

## EUR-ACE Going Global

Assuring and certifying quality of engineering education programmes worldwide

**Virtual Forum**

September 23-24, 2021



# Efforts of last decade: EUR-ACE going global QUEECA TEMPUS Project (*Quality of Engineering Education in Central Asia*) Project Milestones and Results

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**Book of proceedings:**

[http://www.fupress.com/archivio/pdf/3290\\_8876.pdf](http://www.fupress.com/archivio/pdf/3290_8876.pdf)

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# TEMPUS project QUEECA *Quality of Engineering Education in Central Asia*

530326-TEMPUS-1-2012-1-IT-TEMPUS-SMGR

Eligibility period: 15.10.12 - 14.4.16

GA n. 2012 – 2994 / 001 – 001

[www.queeca.eu](http://www.queeca.eu)

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# Partners

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QUEECA involved 4 out of 5 TEMPUS countries in Central Asia. The 4 year QUEECA initiative was led by the University of Florence, School of Engineering under the leadership of Prof. Claudio Borri.

The QUEECA consortium: European partners from Italy, Germany, Belgium, Portugal, United Kingdom and Central Asian partners from **Kazakhstan, Kyrgyzstan, Uzbekistan, and Tajikistan**



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## The Consortium

### European Partners:

- P1 Università di Firenze - Facoltà di Ingegneria - Firenze, Italy
- P2 ASIIN e.v. - Duesseldorf, Germany
- P3 European Network for Accreditation of Engineering Education ENAEE - Bruxelles, Belgium
- P4 Instituto Superior de Engenharia de Lisboa, ISEL Lisboa, Portugal
- P5 Middlesex University - London, United Kingdom
- P6 QUACING Agency - Rome, Italy
- P7 Ruhr University Bochum - Bochum, Germany
- P8 Société Européenne pour la formation des Ingénieurs SEFI, Bruxelles, Belgium
- P9 Sapienza Università di Roma - Roma, Italy
- P10 Università degli Studi di Genova - Genoa, Italy

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## The Consortium

### CA Partners:

**P11 Aktobe State University after K. Zhubanov ASU – Aktobe - Kazakhstan**

**P12 “D.Serikbayev” East Kazakhstan State Technical University – EKSTU -Ust Kamnenogorsk - Kazakhstan**

**P13 Al Farabi Kazakh National University - KaZNU – Almaty - Kazakhstan**

**P14 Kazakhstan Society for Engineering Education - KazSEE - Ust-Kamenogorsk - Kazakhstan**

**P15 Karaganda State Technical University -KSTU KZ – Karaganda - Kazakhstan**

***P16 Ministry of education and science of Kazakhstan Republic MESKR KZ – Astana - Kazakhstan***

**P17 M. Azuevov South Kazakhstan State University - M-Auevov SKSU - Shymkent City – Kazakhstan**

**P18 Education Network – EdNet - Bishkek City Kyrgyzstan**

**P19 Kyrgyz State Technical University - KSTU KG - Bishkek - Kyrgyzstan**

**P20 Kyrgyz State University of Construction, Transport and Architecture named after I. Isanov - KSUCTA Bishkek, Kyrgyzstan**

**P21 Ministry of Education and Science of Kyrgyz Republic - MESKR KG – Bishkek, Kyrgyzstan**

**P22 State Inspection on Licensing and Attestation of Educational Institutions of Ministry of Education and Science of Kyrgyz Republic - SILAEIMESKR- Bishkek, Kyrgyzstan**

