

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION
Federal State Autonomous Educational Institution for Higher Education
«North-Caucasus Federal University»

APPROVED BY

Dean of FPE of NCFU
Candidate of Technical Sciences,
Associate Professor A.E. Verisokin

Educational Practice Program
Introductory Internship

Field of study	13.04.02 Electric Power Engineering and Electrical Engineering
Specialization (Profile)	Training Program of Electrical Engineering
Year of commencement of studies	2026
Mode of study Implemented in semester(s)	full-time 2

DEVELOPED BY:

Associate Professor of
the Department of
Automated Electric
Power Systems and
Power Supply,
Kostyukov D.A.

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1. Objectives of the Practice

The objectives of the educational practice "Introductory Practice" in the field of study 13.04.02 Electric Power Engineering and Electrical Engineering are to consolidate the theoretical knowledge acquired by students in one or more disciplines, familiarize students with the nature and specifics of their future professional activities, gain primary professional skills and abilities, and acquire and improve competencies in the professional field.

2. Tasks of the Practice

The objectives of the placement are:

1. To develop universal and general professional competencies in students.
2. To study the principles of organizing the work of project teams.
3. To become familiar with contemporary scientific and technical projects in the field of electric power engineering and to acquire skills in analyzing project implementation.

3. Place of the Practice in the Structure of the Higher Education Program

The placement belongs to Block 2. Practice, Mandatory Part. The completion of the placement is based on the disciplines "Research Methodology" and "Project Management in the Professional Field."

4. Place and Time of the Practice

The bases for the educational practice of students in the field of study 13.03.02 "Electric Power Engineering and Electrical Engineering" are structural subdivisions of the university, enterprises of the city of Stavropol, Stavropol region, and other constituent entities of the Russian Federation, both directly involved in the generation and distribution of electricity and those consuming electrical energy (factories, plants, housing and communal services facilities, electrical installation organizations).

The timing of the practice is established in accordance with the curriculum and the academic calendar. The duration of the practice for full-time students is 2 weeks and takes place in the 2nd semester.

5. List of planned results of the practice, mapped to the planned results of mastering the educational program

Competency code and formulation	Indicator code and formulation	Planned results describing the stages of competency and indicator formation
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.	Understands the principles of project management in the professional field. Able to analyze the stages of the project life cycle. Familiar with risk control tools.
UC-3 Capable of organising and leading a team, developing a team strategy to achieve the set objective	ID-1UC-3 Demonstrates understanding of teamwork principles (knows roles within a team, types of leaders, and methods of workforce management))	Demonstrates a solid understanding of team roles – including executor, coordinator, expert, and others

		– and recognizes their significance in project work. Is also familiar with leadership styles (authoritarian, democratic, laissez-faire) and comprehends how each influences team effectiveness.
	ID-2 UC-3 Leads team members to achieve the assigned task.	Able to delegate tasks within his/her team based on their competencies.
UC-4 Capable of applying modern communication technologies, including in foreign language(s), for academic and professional interaction	ID-1UC-4 Engages in academic and professional interaction, including in a foreign language;	Possesses skills in searching for information from foreign sources.
	ID2UC-4 Translates academic texts (abstracts, annotations, reviews, articles, etc.) from or into a foreign language	Translates scientific articles using a dictionary
UC-5 Capable of analysing and accounting for cultural diversity in the process of intercultural interaction	ID-1UC-5 Demonstrates understanding of the characteristics of different cultures and nations;	Establishes and maintains professional communication with peers from other regions.
	ID-2UC-5 Builds social interaction taking into account the commonalities and distinctions of different cultures and religions.	Able to assemble a team for the execution of a scientific-technical project while considering the individual attributes of the team members.
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;	Is capable of independently defining and clearly formulating the goal, objectives, and success criteria of a scientific or applied research project in the field of electric power engineering and electrical engineering, taking into account the relevance of the problem, available resources (time, equipment, data), and the requirements of the customer/scientific supervisor.
	ID-2GPC-1 Determines the sequence for solving tasks;	Establishes the workflow sequence for completing an individual assignment
	ID-3GPC-1 Formulates decision-making criteria.	Defines project risks and constructs a risk matrix
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;	Selects a scientific research method and mathematical apparatus for result processing
	ID-2GPC-2 Conducts analysis of the obtained results	Performs an analysis of the results, including with modern software, and compiles a SWOT analysis.
	ID-3GPC-2 Presents the results of the completed work.	Presents the results of the completed work, including through the use of modern software tools.

