

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN
FEDERATION

Federal State Autonomous Educational Institution for Higher Education
«North-Caucasus Federal University

APPROVED BY

Educational and Methodological Council
of the University

Protocol No. 5 of May 21, 2026

ENDORSED BY

Chairman of the Academic Council of
the Faculty of Petroleum Engineering

Candidate of Technical Science

Verisokin A.E.

Protocol No. 10 of May 29, 2026

HIGHER EDUCATION PROGRAM

Field of study	13.04.02 Electric Power Engineering and Electrical Engineering
Specialization (Profile)	Training Program of Electrical Engineering
Faculty	of Petroleum Engineering
Form of Study	full-time
Year of commencement of studies	2026

Stavropol, 2026

The higher education program has been developed by::

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Minutes of the Meeting

of the Educational and Methodological Commission

of the Faculty of Petroleum Engineering No. 10 dated May 14, 2026

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1. Общие положения

The educational program (hereinafter – the HE Program) implemented by the Federal State Autonomous Educational Institution of Higher Education "North Caucasus Federal University" in the field of study 13.03.02 "Electric Power Engineering and Electrical Engineering", focus (profile) of the program « Training Program of Electrical Engineering » ", represents a system of documents developed and approved by NCFU taking into account the requirements of the labor market on the basis of the Federal State Educational Standard of Higher Education.

The HE Program is a set of main characteristics of education (volume, content, planned results), organizational and pedagogical conditions, and forms of assessment, which is presented in the form of a curriculum, an academic calendar, syllabi of disciplines (modules), internship programs, assessment tools, and methodological materials.

This higher education program defines:

- planned learning outcomes of the HE program — student competencies established by the educational standard;
- planned learning outcomes for each discipline (module) and internship — knowledge, skills, abilities and/or experience of activity characterizing the stages of competency formation and ensuring the achievement of the planned learning outcomes of the HE program.

Specialization (profile) – «Training Program of Electrical Engineering».

Forms of study – full-time.

Language of implementation of the HE Program – English .

Qualification awarded — Master's degree.

When implementing the educational program, the organization has the right to use e-learning and distance educational technologies.

When educating persons with disabilities, distance educational technologies provide for the possibility of receiving and transmitting information in forms accessible to them.

In the presence of students with disabilities and persons with limited health capacities, this HE program is adapted taking into account the recommendations of the psychological, medical, and pedagogical commission, and the individual rehabilitation program for persons with disabilities. The educational process for persons with disabilities is carried out in accordance with the "Regulations on the Organization of the Educational Process for Persons with Disabilities and Limited Health Capacities at NCFU," adopted by the Academic Council of NCFU, Protocol No. 5 dated November 24, 2016.

1.1. List of regulatory documents for the development of the higher education program

The regulatory and legal framework for the development of the master's HE program includes:

- Federal Law No. 273-FZ dated December 29, 2012 "On Education in the Russian Federation";
- Federal Law No. 304-FZ dated July 31, 2020 "On Amendments to the Federal Law 'On Education in the Russian Federation' Concerning Issues of Student Upbringing";
- Federal State Educational Standard of Higher Education — Master's Degree in the field of study 13.04.02 Electric Power Engineering and Electrical Engineering, approved by Order of the Ministry of Science and Higher Education of the Russian Federation No. 147 dated February 28, 2018;
- Order of the Ministry of Education and Science of Russia No. 885, Ministry of Education of Russia No. 390 dated August 5, 2020 "On Practical Training of Students" (together with the "Regulations on Practical Training of Students");
- Order of the Ministry of Education and Science of Russia No. 245 dated April 6, 2021 "On Approving the Procedure for Organizing and Implementing Educational Activities in Higher Education Programs — Bachelor's Programs, Specialist's Programs, Master's Programs";
- Decree of the Government of the Russian Federation No. 1678 dated October 11, 2023

"On Approving the Rules for the Application by Organizations Engaged in Educational Activities of E-Learning and Distance Learning Technologies in the Implementation of Educational Programs";

- Order of the Ministry of Education and Science of the Russian Federation No. 1061 dated September 12, 2013 "On Approving the Lists of Specialties and Fields of Study in Higher Education";

- Order of the Ministry of Education and Science of Russia No. 208 dated February 27, 2023 "On Amendments to the Federal State Educational Standards of Higher Education";

