



Project "ENERGY" targets and deliverables





Overall objective



- ✓ The overall objective of the programme is to support the modernisation of higher education in the EU's surrounding area.
- ✓ The Tempus programme promotes institutional cooperation and focuses on the reform and modernisation of higher education systems in the Partner Countries.
- ✓ It contributes to an area of cooperation in higher education involving the European Union and Partner Countries in its wider proximity.
- ✓ In particular, the programme promotes voluntary convergence with EU developments in the field of higher education deriving from the Europe 2020 strategy, the Strategic framework for European Cooperation in education and training (ET 2020) and the Bologna process.





Specific objectives



The specific objectives of the Tempus programme are as follows:

- ✓ To promote the reform and modernisation of higher education in the Partner Countries;
 - ✓ To enhance the quality and relevance of higher education in the Partner Countries;
 - ✓ To build up the capacity of higher education institutions in the Partner Countries, in particular their capacity for international cooperation and for a permanent modernisation process, and to assist them in opening themselves up to society at large, the world of work and the wider world in order;
 - ✓ To foster the reciprocal development of human resources;





Joint Projects



- ✓ Joint Projects are based on multilateral partnerships between higher education institutions in the EU and the Partner Countries.
- ✓ They promote the exchange of knowledge and know-how between EU universities and institutions in the Partner Countries and between Partner Country institutions themselves in various cases.
- ✓ 'Multi-Country Projects' aim to be of benefit to more than one Partner Country. They focus on addressing regional priorities which are common to all the Partner Countries within a specific region. They can also address a 'national priority' which is common to each of the participating Partner Countries.





Scope



This proposal aims to priority: modernisation of curricula with 3 cycle structure, ECTS and degree recognition in the Teacher training and education science in Physical science (BY) and Engineering and engineering trades (BY, AZ, XK).

The project involves higher education institutions from Latvia, Estonia, Lithuania, Poland, Belgium as well as from such partner countries: Belarus, Kosovo, and Azerbaijan. Development of the curricular reform in Engineering and engineering trades is highlighted as a priority in all partner countries.

The wider objective is to enhance networking among higher education institutions across the Partner Countries and EU Member States for improving the education in the field of the energy efficiency enhancement, energy saving and use of renewable sources of energy.





Objectives



The project aims to such specific objectives:

- ✓ To enhance the quality and relevance of higher education in the partner countries by bringing together education excellence and best practice in the field of the energy efficiency enhancement, energy saving and use of renewable sources of energy field on the base of creation/modernisation of study programs;
- ✓ To make compatible/unified curricula for improving the education and expertise of target groups (students/ master-students and academic/ teacher staff) in the declared field;





Objectives



- ✓ To confirm teaching/learning approaches (lectures, practice classes, didactic materials, etc.) and tools (equipment, hardware/software, user/methodological guides, manuals, etc.) for improving the target groups education and expertise;
- ✓ To create Electronic Libraries by directions (enhancement of energy efficiency; energy saving; energy effective materials; use of renewable sources).
- ✓ Realisation of the Project allow to create Joint Educational Platform as a system of developed/improved compatible education tools and didactic materials needed to transfer experience of EU Universities to Partners Countries Universities.





Partners



2	Estonia	TTU
3	Lithuania	VU
4	Poland	LUT
5	Poland	KTU
6	Belgium	KHBO
7	Romania	UDJG
8	Azerbaijan	KHAZAR
9	Azerbaijan	QU
10	Azerbaijan	NAA
11	Belarus	BSU
12	Belarus	BNTU
13	Belarus	BSATU
14	Kosovo under UN	UPKM





Main targets



- ✓ To develop/improve compatible curricula for partners` groups by directions (enhancement of energy efficiency; energy saving; energy effective materials; use of renewable sources)
- ✓ To deliver/upgrade equipment for laboratory classes by directions
- ✓ To create Electronic Libraries of developed/modernized teaching materials
- ✓ To test materials during 1 year teaching
- ✓ Accreditation process on compatible curricula for partners





Main outcomes



The project partners will develop all teaching material, as well as curricula.

Such main activities will be carried out:

2.1. Development of study courses enhancement of energy efficiency: “power electronics”

2.2. Development of study courses enhancement of energy efficiency: “effective lightening”

2.3. Development of study courses enhancement of energy efficiency: “gas- and hydrodynamics”;

2.4. Development of study courses direction energy saving : “heat pumps”;

2.5. Development of study courses direction energy saving: “distribution of power energy”;

2.6. Development of study courses direction energy saving: “energy saving technologies”;





Main outcomes



2.7. Development of study courses direction: “energy effective materials”;

2.8. Development of study courses direction use of renewable sources “solar energy and photovoltaics”;

2.9. Development of study courses direction use of renewable sources “hydrogen energy”;

2.10. Development of study courses direction use of renewable sources: “wind energy”;

2.11. Development of curricula’s descriptions, documentation by partners universities

2.12. Development documentation for accreditation and accreditation process.

The Partner Countries Universities - P11, P12, P13, P14, P15 will prepared laboratory plectrums, used pursued equipment (see WP1) and software are needed for development/modernisation of Laboratory Classes.