6. Structure and content of the practice

The total labor intensity of the practice is 3 credit units (108 hours).

Sections (stages) of practice	Competencies /indicators implemented	Types of academic work during the practice, including independent work	Labor intensity (hours)	Labor intensity (hours)
Introductory lecture	ID-1UC-3 ID-2UK-5 ID-1GPC-1 ID-2GPC-1 ID-3GPC-1	Familiarization with the practice program, consultations on issues arising during the educational practice	2	Oral quiz
Safety briefing	ID-2UC-2 ID-1UC-3 ID-2UC-3 ID-1UC-4 ID-2UC-4	Familiarization with safety instructions	2	Observation
Collection of factual material	ID-1UC-2 ID-1UC-3 ID-2UC-3 ID-1UC-4 ID-2UC-4 ID-1UC-5 ID-1GPC-1 ID-2GPC-1	Work on an individual assignment	40	Observation
Systematization of factual and literary	ID-3GPC-1 ID-1GPC-2	Work on an individual assignment	20	Observation
Processing of factual material	ID-3GPC-1 ID-1GPC-2 ID-1GPC-2	Work on an individual assignment	36	Observation
Preparation of the practice report	OD-3GPC-2	Report writing	8	Report defense

The placement is implemented in the form of practical training. Practical training is a form of organizing educational activities during the completion of an educational program, under which students perform specific types of work related to their future professional activities and aimed at forming, reinforcing, and developing practical skills and competencies relevant to the profile of the corresponding educational program.

7. Methodological recommendations for students on completing the practice

7.1 Use of the educational and methodological materials of the practice

At the first stage, it is necessary to familiarize yourself with the structure of the practice, mandatory types of work and forms of reporting. To successfully complete the assignments of the educational practice "Introductory internship", the student must independently study the presented sources of literature in detail

7.2 Assessment tools for the practice

The assessment tools for the educational practice "Introductory Practice" are based on the list of competencies to be mastered, indicating the stages of their formation during the practice. The assessment tools ensure objective monitoring of the achievement of the planned learning outcomes. The assessment tools include:

- a description of indicators and criteria for assessing competencies at various stages of their formation, and a description of grading scales;
- methodological materials defining the procedures for assessing knowledge, skills, abilities, and/or experience of activities that characterize the stages of competency formation;
- standard control tasks and other materials necessary for assessing knowledge, skills, and the level of mastery of the competencies being formed during the practice.

The assessment tools are an appendix to this practice program.

8. Educational, methodological and informational support of the practice

8.1. Recommended literature

8.1.1. Basic literature

1. Rybalova, E. A. Project Management : textbook : [16+] / E. A. Rybalova ; Tomsk State University of Control Systems and Radioelectronics (TUSUR), Faculty of Distance Learning. – Tomsk : Faculty of Distance Learning of TUSUR, 2015. – 206 p. : diags., tables, ill. – Access mode : by subscription. – URL: <https://biblioclub.ru/index.php?page=book&id=480900> (accessed: April 12, 2022). – Bibliography : p. 175-177. – Text : electronic.