- Order of the Ministry of Education and Science of Russia No. 882, Ministry of Education of Russia No. 391 dated August 5, 2020 "On the Organization and Implementation of Educational Activities in the Network Form of Implementing Educational Programs";

- Professional Standard **"20.035 Worker Performing Dispatch Functions in the Field of Operational Dispatch Management in the Electric Power Industry,"** approved by Order of the Ministry of Labor and Social Protection of the Russian Federation No. 137n dated March 18, 2021;

- Professional Standard **"20.005 Worker in the Design of Intelligent Control Systems in the Electric Power Industry,"** approved by Order of the Ministry of Labor and Social Protection of the Russian Federation No. 667n dated August 11, 2023;

- [Regulations](#) on the Development of Higher Education Programs at the Federal State Autonomous Educational Institution of Higher Education "North Caucasus Federal University," approved by the Academic Council of NCFU, Protocol No. 1 dated August 30, 2021;

- Regulations on Educational and Methodological Support of Higher Education Programs — Bachelor's Programs, Specialist's Programs, Master's Programs at the Federal State Autonomous Educational Institution of Higher Education "North Caucasus Federal University," approved by the Academic Council of NCFU, Protocol No. 12 dated February 20, 2023;

- Regulations on the Head of the Higher Education Program — Bachelor's Program, Specialist's Program, Master's Program at the Federal State Autonomous Educational Institution of Higher Education "North Caucasus Federal University," approved by the Academic Council of NCFU, Protocol No. 11 dated March 28, 2022;

- Regulations on the Organization of the Educational Process under Network Educational Programs at the Federal State Autonomous Educational Institution of Higher Education "North Caucasus Federal University" (new edition), approved by the Academic Council of NCFU, Protocol No. 5 dated November 27, 2025;

- Charter of the Federal State Autonomous Educational Institution of Higher Education "North Caucasus Federal University," approved by Order of the Ministry of Science and Higher Education of the Russian Federation No. 1365 dated December 28, 2018 (as amended March 5, 2021, Order No. 163).

1.2. General characteristics of the higher education program

1.2.1. Mission of the higher education program

The mission of the HE Program is to develop personal qualities, form general cultural, general professional and professional competencies on the basis of a harmonious combination of scientific, fundamental and professional training of personnel using the best domestic and world experience in electric power engineering and electrical engineering, and to form a technically literate, socially responsible personality.

1.2.2. Goal of the higher education program

The goal of the HE program is the formation and development of students' personal qualities, universal, general professional, and professional competencies that ensure the training of masters capable of solving problems of design, monitoring, and management of operating modes of intelligent power supply systems, using digital and information-measurement technologies, data analysis methods, and decision support in the operation and development of electric power facilities.

In the area of upbringing, the general objectives of the HE program are: the formation of students' socio-personal qualities: purposefulness, organization, diligence, responsibility, citizenship, communicativeness, tolerance, and enhancement of their general culture.

1.2.3. Duration of higher education under the educational program

The duration of education under the master's program in the field of study 13.04.02 Electric Power Engineering and Electrical Engineering, specialization (profile) "Intelligent Power Supply Systems," including vacations provided after the state final certification, regardless of the educational technologies applied, is **2 years** for full-time study.

For part-time (with in-person sessions) and distance learning modes, the duration increases by no less than 3 months and no more than six months compared to the duration of full-time study.

When studying under an individual curriculum, the duration for persons with disabilities may be increased by no more than six months upon their application compared to the duration established for the corresponding mode of study.

1.2.4. Workload of the Higher Education Program

The standard labor intensity of the educational program in the field of study 13.04.02 "Electric Power Engineering and Electrical Engineering is 120 credit units. regardless of the mode of study, educational technologies applied, implementation of the master's program using the network form, or implementation of the master's program under an individual curriculum, including accelerated study.

The volume of the master's program implemented in one academic year is no more than 70 c.u. regardless of the mode of study, educational technologies applied, implementation of the master's program using the network form, or implementation of the master's program under an individual curriculum (except for accelerated study), and for accelerated study — no more than 80 c.u.

