

Green Technologies



Latvia University
of Life Sciences
and Technologies



MAGNETIC
LATVIA

LATVIA UNIVERSITY OF LIFE SCIENCES & TECHNOLOGIES

is one of the leading higher education institutions in the Baltic States that has provided education and carried out research for 155 years in areas which are significant for each country's economy. It has been formed as an agricultural academy, which trained specialists to work in the rural areas of Latvia. But just like the structure of the economy has changed, the essence of the university has changed as well. Since 1863 the university has evolved and now it provides study programmes not only in agriculture and biosciences, but also in engineering and social sciences. The University's greatest strength and potential lies in the coexistence of all these directions. Since 2018 it has been renamed to Latvia University of Life Sciences and Technologies.

LLU is offering higher education since 1863 and by this time is has educated specialists for five generations. The high quality of the study and academic environment is proved by the appreciation of the employers of Latvia as well as the 2nd place in Latvia by the number of patents. Nowadays LLU has become the intersection between science, innovation, research, technology and business, and it is a place, where each student acquires education with added value – knowledge, skills and competence that makes him or her not only a good professional, but also a better person.

PROGRAMMES

62
study programmes

14
different directions

27
bachelor programmes

22
master programmes

13
doctroal programmes

FACULTIES

- 8
- Faculty of Agriculture
 - Forest Faculty
 - Faculty of Veterinary Medicine
 - Faculty of Engineering
 - Faculty of Environment & Civil Engineering
 - Faculty of Food Technology
 - Faculty of Economics & Social Development
 - Faculty of Information Technologies

MAIN FIGURES

4176 students (2017)	1110 employees	58 professors
3392 bachelor students	452 academic staff	61 associated professors
616 master students	658 general staff	69 docents
168 doctoral students	45 lecturers	



MISSION

To develop competitive intellectual capital on the basis of excellence in research, application of research findings, high quality of education and effective management of the university.

VISION

Latvia University of Life Sciences and Technologies is one of the leading universities of science and technologies in the Baltic Sea region, specializing in the sustainable use of natural resources aimed at the enhancement of quality of life for society.



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FACULTY OF ENGINEERING

PROGRAMME	BACHELOR STUDIES	MASTER STUDIES	DOCTORAL STUDIES
Agricultural Engineering	•	•	•
Machine design & construction	•		
Applied energetics	•		

FACULTY OF ENVIRONMENT & CIVIL ENGINEERING

PROGRAMME	BACHELOR STUDIES	MASTER STUDIES	DOCTORAL STUDIES
Water engineering	•	•	•
Environmental Engineering	•	•	•
Landscape Architecture and Planning	•	•	•
Civil Engineering	•	•	•

FACULTY OF INFORMATION TECHNOLOGIES

PROGRAMME	BACHELOR STUDIES	MASTER STUDIES	DOCTORAL STUDIES
Computer control & computer science	•		
Machine design & construction	•	•	•

FOREST FACULTY

PROGRAMME	BACHELOR STUDIES	MASTER STUDIES	DOCTORAL STUDIES
Wood Engineering	•	•	•
Wood processing	•		
Wood Materials & Technology	•		

Latvia University of Life Sciences and Technologies offers a wide range of all level study programmes for international students in English.

STUDY PROGRAMMES FOR FOREIGN STUDENTS

BACHELOR STUDY PROGRAMMES:

- Information Technologies for Sustainable Development (professional);
- Landscape Architecture and Planning;
- Computer Control and Computer Science.

MASTER STUDY PROGRAMMES:

- Information Technologies;
- Agricultural Engineering (two specialisation options: Automotive Engineering or Power Engineering);
- Landscape architecture and Planning (professional).

DOCTORAL STUDY PROGRAMMES:

- Agricultural Engineering;
- Environmental Engineering;
- Landscape Architecture;
- Water Engineering;
- Civil Engineering;
- Wood Materials and Technology;
- Information Technologies.



BUDGET REVENUE STRUCTURE

15,68

(EUR million)
REVENUE FOR HIGHER EDUCATION

6,51

(EUR million)
REVENUE FOR SCIENTIFIC ACTIVITIES

6,04

(EUR million)
OTHER REVENUE



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GREEN TECHNOLOGIES

FACULTY OF ENGINEERING

The main research topics in faculty are sustainable energy use in vehicles; smart technologies and robots in biosystems; renewable energy production and use reduction and rational use of by-products and residues.

STUDY AREAS:

Automobile transport;
Agricultural machinery;
Agricultural energetics;
Technical expert;
Machine design.

RESEARCH FIELDS:

Alternative energy resources and equipment;
Biofuels and alternative fuels;
Energy saving technologies;
Automatic control in agriculture production;
Livestock precision technology and management systems;
Use of biomass for energy production;
Machine design and manufacturing;
Performance of electric vehicles.