***P23 Ministry of Education of Republic of Tajikistan - ME of the RT – Dushanbe , Tajikistan***

**P24 Mining Metallurgical Institute of Tajikistan – MMIT – Chkalovsk, Tajikistan**

**P25 Tajik Technical University named after academician M.S. Osimi – TTU – Dushanbe , Tajikistan**

***P26 Ministry of Higher Education Republic of Uzbekistan – MHSSE – Tashkent , Uzbekistan***

**P27 Tashkent State Technical University named after Abu Raikhon Beruni – TSTU – Tashkent, Uzbekistan**

**P28 Tashkent University of Information Technologies - TUIT – Tashkent , Uzbekistan**

Commonwealth of Independent States - Central Asian States





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# Financial Facts

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# Project Overall Budget

QUEECA

Project Nr. 530326-TEMPUS-1-2012-1-IT-TEMPUS-SMGR

Eligibility Period 15/10/2012 - 14/10/2015

	Proposed Budget	Approved Budget	Reduction	
Staff Costs	437.280,00	437.280,00		
Travel Costs, Costs of Stay	451.080,00	420.000,00	31.080,00	6,89%
Equipment	150.000,00	135.000,00	15.000,00	10,00%
Printing and Publishing	91.000,00	91.000,00		
Other Costs	80.000,00	65.000,00	15.000,00	18,75%
Eligible Direct Costs	1.209.360,00	1.148.280,00		
Indirect Costs	84.655,20	80.379,60	4.275,60	5,05%
Total Eligible Costs	1.294.015,20	1.228.659,60		
Tempus Grant	1.164.613,68	1.105.793,64		
Co-financing	129.401,52	122.865,96	6.535,56	5,05%
Total Project Finance	1.294.015,20	1.228.659,60		



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# Project Activities

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# General Aim

QUEECA is a Tempus project which aims at setting up and implementing a system of Quality Assurance of Engineering Education (EE) in Central Asia countries, finalized to the pre-professional accreditation of engineering programmes (i.e. accreditation of educational programmes as entry route to the eng. profession).

The accredited programmes must satisfy the same prerequisites for the award of the EUR-ACE quality label, i.e. the EUR-ACE Framework Standards (EAFS) and the European Standards and Guidelines for Quality Assurance in Higher Education.

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# Main Actions

1. Create a National EE Society where it does not exist (in Kazakhstan, strengthen the existing KazSEE) and a CA Federation of EE Societies, partnered with SEFI and IFEES.
2. Adapt the EAFS and formulate analogous CA Standards (CAEAS) in Russian and English.
3. Create Accreditation Centers in each CA country (with a Regional coordination); train the relevant “accreditors”.
4. Run a series of Trial Accreditations with international teams to test the draft CAEAS and the local accreditors.
5. Taking into account the Trial Accreditations results, formulate the final version of CAEAS.
6. Conduct a first run of pilot accreditation of engineering programmes and award the first EUR-ACE labels in CA.
7. Formulate a self-supporting financial plan for carrying out accreditation after the project closure.



# Specific Objectives of the Project

- Set up and start implementing a system of quality assurance (QA) of engineering education in Central Asia (CA) countries, finalized to the pre-professional accreditation of engineering programmes (i.e. accreditation of educational programmes as entry route to the engineering profession).

- The accredited programmes must satisfy the same conditions required for the award of the EUR-ACE quality label, i.e. the EUR-ACE Framework Standards, the European Standards and Guidelines for Quality Assurance in Higher Education (ESG), and all related quality requirements and procedures. The project will take advantage of the experience in the European Higher Education Area (through ENAEE) and current efforts in Central Asia countries.





# TEMPUS Objectives addressed

## **Tempus Programme Specific Objectives addressed by this project:**

- To promote the reform and modernization 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 and the EU, in particular for international cooperation and for a permanent modernization process, and to assist them in opening themselves up to society at large
- To foster the reciprocal development of human resources
- To enhance mutual understanding between peoples and cultures of the EU and of the partner countries

## **Programme themes addressed by this project:**

*Introduction of quality assurance (QA)*



# Themes and Priorities addressed by this project

## **National and Regional Priorities for 2012 addressed by this application:**

- Main priority: Governance reform: introduction of quality assurance (Regional priority for Central Asia;
- National Priority for Kazakhstan, Tajikistan and Uzbekistan);
- Secondary priority: Development of international relations (Regional priority for CA),

## **The above mentioned priorities are addressed by the project in relation to the concerned partner countries as follows:**

The need for international recognition of eng. degrees is increasingly felt in CA: several universities are stipulating agreements with accreditation agencies in Europe and the USA. This can be very positive, but a more systematic approach is essential for further developments.