Content	Labor intensity in weeks
	Full-time
Theoretical training and distributed internships	72
Examination sessions	11
Internships, including:	20
<i>Introductory Internship</i>	2
<i>Industrial Practice</i>	4
<i>Pre-graduation internship</i>	14
State Final Attestation, including:	4
<i>Preparation for and taking the state examination</i>	2
<i>Preparation for the defense and defense of the final qualification thesis</i>	2
Vacations	23
Total::	130

Content	Labor intensity in credit units
	Full-time
Theoretical training	69
Examination sessions	
Internships, including:	45
<i>Introductory Internship</i>	9
<i>Industrial Practice</i>	15

<i>Pre-graduation internship</i>	21
State Final Attestation, including:	6
<i>Preparation for and taking the state examination</i>	3
<i>Preparation for the defense and defense of the final qualification thesis</i>	3
Total:	120

1.3. Requirements for the level of training required to master the higher education program

The applicant must:

1. Have a state-issued document on higher education.
2. Successfully pass the entrance examinations.

Enrollment is carried out on the basis of competitive selection in accordance with the Admission Rules for Higher Education Programs — Bachelor's Programs, Specialist's Programs, Master's Programs for the 2026/2027 academic year at FSAAI HE "North Caucasus Federal University" (NCFU).

1.4. Field of Professional Activity of Graduates

Fields of professional activity and spheres of professional activity in which graduates who have completed the master's program (hereinafter — graduates) may carry out professional activities:

20 Electric Power Engineering (in the fields of electric power engineering and electrical engineering)

Graduates may carry out professional activities in other areas of professional activity and/or spheres of professional activity provided that their level of education and acquired competencies meet the qualification requirements for the employee.

Within the framework of completing the master's program, graduates may prepare for solving professional tasks of the following types:

- **Research and Development;**
- **Design;**
- **Technological.**

1.5. Objectives of professional activity of graduates

The graduate of the master's program is prepared to solve the following professional tasks, in accordance with the types of professional activity:

1. **Research and Development:**
 - study and analysis of scientific and technical information;
 - application of standard application software packages for mathematical modeling of processes and operating modes of facilities;
 - conducting experiments according to a specified methodology, compiling descriptions of conducted research and analyzing results;
 - compiling reviews and reports on completed work;
2. **Design:**
 - collection and analysis of data for design;
 - participation in calculations and design of professional activity facilities in accordance with the technical specification using standard design automation tools;
 - monitoring the compliance of developed projects and technical documentation with standards, technical specifications, and other regulatory documents;
 - justification of design calculations;
3. **Technological:**
 - calculation of schemes and parameters of equipment elements;
 - calculation of operating modes of professional activity facilities;

- monitoring operating modes of technological equipment;
- ensuring safe production;
- compilation and preparation of standard technical documentation.

1.6. Competencies of the graduate formed as a result of mastering the higher education program

The results of completing the Master's HE Program are determined by the competencies acquired by the graduate, i.e., their ability to apply knowledge, skills, and personal qualities in accordance with the objectives of professional activity.

As a result of completing this Master's HE Program, the graduate must possess the following competencies:

Universal Competencies (UC) of Graduates and Indicators of Their Achievement:

Category of Universal Competencies	Code and Name of Universal Competency	Code and Name of Indicator of Achievement of Universal Competency
Systemic and Critical Thinking	UC-1. Capable of conducting critical analysis of problem situations based on a systems approach and developing an action strategy	ID-1 _{UC-1} . Searches for the required information, performs its critical analysis, and consolidates the analysis results to solve the assigned task; ID-2 _{UC-1} . Analyses a problem situation and performs its decomposition into individual tasks; ID-3 _{UC-1} . Develops a strategy for solving the assigned task.
Project Development and Implementation	UC-2. Capable of managing a project at all stages of its life cycle	ID-1 _{UC-2} . Participates in project management at all stages of the project life cycle.
Teamwork and Leadership	UC-3. Capable of organising and leading a team, developing a team strategy to achieve the set objective	ID-1 _{UC-3} . . Demonstrates understanding of teamwork principles (knows roles within a team, types of leaders, and methods of workforce management); ID-2 _{UC-3} . Leads team members to achieve the assigned task.
Communication	UC-4. Capable of applying modern communication technologies, including in foreign language(s), for academic and professional interaction	ID-1 _{UC-4} . Engages in academic and professional interaction, including in a foreign language; ID-2 _{UC-4} . Translates academic texts (abstracts, annotations, reviews, articles, etc.) from or into a foreign language; ID-3 _{UC-4} . Uses modern information and communication tools for communication
Intercultural Interaction	UC-5. Capable of analysing and accounting for cultural diversity in the process of intercultural interaction	ID-1 _{UC-5} . Demonstrates understanding of the characteristics of different cultures and nations; ID-2 _{UC-5} . Builds social interaction taking into account the commonalities and distinctions of different cultures and religions
Self-organization and Self-development	UC-6. Capable of identifying and realising the priorities of one's own activities and ways	ID-1 _{UC-6} . Assesses one's own resources and their limits (personal, situational,

