Report on Implementation of The Project

Deliverable No.	1
Deliverable Title	Review of Existing Curriculum
Type of deliverable	Report
Deadline	1-4-2011
Delivery Date	1-6-2011
Dissemination level	International
Target group(s)	1- Teachers 2- Administrative and other non-teaching staff 3- Representatives of local telecommunication companies.
Language(s)	English
Decription	Review on the problems associated with the existing curriculum and existing program process includes statistical data on the benefits of the program to target audience, employability of graduates, relevance of course material to the needs of industries, quality of graduates and teaching methodologies, etc.

Workgroup leader	Dr. Bassam Harb	
Workgroup	**Name**	**Insitution**
	Dr. Gharaibeh	YU
	Dr. Bany Salameh	YU
	Dr. Alshamali	YU
	Dr. Alzoubi	YU
	Dr. Nezami	YU
	Dr. Nimrat	HU
	Dr. Rawashdeh	GJU
	Dr. Alfadhl	QMUL
	Dr. Juan Reig	UPV
	Dr. Venkataraman	DCU

REPORT ON IMPLEMENTATION OF THE DELIVERABLE

Please provide an overview on **implementation of the deliverable**, by following the instructions below.

Overall achievements

Please provide a description of the <u>activities carried out</u> since the start of the deliverable and describe to what extent, the <u>results</u> achieved since the beginning of the deliverable, are contributing to the project objectives.

The objective of the curriculum review is to examine the weaknesses and strengths of the existing Master program offered by the Department, measure its relevance to the need of local Telecommunications industry, measure its comparability with similar programs at EU institutions and draw a set of recommendations which will be used in the curriculum development phase of the project.

Through the surveys and meetings conducted by the Curriculum Review Work Group in a span of about 6 months, a review of the existing program and curriculum was realized as a report which highlights the main problems associated with the existing program per the reviewers' comments and draws a set of recommendations for improvement of the existing curricula and courses based on expert opinion collected through questionnaires. The review was based on expert opinion about the program, the contents of the curriculum as well as teaching and evaluation methods. Furthermore, the review covered other aspects such as comparability of the program to similar international programs and the relevance of the program to the needs of local and regional markets. A set of activities were carried out to perform this task. These activities are summarized as follows:

1. Formulation of the **c**urriculum review workgroup. This was formed at the first management meeting of the project and according to the project proposal. The criteria for choosing the WG members were based on their expertise and the relevance of this to the program. The role of each partner in the curriculum review work package was specified as stated in the project proposal. The workgroup consists of 5 faculty members from the Department and one faculty member from each of the project partners. In addition, a number of Jordanian Telecommunications companies selected based on their expertise and relevance to the program were called to participate in the review process.

2. Holding a number of meetings for the purpose of developing the methodology of the review process. The review process was based on two main approaches. The first is to collect data from target groups through a number of questionnaires and the second is direct meetings with target groups where data is collected through direct contacts and discussions in the form of minutes of meeting (MOM).

3. Identifying the target groups which were determined by the workgroup as the main stakeholders of the program and whose opinion would be important to assess the strengths and weaknesses of the program. The first group is the telecommunications industry in Jordan which is the main employers of the graduates. The second group is academic experts with relevant experience

at Jordanian universities who are involved in similar programs and were involved in curriculum development activities at their institutions. The third group is academic experts with relevant experience at EU universities who are involved in similar programs and would provide comparisons and contrasts between the program and similar programs at their institutions. Lastly, the fourth group is Master students (25 students) who were enrolled in the program in the academic year 2010/2011.

4. Designing three different questionnaires to conduct the review process. The first questionnaire targets the academic staff of local project partners (HU and GJU), the second targets experts from the local telecom industry in Jordan, and the last targets EU partners of the project (DCU, QMUL and UPV).

5. Preparing evaluation forms for individual courses offered by the program in order to get feedback from different target groups about the quality of individual courses and their contribution to the overall program.

6. Distributing the review packages which were sent to target groups either by email or in person. The review packages contained:

A. A description of the Tempus project.

B. A description of the existing Master of Science program including the average annual intake, current teaching methodologies, available labs and class sizes.

C. Syllabi and sample exams of the offered courses.

D. Review questionnaires of the overall program.

E. Review forms for individual courses.

7. Holding meeting with representative of local telecommunication industry in order to obtain feedback about the quality of the exiting program through brainstorming discussions. Two meetings were held at GJU campus in Amman with representatives of leading local telecommunications companies in Jordan. In those meetings, the following issues were discussed:

1. Relevance of the existing program to the local industry.

2. Weaknesses and strengths of the program.

3. Methods for bridging the gap between the existing program and industry.

4. The relevance of the proposed new tracks (wireless communication, wireless networks, and network management).

8. Data Collection and Analysis: The questionnaires were collected by the workgroup members either via email or in person in a span of two months. The response of various target groups was different. In general, the response of industry was the slowest given their work load. Once all the questionnaires were collected, data analysis started through subsequent meetings of the workgroup. The review data was first combined from all questionnaires where a summary of answers to each question along with its score was developed.

