



An Industry Oriented MSc. Program in Telecommunications Engineering- Towards an EU Approach

(A Joint Project Funded by Tempus)

Presented by
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Outline

- **The Telecomm Engineering Dept. at YU**
- **Tempus IV**
- **The Project**
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Telecommunications Engineering Department at Yarmouk University

- Established in 1989
- Offers B.S. and M.S. degrees
- 15 highly qualified faculty members
- 7 labs
- Students from Jordan and neighboring countries.
- Annual intake is around 150 students
- 850 BSc. Students and 40 MSc. students

Offered Programs

■ **BSc. Program**

- 167 credit hours
- skills in the fundamental concepts of electrical engineering, mathematics, physical sciences, in addition to analog and digital communications.
- Specialized and advanced topics in telecommunications are also offered such as wireless communications, satellite communications, Television systems, etc..
- practical experiences through field training, graduation projects and lab work.

Offered Programs

■ **MSc. Program**– Thesis Option

- Started 2005
- 24 credit hours of course work
- 9 credit hours of thesis work
- More than 20 graduates since 2005
- Thesis resulted in more than 10 publications

■ **MSc. Program**– Non-Thesis Option

- Started 2010 in cooperation with PFC
- 27 credit hours of course work
- 6 credit hours of graduation project

TEMPUS

- **Trans-European Mobility Scheme for University Studies (TEMPUS)**
- A European Union's programme which supports the modernization of higher education in the Partner Countries of Eastern Europe, Central Asia, the Western Balkans and the Mediterranean region, mainly through university cooperation projects
- The Education, Audiovisual and Culture Executive Agency (**EACEA**) is responsible for the management of Tempus

Tempus Themes

- ❑ **Curricular reform**
 - ❑ ECTS, 3 cycles, diploma supplement
- ❑ **Governance reform**
 - ❑ University management and student services
 - ❑ introduction of quality assurance
 - ❑ institutional and financial autonomy & accountability
 - ❑ equal access to HE
 - ❑ international relations
- ❑ **Higher Education and Society**
 - ❑ Training of non-university teachers
 - ❑ development of partnerships with enterprises
 - ❑ knowledge triangle
 - ❑ training courses for public services (Min./ local auth.)
 - ❑ development of lifelong learning
 - ❑ qualifications frameworks

CURRICULAR REFORM

- ❑ Adapt, modernise and restructure existing curricula with a focus on content, structure, teaching methods and the use of new teaching materials
- ❑ Establish study programmes with a double or multiple degree or a joint degree
- ❑ Establish links with the labour market

TEMPUS ACTIONS

- Joint Projects, implemented at institutional level to reform curricula, improve university governance, create more links with society.
- Structural Measures, implemented at national level for the development and reform of national higher education structures and systems in PC (Ministries of Education must be “associated partners”)

ELIGIBLE PARTNERSHIPS

- National projects:** minimum of 6 HE institutions
 - 3 from Partner Country
 - 3 from 3 different EU countries

- Multi-country projects:** minimum of 7 HE institutions
 - 2 from each Partner Country (minimum 2 PC)
 - 3 from 3 different EU countries

ELIGIBLE APPLICANTS

- **Joint Projects:**

- State-recognised public or private HE institutions (either in EU or PC)
- Associations, organisations or networks of HE institutions

- **Structural Measures:**

- State-recognised public or private HE institutions (either in EU or PC)
- Associations, organisations or networks of HE institutions
- Rector/teacher/student organisations (not Ministries)

Third Call-Tempus IV

- Published: **Nov. 2009**
- Deadline: **March 9, 2010**
- Received applications: **450 proposals**
 - 400 eligible
 - 90 (20%) PC coordinator (grant-holder)
- Average budget size: **€950.000**
- Average consortium size: **13 partners**

Summary Results

- Published: July 28, 2010
- 64 proposals recommended for funding
- 18 proposals have partner countries as coordinator (28%)
- 50 Joint Projects
- 14 Structural measures (22%)
- 31 proposals are multi-country (48%)

Our Project

Project Title	An Industry Oriented MSc. Program in Telecommunications Engineering- Towards an EU Approach
Project Acronym	MTE-EUA
Funding Agency	The Education, Audiovisual and Culture Executive Agency (EACEA) - European Union
Programme	TEMPUS
Sub-programme	Joint Projects
Programme guide / Call for proposals	EACEA No. 28/09
Action	Curricular Reform

Project Partners

No.	PC Type	Institution	City	Country
P1	Grant Holder/ Coordinator	Yarmouk University	Irbid	Jordan
P2	Beneficiary	German Jordan University	Amman	Jordan
P3	Beneficiary	Hashemite University	Zarqa	Jordan
P4	Beneficiary	Dublin City University	Dublin	Ireland
P5	Beneficiary	Queen Mary University of London	London	United Kingdom
P6	Beneficiary	Universidad Politécnica de Valencia	Valencia	Spain

The Team

No.	Institution	Staff Involved
P1	Yarmouk University	Khaled Gharaibeh Bassam Harb, Haytham Bani Salameh, Osama Badarneh, Mahmoud Khasawneh Ahmed Ajlouni, Ahmed Shamali
P2	Jordan German University	Hazem Kaylani, Safwan A. Altarazi Nathir A. Rawshdeh
P3	Hashemite University	Mahmoud Smadi, Saleh Al-Jazzar Abdul Karim Al-Bayati
P4	Dublin City University	Noel Murphy, Conor Brennan Dr Jennifer McManis, Gabriel-Miro Muntean: Martin Collier
P5	Queen Mary University of London	Laurie Cutbert, Dr Yasir Alfadhl Yue Gao, Eliane L. Bodanese Michael Chai
P6	Universidad Politécnica de Valencia	Felipe L. Penaranda-Foix, Juan Reig Pascual, Vicente Casares- Giner, Javier Oliver-Villarroya

Project Objectives

- ❑ To reform and modernize the existing Master programme in Wireless Telecommunications at Yarmouk University.
- ❑ To enhance student learning outcomes and skills to meet local market needs.
- ❑ To converge our study programs with the EU educational system
- ❑ To help local project partners establish and implement their MSc. programs in telecommunications engineering at their institutions.
- ❑ To help the EU partners to learn more about the needs, capacities and educational approaches of the partner institutions in Jordan.

New Program Tracks

- Three main tracks will be introduced:
 1. **Wireless Communications**
 2. **Wireless Networking**
 3. **Telecommunications Network Management**

Impact on YU and Partners

- Reform of our graduate study programs
- Introduction of two new tracks
 - Telecommunications Network Management
 - Wireless Networking
- Lab Equipment (220,000 EUR)
- Professional development of academic staff
- Travel grants for MSc. Students
- Help establish similar programs at partner institutions.

Role of Partners - HU

- Be part of the project **management committee**.
- Participate in preparing and collecting surveys that measure the **local industrial needs** relating to the proposed program.
- Be part of the **curriculum revision** and **development** processes
- Be part of the **promotional campaign** to promote the program benefits among its undergraduate students.
- HU will gain experience throughout the project lifetime that will help in the **development of its own MSc. program**.
 - special arrangements will be made in order to initiate credit transfer from the YU program to the HU program, which will be in its initial phases during the project lifetime.



Thank You