All teaching material will be shared (uploaded) in the common e - learning library.





Summary Of Work Packages



<i>Work package N°</i>	<i>Type of work package</i>	<i>Title of work package</i>
WP.1	Management	Management, coordination and communication
WP.2	Development	Development of conformed and compatible/unified curricula
WP.3	Dissemination	Visibility and Promotion
WP.4	Exploitation	Implementation & testing
WP.5	Development	Sharing and Networking
WP.6	Quality plan	Quality Control System





Work breakdown structure (WBS)



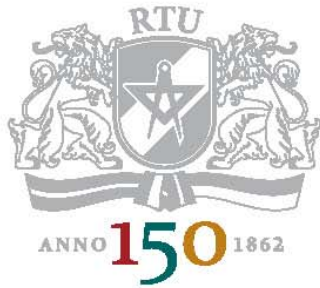
WP1	WP2	WP3	WP4	WP5	WP6
RTU	RTU	BSU	BSU	LUT	BSU
M1 – M36	M1 – M20	M1 – M36	M4 – M32	M1 – M36	M4 – M32
Management coordination communication	Development of conformed and compatible/unified curricula	Visibility and Promotion / Dissemination	Implementation & testing / Exploitation	Sharing and Networking/ Development	Quality Control System / Quality plan



Gantt chart

ID	Task	Start	Finish	2013					2014				2015							
				Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1			
1	WP1 Management coordination communication	15.10.2012	14.10.2015	[Gantt bar from Q4 2013 to Q3 2015]																
2	WP2 Development of conformed and compatible/unified curricula	15.10.2012	13.06.2014	[Gantt bar from Q4 2013 to Q2 2014]																
3	WP3 Visibility and Promotion / Dissemination	15.10.2012	14.10.2015	[Gantt bar from Q4 2013 to Q3 2015]																
4	WP4 Implementation & testing / Exploitation	15.02.2013	30.06.2015	[Gantt bar from Q1 2014 to Q2 2015]																
5	WP5 Sharing and Networking/ Development	15.10.2012	14.10.2015	[Gantt bar from Q4 2013 to Q3 2015]																
6	WP6 Quality Control System / Quality plan	15.02.2013	13.02.2015	[Gantt bar from Q1 2014 to Q2 2015]																





Indicators of progress



- ✓ 11 curricula approved by University as improvement of existing study programs with compatible/unified teaching/learning approaches
- ✓ 10 modernised/developed study programmes (including lecture courses, laboratory classes, didactic materials, descriptions on laboratory practicum).





How indicators will be measured



- ✓ Interim evaluation report, including feedback from student's governance.
- ✓ Up to 400 students enrolled in the study process, using new courses/experimental/virtual laboratory works
- ✓ Up to 50 persons of Academic & teaching (A/TS) staff enrolled every year in the advanced training since the 2nd year of the project running and after project completion





Specific Project Objectives



1. To develop/improve compatible curricula for partners` groups by directions (enhancement of energy efficiency; energy saving; energy effective materials; use of renewable sources);
2. To develop/improve compatible and complementary laboratories for partners` groups by directions;
3. To develop/improve lecture courses for partners` groups by directions;
4. To develop/improve compatible other teaching materials courses for partners` groups by directions;
5. To deliver/upgrade equipment for laboratory classes by directions
6. To create Electronic Libraries of developed/modernized teaching materials





Indicators of progress



- ✓ NN Curricula validated by student governance;
- ✓ NN Curricula validated by University;
- ✓ NN Curricula validated by Responsible Body;
- ✓ NN Units of modified/new lectures course;
- ✓ NN Units of upgraded/new equipment/software for practical/virtual laboratories;
- ✓ NN Units of modified/new practical/virtual laboratories.
- ✓ NN developed/modernized lecture courses.
- ✓ Home page address of Electronic Library of developed/modernized teaching materials,
- ✓ NN of course published in Electronic Library





How indicators will be measured



Interim evaluation report, including feedback from student self-governance organisations.
Documents for validation (**accreditation**) of **3 curricula**;
Validated didactic materials, methodo-logical and user guides the created practical/virtual laboratories; Acceptance documents for the created practical/virtual laboratory works;
Uploaded courses in Electronic Library.





