Name of the educational program:

Bachelor's Program in Aeronautical Engineering

Qualification:

Bachelor of Engineering in Aeronautical Engineering

Educational program volume in credits:

264 ECTS credits;

Educational program structure:

A graduate of the Bachelor's program in Aeronautical Engineering at the National Defense Academy is awarded the academic degree of Bachelor of Engineering in Aeronautical Engineering upon accumulating a total of 264 credits. These credits are divided as follows:

- Major core courses: 149 credits
- Free component: 115 credits





Reason for Offering the Educational Program and Relevance of the Program

The primary customer for the Bachelor's Degree Educational Programs in Aeronautical Engineering at the LEPL-David Aghmashenebeli National Defence Academy of Georgia and the employer of its graduates is the Ministry of Defence of Georgia. The program considers the educational requirements, interests, and priorities of the Ministry of Defence of Georgia, which is the reason for offering this Bachelor's Educational Program.

The challenges facing the Georgian Defense Forces today put on the agenda the training of bachelors with knowledge and relevant skills in the field of modern technologies and aviation engineering, who will have extensive knowledge of the main tasks of various areas of aviation engineering, theories of their solution and basic principles, and the ability to understand complex issues and solve them.

Purpose of the Educational Program

The Bachelor's Educational Program in Aeronautical Engineering aims to produce a competitive and qualified graduate who meets the demands of both the local and international job markets. The program will ensure that graduates:

• Goal 1: Gain a comprehensive understanding of the fundamental principles of aeronautical engineering and their applications, enabling them to engage in the processes of designing, constructing, manufacturing, and maintaining aircraft.

• Goal 2: Have the opportunity to pursue successful professional careers and continue their education at advanced levels.

• Goal 3: Develop collaboration, leadership, and communication skills, allowing them to realize their potential fully.

Prerequisites for Admission to the Educational Program

Applicants who have registered for the current year's Unified National Examinations and are not yet 24 years old are eligible to compete for admission to the Bachelor's Degree in Aeronautical Engineering. The following prerequisites must be met for admission to the Bachelor's Degree program:

- Successful completion of the Unified National Examinations in Georgian Language and Literature, Foreign Language, and Mathematics or Physics.

- Passing the selection round (which includes a medical examination, meeting physical standards, and an interview) in accordance with the internal regulations of the National Defense Academy.

Additionally, an applicant can obtain a Junker status at the National Defence Academy without taking the Unified National Examinations, as per the legislation of Georgia. Before commencing their studies in the educational programs, applicants must complete the Basic Combat Training Course (BCT).

Rules for Assessing Language Proficiency of the Junkers

All Junkers enrolled in the Academy's undergraduate programs must undergo a language proficiency assessment.

- The level of language proficiency is determined by the format of the exam questions, the assessment criteria, and the minimum competency threshold.

- The selection and preparation of the exam materials are managed by the Language Training Department of the Baccalaureate.

- The Examination Center, in conjunction with the Baccalaureate and the Academy's G3/G2 Training Department, organizes the exams.

- Junkers who do not meet the required level of English proficiency must complete all mandatory English language courses included in the educational programs of the Academy.

- To assess language competence, the academy conducts a diagnostic test (placement test) at the beginning of the first and second year.

- Based on the test results, Junkers are classified into six language proficiency levels: A1, A2, B1, B1+, B2, and B2+.

- Junkera will be grouped according to their language competence levels: A1, A2, B1, B1+, B2, and B2+.

- Those who achieve a B2 level of English proficiency will have the option to choose and study an additional foreign language (either German or French) during the first four semesters of the first-level higher education program.

- If necessary, an individualized curriculum will be developed based on the specific needs of the target audience regarding their language competence.

Learning Outcomes after Completing the Program

Upon completing the program, graduates will be able to:

- Understand the principles of mathematics, natural sciences, and engineering necessary for aviation engineering work.

- Perform engineering design and production tasks while considering safety, environmental, and economic factors.

- Conduct experiments, laboratory tests, and engineering measurements according to established instructions to study and solve engineering problems.

- Utilize modern approaches, skills, and technological tools in their engineering work.

- Communicate effectively in writing, orally, and graphically to express their ideas and solutions.

- Draw conclusions by identifying engineering problems, analyzing data, and implementing solutions.

- Demonstrate teamwork, collaboration, and management skills to work effectively in a multidisciplinary environment.