QUEECA reached the setting up in CA of a system for pre-professional accreditation of engineering education through a network of National QA/Accreditation Agencies able to accredit engineering programme and be authorized by ENAEE to award the EUR-ACE quality label.

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# Project WP and Deliverables

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# List of Workpackages

WP number	WP type	WP title
WP1	<u>Development</u>	English Intensive Language Courses
WP 2	<u>Development</u>	Elaboration of Central Asia Engineering Accreditation Standards (CAEAS)
WP 3	<u>Development</u>	Setting up National Engineering Societies and a Central Asian Federation of EES
WP 4	<u>Development</u>	Setting up National Engineering Accreditation Centers
WP 5	<u>Development</u>	Accreditation of programmes
WP 6	<u>Management</u>	Project Management Meetings
WP 7	<u>Quality</u>	Quality Control and Monitoring
WP 8	<u>Dissemination</u>	Queeca Dissemination
WP 9	<u>Exploitation</u>	Local Workshops based on the results of first trial accreditation



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# List of Workpackages (1/2)

Deliv. / Activity Ref. N°	Activities (as indicated in the LFM)
1.1	Intensive English Language Courses
1.2	Technical Intensive English Courses
2.1	Revision of EURACE Framework standards in Russian (UPDATING an EXISTING DOCUMENT)
2.2	First draft of Central Asia Standards (CAEAS)
2.3	Approved Final CA Standards
3.1	Workshops to create National EE Societies in CA
3.2	Draft Statutes of the National EE Societies
3.3	Formalisation of National EE Societies
3.4	Conferences to launch the National Structures
3.5	CA Federation of EE Societies statutes
3.6	Formalization of the CA Federation
4.1	<i>Training Visit to ENAAE (including the training of the accreditors)</i>
4.2	Candidates for "Trial Accreditations"
4.3	Trial Accreditations to test CAEAS
4.4	Accreditation Centre workshop in Central Asia
4.5	Formalization Nat. Eng. Accreditation Centres ( <i>deliverable under the responsibility of the CA partners</i> )
4.6	Conferences to launch the Centres ( <i>at the occasion of 3.4</i> ) <i>Conferences to assess the trial accreditations and launch the accreditation centres</i>
5.1	<i>First actual Accreditation visits in Kazakhstan run according to the rules set within the CAEAS</i>
5.2	<i>First actual Accreditation visits in Kyrgyzstan run according to the rules set within the CAEAS</i>
5.3	<i>First actual Accreditation visits in Uzbekistan run according to the rules set within the CAEAS</i>
5.4	<i>First actual Accreditation visits in Tajikistan run according to the rules set within the CAEAS</i>

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# List of Workpackages (2/2)

6.1	1st Management Board Meeting
6.2	2nd Management Board Meeting
6.3	3rd Management Board Meeting
6.4	4th Management Board Meeting
6.5	5th Management Board Meeting
6.6	6th Management Board Meeting
6.7	Minutes of internal meetings
6.8	Instruments for the management of the project
6.9	Tempus Representatives Meeting
6.10	1st Project Board and Kick Off-Meeting
6.11	2nd Project Board Meeting
6.12	3rd Project Board Meeting
6.13	Audits
7.1	Quality Evaluation Reports
7.2	Evaluation Questionnaires on Project Activities
8.1	QUEECA Forum
8.2	International Synergies
8.3	QUEECA web site
8.4	Informative Material ( <i>leaflet, booklet, posters</i> )
8.5	QUEECA Final Conference
8.6	QUEECA Book
9.1	Kazakhstan workshop based on results of 1° trial ( <i>pilot accreditation</i> )
9.2	Kyrgyzstan workshop based on results of 1° trial ( <i>pilot accreditation</i> )
9.3	Uzbekistan workshop based on results of 1° trial ( <i>pilot accreditation</i> )
9.4	Tajikistan workshop based on results of 1° trial ( <i>pilot accreditation</i> )

