

Riga Technical University

Project: Improvement of master-level education in the field of physical sciences in
Belarusian universities, "Physics"

Project number: 561525-EPP-1-2015-1-LV-EPPKA2-CBHE-JP - ERASMUS+
<http://physics.rtu.lv/>

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Quality Assurance Plan

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1. The purpose of the project quality monitoring and control

Quality monitoring and control of new developed and modernised curricular in Physics is vital to the sustainability and confidence for the prospective students. Quality control activities span the lifetime of the project as they include establishing the internal quality procedures, preparing evaluation forms and guidelines, carrying out internal evaluations, reporting, engaging external evaluators for the Physics courses and programmes and paving the way to the accreditation.

The Quality Assurance Plan (QAP) to be presented to and approved by the Management Committee (MC) in the beginning of the project.

QAP to be used for the monitoring activities and periodic review of the project and its outputs. It will ensure that:

- Intended learning outcomes are developed and published in the new syllabi.
- Industry (professional associations, etc.) representatives and students participate in syllabi design.
- The curriculum and programme design and content, output of WP2, is reviewed and evaluated by involved parties and stakeholders; suggestions are offered and follow-up procedures are determined.
- Specific needs of different modes of delivery (e.g. lecturing, lab work, e-learning) and target groups are taken into account.
- Learning resources are available to the teachers and students
- Formal programme approval procedures by the university authorities are initiated and completed timely.
- Monitoring of the progress and achievements of students is in place

2. Assumptions and risks

Related assumptions and risks should be taken into consideration:

- Sufficient involvement of students, faculty & technical staff, administration
- Well organised cooperation and communication between the project partners
- Appropriate infrastructure & technical support in Partner country universities
- Recognition from Belarusian Ministry of Education, universities' authorities, industry representative and wider community.
- Mitigation measures: dissemination will start from M0; a critical number of committed staff has already been approached; the participating industrial partners ensure a

minimum of support to the project; quality procedures already in place in participating EU will be used; enough time has been foreseen in the planning of the activities to account for delays

3. Approach and methodology

The main results (deliverables) of the project are two model curricula, which include Model (standard) educational master-level plan for each specialty (“*Functional nanomaterials*”, “*Photonics*” and “*Production and processing of polymers and composites*”) and also convenient study programs with descriptions of training courses for 3 course-components – the state (mandatory) component, the university component (which can be different for different universities depending on their specific directions of education) and elective (by choice of students) component (which determines concrete specialisation of master-students training).

Model (standard) educational programs for named specialties will be developed in the first year of the project. The programs will be approved either by the Ministry of Education of Belarus or by Rectors of Belarusian Universities (this procedure is now tuned in Ministry) at the beginning of the second year of the project.

In the second year of the project sets of curricula subjects (special courses study programs), will be developed for each of the universities on the basis of the approved Model (standard) educational programs.

Compatible standard study programmes (including lecture courses, physical and simulating laboratory classes and appropriated didactic materials) by specialties “Functional nanomaterials”, “Photonics” and “Production and processing of polymers and composites” will be developed in English language and translated to study language of Belarusian partners. Study programs with courses descriptions will be supported by the developed 5 e-books for students and teaching staff.

New master-level programs testing will be implemented in 2 years: 1st year testing will be done during 3rd project year. The 2nd year testing will be provided beyond the project.

3.1 Internal monitoring and control

To implement QAP, a working group for internal quality control activities will be created at each Belarusian university consisting of one academic staff, students, and students’ organisation representatives. The working will be responsible for the internal quality monitoring, prepare all necessary material (questionnaires, forms, etc.), according to the ENQA guidelines, QAP and Project Manual.

The university’ quality working groups report every nine months to the leader of partner team, which prepares progress reports on activities and results and submit them to the MC for approval and decision on corrective actions. Quality working group representatives participate and report at MC meetings.



Upon recommendations of quality working groups and the results of the internal evaluations, all necessary actions will be taken towards accreditation and guidelines and follow up procedures will be prepared.

3.2 External monitoring and control

For the external quality control and monitoring, experts from non-participating EU institutions will be subcontracted by the project and carry out external quality control activities. The external evaluation will take place in the second and third project year, before and after the course implementation.

The results from monitoring visits of Belarusian NCP to participating universities will be used for planning of corrective actions.

3.3 Internal procedures and documents

The project Coordinator elaborates a "Project Manual" (PM) according to good practice quality procedures, The PM describes all project tasks and corresponding schedule. The PM provides each individual, contributing to the project.

The project Coordinator will circulate and archive (on Paper and in electronic form) all correspondence related to the project, both internal as external (e.g. meeting minutes and agenda, reports, finance documents, plans etc.), using a specific project numbering.