- Recognize their professional responsibility when making engineering decisions, taking into account safety, environmental, and economic factors.

- Determine their own path for further learning in line with continuous professional development.

Methods for Achieving Learning Outcomes

The teaching process will incorporate best practices from leading Western universities and military educational institutions. We will utilize approaches that reflect the latest trends in educational sciences, including: discussions and debates, group work, collaborative learning, case analyses, brainstorming sessions, role-playing and situational games, demonstration methods, inductive and deductive reasoning, analysis and synthesis, explanatory teaching methods, action-oriented learning, among others.

If necessary, distance learning formats will also be employed.

Assessment System

The knowledge of the Junkers is assessed in accordance with Order No. 3 of the Minister of Education and Science of Georgia, dated January 5, 2007, titled "On Approval of the Rules for Calculating Credits for Higher Education Programs."

The Junkers' workload includes attending lectures, participating in working groups, conducting practical and/or laboratory studies, completing independent work, preparing for and taking exams, working on course projects, and engaging in other activities relevant to the specific bachelor's educational program. Knowledge assessment is carried out using a 100-point grading system.

The final (summary) assessment includes both intermediate assessments and the final exam score. Each component of the assessment has a specific percentage value contributing to the total score of 100 points. The final exam is mandatory. The minimum competency threshold weights for the midterm exam and midterm assessments are set at 30%, while the weight for the final assessment is set at 40%. The minimum competency threshold for some assessments of the Combined Arms Command training courses in the syllabi is higher, but not higher than the requirement established by law.

The right to take the final exam is granted to the Junker who accumulates a total of 51 points or more when considering the maximum scores of both the midterm and final exams. The final (summary) grade is the sum of the midterm and final exam grades.

The grading system includes five types of positive grades:

a) (A) Excellent – 91-100 points;

b) (B) Very Good – 81-90 points;

c) (C) Good – 71-80 points;

d) (D) Satisfactory – 61-70 points;

e) (E) Sufficient – 51-60 points.

The assessment system also includes two types of negative evaluations:

a) (FX) did not pass – 41-50 points, which indicates that the Junker needs additional work to pass and is allowed to retake the exam once, along with independent study;

b) (F) Failed – 40 points or less, which means that the Junker has failed. The Academic Council will consider the termination of the Junker's status.

The Junker has the right to take an additional exam if they receive an FX evaluation, which must be completed no later than 5 days after the announcement of the final exam results.

The forms, methods, components, and criteria for assessing the Junker's knowledge are specified in the syllabi for each individual study course.

Employment Opportunities for Graduates

Graduates will have the opportunity to work within the Ministry of Defence of Georgia, specifically in the units of the Aviation and Air Defense Command of the Defence Forces of Georgia. The Ministry of Defence of Georgia will facilitate the employment of these graduates. Additionally, graduates can also explore job opportunities in the civilian sector, including:

- State or private aviation companies and organizations,

- Airlines, airports, and civil aviation services,

- Various enterprises that require a Bachelor of Engineering degree for roles related to design, production, and service processes.

Continuing Education

Graduates have the opportunity to pursue their master's degrees and participate in military professional development courses, both in Georgia and internationally.

Material and Technical Resources for Implementing Educational Programs

The Bachelor's degree program in Aeronautical Engineering is offered by the LEPL - David Aghmashenebeli National Defence Academy of Georgia. This program is supported by various educational and auxiliary facilities, including modern lecture rooms, laboratories, a library, faculty offices, computer centers, a simulation center, sports halls, a swimming pool, a fitness center, a recreation center, a dining hall, and an infirmary.

For practical and laboratory work as well as industrial practice, the following resources will be utilized:

- The design, technological, and examination facilities of JSC "Tbilaviaamsheni";

- The design, technological, examination, and laboratory facilities of the LEPL - Military Scientific Technical Center "Delta";

- The training facilities of the Aviation School at the Aviation and Air Defence Center;

- The aviation equipment of the subordinate units of the Aviation and Air Defence Command;

- The training and research laboratories of the Georgian Technical University.

All training buildings, laboratories, and the library at the National Defence Academy are equipped with appropriate resources. The library contains a diverse collection of books

covering natural sciences, engineering, aviation, humanities, social sciences, and military-related topics.

The Ministry of Defence of Georgia covers the costs for providing Junkers with educational materials, office supplies, food, accommodation, military equipment, and remuneration for academic and support staff.