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Faculty of Forestry,
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Scientific Research and International Cooperation

The beginnings of scientific research in the field of forestry are related to 1920 and the founding of the Faculty of Agriculture in Zemun, where Forestry was organised as one of the departments. At that time, research activities took place primarily within the Institute of Forestry, in addition to other three institutes which operated at that time. After the first reorganisation in 1932, when the Faculty of Agriculture changed its name to the Faculty of Agriculture and Forestry, scientific research was performed through five institutes, which were dealing with forestry issues, and common cabinets for agriculture and forestry. The task of scientific research at the time was the improvement of forest science in general and exploration of those issues that were significant to the forestry practice. In addition to the Faculty staff, professionals from forestry practice also participated in the research, which was in total just over 20 people, appearing as authors of a total of 317 articles written in the 1920–1944 period. As a result of independent scientific research, the first doctoral dissertation entitled Entomological Monograph of the University Domain Majdanpek was written by Svetislav Živojinović and defended at the Faculty of Agriculture and Forestry on 13th November, 1940.

After the liberation in 1945, scientific research took place within the Forestry Department, because the Forestry Institute was not renewed. Until the establishment of the independent Faculty of Forestry in 1949, a total of 63 scientific and professional articles were published, which mostly dealt with specific forestry issues and slightly less with wood-industrial issues.

With the establishment of the independent Faculty of Forestry, much more favourable conditions for the development of scientific research were created, which was then already taking place in different fields: forestry, wood processing and erosion control. Post-war regulations define the framework of

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the independent scientific research through teaching for scientific improvement and preparation of doctoral dissertations, which lasts for four semesters and includes oral exams and written work in the field for which the candidate is preparing for independent scientific work. According to the 1956 statute, a doctorate can be done in 21 scientific disciplines as major subjects. In the period until 1960, doctoral dissertations resulting from independent scientific research were defended by the following candidates: Milutin Knežević (1951), Branislav Jovanović (1953), Dušan Simeunović (1954), Branislav Pejovski (1954), Toma Bunuševac (1954), Konstantin Vasić (1955), Dragoljub Mirković (1956), Dragomir Milojković (1956), Vladislav Popović (1956), Ljubomir Petrović (1956), Jovan Pavić (1956), Slobodan Gavrilović (1956), Dušan Oreščanin (1957), Ivan Soljanik (1957), Lazar Vujičić (1957), Milovan Gajić (1958), Radovan Ivkov (1959), Radomir Ljujić (1959), Danilo Todorović (1959), Milutin Simonović (1960) and Siniša Stanković (1960). This allowed for the forms and scope of scientific research after 1960 to be more extensive and diverse in character, and the new quality environment was created as a starting point for new staff training within the four departments.

During the one hundred-year period of work at the Faculty of Forestry, according to the old law, a total of 297 doctorates were written and defended, of which 159 in the Department of Forestry, 69 in the Department of Wood Processing, 33 in the Department of Landscape Architecture and Horticulture and 36 in the Department of Erosion and Torrent Control. During that period, a total of 435 students completed their Master's degree studies, of which 248 in the Department of Forestry; 76 in the Wood Processing Department; 56 in the Department of Landscape Architecture and Horticulture and 55 in the Department of Erosion and Torrent Control. Since the signing of the Bologna Declaration and the reform of studies

56 Laboratory for Biotechnology
founded in 2016



56

at the Faculty of Forestry (Bologna 1, 2 and 3) in 2003, doctoral academic studies were completed by a total of 49 students of which 21 students of the study programme of Forestry, seven students of the study programme of Technologies, Management and Design of Furniture and Wood Products, eight students of the study programme Landscape Architecture and 13 students of the study programme of Ecological Engineering for Soil and Water Resources Protection. According to the latest accreditation, which is in progress (Bologna 4), doctoral studies at the Faculty of Forestry will be organised as four separate study programmes: Forestry with seven sub-modules; Landscape Architecture and Horticulture; Wood Technologies and Ecological Engineering for Soil and Water Resources Protection.

Today, the Faculty of Forestry is the oldest scientific research institution in the territory of the Republic of Serbia, with a 100 years long tradition. By a decision of the Ministry of Education, Science and Technological Development from 2020, it was accredited as a state scientific research institution in the field of biotechnical sciences - agriculture, forestry and fisheries.

