



Tempus



## EU TEMPUS PROJECT “ECONANO”

### **Advanced Course on Environmental Engineering**

**Baku, September 2014 – June, 2015**

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### GOALS

The advanced course on Environmental Engineering, is part of the EU TEMPUS Project ECONANO, whose objective is to modernize the curricula of Master Program on Ecological Engineering in Azerbaijan through a two-year Project.

**The main goal of the course is to train professionals** interested in adding to a background in the traditional Environmental Engineering area some more advanced topics in particular involving nanotechnology for pollution reduction.

**Participants will attend a 10 months specialization study in the Baku State University**, under the tutorial work of outstanding teachers from Azerbaijan and from the EU in an International atmosphere.



## **PROGRAM**

The course will start on the 29<sup>th</sup> of September 2014 and will end on the middle of June 2015. It includes **academic lectures and tutorial work (300 hours)**, 4 months of **laboratory training (625 hours)** and the completion of a **thesis report (125 hours)** to be successfully discussed. During the first four weeks of September an intensive course in English language will be offered to the students.

The class will be composed of **12 Azerbaijan graduates** in a master course on Ecological Engineering or on an equivalent subject, such as Environmental chemistry.

The course is characterized by a **learning by doing approach, joining** front end lectures with laboratory tutorial work on the same subjects. The **teaching** of each module will be **shared** by at least one Azerbaijan teacher and one EU teacher.

At the end of the training a **thesis** will be **discussed in front of an International committee**, on June 2015.

The **official language** of the course is **English**.

The first part of the course will consist of 6 front end (lecture) modules and of 3 laboratory modules as follows:

Module 1

***“Nanostructured material for Ecological applications”***

Module 2

***“Photocatalysis to reduce water and air pollution”***

Module 3

***“Site remediation by advanced processes”***

Module 4

***“Membrane Technology ”***

Module 5

***“Water and air purification by adsorption”***

Module 6

***“Environmental monitoring”***

Laboratory Module 1

***“Lab on production of nanostructured materials for photocatalytic applications”***

Laboratory Module 2

***“Lab on membrane technology ”***

Laboratory Module 3

***“Lab on Environmental monitoring”***

All the modules are focused on advanced technology, which may be applied on the main pollution problems in Azerbaijan.



## **ASSESSMENT CRITERIA AND FINAL AWARD**

At the end of the first part of the course (attendance of modules and lab modules), **in January 2015**, there will be a **written exam** on the modules' content and the evaluation of the specific **reports on each lab module**. These evaluations, if passed, will be awarded with 30 ECTS (European Credit Transfer System).

The **training activity of 3 months**, corresponding to 25 ECTS, will be performed between February and May 2015 near a laboratory of an European university of the project partners: Sapienza University of Rome, Paris 13, University of Patras. If a student will renounce to spend the overall period of staying abroad, he will be allowed to spend the residual period of time near the premise of one of the Azerbaijan partners of the project.

At the end of the course a **thesis** in the English language will be written **on the training activity** and, if successfully discussed, it will allow the achievement of 5 ECTS.

**The selection** of the subject and the premise assigned to each student **will be made on the basis of the notes achieved in the written exam** on the modules taught during the first part of the ACEE.

At the end of the course a certification of specialization in Environmental Engineering will be issued by the Baku State University to the students who successfully complete the entire evaluation process.

The certification of specialization corresponds to **300 ECTS**.

## **TEACHERS**

**The teaching involves scholars from the following Universities.**

**European Union Universities:**

University of Rome La Sapienza (Italy), University Paris 13 (France), University of Patras (Greece).

**Azerbaijan Universities:**

Baku State university, Azerbaijan University of Architecture and Construction, QafQaz University.

**Private Companies:**

AzecoLab.

## **ADMISSION REQUIREMENTS AND PROCEDURES**

- The admission of the students will be selected by a **joint committee** of EU and Azerbaijan scholars nominated by the ECONANO Project coordinator.
- Eligible candidates should be have a Master **in Environmental Engineering or equivalent degrees** ( Chemistry with specialization in Ecological chemistry or Ecological monitoring, Physics of nanoparticles, Industrial ecology, Emergency and Life Safety Engineering).
- **The total maximum number of students is 12**, 4 graduated from each Azerbaijan University participating at the project: Baku State University, Azerbaijan University of Architecture and Construction, QafQaz University.
- Selection of candidates will be based on **Scientific Curriculum** and an achieved certification in the **English language**.

## **APPLICATION**

The **enrollment application form** has to be submitted to:

**Prof. Maxammadali Ramazanov**  
**Baku State University**

**at the following email address:** mamed\_r50@mail.ru

Deadline for application submission: **15<sup>th</sup> of July 2014.**

All applications must include necessarily, as **PDF** or **JPG** attachments, written in English language:

- A completely filled out Enrollment application form, downloadable at [http: www.tempuseconano.eu](http://www.tempuseconano.eu)
- Copy of a valid identity card
- Certificate of the university degree
- Curriculum vitae
- Motivational letter
- One letter of reference
- Transcript of academic records
- English language certificate

### **Reimbursement of the training abroad**

For the training abroad **the European project will cover the travelling expenses and the cost of subsistence.** For this latter expense each student will receive 1500 Euro for each month spent abroad, that is up to an overall amount of 4500 Euro for the period of three months.