



Co-funded by the
Erasmus+ Programme
of the European Union



ESSENCE – Erasmus+ on Smart Energy Systems

Establishing Smart Energy System Curriculum at Russian
and Vietnamese Universities

**Vytvorenie kurikula pre študijný program „Inteligentné energetické systémy“ na
univerzitách v Rusku a vo Vietname**

Names of P3 staff members:

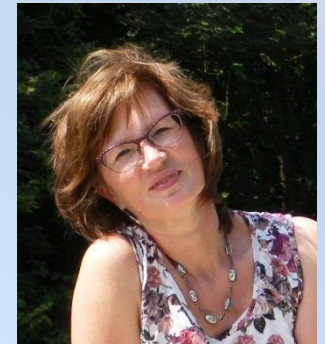
- ***Dr.h.c. prof. Ing. Michal KOLCUN, PhD.***

- P3 leader; P3 academic supervision
- Head of the Department of Electrical Power Engineering (EPE) at FEI TU of Košice



- ***prof. Ing. Iraida KOLCUNOVÁ, PhD.***

- professor at Department of Electrical Power Engineering (EPE) at FEI TU Košice



- ***Ing. Dušan MEDVEĎ, PhD.***

- P3 administrative coordination
- assistant professor at Department of Electrical Power Engineering (EPE) at FEI TU Košice



ESSENCE project overview

The overall aim of the ESSENCE project is to modernise the master-level curriculum in smart energy systems (SES) at Russian and Vietnamese universities in close cooperation with the industry and in accordance with the European Qualification Framework (EQF). Within the framework of the project, a core curriculum will be developed to be embedded into existing master programmes and implemented during the third year of the project life. By curriculum development, the partners will draw on specific assets of each consortium member and use the European experience in the creation of educational programmes aligned with the Bologna process.



- The project is funded under the Erasmus+ Programme. **Key Action 2:** Cooperation for innovation and exchange of good practices. Capacity Building in the field of higher education
- The project formally started on **15 October 2017**; its duration is 3 years.
- Project budget: **EUR 856 328** from the EC
- P3 (TUKE) budget: **EUR 49 600** from the EC





ESSENCE project overview

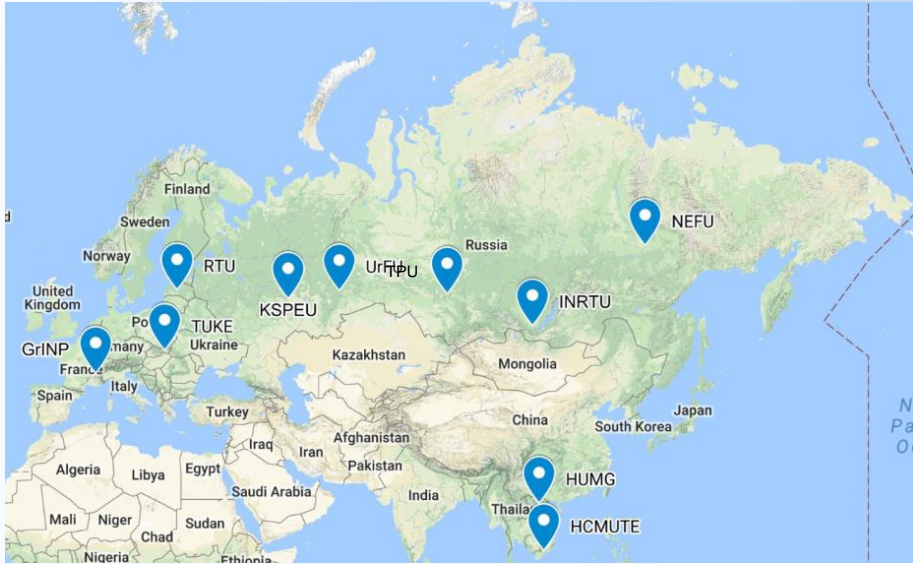
Within the framework of the project, a **core curriculum** will be developed to be embedded into **existing master programmes** and implemented during the third year of the project life (academic year **2019/2020**).

The core curriculum will consist of **9 courses** (syllabi and teaching materials) and an **industrial practical training course** with the average weight of each course being 3-6 ECTS credits and the total weight up to 45 ECTS credits. The content of the practical course will be harmonized with the core curriculum and the expectations of the industry by incorporating appropriate learning outcomes and step-by-step navigation materials.


To ensure the most efficient adaptation of graduates to the professional life as well as the involvement of the industry into the programme implementation and to help designing an individualised industry involvement track, the Industry Involvement Guide will be developed as accompanying materials for the practical course.

This Guide will help the industry to assess the learning outcomes attained by a student; it will help the student to understand the expectations of the industry and provide very useful guidance for the start of a career and will help a university to organise a student internship in accordance with the goals of the modernised curriculum and the vision of the industry.


Consortium



10 Partners
5 countries
plus 1 associated partner

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 • Institut Polytechnique de Grenoble
P2 Grenoble INP

Associate Partner
Siemens Moskva

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 • Tomsk Polytechnic University **P4 TPU**
RU coordinator
- Irkutsk National Research Technical University **P5 INRTU**
- Ural Federal University named after the first President of Russia B.N.Yeltsin **P6 UrFU**
- Kazan State Power Engineering University **P7 KSPEU**
- North-Eastern Federal University named after M.K.Ammosov **P8 NEFU**

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 • Rīgas Tehniskā Universitāte
P1 RTU
coordinator

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 • Technická Univerzita v Kosíciach
P3 TUKE

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 • Ho Chi Minh City University of Technology and Education
P9 HCMUTE
VN coordinator
- Hanoi University of Mining and Geology **P10 HUMG**

Activities of P3 (TUKE)

- **WP1:** development of questionnaire for self-assessment of RU and VN universities, situation analysis at P6, P7 and P8; assessment visits; selection and assignment of courses; **passed**
- **WP2:** validation of equipment lists for P6, P7 and P8; **in process ...**
- **WP3:** development and delivery of Webinar/Training in advanced teaching techniques, organization of training in curriculum development for 6 RU and/or VN staff; **in process ...**
- **WP4:** hosting student summer school; **in preparation**
- **WP5:** peer-review of 4 courses, analysis of curriculum pilot implementation for P6, P7 and P8; quality assurance visits; **in preparation/passed**
- **WP6:** update of related information on TUKE web-site, participation in dissemination conference; signing agreements; **passed**
- **WP7:** assignment of project team, financial and progress reporting, day-to-day coordination, participation in coordination meetings. **in process ...**



Cooperation arrangements, management and communication

- According to A1.2.2 there were realized Assessment visits (Kazan State Power Engineering University **KSPEU**, North-Eastern Federal University **NEFU**, Ural Federal University **UrFU**)
- TUKE (P3) trained 3 RU staff (A3.2.1) (**14.-18. May 2018**)
- TUKE (P3) realized a **training** in advanced teaching techniques for teaching staff in partner countries (A3.1.1, A3.2.1) (**19.-20. March 2019**)
- TUKE (P3) will participate on the **teachers' mobility** in Tomsk. Summer school (A4.3.3) (for P1, P2 and P3; **July/August 2020**)
- TUKE (P3) will participate on the **students' mobility** in Tomsk. Summer school (A4.3.2) (for students of P1-P10; **July/August 2020**)



Thank you for your attention

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