The scientific research at the Faculty is implemented by 124 researchers, through individual activities or activities of project teams, dealing with fundamental, applied and developmental research in the fields of forestry, wood science and technology, landscape architecture and ecological engineering for soil and water resources protection.

The basis for scientific research are a number of laboratories and centres, which were formed at the Faculty of Forestry in the past period. According to the current 2019 statute, the Chairs and Departments of the Faculty have the following belonging laboratories and centres:

DEPARTMENT OF FORESTRY

Chair of Seed Science, Nursery Production and Afforestation

- Laboratory for Tree Anatomy
- Laboratory for Seed and Seedling Testing
- Laboratory for Biotechnology
- Centre for Forest Genetic Resources Monitoring and Conservation
- Centre for Afforestation and Artificial Forest Regeneration

Chair of Forest Ecology

- Laboratory for Dendrology and Phytocoenology
- Pedological Laboratory for Soil Chemistry
- Centre for Monitoring Forest Sites and Forest Ecosystems Floristic Diversity

Chair of Silviculture

- Centre for Silvicultural Data Monitoring, Collection and Processing
- Centre for Climate Change Monitoring in Forest Ecosystems

Chair of Forest Protection

- Laboratory for Forest Entomology
- Laboratory for Forest Phytopathology
- Forest Fire Research Centre

Chair of Forest Resources Utilisation

- Laboratory for Wildlife Management
- Forest Utilisation Laboratory
- Forest Utilisation Centre



57



58

Chair of Forest Management Planning

- Laboratory for Geodesy and GIS
- Laboratory for Increment Research and Biomonitoring
- Centre for Monitoring, Inventory and Forest Management Planning

Chair of Bioeconomy, Policy and Governance in Forestry and Nature Conservation

- Centre for Forest Economics, Trade and Marketing (CETM)

DEPARTMENT OF WOOD SCIENCE AND TECHNOLOGY

Chair of Primary Wood Processing

- Laboratory for Wood Properties
- Laboratory for Hydrothermal Wood Processing
- Laboratory for Sawmill Wood Processing
- Laboratory for Veneers and Plywood
- Laboratory for Wood Anatomy

Chair of Machines and Apparatuses in Wood Processing

- Centre for Machines and Apparatuses in Wood Processing
- Centre for Computer Numerical Control (CNC) Machines in Wood Processing
- Laboratory for Tool Preparation and Sharpening
- Laboratory for Technical Physics and Measurement and Regulation Technics
- Centre for Biomass
- Laboratory for Machines and Apparatuses in Wood Processing
- Laboratory for Mechanical Engineering

Chair of Chemical-Mechanical Wood Processing

- Laboratory for Chemical Wood Processing and Chemistry
- Laboratory for Particleboards and Fibreboards Testing
- Laboratory for Adhesives and Coatings Testing
- Centre for Wood Composites, Paper and Bioprocess Engineering

Chair of Final Wood Processing

- Institute for Furniture Quality Control
- Laboratory for Surface Wood Processing
- Centre for Design and Engineering of Interior and Furniture

Chair of Wood Industry Management and Economics

- Centre for Wood Industry Marketing and Economics
- Timber Trade Centre
- Centre for Production Systems Organisation in Wood Processing
- Centre for Wood Processing Management

Chair of Wood Protection

- Laboratory for Wood Protection

DEPARTMENT OF LANDSCAPE ARCHITECTURE AND HORTICULTURE

Chair of Landscape Horticulture

- Laboratory for Plant Tissue Culture
- Seed Laboratory
- Laboratory for Chemotaxonomy
- Centre for Ornamental Plant Production



59

Chair of Planning and Design in Landscape Architecture

- Centre for Landscape Planning and Design
- Landscape Laboratory

Chair of Landscape Engineering

- Laboratory for Landscape Engineering
- Centre for Sports and Recreational Facilities

DEPARTMENT OF ECOLOGICAL ENGINEERING FOR SOIL AND WATER RESOURCES PROTECTION

Chair of Torrent and Erosion Control

- Laboratory for GIS
- National Centre for Climate Change and Desertification

Chair of Soil Amelioration

- Laboratory for Soil Quality Monitoring
- Centre for Terrestrial Ecosystems Critical Loads Assessment