9. Summarizing the strengths, weaknesses and recommendations suggested by the reviewers by drawing a consistent set of data after removing contradictory data. Through an extensive analysis of the collected data, a list of strengths and weaknesses of the program and the core courses

offered was identified. On the other hand, a set of recommendations for improvement of the existing curriculum, providing comparability with similar EU programs and addressing the local market needs was developed. These recommendations include: modifying the program structure, updating the list of courses, updating course topics, introducing new study models, modifying teaching methodologies and introducing quality control measures of the program. These recommendations produce guidelines on the set of improvements required in the proposed curricula. Therefore, we believe the curriculum review process serves as input to the design of the new curricula, new program structure, new study models and teaching methodologies at the Department. To be specific, the critics provided by our local industries are crucial for designing a new program with up-to-date curricula which address the needs of the local market and produce graduates who are competitive and capable to take pace with dynamic labor market needs and advances in telecommunication industries. Also, the dialogue established between faculty in our department and EU institutions through the review process regarding comparisons of program content; the application of quality assurance procedures to guide student assessments; modern learning technologies; ECTS compatibility and the use of credit system, lead to a set of recommendations for curriculum changes and hence modernizing our program. The results of this review process will help our local partner institution to establish and implement their Master of Science programs in telecommunications engineering at their institutions. The active engagement of the workgroup members with representatives from our local telecommunications industry developed the missing links that will enhance the quality of the programs and the employability of the graduates. The development of supporter/stakeholder networks will lead to the introduction of institutional mechanisms for monitoring and implementing curricular changes that are aligned with employer and societal needs which in turn, will help our EU partners to better understand the needs of our local industry.

Coherence with the workplan and comments on deviations and modifications

Please write in this section the main changes which have occurred compared with the original project proposal. (More detailed information is requested in the relevant sections below).

All the activities which have been conducted in this work package were in accordance with the planned one and no deviations were noticed. There was some modifications regarding collecting forms from local industry representatives. All WG members had to conduct on site visit to all companies involved to collect the forms.

Obstacles and shortcomings

Please describe any obstacles and/or shortcomings experienced during the period covered by the report and the measures taken by the project team to address them.

Although the work has been completed, the workgroup was encountered by a number of obstacles and issues that need to be considered in future activities of the project. These issues can be summarized by the following:

1. Communication with industry

The workgroup was faced by the slow response and enthusiasm of representatives of local telecommunication industry and other organizations in attending meetings and completing the questionnaires. Through discussions with those who attended the workgroup meetings, it was realized that there is some kind of mistrust between academia and industry. People from industry think that the academic sector in Jordan is not putting enough effort to address the needs of industry while academics think that industry is not providing enough feedback to address the needs of industry. This is a historical problem in Jordan on the national level and there is much to be done by all parties in order to bridge the gap between the two parties.

The workgroup managed to overcome this obstacle by relying on personal relationships with people in industry. Mainly, the workgroup members used their contacts specially those who graduated from the Department to reach out to industry. Furthermore, the workgroup did not wait for people to attend meetings at the Department but rather held meetings and presentations with them at their sites where the objectives and the activities of the project where clarified and discussed with them. In each visit of the workgroup members to companies and the subsequent contacts with people either by email or by telephone, the workgroup was successful in getting people complete the review questionnaires.

2. Availability of staff members for attending workgroup meeting

   Given the teaching load of the workgroup members, it was a hard for the workgroup to convene on a regular basis. Instead, it was decided in the first few meetings that meeting to be held whenever members complete their tasks. The workgroup leader played a vital role in distributing tasks among workgroup members and in arranging meetings.

3. Communication with EU staff members

   One of the planned activities within the curriculum review work package is to hold meetings with EU staff to discuss the review process. However, and given the availability of EU staff, it was hard to arrange such meetings and it was decided that a meeting is needed at the stage of writing the report of the work package. The workgroup relied on contacts by email and sometimes using Skype to discuss the various issues of the work package.

   The workgroup leader called for a meeting with EU staff involved in the work package at DCU in Dublin, Ireland on April 19th, 2011 at the time when two of the workgroup members (Dr. Harb and Dr. Gharaibeh) where on a visit to DCU under deliverable no. 2 (Awareness of EU Educational System). The meeting was a success where various aspects of the review process were discussed and a set of recommendations were given to the workgroup leader to improve the report of this work package.

