



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

(A Joint Project Funded by Tempus)

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# Project Summary

Project Title	An Industry Oriented MSc. Program in Telecommunications Engineering- Towards and 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

# Outline

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# Project Main Objective

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*“The main objective of this project is to **modernize the existing Masters program** in wireless communications at HFET and to **introduce new tracks** that will provide strong **linkages to the needs of local and regional industries** and will contribute to providing **international recognition** for our programs in the area of wireless communications.”*

# Project Summary

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- The new programs and tracks will be based on the teaching and learning methodology of the **Bologna process**.
  - Program specification and innovative curriculum design will start from decisions on overall goals, **learning objectives** and intended **learning outcomes**.
  - Lists of **competencies and abilities, knowledge and skills** and subject benchmarking considerations will be described first and will serve as reference points for the curriculum development process.

# Partners (Beneficiaries)

<b>P1</b>	<b>Grant Holder/ Coordinator</b>	<b>Yarmouk University</b>	<b>Irbid</b>	<b>Jordan</b>
<b>P2</b>	<b>Beneficiary</b>	<b>German Jordan University</b>	<b>Amman</b>	<b>Jordan</b>
<b>P3</b>	<b>Beneficiary</b>	<b>Hashemite University</b>	<b>Zarqa</b>	<b>Jordan</b>
<b>P4</b>	<b>Beneficiary</b>	<b>Dublin City University</b>	<b>Dublin</b>	<b>Ireland</b>
<b>P5</b>	<b>Beneficiary</b>	<b>Queen Mary University of London</b>	<b>London</b>	<b>United Kingdom</b>
<b>P6</b>	<b>Beneficiary</b>	<b>Universidad Politécnica de Valencia</b>	<b>Valencia</b>	<b>Spain</b>

# The Team

P1	<b>Yarmouk University</b>	Khaled Gharaibeh Bassam Harb Haytham Bani Salameh Osama Badarneh Mahmoud Khasawneh Ahmed Ajlouni Ahmed Shamali
P2	<b>Jordan German University</b>	Hazem Kaylani Safwan A. Altarazi Nathir A. Rawshdeh
P3	<b>Hashemite University</b>	Mahmoud Smadi Saleh Al-Jazzar Abdul Karim Al-Bayati
P4	<b>Dublin City University</b>	Noel Murphy Conor Brennan Dr Jennifer McManis Gabriel-Miro Muntean: Martin Collier
P5	<b>Queen Mary University of London</b>	Laurie Cutbert Dr Yasir Alfadhl Yue Gao Eliane L. Bodanese Michael Chai
P6	<b>Universidad Politécnica de Valencia</b>	Felipe L. Penaranda-Foix Juan Reig Pascual Vicente Casares-Giner Javier Oliver-Villarroya

# Project Objectives

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- ❑ To reform and modernize the existing Master programme in Wireless Telecommunications at Yarmouk University including curricula, teaching methodologies, quality control, and to establish new up-to-date tracks in related areas.
- ❑ To enhance student learning outcomes and skills to meet local market needs and international best practices through the building of technical capacity at YU and local partner institutions.



# Project Objectives

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- ❑ To converge our study programs with the EU educational system with regard to the Bologna process and achieve academic and professional recognition of YU programmes within the EU (which will also contribute to intercultural interaction).
- ❑ To help local project establish and implement their MSc. programs in telecommunications engineering at their institutions.

# Project Objectives

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- ❑ To help the EU partners to learn more about the needs, capacities and educational approaches of the partner institutions in Jordan, and, to better understand the needs of both local and international industry.

# New Program Tracks

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- All tracks will be designed to provide graduate level education for either fresh graduates or those employed in related fields.
- The newly-introduced tracks are mainly expected to reduce the unemployment rates by producing qualified /experienced engineering professionals.
- Entrants to the program will be those who have at least a bachelor's degree in Telecommunications engineering Electrical/Electronics Engineering or IT Engineering.

# New Program Tracks

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- Three main tracks will be introduced:
  1. Wireless Communications
  2. Wireless Networking
  3. Telecommunications Network Management
- All newly-introduced tracks offer flexibility of:
  - switching between tracks, study models and between options (thesis or non-thesis)
  - transferring/mobility of credits (i.e., allow mobility of credits between YU and other partner institutions including Jordanian partners).

