



აკაკი წერეთლის სახელმწიფო უნივერსიტეტი

Akaki Tsereteli State University

Kutaisi, GEORGIA



History of Akaki Tsereteli State University

The history of Akaki Tsereteli State University (ATSU) started 80 years ago (1933) and it's one of the oldest high education institutions of Georgia.

Akaki Tsereteli State University was merged with Kutaisi Technical University in 2006 and with Sukhumi Subtropical Teaching University in 2010.

ATSU became one of the largest universities with wide spectrum of academic (on BA, MA, and PhD levels) and professional teaching programs and research fields.

ATSU aims to respond to the job market needs and provide skilled labour force to contribute to the social, economic and cultural development of the country.



Faculties:

1. Humanitarian Faculty
2. Faculty of Business, Law and Social Science
3. Faculty of Pedagogic
4. Faculty of Medicine
5. Faculty of Exact and Natural Science
6. Faculty of Technical Engineering
7. Faculty of Technological Engineering
8. Faculty of Maritime Transport
9. Agrarian Faculty





Educational Programs at ATSU

- 42 Bachelor programmes
- 3 one-step programmes
- 52 Master programmes
- 31 Doctoral Programmes

ATSU is an authorized University by the
National Centre for Educational Quality Enhancement



Faculty of Technical Engineering

Educational Programmes

4 Bachelor degree programmes, including:

Civil Engineering;

Electrical Engineering;

Vehicle Maintenance and Expertise;

Quality Control and Techno-Economic Feasibility Assessment.

4 Master degree programmes

and

2 PhD programmes

International projects

- **ERASMUS + Project: Boosting the role of HEIs in the industrial transformation towards the Industry 4.0 paradigm in Georgia and Ukraine**
- **The following activities were performed within the project:**
- Virtual laboratory was arranged for Master students specialized in Electrical Engineering and Civil Engineering;
- Computer equipment for this laboratory was purchased (16 computers, projector, monitor unit, screen).
- In terms of the Industry 4.0 paradigm, in the educational programs there are planned laboratory works on Smart Solar Systems simulation in a syllabus of the discipline ***“Renewable energy (solar, wind) generating equipment, devices, technological schemes and bases of design”***

Aim of the course

The aim of the course is to equip students with the relevant basic knowledge about the advanced and rapidly developing field of electrical engineering - Alternative Energy.

The course will be launched in 2021-2022 academic year during the Fall semester in a pilot, and then after reaccreditation of a Master program, a complete course will be launched in 2022-2023 academic year.

Software used

Energy 3D simulation-based engineering tool used for designing green buildings and power stations.

The laboratory works are prepared by Academic doctor who has experience in solar panels design.

Free version available on the

link: <https://energy.concord.org/energy3d/>

Tentative content of the course

- Renewable energies. Energy resources. The importance of environmentally friendly energy sources;
- Solar power. Solar power resources. Possibilities of using solar power;
- Solar-based micro-power system. Direct generation of electricity from solar power. Photoelectric converter circuit;
- Wind turbines and wind power accumulation;
- Wind power plants.

Smart Solar Systems Simulation Lab

The Lab is aimed at providing simulation of power generation and distribution in the smart solar systems.

Equipment purchased within the project: 16 computers, projector, screen and monitor unit.



Virtual Laboratory







Industry 4.0 in Georgia

In terms of enabling the implementation of Green Economy policy declared by the Government of Georgia, specialists will be trained for companies acting in the country, in particular for German manufacturer of solar panels – LLC AE Solar.

Also the production of electric vehicles is planned to be launched in the country in the near future

What are the benefits for students?

- Development of computer simulation skills
- Innovative lessons on core topics of the Industry 4.0
- Enhanced employment opportunities

What are the benefits for industry?

Availability of high-skilled specialists having a common body of knowledge and skills on Industry 4.0 required for companies acting in the region (German manufacturer of solar panels – LLC AE Solar).

What are the benefits for the teaching staff

- The enhanced opportunities for training high-skilled specialists
- The enhanced opportunities for self-development.



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