



School of Agricultural and Natural Sciences

Programme Title:

Forestry

Qualification Awarded:

Bachelor's in Forestry 0105

Programme Credits:

240 ECTS credits

Language of Instruction:

Georgian

Objectives of the Programme:

The aim of the program is to prepare graduates that will have knowledge in the field of forestry, knowledge of forest care - protection, restoration and renewal, principles of the sustainable forest use. They will also have knowledge of fundamentals of design, structure, control mechanisms and technology of timber processing in the timber production, as well as the principles of landscape planning and cultivation of decorative gardens and parks, main stages of history of the art of gardening and its modern trends.

Career Options:

Graduates of the program will get the latest knowledge and experience in the field of forestry, ensuring their competitiveness in the labour market and their successful career, since this educational program is developed in accordance with the educational programs of higher education institutions in Europe, namely: University of Natural Resources and Life Sciences Vienna (www.boku.ac.at); Faculty of Forestry and Wood Technology, Mendel University, Brno (www.mendelu.cz); Wood Technology Department, University of Applied Sciences, Eberswalde (www.hnee.de).

After completion of the bachelor's degree program, graduates will be to pursue career in the following state and private sectors:

- Ministry of Environment Protection and Agriculture of Georgia, National Forest Agency and all its Regional Divisions under its subordination;
- Agency of Protected Areas and its territorial administrations;
- Environmental NGOs;
- Municipal offices and private businesses in towns and villages;
- Botanical Gardens;
- Nursery farms;
- Research institutes and laboratories;
- Timber enterprises.

If desired, graduates of the Bachelor Program will be able to continue their studies on the next level of education, after completing the necessary procedures.



Admission Prerequisites:

Admission to the programme is carried out in accordance with the Law of Georgia on Higher Education and in accordance with the provisions of the unified national examinations approved by Order N19/N of 18 February 2011.

To facilitate the mobility of high school graduates and prospective students, it is permissible to enrol in an educational programme without passing unified national examinations, in accordance with the rules and terms defined by the Ministry of Education and Science of Georgia, for those that are:

- foreign citizens or persons without citizenship, who received complete general education or its equivalent abroad;
- Georgian citizens who received complete general education abroad or its equivalent and during the last two years of complete general education had been studying abroad;
- foreign citizens, who have studied/ are studying and have received credits/qualifications abroad from a Higher Educational Institution recognized by the legislation of that country;
- Georgian citizens, who, for the term defined by the Ministry of Education and Science of Georgia, lived/are living, studied/are studying and have received credits/qualifications abroad from a Higher Educational Institution recognized by the legislation of that country.

Enrolment in educational programs is also possible through mobility, in accordance with the Rule of Transfer Between High Educational Institutions defined by the by Order N10/N of February 4, 2010 by the Minister of Education and Science of Georgia.

Learning Outcomes (Competences)

After completion of the program, graduates of the Bachelor of Forestry will be able to protect forest biodiversity, regenerate and rationally use forest resources, predict the biodiversity of forest ecosystems of protected areas and the planning and management mechanisms of protected areas.

They will know biological and ecological peculiarities of harmful species of insects and diseases, understand the cultivation and management of artificial plants, will be able to participate in the planning and management of urban famine, will be able to determine aspects of tree processing techniques and standardization by the type of harm and disease of certain species using ecological indexes, will be able to identify the pest and disease-causing organisms and determine their harm, able to conduct planning and management of nurseries, able to design and manage timber processing enterprises.

After completing the Bachelor's Degree in Forestry, graduates will own general and specific competencies listed below:



General Competences:

Graduates will be able to:

- apply critical thinking, discuss and debate;
- professionally write and communicate in native language;
- write and communicate scientific material in foreign languages (English) ;
- adapt and act in unfamiliar and changing environments;
- work in a group;
- use modern information and communication technologies;
- process scientific literature, analyse it and publicly discuss it;
- appreciate and respect differences and cultural diversity.

Specific Competences:

Graduates will have:

- knowledge of the characteristics of plant biology, peculiarities of the biochemical and physiological processes in the plant;
- ability to identify the ecological factors affecting the biocenosis, ecosystems and biospheres, and evaluate their influence;
- knowledge of the general principles of plant protection;
- knowledge of the soil genesis, based on the genesis of soils, soil preparation and management of its fertility;
- ability to determine the extreme conditions of soil and climatic conditions and relate to the growth and development of specific plants;
- knowledge of the systematics of dendrology, their morphology, bioecological features and principles of application;
- knowledge of the principles of sustainable forest management, as well as of planning and implementation of forest economic activities;
- knowledge of urban greening and landscape planning principles;
- knowledge of timber manufacturing technologies and processing methods;
- knowledge of the principles of forest conservation and reproduction of forest biodiversity conservation, protection and rational use of forest resources and forecasting;
- ability to find and analyse information material on forestry issues, establish a reasoned conclusion on how the problem is set up and how to solve it;
- ability to evaluate the existing problem and describe it to both specialist and non-specialists, in both written and verbal forms;
- understanding of the importance of forests, their protection, conservation and sustainable use of natural and artificial ecosystems.