(including health preservation)	of improving them based on self-assessment	temporal), and uses them optimally to successfully complete an assigned task ID-2 ^{UC-6} . Identifies the priorities of personal growth and ways to improve one's own activities based on self-assessment.
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General professional competencies and indicators of their achievement

Category of general professional competencies	Code and name of general professional competencies	Code and name of indicator for achieving general professional competencies
Planning	GPC-1. Capable of formulating research objectives and tasks, identifying task-solving priorities, and selecting evaluation criteria	ID-1GPC-1. Formulates research objectives and tasks; ID-2GPC-1. Determines the sequence for solving tasks; ID-3GPC-1. Formulates decision-making criteria.
Research	GPC-2. Capable of applying modern research methods, evaluating and presenting the results of completed work	ID-1GPC-2. Selects the appropriate research method to solve the assigned task; ID-2GPC-2. Conducts analysis of the obtained results; ID-3GPC-2. Presents the results of the completed work

Selection of Professional Standards Corresponding to the Professional Activity of Graduates

When determining professional competencies based on professional standards, the Organization selects professional standards corresponding to the professional activity of graduates from those specified in the appendix to the FSES HE and/or other professional standards corresponding to the professional activity of graduates, from the register of professional standards (list of types of professional activity) posted on the specialized website of the Ministry of Labor and Social Protection of the Russian Federation "Professional Standards" (<http://profstandart.rosmintrud.ru>) (if relevant professional standards exist).

In the absence of professional standards corresponding to the professional activity of graduates, professional competencies are determined by the Organization based on an analysis of the requirements for professional competencies imposed on graduates in the labor market, generalization of domestic and foreign experience, consultations with leading employers, employer associations in the industry where graduates are in demand, and other sources.

Field of professional activity	Professional standard	Generalized labor functions	Labor functions		Qualification level (sublevel)
			Name	Code	
20 Electric Power Engineering	20.035 Worker Performing Dispatch Functions in the Field of Operational Dispatch	Management of the electric power system's operating mode	Frequency regulation of electric current	A/01.6	6
			Regulation of active power flows	A/02.6	6

	Management in the Electric Power Industry		Voltage regulation in the electric network with nominal voltage of 110 kV and above	A/03.6	6
			Maintenance of active power reserve	A/04.6	6
20 Электроэнергетика	20.005 Worker in the Design of Intelligent Control Systems in the Electric Power Industry	Organization of the development and issuance of design documentation for ICS in electric power engineering	Development of the concept and technical specification for the design of ICS for electric power facilities	C/01.7	7
			Monitoring of the development of the ICS design for electric power facilities	C/02.7	7
			Implementation of author's supervision over compliance with approved design solutions of ICS design documentation for electric power facilities	C/03.7	7
			Implementation of measures for protection of copyright on ICS design solutions for electric power facilities	C/04.7	7

Professional Competencies (PC) of Graduates and Indicators of Their Achievement

Professional Tasks	Code and Name of Professional Competency	Code and Name of Indicator of Achievement of Professional Competency	Basis (PS, experience analysis)
Research and Development			
study and analysis of scientific and technical information; application of standard application software packages for mathematical modeling of processes and operating modes of facilities; conducting experiments according to a specified methodology, compiling descriptions of conducted research and analyzing results; compiling reviews and reports on completed work	PC-1. Capable of participating in research and development activities in the field of electrical power engineering	ID-1. Performs analysis and processing of scientific and technical information on the research subject from domestic and foreign sources; ID-2. Conducts experiments according to a given methodology; processing and analyses research results; ID-3. Compiles reports and presents the results of completed work; ID-4. Prepares applications for industrial property objects.	Experience analysis
Design			
collection and analysis of data for design; participation in calculations and design of professional activity	PC-2. Capable of participating in the design of objects of professional activity	ID-1. Performs calculation and analysis of the economic and technical characteristics of the object being	Experience analysis