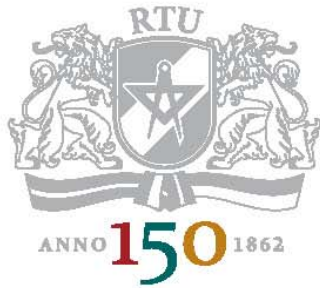
WP1



Management, coordination and communication

Detailed Project Activity Schedule (Gantt chart including mail stones and deliverables);
Structural Plan (WBS); Procedure Book
Consortium management meetings, workshops, final conference
Purchased equipment
Double-sided agreements for cooperation between project partners (by directions)





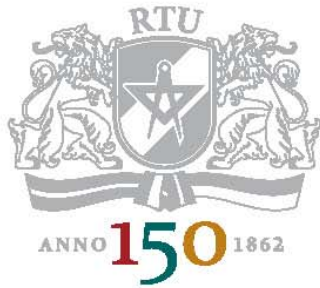
WP2



Development of curricularas

- 2.1. Development and translation to national languages of study courses direction “enhancement of energy efficiency”
- 2.2. Development and translation to national languages of study courses direction “energy saving”;
- 2.3. Development and translation to national languages of study courses direction “energy effective materials”
- 2.4. Development and translation to national languages of study courses direction “ use of renewable sources”
- 2.5. Development of curricularas’s descriptions, documentation by partners universities
- 2.6. Development documentation for accreditation and accreditation process





WP3



Visibility and Promotion Information/promotional materials

Web Portal

Information Sessions

Information at web pages of partners





WP4



Implementation & testing

- 4.1 Student attraction
- 4.2 1 year testing





WP5



Sharing and Networking:

Students/master-students and
academic/teaching staff mobility
Students/master-students and
academic/teacher staff improved skill and
expertise
Electronic coursed upload in library





WP6



Quality Control System

- 6.1 Quality Control System Setup
- 6.2 Ex Ante Evaluation Report
- 6.3 Regular Monitoring Report
- 6.4 Interim Evaluation (including feedback from student self – governance organisations)
- 6.5 Tuned teaching programs
- 6.6 On time response to the changes





Milestones WP 2 proposal



Development of conformed and compatible/unified curricula

Nomination of leader partner's – 14.12.2012

Nomination of partners representatives – 21.12.2012

Table of content with indication of responsible author –
14.01.2013 / task leader must send/ upload in moodle to
RTU/

Collection of partner's input for EN version – 01.06.2013

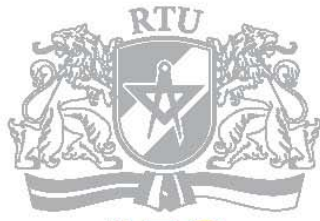
First EN draft – 01.09.2013 / task leader must send/
upload in moodle to RTU/

Approved EN draft – 01.12.2013 / task leader must send/
upload in moodle to RTU/

Approved National drafts – 01.02.2014 / task leader must
send/ upload in moodle to RTU/

Printing/ publishing, tuning – till 13.06.2014





Leaders WP 2



Tempus

(EU countries only/ proposal)

1. "Power electronics" RTU (LV); KHBO (BE); UPKM (XK)
2. "Effective lighting " BNTU (BY); RTU (LV); UPKM (XK); NAA (AZ); BSU (BY);
3. "Gas- and Hydrodynamics": BSU (BY); KHASAR (AZ); LUT(PL); QU (AZ); NAA (AZ);
4. "Heat pumps": BSATU (BY); BSU (BY); KHBO (BE); LUT(PL); UDJG (RO);
5. "Distribution of power energy"; TTU (EE); KHBO (BE); UPKM (XK); QU (AZ);
6. "Energy saving technologies" BNTU (BY); BSU (BY); RTU (LV); KHBO (BE); UPKM (XK); UDJG (RO); VU (LT);
7. "Energy effective materials" BSU (BY); KHAZAR (AZ); KHBO (BE); UPKM (XK); NAA (AZ);
8. "Solar energy and photovoltaics" BSU (BY); KHAZAR (AZ); KHBO (BE); RTU (LV); VU (LT); UPKM (XK); QU (AZ); KTU (PL);
9. "Hydrogen energy" BSU (BY); BNTU (BY); KHAZAR (AZ); KHBO (BE); RTU (LV); UPKM (XK);
10. "Wind energy" BNTU (BY); KHAZAR (AZ); KHBO (BE); RTU (LV); UPKM (XK); QU (AZ); UDJG (RO).





**Thank you for your
attention!**