Development of programmes and courses
Please provide a description of the teaching/training programme(s) (undergraduate/postgraduate programmes, intensive courses, training modules to academic or non-academic staff, etc.) that the beneficiaries are developing or of the introduction of the new programme(s) and the state-of-play of these developments at the time of submitting the report. If unforeseen changes in the original plans occurred, please describe the type of changes and the measures taken to address them. Please also indicate the activities you plan to carry out before the end of the project. If this section is not relevant for your project, please write 'Not Applicable'.

‘Not Applicable’.

Restructuring: university management and governance
Please provide information on the institutional changes that the project is introducing in the Partner Country beneficiaries (institutions), the state-of-play of project activities and any changes which occurred compared with the original plans. Please also indicate the activities you plan to carry out before the end of the project. Examples: establishment of new units/faculties, establishment/upgrading of libraries, establishment/restructuring of international relation offices, introduction of reforms to university governance (i.e. decision process, autonomy, accountability). If this section is not relevant for your project, please write 'Not Applicable'.

‘Not Applicable’.

Staff (re-)training

Please provide a description of the activities carried out in order to train the staff of the partner country participating institutions. Please also provide an outline of the selection criteria for the different groups of people who have participated in the implementation of these activities. Please describe any change in comparison with the original proposal and indicate the activities that you plan to carry out before the end of the project.

The Curriculum Review Work Group was formed at the first management meeting of the project and according to the project proposal. The criteria for choosing the WG members were based on their expertise and the relevance of this to the program. The role of each partner in the curriculum review work package was specified in the project proposal.
The workgroup consists of 5 faculty members from the Department and one faculty member from each of the project partners. In addition, a number of Jordanian Telecommunications companies selected based on their expertise and relevance to the program were called to participate in the review process

Staff mobility

Please provide an outline of the staff mobility scheme and the selection criteria used for the different groups of people that participate in mobility. Please describe the activities carried out so far, how mobility activities have been organised by home institutions and how mobility helped and/or will help achieve the project's objectives. Information about how the home institutions recognise the mobility should also be provided. If unforeseen changes in your original plan occurred, indicate the type of changes and the measures taken to address them. Please also indicate the activities that you plan to carry out before the end of the project.

The workgroup leader called for a meeting with EU staff involved in the work package at DCU in Dublin, Ireland on April 19th, 2011 at the time when two of the workgroup members (Dr. Harb and Dr. Gharaibeh) where on a visit to DCU under deliverable no. 2 (Awareness of EU Educational System). Also, Dr. Ma from QMUL attended the meeting while Dr. Juan Reig participated in the meeting using Skype. The meeting was a success where various aspects of the review process were discussed and a set of recommendations were given to the workgroup leader to improve the report of this work package.

Student mobility

Please provide an outline of the student mobility scheme and the selection criteria for the different groups of students that participate in mobility. Please describe the activities carried out so far, how mobility activities have been organised by home institutions and how mobility helped and/or will help achieve the project's objectives. Information about how the home institutions recognise the mobility (credit transfer, double diploma, diploma supplement, etc.) should also be provided. If unforeseen changes in your original plan occurred, indicate the type of changes and the measures taken to address them. Please also indicate the activities that you plan to carry out before the end of the project. If this section is not relevant for your project, please write 'Not Applicable'.

'Not Applicable'.

Academic co-ordination and administrative management

Please describe how the division of labour is managed between the various beneficiaries , for both academic co-ordination and administrative management. Particular attention should be paid to the description of how this division of labour is managed in areas such as communication and the decision-making process used. Please also describe how day-to-day project activities are managed, indicating what kind of administrative support or other support you have received from the beneficiaries (institutions). If you encountered difficulties related to the management of the project, please indicate the type of problems and the solutions found to address them.