facilities in accordance with the technical specification using standard design automation tools; monitoring compliance of developed projects and technical documentation with standards, technical specifications, and other regulatory documents; justification of design calculations;		designed; ID-2. Evaluates the feasibility of implementing an investment project and selects the most optimal investment alternative.	
Technological			
calculation of schemes and parameters of equipment elements; calculation of operating modes of professional activity facilities; monitoring operating modes of technological equipment; ensuring safe production; compilation and preparation of standard technical documentation.	PC-3. Capable of managing the power system operating mode of an electrical power supply system using digital technologies	ID-1. Performs calculations of the performance indicators of electrotechnical equipment and its systems; ID-2. Ensures the required operating modes and specified parameters of the technological process for elements of power supply systems; ID-3. Applies knowledge of digital technologies in the processes of generation, transmission, and distribution of electrical energy; ID-4. Applies knowledge of the specific features of installation, start-up and commissioning, adjustment, testing, and acceptance into service of various types of electrical power and electrotechnical equipment.	20 Electric Power Engineering 20.005 Worker in the Design of Intelligent Control Systems in the Electric Power Industry 20.035 Worker Performing Dispatch Functions in the Field of Operational Dispatch Management in the Electric Power Industry

Achievement of the HE program learning outcomes is carried out through the mastery of a group of interrelated competencies (universal, general professional, professional) that constitute aggregated learning outcomes, which are formed within modules (their constituent disciplines) and allow the graduate to implement a specific type of professional activity and the corresponding specific labor functions and professional tasks.

The learning outcomes mastered within modules (their constituent disciplines) ensure the gradual formation of the HE program learning outcomes.

List of planned learning outcomes and their constituent competencies

Code of learning outcome	Learning outcome	Competencies formed within the framework of achieving the learning outcomes
P1	Capable of conducting critical analysis of problematic situations based on a systemic approach, and developing a strategy of action.	UC-1
P2	Capable of managing a project at all stages of its life cycle.	UC-2
P3	Capable of organizing and leading a team, developing a team strategy to achieve the set goal.	UC-3
P4	Capable of applying modern communication technologies, including in foreign language(s), for academic and professional interaction.	UC-4
P5	Capable of analyzing and considering cultural diversity in the process of intercultural interaction.	UC-5
P6	Capable of formulating research goals and objectives, identifying priorities for solving tasks, and selecting evaluation criteria.	GPC-1
P7	Capable of applying modern research methods, evaluating, and presenting the results of completed work.	GPC-2
P8	Capable of participating in research activities in the field of electric power engineering.	PC-1
P9	Capable of participating in the design of professional activity facilities	PC-2
P10	Capable of managing the electric power system's operating mode	PC-3

1.7. Documents regulating the content and organization of the educational process during the implementation of the higher education program

1.7.1. Academic calendar schedule

The academic calendar establishes the sequence and duration of theoretical studies, examination sessions, internships, state final certification, and vacations.

1.7.2. Curriculum

The curriculum specifies the list of disciplines (modules), internships, forms of intermediate assessment, state final attestation of students, and other types of educational activities, indicating their volume in academic hours and credit units, as well as their sequence and distribution by study period. The curriculum allocates the volume of students' work in interaction with the instructor (students' contact work with the instructor) (by type of training session) and students' independent work in academic hours and credit units. For each discipline (module) and internship, the form of intermediate assessment of students is indicated. Elective disciplines (modules) are reflected in the curriculum but are not included in the volume of the educational program..

1.7.3. Work programs of disciplines (modules), including assessment tools

The HE Program includes syllabi of all academic disciplines (modules) provided for by the curriculum, including disciplines of the student's choice. Syllabi for elective disciplines are developed but are not included in the HE program.

In the syllabus of each discipline (module), the final learning outcomes must be clearly formulated in a competency-based approach in strict accordance with the acquired knowledge, skills, and abilities as a whole for the HE Program, taking into account the specialization (profile).