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# Project Milestones



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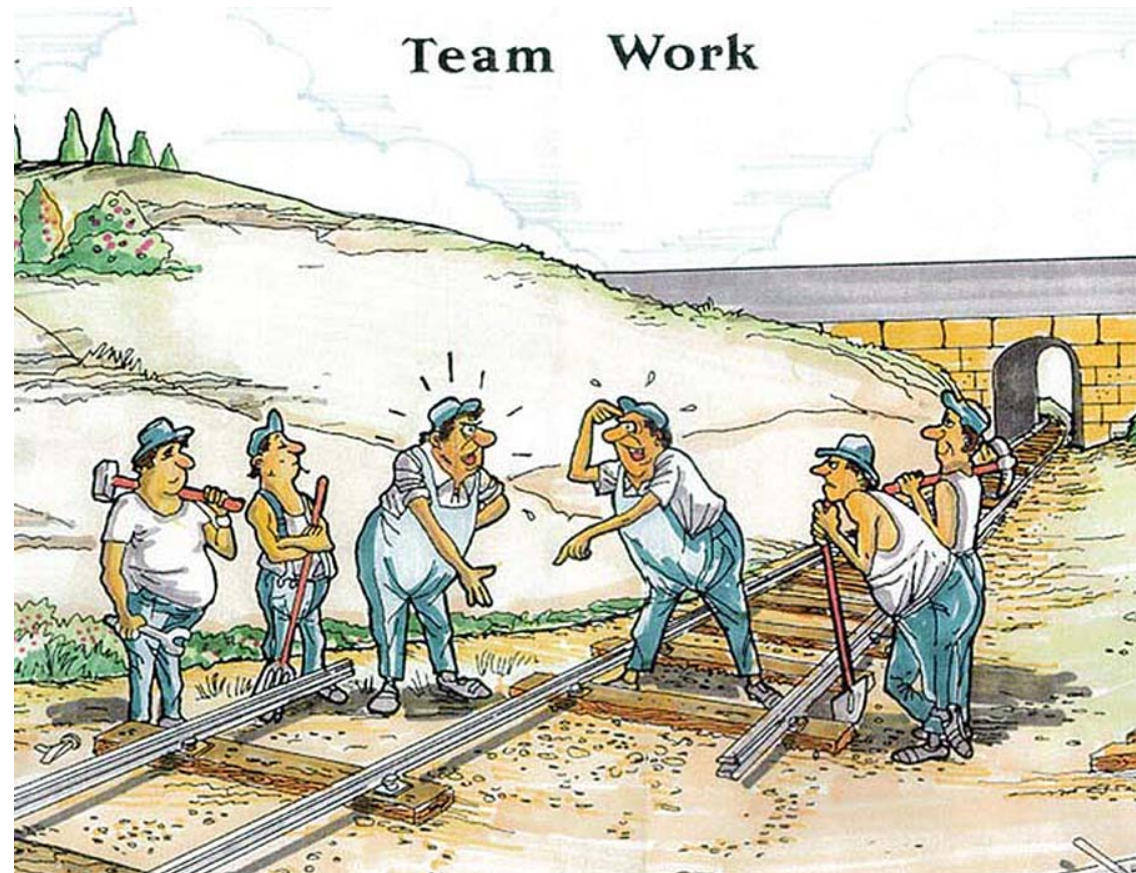
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# Project Management

Despite some initial difficulties the partnership appears solid and the participation from the partners active and lively.





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# Project Management

Money transfer procedures have been standardised (pre-financing to the partners institutions on the basis of partnership agreements).

PC coordinators have been identified: they ensure the best possible communication with the partners.

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# Project Goals

Practically all WP activities are on time with respect to the initial workprogramme



**KEEP  
CALM  
& ACHIEVE  
YOUR  
GOALS**

The banner features a dark blue background on the left with white and yellow text, and a world map made of puzzle pieces on the right. A yellow diagonal line separates the two sections.

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European Network  
for Accreditation of  
Engineering Education



# Achieved project goals

- ✓ Several partnership meetings took place
- ✓ Language courses have been completed
- ✓ PC workshops have been carried out in Summer 2013
- ✓ Training for perspective accreditors accomplished in TJ, KG, KZ, UZ
- ✓ KG and UZ association for EE have been formally established;
- ✓ Project dissemination at several international EE events was ensured
- ✓ Final project book published (still downloadable):  
[http://www.fupress.com/archivio/pdf/3290\\_8876.pdf](http://www.fupress.com/archivio/pdf/3290_8876.pdf)

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# Main Challenges

- WP 4 (Setting up National Engineering Accreditation Centers) and WP 5 (Accreditation of Programmes), both under the, appear to be the main challenges of ENAA engineering ones for the project.
- Their activities are just started and rising expectations from the concerned parties have to be reported.