The Curriculum Review Work Group was formed at the first management meeting of the project and according to the project proposal. The role of each partner in the curriculum review work package was specified in the project proposal. The workgroup consists of 5 faculty members from the Department and one faculty member from each of the project partners. In addition, a number of Jordanian Telecommunications companies selected based on their expertise and relevance to the program were called to participate in the review process. The role of each partner in the curriculum review work package was specified in the project proposal. The workgroup from YU was mainly responsible for designing, distributing and collecting review questionnaires and preparing the review package which consisted of information about the existing curriculum and the review questionnaires. They were also responsible of writing this review report. YU, as grant holder, played the main role on the management of this work package. The workgroup held several meetings throughout the review process to set a work plan for conducting this process and make sure that all decisions taken are inline with WP objectives. All WG members participated effectively in all planned activities of the review process. Also, other project partners were responsible for the realization of the WP activities planned for their institution in the activity plan; e.g, participation in reviewing the program and courses; participation in meeting with local telecommunications industries, etc. The WG leader contacted all contact persons of all members involved in the curriculum review package through emails. Most of the contacts with all partners involved were through emails or contacts in person. The WG leader assigned tasks to each group member leader and took the responsibility to follow up and make sure that all tasks assigned are done in appropriate manner. Some problems related to participation in project activities were encountered. For example, one of the planned activities within the curriculum review work package is to hold meetings with EU staff to discuss the review process. However, and given the availability of EU staff, it was hard to arrange such meetings and it was decided that a meeting is needed at the stage of writing the report of the work package. The workgroup relied on contacts by email and sometimes using Skype to discuss the various issues of the work package. Also, the involvement of WG members with teaching, made it hard for them to attend all meetings. To overcome this problems, the WG leader sent the MOM to all members of the WG which includes all issues that have been discussed and all actions to be taken. The department of Telecommunications engineering provided most of the administrative and secretarial staff support.

Equipment

Please outline the equipment purchased, explain where the equipment has been installed, who will benefit from it and have access to it and plans for future maintenance. Please also describe the activities that you plan to carry out before the end of the project, in relation to the equipment purchased/installed. If unforeseen changes in your original plan occurred, indicate the type of changes and the measures taken to address them. If this entry is not relevant for your project, please write 'Not Applicable'.

During the review process, a computer was purchased and it was located such that all WG members have access to it.

Dissemination

Please describe what has been done to disseminate the results of the activities carried out to date, both within the framework of the project and outside the project. In particular, you should refer to the definition of tasks and the dissemination channels used to make the project results available to larger beneficiary groups. If a web site for the project has been created, please provide the address. If there have been any unexpected positive secondary effects from project activities, please describe them in this section. Please indicate any change which occurred in comparison with the original plans for dissemination and the activities you plan to carry out before the end of the project, to disseminate the project results.

Two meetings with local industry representatives where information about the project and the proposed programs was presented. The meetings were attended by about 25 people.

Sustainability

A project is 'sustainable' when it continues to deliver benefits to the project beneficiaries and/or other target groups for an extended period after the EU's financial assistance has ended. Sustainability may not be relevant for all aspects of a project; in each project some activities or results may be continued, while it may not be necessary to continue others. Sustainability is relevant for issues such as: academic/socio-economic/institutional support (describe the measures undertaken to formalise or institutionalise any links with local non-university partners, to obtain official accreditation of new curricula, etc.), involvement of members from the beneficiaries (institutions)(ownership/motivation), effective management and leadership, active participation of the target group, forecast of needs, availability of resources to continue, making the most of results achieved and a measurable medium/long term impact (long-lasting effects of project cooperation, as well as impact on the beneficiaries (institutions) and target groups). Please explain which of your planned activities and results must be maintained to make your project sustainable. Describe which measures have been taken so far to realistically ensure the continuity of those activities and results beyond the original life- cycle of the project (even when the project is no longer financed by Tempus). Please indicate any changes which occurred in comparison with the original plans and the activities you plan to carry out before the end of the project in order to ensure sustainability.

N/A

Quality control and monitoring

Please describe what monitoring activities the beneficiaries carry out, in order to assess whether the project proceeds according to the workplan. Please describe the strategy for internal and external evaluation of project results and include measurable quality indicators for progress. In addition to the project results (courses, publications, new institutional structures, etc), you should also pay attention to the project management strategy. In particular, explain what instruments you use to ensure effective quality control (i.e. the Logframe approach, feedback questionnaires for evaluations or surveys, swot analysis, etc.) and who is involved in evaluation (i.e. committee(s), validation commission(s), accreditation board(s), etc.). For external evaluation, please mention the role of independent experts or peer reviewers providing a summary of their evaluation plan and report(s). Please indicate the activities carried out to date, any change which occurred in comparison with the original plans and the activities you plan to carry out before the end of the project.

Gender balance

Please explain to what extent the principle of equal opportunities has been taken into account in the project implementation (i.e. gender analysis carried out, presence of women in decision-making bodies, balanced percentage share of women among the teachers or the enrolled students, etc.). Describe how the project helped to promote gender balance and to identify and address factors influencing gender discrimination.

Any other comment

Please provide in this entry, any relevant information you think might be useful for the assessment of your project's implementation (i.e. synergies with other projects, any support from external environment, networking with professional bodies, etc.).