# Pedagogical Approach

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- Shift from an input driven system defined by years of study, content catalogues and contact hours, to a system primarily based on learning outcomes.
  - This approach gives international comparability and flexibility of teaching and learning methods, and provides for stronger, more transparent mechanisms of quality assurance.
- The implementation of a **quality control** system which proves that intended learning outcomes have been achieved by the provided curricula and teaching/learning approaches.

# Management of the Project

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- Activities dedicated to management of the project and quality control will be carried out during the **whole lifetime of the project**.
- The **management committee** of the project will be responsible of monitoring the progress of implementing project activities.
  - YU being the lead partner of the project will also be responsible of coordinating the project activities among local partners
  - DCU will coordinate the project activities among EU partners.
- Each activity will be carried out by a committee formed from some or all the project partners.

# Quality Control of the Project

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- Monitoring of project results and quality control will be achieved through different mechanisms:
  - An **annual budget review** and audit will be conducted to ensure that financial aspects of the project are in line with the allocated budget and the level of achievement of project outcomes and outputs.
  - **Internal monitoring** will be carried by YU administration to periodically check the project status and analyze results achieved.

# Dissemination

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- The objectives and the scope of the program are of vital importance to the related local industries and they comply with the strategic plan of MOHE.
- The proposed program through its activities will create an environment that allows the interaction between industry and academia which will enable the dissemination of information about the program and its activities at the domestic level.
- Utilize our existing close ties to local industries to help promote the new study programs.



# Dissemination

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- A **campaign** of the program benefits will be communicated to the target audience.
- Successful activities and achievements will be published in **leaflets and brochures**, and distributed to contacts in industrial, commercial and educational institutions.
- **Online resources** and social networking forums such as YouTube, Facebook, etc . will be used to disseminate the message of the project and bring its outcomes to as wide an audience as possible.
- An **informative web site** containing all relevant information about the project and periodical organization of promotional and informative sessions regarding the project and its current status.

# Dissemination

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- **Workshops** will be held in cooperation with the local industry representatives and experts on higher education to promote the new programs and to get feedback about how to improve the program outcomes.
- Generate positive publicity for the activities and outcomes of the project in the **local press and visual media** to promote the general objectives and benefits of the Tempus programme and the aims of the EU in promoting this type of cooperation.
- At least **one scholarly article** on the activities and outcomes of the project will be published in an international educational forum.

# Sustainability

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- The sustainability of the program is linked to the **institutional policies of Yarmouk University, the MOHE** as well as the market demands since the proposed programs will be an integral part of the academic activities of HFET.
- The **strategies of YU and MOHE** support the development of such programs and hence they will ensure the sustainability of the program on both institutional and financial levels.
- **Approval and accreditation of the new programs** will be sought throughout the curriculum development process which will ensure the sustainability of the new programs as an integral parts of graduate study programs of YU.

# Role of Partners - YU

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- YU will act as the **contractor of the project**, being legally responsible for the contract and managing the grant on behalf of the consortium.
- YU will **allocate its administrative and academic staff** with partial covering of salaries and necessary facilities for the successful implementation of the project.
- YU will also act as a **coordinator** and will assign a staff member whose responsibility is to organize project activities equitably amongst the partners to ensure seamless dissemination of information and the successful implementation of the project activities in a timely and efficient manner.
- Most of the **activities of the project will take place at YU** and its academic staff will be involved in the main activity of the project, which is curriculum development, in addition to all the activities related to the dissemination and sustainability of the project.

# Role of Partners - GJU


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- Participate in all the **management and dissemination** activities such as meetings, seminars, workshops, etc. and will dedicate its resources to the successful implementation of these activities.
- Be part of the study, **survey and analysis of the industrial needs** in the telecommunication sector and in specifying and studying the educational needs and skill requirements of the proposed program graduates.
- Be part of **the curriculum development process**, where it will dedicate experienced staff members who have links to local and German industries for the project activities.
- Help in developing **a strategy for marketing the program benefits** to a wider audience, given its partnerships with local and international industries.
- GJU is well known for its approach to **quality control** in education and hence it will be part of the development of a QC plan for the proposed program.

# Role of Partners - HU

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- Be part of the project **management committee** where it will dedicate staff members for attending meetings and participating in activities related to management of the project.
- Participate in preparing and collecting surveys that measure the **local industrial needs** relating to the proposed program.
- Academic staff of HU will 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  
Good Luck**