Competences developed in the Program are evaluated in accordance with the six criteria for the first level of Higher Education set by the National Qualification Framework:



Knowledge And Understanding:

Graduates will:

- have a wide knowledge of forestry;
- know the principles of forest maintenance (care-protection), restoration and renewal, and principles of sustainable use;
- know the systems of the dendrology, their identification and bioecological peculiarities;
- know forest inventory, planning and management;
- understand the biodiversity of forest ecosystems of protected areas, as well as be aware of the planning and management mechanisms of protected areas;
- know principles of landscape planning and cultivation of decorative gardens and parks,
- know the main stages of history of the art of gardening and its modern trends;
- know the principles and characteristics of planning decorative gardens and parks;
- know decorative dendrology, most commonly used in decorative gardening;
- know production processes, structure, woodworking machines, machines and equipment for woodworking enterprises;
- know the standardisation of recycled timber resources (wooden sleepers, wooden veneers, etc.);
- know principles of the timber processing technology - chemical-processing of the timber, thermal processing of the timber, drying, etc.;
- understand the crucial role of anthropogenic factors in the protection and reproduction of forest resources;
- know the role of dendrological entomology in forest ecosystems;
- know the damaging phase of pests and its damaging period;
- understand the environmental value and ecological functions of forest ecosystems.

Applying Knowledge To Practice:

Graduates will be able to:

- protect forest biodiversity, prognose, organise and predict rational use and regeneration of forest resources;
- draft and implement forest management plan, as well as participate in organizing and executing forest taxation works;
- develop artificial ecosystems of forests and take part in planning and development of decorative gardens and parks;
- design and analyse garden and park styles;
- plan and manage dendrological and decorative plant nurseries;
- grow plants with seeds and vegetative propagation, and cultivate and care for them in plant nurseries;
- participate in design and management of timber processing enterprises;
- use processed standardized timber resources;



- determine any kind of harm caused, using ecological indexes;
- identify forest pest species and define their harm;
- plan and implement measures to combat specific pests and disease-causing organisms.

Ability To Make Conclusion:

Graduates will be able to:

- formulate their opinions, based on provided information, and use alternative and additional resources for their solution;
- prepare a written report in the field of forestry and make conclusions within its competence;
- explore biodiversity research of forest ecosystems by participating in monitoring, analyse the results and draw conclusions.
- take part in discussing industry /field-specific issues, regulated by the relevant legislative acts.

Communication Skills:

Graduates will be able to:

- prepare detailed written reports about ideas, existing problems and their solutions, verbally share information to the forestry industry specialists and non-specialists in Georgian and foreign languages;
- use modern information and communication technologies.

Ability to Learn:

Graduates will be able to evaluate and plan consistent and multilateral learning processes, as well as to determine further learning needs.

Values:

Graduates will be able to:

- participate in the formation of professional values and seek to establish them;
- assess the values and theories of nature and contribute to the establishment of new values.

Learning and Teaching Methods

In order to achieve learning outcomes, the purpose of each study course is to determine the appropriate learning and teaching methods. In the frame of the program, the following methods of teaching are used: lecture, seminar, practical and laboratory training. The following evaluating tools are used in order to measure the learning outcomes: homework tasks, tests, verbal and practical examination, presentation, analysis of completed works, reports, projects, essays and others. According to the training courses, teaching methods are written in syllabus.



Within the framework of academic freedom, the lecturer is entitled to specify and use methods that are not included in the program and/or not use any of the learning and teaching methods from the program, based on the course content.

Knowledge Assessment System

Student's knowledge is assessed by a score system out of 100 points. The assessment is multicomponent and meets the rules of calculating higher educational program credits, approved by the Order N3 issued on 5 January 2007 by the Minister of Education and Science of Georgia.

During the assessment of student's knowledge, all the academic staff and any invited personnel are obliged to use the above-mentioned rule. Following scheme is used to assess the knowledge:

1. Five types of positive assessment:

- (A) Excellent – score between 91-100;
- (B) Very good – score between 81-90;
- (C) Good – score between 71-80;
- (D) Satisfying – score between 61-70;
- (E) Sufficient – score between 51-60.

2. Two types of negative assessment:

- (FX) Fail to pass – score between 41-50, which means that the student needs to work more and he or she is able to redeliver exam after the independent preparation;
- (F) Fail – score 40 and below, which means that work done by students is not sufficient and he or she must study the course again.

During the assessment of study outcomes forming and summary assessment forms are used. These include, but are not limited to: homework tasks, laboratory work, tests, oral and written exams, presentations, essays, projects.

Study plan (Curriculum)

Curriculum and semester plan are available. The description of the study components is described in the syllabi.

Human and Material resources

Agricultural University of Georgia employs outstanding academic and invited personnel with successful experience (see annex) for its educational programmes.

Educational programmes are financially and materially supported. For implementation of the programmes university allocates relevant financial resources. Programmes are also supported materially. Educational programmes are taught at Kakha Bendukidze University Campus, which is equipped with all the necessary inventory and other resources needed for high quality education.