technology (JUST)
4. Handri Ammari, Mutah University (MU)
5. Bashar Hammad, Hashemite University (HU)


The partners were handed letters addressed to presidents of each partner Jordanian universities requesting to internally accredit the selected 6 courses in their universities as shown in Appendix 1. Participants have all agreed that only internal accreditation procedures are required and there is no need to go to HEAC for accreditation.



Each partner university has followed its own internal accreditation procedures and presidents have replied to the president of Princess Sumaya University for Technology acknowledging the approval of accreditation of the courses as shown in the letters of Appendix 2.

In appendix 3, a decision to form the establishment of the department of power and energy engineering is shown.

**Appendix 1:** Letters from PSUT to other Jordanian partner universities requesting accreditation of courses.

  
Princess Sumaya University for Technology جامعة الأميرة سمية للتكنولوجيا

Date: April 6, 2014  
Ref: 468/22/1/806

Professor Ekhleif Tarawneh,  
President  
The University of Jordan  
Jordan

Dear Prof. Tarawneh,

Firstly, I would like to extend, on behalf of all faculty and staff at Princess Sumaya University for Technology (PSUT), warm good wishes to you and your staff.

The University of Jordan (UoJ) joined us in 2012, in a European funded TEMPUS project entitled, "Modernising Undergraduate Renewable Energy Education: EU Experience for Jordan (MUREE)" to serve as a partner body and part of its consortium. UoJ, as one of our most active partners with its strong presence and valuable contribution to MUREE, is indispensable to the success of this project.

MUREE's objective is to develop, integrate, accredit and evaluate a high-quality bachelor degree programme in renewable energy in the country, to be jointly taught by universities in Jordan, in accordance with the Bologna process. The project is developing 6 curriculums, as detailed below:


- Energy Conversion
- Solar-thermal energy
- Wind energy
- Drive Machines
- Photovoltaic (E-Learning format)
- Renewable Energy Systems (E-Learning format)

The courses are in the final stages of development and should be ready for delivery, shortly. We would therefore like to request you to integrate these courses within the existing, appropriate, study plans in renewable energy that are offered at your university, and to start offering some of the courses at the beginning of the academic year 2014/2015, as a requirement of the Tempus program regulations. Attached are the outlines of courses assigned to be delivered by UoJ.

We are very appreciative of the professionalism and dedication of the UoJ team and look forward to continued cooperation.

With best wishes,

Sincerely,

  
Issa Batarseh, Ph.D.  
President  
Princess Sumaya University for Technology

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Princess Sumaya University for Technology



جامعة الأميرة سمية للتكنولوجيا

Date: April 6, 2014  
Ref: 468/22/1/806

Professor Abdallah I. Husein Malkawi,  
President  
Jordan University for Science and Technology  
Jordan

Dear Prof. Malkawi,

Firstly, I would like to extend, on behalf of all faculty and staff at Princess Sumaya University for Technology (PSUT), warm good wishes to you and your staff.

Jordan University for Science and Technology (JUST) joined us in 2012, in a European funded TEMPUS project entitled, "Modernising Undergraduate Renewable Energy Education: EU Experience for Jordan (MUREE) to serve as a partner body and part of its consortium. JUST, as one of our most active partners with its strong presence and valuable contribution to MUREE, is indispensable to the success of this project.

MUREE's objective is to develop, integrate, accredit and evaluate a high-quality bachelor degree programme in renewable energy in the country, to be jointly taught by universities in Jordan, in accordance with the Bologna process. The project is developing 6 curriculums, as detailed below:

- Energy Conversion
- Solar-thermal energy
- Wind energy
- Drive Machines
- Photovoltaic (E-Learning format)
- Renewable Energy Systems (E-Learning format)

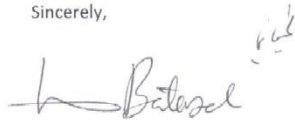
The courses are in the final stages of development and should be ready for delivery, shortly. We would therefore like to request you to integrate these courses within the existing, appropriate, study plans in renewable energy that are offered at your university, and to start offering some

of the courses at the beginning of the academic year 2014/2015, as a requirement of the Tempus program regulations. Attached are the outlines of courses assigned to be delivered by JUST.

We are very appreciative of the professionalism and dedication of the JUST team and look forward to continued cooperation in the future.

With best wishes,

Sincerely,



Issa Batarseh, Ph.D.  
President

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Princess Sumaya University for Technology



جامعة الأميرة سمية للتكنولوجيا

Date: April 6, 2014  
Ref: 468/22/1/806

Professor Reda Khawaldeh,  
President  
Mutah University  
Jordan

Dear Prof. Khawaldeh,

Firstly, I would like to extend, on behalf of all faculty and staff at Princess Sumaya University for Technology (PSUT), warm good wishes to you and your staff.