For assessing students' personal achievements against the stage-by-stage requirements of the corresponding HE Program, the departments create assessment tools for ongoing progress monitoring and intermediate assessment. These tools may include: control questions and standard tasks for practical classes, laboratory and test papers, colloquia, credit tests and examinations; tests and computer testing programs; sample topics for term papers/projects, abstracts, etc., as well as other forms of control that allow assessing the degree of formation of students' competencies.

1.7.4. Internship programs, including assessment tools

In accordance with the Federal State Educational Standard for Higher Education in the field of study 13.04.02 "Electric Power Engineering and Electrical Engineering," the "Internships" section of the master's HE program is mandatory and represents a type of training session directly oriented towards the professional and practical training of students. Internships consolidate the knowledge and skills acquired by students as a result of mastering theoretical courses, develop practical skills, and contribute to the comprehensive formation of universal, general professional, and professional competencies of students.

The following types of internships are provided for in the implementation of this educational program:

a) Types of Introductory Internship:

- Introductory internship;
- Research work (obtaining primary research skills).

б) Types of Industrial internship::

- Research work;
- Practice in Acquiring Professional Skills and Professional Work Experience;
- Pre-graduation internship.

Internships of students in third-party organizations are organized on the basis of concluded agreements on practical training of students, in accordance with which students are provided with

internship places, as well as organizational and information-methodological assistance during the internship. Students may independently propose internship places. In this case, a letter of request is sent from the faculty to the relevant organization. The student begins the internship only after official confirmation of the organization's (enterprise's) consent. If there are vacancies, students may be hired for them if the work performed meets the requirements of the internship program.

Upon completion of the internship, the student draws up a report on the internship, which is defended before a commission. Based on the results of the report, a grade (pass/fail with a mark) is given.

For persons with disabilities and limited health capacities, the choice of internship places is coordinated with the requirement of their accessibility for these students.

The assessment of results, forms, and procedure for conducting internships are specified in the Regulations on the Organization and Conduct of Internships for Students in Higher Education Programs — Bachelor's Programs, Specialist's Programs, Master's Programs at the Federal State Autonomous Educational Institution of Higher Education "North Caucasus Federal University" (Order No. 1556-O dated July 18, 2025).

For each internship, programs have been developed that include:

- Indication of the type of internship and the form(s) of its conduct;
- List of planned learning outcomes during the internship, correlated with the planned results of mastering the HE program;
- Indication of the place of the internship in the structure of the HE program;
- Indication of the volume of the internship in credit units and its duration in weeks in academic hours;
- Content of the internship;
- Indication of reporting forms for the internship;
- Assessment tools for intermediate assessment of students in the internship;
- List of educational literature and Internet resources necessary for the internship;
- List of information technologies used during the internship, including a list of software and information reference systems (if necessary);
- Description of the material and technical base necessary for the internship.

The assessment tools for the internship provided for by the HE program reflect questions and tasks that allow assessing the degree of formation of competencies and achievements of students during the internship.

2. CONDITIONS FOR IMPLEMENTING THE EDUCATIONAL PROGRAM

2.1 Information Support for Program Implementation

Each student during the entire period of study is provided with individual unlimited access to several electronic library systems (electronic libraries) and to the university's electronic information and educational environment.

The electronic library system and the electronic information and educational environment provide the student with the ability to access from any point where there is access to the Internet, both on the territory of the organization and outside it.

The organization's electronic information and educational environment provide:

- access to curricula, syllabi of disciplines, internships, to publications of electronic library systems and electronic educational resources specified in the syllabi of disciplines (modules) and internships;
- formation of an electronic portfolio of the student, including the preservation of the student's works, reviews, and evaluations of these works by any participants in the educational process;
- recording of the educational process, results of intermediate assessment, and results of mastering the HE program;
- conducting all types of classes, procedures for assessing learning outcomes, the implementation of which is provided for using e-learning and distance learning technologies;
- interaction between participants in the educational process, including synchronous and/or asynchronous interaction via the Internet.

2.2 Material, Technical, and Educational-Methodological Support of the Master's Program

The material and technical base of FSAAI HE "NCFU" (premises and equipment) ensures the conduct of all types of disciplinary training, including lectures, laboratory, practical classes of students provided for by the curriculum, state final certification, and complies with current sanitary and fire safety rules and regulations.

The premises are study rooms for conducting classes, equipped with equipment (or their virtual analogues) and technical teaching aids.