2. Sidorenkov, A.V. Managing the Effectiveness of Groups and Teams in Organizations : textbook / A.V. Sidorenkov, N.Yu. Ulyanova ; Ministry of Education and Science of the Russian Federation, Southern Federal University. – Rostov-on-Don : Publishing House of the Southern Federal University, 2016. – 325 p. : diags., tables. – Bibliography in the book. – ISBN 978-5-9275-1989-7 ; Same [Electronic resource]. – URL: <http://biblioclub.ru/index.php?page=book&id=493314>

8.1.2. Additional literature

1. Pavlov, A.N. Effective Project Management Based on the PMI PMBOK® 6th Edition Standard : practical guide : [16+] / A.N. Pavlov. – Electronic edition. – Moscow : Laboratory of Knowledge, 2019. – 273 p. : diags., tables. – (Projects, Programs, Portfolios). – Access mode : by subscription. – URL: <https://biblioclub.ru/index.php?page=book&id=494023> (accessed: April 12, 2022). – ISBN 978-5-00101-619-9. – Text : electronic.

2. Krasnostanova, M.V. From an Inventive Team to a Hi-Tech Corporation: Human Factors and Dynamics of an Innovation Project : textbook / M.V. Krasnostanova. – Moscow : RG-Press, 2014. – 88 p. : diags. – Bibliography in the book. – ISBN 978-5-9988-0270-6 ; Same [Electronic resource]. – URL: <http://biblioclub.ru/index.php?page=book&id=276547>. GOST R ISO 31000-2019. Risk management. Principles and guidelines

8.1.3. Methodological literature

1. Methodological guidelines for the organization and conduct of introductory internship for students of the field of study 13.03.02 "Electric Power Engineering and Electrical Engineering".

8.1.4. Internet resources

1. <http://catalog.ncfu.ru> – electronic catalogs of the Association of Electronic Libraries of Educational Institutions and Organizations of the North Caucasus Federal District (SKFO).

2. <http://elibrary.ru> – Scientific Electronic Library eLIBRARY.RU

3. <https://biblioclub.ru/> Electronic Library System "University Library Online"
4. www.iprbookshop.ru – Electronic Library System IPRbooks
5. <https://www.rosseti.ru/> – Website of the Rosseti Group of Companies

8.2. Software:

No special software is required/

9. Material and technical support of the practice

A classroom equipped with specialized furniture and technical teaching aids used for presenting educational information to a large audience: personal computers, an instructor's computer, a projector, and a magnetic marker board.

10. Features of completing the practice by persons with disabilities

Students with disabilities are provided with special textbooks, teaching aids and didactic materials, special technical means of learning for collective and individual use, services of an assistant who provides students with the necessary technical assistance, as well as sign language interpreting and typhlo-sign language interpreting services. Completing the practice by students with disabilities may be organized together with other students, as well as in separate groups.

Completion of the practice by students with disabilities is carried out taking into account the characteristics of psychophysical development, individual capabilities and health status. In order to ensure accessibility of higher education under the educational program for persons with disabilities during the practice, the following is provided:

1) For persons with visual disabilities:

- presence of an assistant who provides the student with the necessary technical assistance taking into account individual characteristics (helps to take a seat, move around, read and complete the task, including writing under dictation);
- written assignments, as well as instructions on the procedure for their completion, are formatted in enlarged font;
- special textbooks, teaching aids and didactic materials (with large print or audio files);
- individual uniform lighting of at least 300 lux;
- if necessary, a magnifying device is provided to the student for completing the task.

2) For persons with hearing disabilities:

- presence of an assistant who provides the student with the necessary technical assistance taking into account individual characteristics (helps to take a seat, move around, read and complete the task, including writing under dictation);
- provision of collective sound amplification equipment; if necessary, the student is provided with individual sound amplification equipment;
- provision of appropriate sound means of information reproduction.

3) For persons with musculoskeletal disorders (including those with severe motor impairments of the upper limbs or absence of upper limbs):

- written assignments are performed on a computer with specialized software or dictated to an assistant;
- at the student's request, assignments may be completed orally.