Mutah University (MUTAH) joined us in 2012, in a European funded TEMPUS project entitled, "Modernising Undergraduate Renewable Energy Education: EU Experience for Jordan (MUREE) to serve as a partner body and part of its consortium. MUTAH, as one of our most active partners with its strong presence and valuable contribution to MUREE, is indispensable to the success of this project.

MUREE's objective is to develop, integrate, accredit and evaluate a high-quality bachelor degree programme in renewable energy in the country, to be jointly taught by universities in Jordan, in accordance with the Bologna process. The project is developing 6 curriculums, as detailed below:

- Energy Conversion
- Solar-thermal energy
- Wind energy
- Drive Machines
- Photovoltaic (E-Learning format)
- Renewable Energy Systems (E-Learning format)

The courses are in the final stages of development and should be ready for delivery, shortly. We would therefore like to request you to accredit these courses within the existing, appropriate, study plans in renewable energy that are offered at your university, and to start offering some of the courses at the beginning of the academic year 2014/2015, as a requirement of the Tempus program regulations. Attached are the outlines of courses assigned to be delivered by Mutah University.

We are very appreciative of the professionalism and dedication of the MUTAH team and look forward to continued cooperation.

With best wishes,

Sincerely,



Issa Batarseh, Ph.D.  
President



Date: April 6, 2014  
Ref: 468/22/1/806

Professor Kamal Bani-Hani,  
President  
The Hashemite University  
Jordan

Dear Prof. Bani-Hani,

Firstly, I would like to extend, on behalf of all faculty and staff at Princess Sumaya University for Technology (PSUT), warm good wishes to you and your staff.

The Hashemite University (HU) joined us in 2012, in a European funded TEMPUS project entitled, "Modernising Undergraduate Renewable Energy Education: EU Experience for Jordan (MUREE) to serve as a partner body and part of its consortium. HU, as one of our most active partners with its strong presence and valuable contribution to MUREE, is indispensable to the success of this project.

MUREE's objective is to develop, integrate, accredit and evaluate a high-quality bachelor degree programme in renewable energy in the country, to be jointly taught by universities in Jordan, in accordance with the Bologna process. The project is developing 6 curriculums, as detailed below:

- Energy Conversion
- Solar-thermal energy
- Wind energy
- Drive Machines
- Photovoltaic (E-Learning format)
- Renewable Energy Systems (E-Learning format)

The courses are in the final stages of development and should be ready for delivery, shortly. We would therefore like to request you to integrate these courses within the existing, appropriate, study plans in renewable energy that are offered at your university, and to start offering some of these courses at the beginning of the academic year 2014/2015, as a requirement of the

Tempus program regulations. Attached are the outlines of courses assigned to be delivered by The Hashemite University.

We are very appreciative of professionalism and dedication of the HU team and look forward to continued cooperation.

With best wishes,

Sincerely,



Issa Batarseh, Ph.D.  
President

**Appendix 2: Appendix 1:** Response letters from Jordanian partner universities to PSUT confirming accreditation of courses.



Jordan University of Science & Technology  
Office of the President



جامعة العلوم والتكنولوجيا الأردنية  
مكتب الرئيس

هاتف ٧٢٠١٠٠٠ (٩٦٢-٢) - فاكس ٧٠٩٥١٢٣ (٩٦٢-٢)

ص.ب (٣٠٣٠) اربد (٢٢١١٠) الأردن

Ref. 16-6-8-4006

الرقم: .....

Date 7-9-2014

التاريخ: .....

الموافق: .....

Princess Sumaya University for Technology

Amman, Jordan

Dear Prof. Mash'hur Refai

Referring to your letter dated 6/4/2014 Regarding MUREE project, I would like to inform you that the mechanical engineering department at JUST has introduced the following courses into the new curricula as of the academic year 2014/2015. Some of these courses will be offered next semester. These courses include

Energy Conversion

Solar Energy

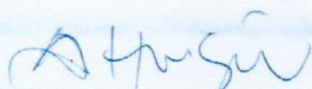
PV technology

Wind Energy

Renewable energy systems

Looking forward to having more collaboration among our universities

Yours



Prof. Abdallah Husein Malkawi

President

Jordan University for science and Technology

Jordan





MU'TAH UNIVERSITY

President Office

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



جامعة مؤتة

مكتب الرئيس

Ref. : 134, 17. 5171

Date : 18-9-2014

الرقم :

التاريخ :

الموافق :

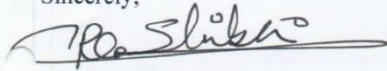
Princess Sumaya University for Technology  
Amman  
Jordan

Dear Prof Mash'hur Refai,

I am very pleased to inform you that our Contact person for the MUREE project (530332- MUPUS-1 -2012-1- JO- TEMPUS- JPCR) is Dr. Handri Ammari, as of September 18, 2014.