Rooms for independent work of students are equipped with computer equipment with the ability to connect to the Internet and provide access to the university's electronic information and educational environment.

The organization is provided with the necessary set of licensed and freely distributed software, the composition of which is subject to updating as necessary.

The implementation of the HE Program is provided with appropriate educational and methodological materials: textbooks or study guides (lecture courses); study guides (practicums) or methodological instructions for performing practical or laboratory work; methodological recommendations for organizing students' independent work or methodological instructions for performing certain types of work: term papers/projects, test papers, abstracts; educational visual aids providing thematic illustrations; methodological instructions for organizing and conducting each type of internship provided for by the curriculum; methodological instructions for performing final qualifying theses.

Specific educational and methodological materials are defined in the syllabi of disciplines (modules) and internships.

When using printed publications in the educational process, the library collection is stocked with printed publications at the rate of at least 0.25 copies of each of the publications specified in the syllabi of disciplines (modules), internship programs, per one student from among those simultaneously studying the relevant disciplines (modules) or undergoing the relevant internship.

Students are provided with access (remote access) to modern professional databases and information reference systems, the composition of which is determined in the syllabi of disciplines and is subject to updating as necessary.

Students with disabilities and limited health capacities are provided with printed and/or electronic educational resources in forms adapted to the limitations of their health.

2.3 Staffing Conditions for Implementing the Master's Program

The implementation of the master's program is provided by pedagogical workers of the Organization, as well as by persons attracted by the Organization to the implementation of the master's program on other terms.

The qualifications of the pedagogical workers of the Organization must meet the qualification requirements specified in qualification reference books and/or professional standards (if any).

At least 70 percent of the number of pedagogical workers of the Organization participating in the implementation of the master's program, and persons attracted by the Organization to the implementation of the master's program on other terms (based on the number of filled positions, reduced to integer values), must conduct scientific, educational-methodological and/or practical work corresponding to the profile of the taught discipline (module).

At least 5 percent of the number of pedagogical workers of the Organization participating in the implementation of the master's program, and persons attracted by the Organization to the implementation of the master's program on other terms (based on the number of filled positions, reduced to integer values), must be managers and/or employees of other organizations carrying out labor activity in the professional sphere corresponding to the professional activity for which graduates are being prepared (having at least 3 years of work experience in this professional sphere).

At least 70 percent of the number of pedagogical workers of the Organization and persons attracted to educational activities on other terms (based on the number of filled positions, reduced to integer values) must hold an academic degree (including an academic degree obtained in a foreign state and recognized in the Russian Federation) and/or an academic title (including an academic title obtained in a foreign state and recognized in the Russian Federation).

General supervision of the scientific content of the master's program should be carried out by a scientific and pedagogical worker of the Organization holding an academic degree (including an academic degree awarded abroad and recognized in the Russian Federation), carrying out independent research (creative) projects (participating in the implementation of such projects) in the field of study, having annual publications based on the results of this research (creative) activity in leading domestic and/or foreign peer-reviewed scientific journals and publications, and also carrying out annual approbation of the results of this research (creative) activity at national and international conferences.

2.4 Financial Conditions for Implementing the HE Program

Financial support for the implementation of the HE Program in the field of study 13.04.02 Electric Power Engineering and Electrical Engineering by FSAAI HE NCFU is provided in an

amount not lower than the basic standard costs for the provision of public services in the field of education for this level of education and field of study established by the Ministry of Education and Science of the Russian Federation, taking into account correction factors that take into account the specifics of educational programs in accordance with the Methodology for Determining the Standard Costs for the Provision of Public Services for the Implementation of State-Accredited Higher Education Programs in Specialties and Fields of Study.

2.5 Mechanism for Assessing the Quality of Educational Activities and Student Training

The quality of educational activities and student training under the program is determined within the framework of the internal assessment system, as well as external independent assessment during professional-public accreditation on a voluntary basis.

In order to improve the master's program, the university attracts employers and/or their associations, legal entities and/or individuals to conduct internal assessment of the quality of educational activities and student training.

Students are provided with the opportunity to evaluate the conditions, content, organization, and quality of the educational process as a whole and individual disciplines (modules) and internships.

Professional-public accreditation is carried out by employers, their associations, as well as authorized organizations or authorized national professional-public accreditation bodies in order to recognize the quality and level of graduate training as meeting the requirements of professional standards and labor market requirements for specialists of the relevant profile.

