

FACULTY OF WOOD SCIENCES AND TECHNOLOGY

Faculty of Wood Sciences and Technology

education, research and relations

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FACULTY OF WOOD SCIENCES AND TECHNOLOGY

The Faculty is oriented on the university education in the whole spectrum of wood processing disciplines, focusing on complex research, development and exploitation of wood.



HISTORY OF FACULTY OF WOOD SCIENCES AND TECHNOLOGY

1762 – Academia Montanistica in Banská Štiavnica, founded by Austrian imperator Maria Theresa

1807 Forestry Department – including processing of wood 1906 Mining and Forestry Academia in Banská Štiavnica 1946 – established The College of Agricultural and Forest Engineering in Košice – The Department of Wood Engineering was established at the Faculty of Forest Engineering in 1949, as a new study branch, one of the first in the world,

1952 - Faculty of Wood Sciences and Technology is established in the frame of University of Forestry and Wood Technology in Zvolen with Czechoslovak scope,

1992 – Faculty of Wood Sciences and Technology is the part of Technical University in Zvolen



DEPARTMENTS OF FACULTY

- Department of Wood Science
- Department of Wood Working
- Department of Mechanical Wood Technology
- Department of Furniture Design and Wood Products
- Department of Furniture and Wood Products
- Department of Business Economics
- Department of Marketing, Trade and World Forestry
- Department of Mathematics and Descriptive Geometry
- Department of Physics, Electro-technics and Applied Mechanics
- Department of Fire Protection
- Department of Chemistry and Chemical Technologies



EDUCATION

- Educational, research and development activities are ensured by 154 employees, at present.
- There are 13 full professors, 23 assoc. professors, 59 assist. Professors (Ph.D.), 11 assistants, 15 research staff and 33 technicians.
- The Faculty provides study in internal and external forms of study. Study finished more than 9935 students, from them is about 2523 foreign since the establishment of the faculty.
- In the frame of scientific education, the Faculty educates scientific workers, scientific study finished 11 doctors of science (Dr.Sc.), 228 C.Sc. and 242 Ph.D. till today.



STUDY PROGRAMES – Bc.

Wood Technology:

- Construction of Timber Structures and Furniture
- Furniture Production
- Wood Processing Technologies
- Management of Woodworking and Furniture Production

Economy and Enterprise Management:

• Enterprise Management in Wood Processing Industry

Design:

- Interior Design
- Furniture Design

Protection of People and Property:

• Fire Protection of People and Property



STUDY PROGRAMES – MSc.

Wood Sciences:

- Wood Engineering
- Technology of Biomass Processing
- Technique for Wood Processing
- Construction of Wood Products
- Material Engineering
- Furniture and Wood Products

Economy and Enterprise Management:

• Enterprise Management in Wood Processing Industry

Design:

• Furniture Design

Protection of Persons and Property:

- Fire and Rescue Services
- Technical Safety of Persons and Property



STUDY PROGRAMES – PhD.

Wood Sciences:

- Wood Structure and Properties
- Technology of Wood Processing
- Construction and Technology of Wood Products

Protection of Persons and Property:

• Fire Protection and Safety



SCIENTIFIC RESEARCH

- The Faculty of Wood Sciences and Technology is the leader in the wood sciences research in Slovakia. A significant portion of research is undertaken by students' scientific and technical work.
- The scientific and research activities of the Faculty of Wood Sciences and Technology are aimed at complex utilisation of wood raw material, technology and techniques, furniture design, fire safety and economics.
- Main attention is focused on valuation of wood, its transformation into products of new generation creating a complex interior – the human microenvironment.
- The aim of the instruction process is to educate highly qualified specialists (in Bc., MSc., PhD. degree programmes) all for the demands of Slovakia and foreign countries for the whole field of wood and wood products, namely: - wood technologists,
 - economists,
 - designers and interior consultants,
 - specialists in the area of protection of persons and property.



INTERNATIONAL PROJECTS

7. FP of European Commission:

PIRSES-GA-2011-295260

Ecological application of nanosorbents on the base of natural and synthetic ionites and carbons (ECONANOSORB)

ENV.2011.2.1.6-1

Future-oriented integrated management of European forest landscapes (INTEGRAL)



INTERNATIONAL PROJECTS

COST Action FP-1006

Bringing new functions to wood through surface modification

COST Action FP1104

New possibilities for print media and packaging - combining print with digital

COST Action FP 0804

Forest Management Decision Support Systems

Bilateral project: SLOVAKIA – CZECH Rep. Bilateral project: SLOVAKIA – PORTUGAL DREVÁRSKA FAKULTA NATIONAL RESEARCH PROJECTS "VEGA" and "APVV"

- Defects in the surface and inner parts of wood research of their creation, detection, inhibition and prevention
- Hydrolysis optimization of selected fast growing trees and wood wastes
- Influence of thermo-mechanical loading on wood properties
- Interaction of the Components of Wood and High Temperatures during Pressing of Wood Composites and its Effect on the Formation of Composites Avoiding the Chemical Changes in Composition of Pressed Wood Particles and Elimination of the Fire Risk
- Interaction of wood and plastics at creation of layered materials by gluing
- Interaction wood heat -- water and its effect on the formation of moisture, temperature and stress fields in wood
- Modelling substitution changes at timber market under the increasing demand for renewable energy resources
- Modification of wood properties for the purpose of 3-D compression molding
- Surface properties and phase interface interaction of the wood -- liquid system
- The changes in the structure and properties of beech wood (Fagus sylvatica L.) caused by mechanical injury of the trunk in living trees
- Timber quality parameters and their implementation in grading methods on the different principles
- Wood Composites with Antimicrobial Properties



ACTA FACULTATIS XYLOLOGIAE ZVOLEN

Scientific journal Acta Facultatis Xylologiae Zvolen ISSN 1336-3824

- publishes peer-reviewed scientific papers covering the fields of wood structure and properties, wood processing, wood processing, machining and drying, wood modification and preservation, furniture construction and design, wooden constructions, economics and management of wood processing industry
- Coverage
 - Elsevier SCOPUS
 - ProQuest Engineering Journals and ProQuest Technology Journals
 - USDA AGRICOLA
- current issue Vol. 56
- <u>www.tuzvo.sk/df/afx</u>





INTERNATIONAL RELATIONS

- The Faculty of Wood Sciences and Technology participates in international research, training, and mobility projects, it creates the space for study and work stays abroad.
- Faculty actively co-operates with partner institutions in Europe and overseas.
- Within the Erasmus program it cooperates in the European Credit Transfer System (ECTS).



INTERNATIONAL RELATIONS

University of Life Sciences in Poznan, Poland SGGW Warszawa, Poland VGLTA Voronezh, Russia **TU Dresden**, Germany LTU Sofia, Bulgaria **BOKU** Wien, Austria ŠF Zagreb, Croatia NLTI Lviv, Ukraine Transilvania University Brasov, Romania Université de Nancy, France University in Hamburg, University in München, Germany FHS Rosenheim, Germany Virginia Polytechnic Institute and State University Blacksburg, LSIWCH Riga, Latvia and others



INTERNATIONAL RELATIONS

Faculty of Wood Sciences and Technology is a member of many international organisations:

International Academy of Wood Sciences (IAWS)

International Association of Wood Anatomists (IAWA)

Society of Wood Science and Technology (SWST)

International Union of Forest Research Organizations (IUFRO)

International Association for Economics and Management in Wood Processing and Furniture Manufacturing (WoodEMA)

InnovaWood



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Thank you for your attention!

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