LITHUANIAN
ENERGY
INSTITUTE

PhD STUDIES

2022 – 2023

PHD STUDIES AT LITHUANIAN ENERGY INSTITUTE

LEI in cooperation with Lithuanian universities implements joint doctoral studies in the following science fields:

TECHNOLOGICAL SCIENCES

ENERGETICS AND POWER ENGINEERING – in cooperation with Kaunas University of Technology;

ENVIRONMENTAL ENGINEERING – in cooperation with Kaunas University of Technology and Vytautas Magnus University;

SOCIAL SCIENCES

ECONOMICS – in cooperation with Kaunas University of Technology and Klaipėda University.

A PHD PROGRAMME CORRESPONDS TO 4 YEARS STUDIES (FULL-TIME) AND CONSISTS OF:

- Independent research under supervision;
- Courses for PhD students (approx. 4 modules, 30 ECTS credits);
- Writing and publishing at least 2 scientific articles;
- Participating in at least 2 international conferences;
- The completion of a PhD thesis.

DOCTORAL RESEARCH TOPICS
LEI PHD STUDIES INTAKE 2022 (1)

Energetics and Power Engineering (T 006)

- Numerical investigation of granulated biofuel dynamics and combustion processes by Discrete Elements Method
- Theoretical and numerical investigation of biomass pyrolysis in hot liquid medium
- Investigation of heat and mass processes by Discrete Elelements (Molecular Dynamics) methods
- Numerical investigation of time dependent fluid flows in elastic channels
- Application of thermochemical processes for processing waste biomass and waste into valuable energy products and chemicals
- An experimental investigation of the physicochemical properties influence of the coating to evaluate the impact on the formation of vapor film
- Investigation on plasma assisted combustion of different gas mixtures for combustion efficiency
- Investigation of radionuclides migration from radioactive waste disposal facility taking into account interactions of engineered barriers with the environment

DOCTORAL RESEARCH TOPICS
LEI PHD STUDIES INTAKE 2022 (2)

Energetics and Power Engineering (T 006)

- The influence of plasma jet parameters on the formation and propertie of ceramic composite coatings
- New nuclear installations' reliability study and possible hazards probabilistic safety assessment to reduce risk of extreme events
- Aging energy infrastructure safety dynamics' and possible risky events' probabilistic assessment
- Numerical investigation of premixed flame-turbulence interaction
- Research on Energy Systems Integration for Smart Climate Neutral Cities
- Investigation of inter-phase interactions in the presence of condensation
- Application of the Machine-learning based methods on the path to the buildings' sector decarbonisation
- Optimal integration of air-to-water heat pumps towards decarbonization of buildings
- Validation of zero CO2 buildings (digital, thermodynamic) models
- Investigation of virtual power plants control algorithms

DOCTORAL RESEARCH TOPICS
LEI PHD STUDIES INTAKE 2022 (3)

Energetics and Power Engineering (T 006)

- Investigation of influence of energy efficiency measures on energy demand in industry

Environmental Engineering (T 004)

- Interaction between waste management and energy generation systems in terms of material properties and environmental impact
- Evaluation of ecological flow in the context of anthropogenic activity and climate change

Economics (S 004)

- Research on economic development in the context of climate change

Who can apply for PhD studies?

Individuals with Master's qualification degree or having graduated from one-level higher education system.

A **doctoral degree** is awarded by Kaunas university of Technology to a person who has successfully completed doctoral studies and defended a doctoral dissertation.

IMPORTANT DATES

February

Announcement of PhD research topics Online at www.lei.lt.

March – June

Submission of applications.

End of June

Participation in motivational interview.

July – August

Signing of a Study agreement.

September

Beginning of studies.

September – November

Additional admission (-s) is (are) organised for the remaining state-funded placements.

ADMISSION PROCEDURE

1. Submit required documents:

- Application for admission;
- Copy of ID card or passport ID page;
- Curriculum Vitae;
- Master's diploma or equivalent higher education degree and diploma supplement (translated into English or Lithuanian and certified by notarization)*;
- References by two academic referees or researchers in the field;
- List of publications and their copies or a research proposal on the selected PhD topic;
- One photo (3 cm x 4 cm);
- Certificate of English proficiency: IELTS ≥6.5, TOEFL≥90, ECFR≥C1, or equivalent;
- Other relevant documents.

* – If your education documents are issued in the country other than Lithuania, the document certifying your diplomas' evaluation is obligatory (see http://www.skvc.lt/en/).

2. Participate in motivational interviews on-site or online;
3. Sign a study agreement.

FINANCING

The PhD studies can be financed by the budget of the Republic of Lithuania or a PhD student's personal finances.

Scholarships:

Doctoral students admitted to state-funded positions receive monthly scholarships:
during the 1st year – 798 Euro/month,
during the 2nd-4th years – 924 Euro/month.

Immigration Regulations:

Visit the website of the Migration Department for requirements at www.migracija.lt.

CYSENI

SINCE 2003 LEI ORGANISES AN ANNUAL CONFERENCE OF YOUNG SCIENTISTS ON ENERGY AND NATURAL SCIENCES ISSUES (CYSENI).

The main goal of the Conference is is to discuss issues and perspectives of Natural Sciences and Energy Sector worldwide; as well as to allow young scientists to develop their skills and networking.

PhD students, postdocs, master students and all other young scientists doing research on energy issues are welcome to the Conference as speakers and participants.

PARTICIPATION IN THE CONFERENCE IS FREE.

MORE INFORMATION AT WWW.CYSENI.COM.

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Full information can be found at our website's

WWW.LEI.LT

"PhD studies" section.