FACULTY OF ENVIRONMENT AND CIVIL ENGINEERING

The Faculty of Environment and Civil Engineering is the only one that prepares specialists in land use planning, landscape architecture and planning, construction of agricultural buildings and structures, as well as environmental and water engineering engineers with knowledge of drainage of agricultural land and hydrotechnical structures for drainage systems. The faculty has eight laboratories of scientific and practical work. Two of them are two-storey modern rooms with extensive functional capabilities, two laboratories for studying water flows, two for testing structural strength and strength, composite materials, one for acoustic laboratories and one for exploration of glass structures.

STUDY AREAS:

Civil engineering;
Landscape architecture and planning;
Land management and land surveying;
Environmental engineering and water management.

RESEARCH FIELDS:

Agriculture impact on the environment;
Self-run off drainage systems;
Optimization and strengthening of structures;
Development of Latvia's rural landscape;
Development of new energy efficient building materials;
Sustainability of the buildings;
The Model of Land Management in Local Municipality.

FACULTY OF INFORMATION TECHNOLOGIES

Information and Communication Technologies (ICT) are a perspective area in Latvia characterized by industries rapid growth. ICT exports are growing; ever more Latvian companies offer services not only in the local but also in the international market. Nowadays and in the long term, both Latvia, both in the international labour market information technology experts are and will be one of the most demanded.

STUDY AREAS:

Computer control and computer science;
Information technologies;
Programming.

RESEARCH FIELDS:

Risk analysis in agriculture;
Agriculture information systems;
Modelling of biological process imitations;
Statistics and methods of regional analysis;
Systems analysis and modelling in forest management and planning, etc.

FOREST FACULTY

Forest Faculty has long history. It was one of the first establishments in university after Faculty of Agriculture. The faculty consists of 4 departments: Forestry, Forest use, Wood Processing and Working Environment.

STUDY AREAS:

Forestry;
Forest Exploitation;
Wood Processing.

RESEARCH FIELDS:

Forest cultivation, conservation, production mining technology;
Wood processing.

ALTERNATIVE FUELS RESEARCH LABORATORY

LLU Forest and Water Resources Research Laboratory conducts research programmes and projects, fundamental and applied research in forest sciences, hydro-engineering sciences, environmental sciences and material sciences related to:

- Forest resources – their sustainable management, planning and recreation;
- Timber resources – timber application in construction (bridges, towers, support of water edges etc.);
- Sustainable environment – research of land, water and air quality;
- Hydro-technical structures – drainage, ports, power supply in the context of hydroelectric power stations;
- Water resources – addressing issues from drinking water to sewage sludge utilization;
- Hydrology – surface and ground water flow and cycles, flood risks.

FOREST RESEARCH STATION

Forest Research Station is a public agency founded by the Latvian State Forestry Institute "Silava" and the Latvia University of Life Sciences and Technologies, whose mission is to manage state research forests for research, long-term scientific research objects, environmental and forest monitoring facilities, as well as training and further training support in the field of forestry education.

POINTS OF EXCELLENCE

According to QS EECA ranking LLU is one of best Universities in Europe and Central Asia and the best Life-science University in Baltic states. LLU has ranked 139th among the top 300 universities in QS EECA University Rankings 2018. Besides LLU holds „Investment in Excellence” standard!

LLU is included in U-Multirank, a European Union higher education institution's assessment system, based on both academic achievement and the quality of training, international cooperation and other criteria.

RESEARCH

The research specialisation of the university is based on the analysis of the importance of scientific branches and research fields in the framework of priority fields of economy for the Latvian smart specialisation and achievement of the strategy's aims. The medium-term research goals are the following:

- Excellence in the research;
- Application of the research results in the national economy (accumulated and created knowledge, technologies and innovations are meant as the research results).

LLU's specialisation fields and subfields are set forth in the context of the existing administrative division of LLU. The specialisation fields and subfields of each unit have been chosen on the basis of the scientific competence of the university and the lines of research selected for further development, and they comply with the needs of the prospective areas of economy, in which the Latvian innovation capacity has to be formed, determined in the Smart Specialisation Strategy of Latvia.

The Block of GreenTech or Engineering Sciences includes Engineering and technology (Group 2), as well as related science sub-divisions in Natural sciences (Group 1), Agricultural sciences (Group 4) and Medical and health sciences (Group 3). The main research activities are related to food technology, power engineering, smart machinery and technologies (particularly in agriculture and forestry), information technologies, construction, woodworking, geodesy, the environment, and water management issues (including greenhouse gases (GHG) and agricultural runoff).

CONTACTS

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