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# Project Dissemination

- Web site
- Papers presented at the occasion of several EE related events (SEFI annual conference, World Engineering Education Forum etc.);
- Participation to the UZ national days of education and contribution to the relevant publications;
- Posters and leaflet



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# Programme Accreditation

## WP 4 - Setting up National Engineering Accreditation Centers

### Deliverable 4.2: Candidates for "Trial Accreditations"

Country	HEI	Title of the degree programme	Level
KG	Kyrgyz State Technical University	Information and communication technologies and systems in communication.	1 <sup>st</sup> cycle
KG	Kyrgyz State University of Construction, Transportation and Architecture	Constructing	1 <sup>st</sup> cycle
TJ	Tajik Technical University	Alternative and renewable sources of energy (Energy Department)	2 <sup>nd</sup> cycle
TJ	Tajik Technical University	Building Design (Faculty of Civil Engineering and Architecture)	1 <sup>st</sup> cycle
UZ	TSTU	Electronics and Instrumentation.	1 <sup>st</sup> cycle
UZ	TUIT	Software Engineering	1 <sup>st</sup> cycle
KZ	KAZNU – Kazakh National University	* Bachelor Degree Programme in “Electric Power Engineering”	1 <sup>st</sup> cycle
KZ	KAZNU – Kazakh National University	* Bachelor Degree Programme in “Radioengineering, Electronics and Telecommunications”	1 <sup>st</sup> cycle
KZ	KAZNU – Kazakh National University	* Master Degree Programme in “Radioengineering, Electronics and Telecommunications”	2 <sup>nd</sup> cycle
KZ	KAZNU – Kazakh National University	* Bachelor Degree Programme in “Thermal Power Engineering”	1 <sup>st</sup> cycle
KZ	KAZNU – Kazakh National University	* Master Degree Programme in “Thermal Power Engineering”	2 <sup>nd</sup> cycle

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# Latest Events

When	What	Where
<b>2015</b>		
2015 September (exact date to be defined)	QUEECA Closing Conference including QUEECA Project Board (plenary) and Management Board meetings	Firenze, Italy
2015.01.16 (date to be confirmed)	QUEECA Project Board meeting	Portugal (exact location to be confirmed)
<b>2014</b>		
2014.11.19	QUEECA coordination meeting (among EU partners)	Brussels, BE (ENAAEE Headquarters)
2014.10.24 (afternoon only)	QUEECA Management Board Meeting	Tadjik Technical University, Dushanbe, Tadjikistan
2014.10.23-24	TJ National Forum	Tadjik Technical University, Dushanbe, Tadjikistan
2014.10.20-22	Trainings for TJ experts	Tadjik Technical University, Dushanbe, Tadjikistan
2014.09.17	QUEECA coordination/dissemination meeting	Middlesex University, UK



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# What after QUEECA ? Further and future steps

- Given the excellent and encouraging results in CA, a follow-up project for introducing the EUR-ACE system in the countries of North Africa has been launched by the University of Genova in 2017
- The **MEDACCR project (2018-21)** has just accomplished this mission in **Tunesia, Algeria and Jordan**
- The North African countries of the Mediterranean are very similar from the point of view-education to the European model; the geographical and cultural proximity of the North African country to European country, allows to introduce the model of the EUR-ACE
- **Immediate next task: a BALCAN-ACCR project to be promoted by QUACING for extending EUR-ACE in the Balcan area (Albania, North Macedonia, Montenegro, Kossovo, Serbia, Croatia, Slovenia ...?)**

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# **Efforts of last decade: EUR-ACE going global** **QUEECA TEMPUS Project** **(Quality of Engineering Education in Central Asia)** **Project Milestones and Results**

**Many thanks for your attention**

**Claudio Borri, Prof. Ing. Dr.-Ing. h.c. mult.**

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