With many thanks for your cooperation.

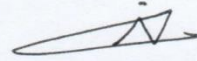
Sincerely,



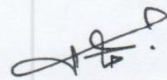
Prof. Rida A. Shibli  
President of Mutedah University

د. عبد الله الزبيدي  
11/9

للمعلم والعميد استلم

  
A / 99

استلمت في مكتب الرئيس  
11/9



THE HASHEMITE UNIVERSITY  
The Presidency



الجامعة الهاشمية  
رئاسة الجامعة

الموافق 28-10-2014

الرقم 1106-1409874 التاريخ

Professor Mashhoor Al-Refai  
President  
Princess Sumaya University for Technology  
Jordan

Dear Prof. Al-Refai,

With reference to your letter No. 468/22/1/806 dated April 6, 2014 regarding integrating courses that are being developed through a European funded TEMPUS project entitled "Modernising Undergraduate Renewable Energy Education: EU Experience for Jordan (MUREE)", I would like to kindly inform you of the following:

- 1- The course entitled "Renewable Energy Systems" is offered in the first semester of the academic year 2014/2015, by the Mechatronics Engineering Department, with the same course description attached with the above mentioned letter.
- 2- The other courses listed in the above-mentioned letter, and especially "Photovoltaic Systems", will be offered as Special Topics courses. Furthermore, they will be added as mandatory or elective courses with the same titles and contents after the Faculty of Engineering reviews its curricula. This process is done periodically according to the regulations at the Hashemite University, taking into account the feedback from the Curricula Committee and all stakeholders.
- 3- Courses of "Wind Energy" and "Energy Conversion" mentioned in the letter are currently being taught in a course titled "Renewable Power Generation" in the Electrical Engineering Department as a mandatory course.

I would like to take this opportunity to emphasize HU's continuous support and commitment for current and future collaboration between our institutions, and I am confident of the success of MUREE Project.

Sincerely Yours

  
Prof. Kamal Bani-Hani  
President



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Princess Sumaya University for Technology



جامعة الأميرة سمية للتكنولوجيا

No: 468/31/13/1550  
Date June 22 2014

**Dean of King Abdullah II School for Electrical Engineering**

Here within, I confirm the Dean Council Decision No. 8 30-2013/2014 which has been taken in the Meeting No. 30 for the Academic Year 2013/2014 on June 18<sup>th</sup> 2014 as follows:

**Decision No. 8 30-2013/214:**

- 1- Approval of renewing the Electrical Power and Energy Engineering Curricula based on the recommendations of the European Project (MUREE) as follows:

| Course from MUREE Project                          | Equivalent Course from Electrical Power and Energy Engineering Curriculum |
|--|---|
| Energy Conversion                                  | Energy Conversion (24472)   |
| Solar-Thermal Energy & Wind Energy Machines Drives | Renewable Energy Systems (24571)  |
|  | Electrical Machines II (24462)  |

- 2- This decision is to be executed starting from the beginning of the Academic Year 2014/2015.

Kindest Regards,

*Prof. Mash*

University President

Prof. Mashhūr Retar



cc:  
Admission and Registration Director

**Appendix 3: A decision to form the establishment of the department of power and energy engineering at PSUT.**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Princess Sumaya University for Technology



جامعة الأميرة سمية للتكنولوجيا

Ref: 468/31/13/ 2689

Date: 13/10/2014

**Dean of King Abdullah II School for Electrical Engineering**

Here within, I confirm the Dean Council Decision No. (3) 8/2010/2011 which has been taken in the Meeting No. 8 for the Academic Year 2010/2011 on December 1<sup>st</sup> 2010 as follows:

**Decision Number (3) 8/2010/2011**

The conceptual acceptance of developing new programs at Princess Sumaya University for Technology, and to provide recommendations to the Board of Trustees when decisions are taken. The council decided the following.

First: The college council of The King Abdulla II Faculty for Electrical Engineering

1. Renaming the department of electronics engineering to become the department of electrical engineering. The latter department shall follow the former department.
2. Developing the following new programs in the department of electrical engineering :
  - a. Bachelor's degree program in electrical power and energy engineering.
  - b. Master's degree program in electrical engineering.

Second: The King Hussein Faculty for Computing Sciences

1. Developing a new bachelor's degree program in software engineering.
2. Developing a new master's degree program in information security and computer criminology.

Third: The King Talal Faculty for Business and Technology

Developing a new bachelor's degree program in accounting. The relevant department shall study the naming of the new program according to the international programs in this field of study.

Kindest Regards,



University President

Prof. Mashhoor Refai



Cc:

Admission and Registration Director