CURRICULUM FOR TRILATERAL PROGRAM ENERGY TECHNOLOGY (Start: Autumn 2018)

1st semester (30 credits) – Lappeenranta University of Technology (Finland)

- Turbomachinery (4 ECTS)
- Academic Writing in English (3 ECTS)
- Fundamentals of Computational Fluid Dynamics (6 ECTS)
- Turbomachinery in Renewable Energy (5 ECTS)

**Elective Courses:**
- Energy Systems Engineering (6 ECTS)
- Bioenergy (3 ECTS)
- Steam Boilers (6 ECTS)
- Maintenance Management (4 ECTS)
- Advanced Topics in Modelling of Energy Systems (6 ECTS)
- Design of an Electrical Machine (6 ECTS)
- Solid Waste Management Technology (7 ECTS)

see course details on: [https://www.lut.fi/web/en/admissions/masters-studies](https://www.lut.fi/web/en/admissions/masters-studies)

2nd semester (30 credits) – Peter the Great St. Petersburg Polytechnic University (Russia)

- Network Problems and Electrical Systems Technology (3 ECTS)
- Electrical Machines (3 ECTS)
- Thermal Power Plants (4 ECTS)
- Turbine-driven Compressors (4 ECTS)
- Modeling of Vaporization Processes (3 ECTS)
- Numerical Methods in Heat and Mass Transfer II (3 ECTS)
- Project Work (4 ECTS)

**Practical Module:** (6 ECTS):

**ELECTIVE COURSES:**
- Energy Efficient HVAC Systems (2 ECTS)
- Project Management (2 ECTS)
- Designing Energy Efficient Buildings (2 ECTS)
- Electrical Power Systems (2 ECTS)
- Power System Protection (2 ECTS)


3rd semester (30 ECTS) – Leibniz University of Hanover (Germany)

- Advanced Thermodynamics / Thermolab
- Combustion Technology (only summary of German Lecture)
- Electric Power Systems I
- Electrical Energy Storage
- Electrical Machines and Drives
- Electrothermal Processing (Electrotechnologies)
- Power Electronics
- Power Plant Technology I

see course details on: [https://www.dbs.uni-hannover.de/et-inf/modkat/lvk/index.php](https://www.dbs.uni-hannover.de/et-inf/modkat/lvk/index.php)

4th semester (30 ECTS)

- Scientific and Research Work. Master Thesis Completion. Final Examination (30 ECTS)

The master thesis will be written at the home university. The thesis must be defended. The defensive must be attendant by academic staff of all three partner universities. The primary supervisor should be from the institution where the master thesis is performed. The secondary supervisors should be from the other two partner universities.