The project Coordinator will take care of the communication flow inside the project. He will report scientific, technical and financial matters in the progress reports. All necessary forms for partners, enabling proper reports circulation on curricular development, feedback, technical and financial matters will be developed.

The project Coordinator follows up the project progress and points out every possible problem or improper functioning. During the MC meetings, the Project manager reports to the MC members on the project progress. Where necessary, after consultation and in accordance with the MC and the EACEA, the Project manager will immediately propose the most adapted remediation measures.

The state of the project quality will be measured by elaboration of the Quality Reports from the partners as well as the Consolidated Quality Reports, produced by the Coordinator. Partners will measure the project progress against the Project plan milestones and deliverables, as planned.

The Coordinator ensures the circulation and the archive of all correspondence related to the project, as well internal as external, using a specific project numbering (meeting minutes and agenda, reports, finance documents, plans etc.).

All documents of the e-archive and study courses materials are available electronically on the project website: <http://dl.bsu.by>.

4. Implementation schedule

The coordinator is responsible for submitting, in due time, to the Executive Agency, all reports and financial statements as required in the Grant Agreement. For this purpose and in a timely manner, the beneficiaries commit to provide the coordinator with all necessary information and, if applicable, copies of supporting documents needed for drawing up reports, financial statements and any other documents required in the Grant Agreement.

Deadlines for Partner Reports are the following: **31st of May 2016; 15th March of 2017; 15th January of 2018 and 30th October 2018.**

The coordinator shall provide the beneficiaries with the appropriate reporting forms for revealing the project progress, quality of developed curricula, the declaration of expenses/activities and the respective instructions for their completion.

The Coordinator maintains a schedule of QAP, which appreciates Log-Frame matrix tasks and deliverables in the form, which is convenient to the partners and helps to avoid overlapping in the reporting process (see Table 1).

Table 2: A schedule of the Quality Assurance Plan

No	Deliverables - reports	Time	RTU	EU	Partners universities	Professional associations
	Financial reports	31.05.16 15.03.17 15.01.18 30.10.18	Yes	Yes	Yes	Yes
	Activities reports: integrated report on project progress, development of curricular, QA issues, etc.	31.05.16 15.03.17 15.01.18 30.10.18	Yes	Yes	Yes	Yes
WP1	Ex Ante Evaluation Report on existing curricular in Belarusian universities	15.03.16	Yes		Yes	
	Study report on adjusted list of curricula to be developed and modernised in the project.	30.03.16	Yes		Yes	
WP2	Partners' reports on new curricular development with attachment of developed teaching materials: lecture notes/synopses, presentations, materials for lectures,	30.06.18	Yes		Yes	



	descriptions/manuals of laboratory works, students' books, etc.					
	Partners reports on new curricular testing with feedback from teaching staff, master-students, Ministry' officers and entrepreneurs (professional associations, enterprises, etc.) involved in teaching of students and curricular modernisation	30.06.18	Yes		Yes	
WP3	<i>Development of innovative ICT based teaching and learning environment</i> <i>3.1. E-Library</i> <i>3.2. The number of teaching/didactic materials uploaded to e-Library</i> <i>3.3. Virtual laboratory for student training, the instruction for its on-line</i>	30.11.17	Yes	Yes	Yes	
WP4	Project Manual - a summary of rules, methods and tools for the project implementation.	Dec. 2016	Yes	Yes	Yes	Yes
	Quality Assurance Plan elaboration	Dec. 2016	Yes	Yes	Yes	Yes
	Feedback on Belarusian NCP and EACEA recommendations (after midterm report)	June 2017	Yes		Yes	
	A survey about the quality on new developed/ modernised courses after 1 st year testing	June 2018	Yes		Yes	Yes
	Reports and presentations of external experts on quality monitoring: <ul style="list-style-type: none"> • Meeting and presentation to the partners • Intermediate QA report • Final QA report 	Nov 2017 March 2018 August 2018	Yes	Yes	Yes	Yes
	Internal Intermediate Internal Final Quality Reports	March 2018 August 2018	Yes	Yes	Yes	Yes
	Feedback from the industry representatives and HEIs about	Sept 2017	Yes	Yes	Yes	Yes



	new developed courses and idea for the future activities and Recommendations for new master-level programs introduction and sustainability in Belarusian universities beyond the project	June- July 2018				
WP5	Recommendations for new master-level programs introduction and sustainability in Belarusian universities beyond the project.	30.09.18	Yes	Yes	Yes	Yes
WP6	Management, coordination and communication: meeting's agenda, participants lists, minutes of the meetings with the decisions, reviews of the previous meetings.	Before and after each MC and Belarusian partner's meeting.	Yes	Yes	Yes	Yes
	External financial audit	At the end of the project	Yes	Yes	Yes	Yes