3. EDUCATIONAL PROGRAM AND CALENDAR PLAN FOR EDUCATIONAL WORK

3.1. Goals and Objectives of the Educational Program within the Educational Program

The goal of the educational (upbringing) program is, based on basic social values, to ensure the personal development of students, manifested in:

- the development of a positive attitude towards social values, i.e., the development of their socially significant relationships;
- the acquisition of experience in behavior corresponding to these values, experience in applying the formed knowledge and relationships in practice, and the acquisition of experience in carrying out socially significant deeds.

Objectives of the program:

- development of worldview and actualization of the system of basic personal values;
- familiarizing students with universal moral norms, national foundations, and academic traditions;
- fostering respect for the law, norms of collective life, development of civil and social responsibility;
- fostering a culture of interethnic communication in the youth environment;
- prevention of manifestations of national and religious extremism and national intolerance in the student environment;
- increasing the level of safe behavior culture;
- formation of a culture of interaction between Cossack societies and associations of the region and student associations of NCFU, and involvement of the Cossacks in creative activities aimed at strengthening unity, harmonizing interethnic (interethnic) relations, preventing extremism and preventing conflicts on national and religious grounds in the youth environment of NCFU;
- development of a system of social support for student youth;
- fostering a culture of financial literacy, developing a system for protecting social rights and ensuring social guarantees for students belonging to the privileged category;
- fostering a positive attitude towards work, fostering socially significant purposefulness and responsibility in business relations;
- ensuring personal development and its socio-psychological support, forming personal qualities necessary for effective professional activity;
- identification and support of talented youth, formation of organizational skills, creative potential, involvement of students in processes of self-development and self-realization;
- formation of a culture and ethics of professional communication;
- fostering an internal need for a healthy lifestyle, a responsible attitude towards the natural and socio-cultural environment;
- development of personal qualities and attitudes (responsibility, discipline, self-management), social skills (emotional intelligence, orientation in the information space, speed of adaptation, communication; ability to work in a team) and managerial abilities (skills in making decisions under conditions of uncertainty and change, time management, leadership, critical thinking).

3.2. Educational Program within the Structure of the Educational Program

The HE Program in the field of study 13.04.02 "Electric Power Engineering and Electrical Engineering," specialization (profile) " Training Program of Electrical Engineering " includes the Educational (Upbringing) Program and the Calendar Plan for Educational Work.

The work program of education (upbringing) as part of the main HE program is developed for the period of its implementation and defines a set of key characteristics of the system of educational work of the higher education institution (principles, methodological approaches, goal, objectives, directions, forms, means and methods of education, planned results, etc.).

3.3 Content of the Educational Program

The Educational Program reflects the university's activities in the following traditional areas:

- Intellectual education;
- Spiritual and moral education;
- Civic and patriotic education;
- Aesthetic education;
- Physical education;
- Legal education;
- Environmental education;
- Educational activities for the professional development of students;
- Development of student self-government;
- Development of project activities;
- Prevention of asocial forms of behavior.

3.4. Calendar Plan for Educational Work within the Educational Program

The academic calendar schedule establishes the sequence and volume of implementation of educational activities (order, volume, time boundaries).

3.5 List of Resources Required for the Educational Process

Resource provision allowing the full implementation of the Educational Program at NCFU and the substantive part of educational activities includes the following types: regulatory and legal support; staffing; financial support; information support; scientific-methodological and educational-methodological support; material and technical support.

3.6. NCFU Infrastructure Supporting the Implementation of the Educational Program

The infrastructure of NCFU supporting the implementation of the Educational Program includes:

- educational space (study rooms, computer labs, educational and research laboratories, specialized classrooms, computer-linguaphone classrooms);
- research and education centers (RECs);
- research laboratories;
- support services (transport, communications, catering service, etc.).

The territory of NCFU houses a number of sports facilities, namely: a gymnastics gym, a game sports hall, a weightlifting/fitness gym, a wrestling gym, a physical therapy gym, a swimming pool, and the "Burevestnik" stadium.

Additionally, the university buildings house: concert halls, the Museum of Archaeology, the research and education center "Museum of Regional Literature and Literary Local History," the Geological Museum, the Zoological Museum, the NCFU Museum, and the Museum Center.