Chair of Erosion Control Geotechnics

- Geotechnical Laboratory
- Centre for Groundwaters of Forest Ecosystems

57 Pedological Laboratory
for Soil Chemistry

58 Laboratory for GIS
founded in 2019



60

Scientific research at the Faculty of Forestry is mainly realised within the projects that are financed by: the Ministry of Education, Science and Technological development; the Ministry of Agriculture, Forestry and Water Management; the Ministry of Environmental Protection; Provincial Secretariat for Agriculture, Water Management and Forestry; the Secretariat for Environmental Protection of the City of Belgrade; PE Srbi-jašume; PE Vojvodinašume; PUC Zelenilo-Belgrade; national parks, municipalities, embassies, international organisations, and other sources, which was the case in the earlier period as well. From 2015 to 2020, a total of 170 national, bilateral and international projects were implemented at the Faculty.

In the past five years, as a result of scientific research, more than 300 articles have been published in international journals from the SCI list, of which 10 are papers in category M21a, 20 papers in journals of category M21 and 41 in journals of category M22, as well as 62 results in category M10, which speaks in favour of the quality of scientific research at the Faculty.

In addition, the Faculty was involved in different international projects and networks, such as: TEMPUS, FOPER, IPA, HORIZON 2020, Erasmus +, CEEPUS, COST, which have developed the international cooperation at the Faculty. Establishing, nurturing and development of cooperation with other universities in the country and abroad, as well as with international institutions and organisations engaged in scientific research and

59 Institute for Furniture
Quality Control

60 Laboratory for Chemotaxonomy,
a high-performance liquid
chromatography device

higher education issues, used to be and remains a permanent commitment of the Faculty of Forestry. Numerous agreements of cooperation concluded with partners from almost all continents are a proof of that. They are a basis for the exchange of students and teachers, exchange of acquired knowledge and experience, joint participation in projects and the like.

Currently, the University of Belgrade - Faculty of Forestry, has signed agreements of cooperation with various institutions from the following countries:

- Albania (Forest and Pasture Research Institute, Tirana; Agricultural University of Tirana, Faculty of Forest Sciences);
- Belarus (Belarusian State Technological University, Minsk)
- Bosnia and Herzegovina (University of Banja Luka, Faculty of Forestry; University of Sarajevo, Faculty of Forestry; University of Bihać, Technical Faculty);
- Great Britain (CABI International, Wallingford);
- Greece (University of Thessaly);
- Italy (Confindustria Udine);
- China (Beijing Forestry University);
- Hungary (University of Debrecen, Institute of Animal Science, Biotechnology and Nature Conservation);
- Germany (Albert Ludwig University of Freiburg, Institute for Landscape Management; Albert Ludwig University of Freiburg, Faculty of Environment and Natural Resources; University of Hamburg, Faculty of Mathematics, Informatics and Natural Sciences - Centre for Wood Science);
- Norway (Norwegian University of Life Science);
- Poland (Poznan University of Life Sciences);
- Romania (Stefan cel Mare University of Suceava);
- Russia (Moscow State Forest University, Faculty of Forestry; Volga State University of Technology, Faculty of Forestry and Ecology; Voronezh State University of Forestry and Technologies named after GF Morozov);

- Northern Macedonia (Faculty of Forestry, University of St. Cyril and Methodius);
- Slovenia (University of Ljubljana, Biotechnical Faculty; University of Primorska, Faculty of Management, Koper; Environmental Protection College, Velenje);
- Turkey (Kastamonu University Erasmus Office);
- Finland (European Forestry Institute; University of Eastern Finland)
- Croatia (University of Zagreb, Faculty of Forestry; Croatian Forest Research Institute);
- Czech Republic (Mendel University in Brno; Brno University of Technology);
- Switzerland (ETH Zurich).

As a prerequisite for attracting foreign students to the Faculty of Forestry, the first Master's degree study programme in English *Forestry and Natural Resources Management*, whose accreditation is in progress, was initiated in 2019.

The results of scientific research are presented in more detail at the level of chairs, with lists of the most important references and projects implemented in the past period. The chapters on specific chairs also elaborate on their cooperation with different institutions from this country and from abroad.