

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION
ederal 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

**ASSESSMENT TOOLS
for the Industrial practice
Pre-Graduation 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	full-time
Implemented in semester(s)	4

Foreword

1. Purpose: The assessment tools for the Industrial practice “Pre-Graduation Internship” are intended to assess students’ knowledge during the placement, for ongoing progress control and intermediate assessment. The tools include a set of control assignments for the placement.

2. The assessment tools are an appendix to the program of the Industrial practice “Pre-Graduation Internship”.

3. Developer: Zelensky E.G., Associate Professor of the Department of Automated Electric Power Systems and Power Supply.

4. The assessment tools have undergone expert review.

Members of the expert group:

Chairperson: Kononov Yu.G., Head of the Department of Automated Electric Power Systems and Power Supply.

Committee members:

Demin M.S., Associate Professor of the Department of Automated Electric Power Systems and Power Supply.

Petrov A. V., Associate Professor of the Department of Automated Electric Power Systems and Power Supply.

Representative of the employer organization: Solovyev I.S., Deputy Chief Engineer of the Western Electric Networks, branch of PAO "Rosseti North Caucasus" – "Stavropolenergo" (Stavropol Region).

Expert opinion: The assessment tools correspond to the educational program of higher education in the field of study 13.03.02 Electric Power Engineering and Electrical Engineering and are recommended for assessing the level of competency formation during ongoing progress control and intermediate assessment of students in the placement “Pre-Graduation Internship”.

5. The validity period of the assessment tools is determined by the period of implementation of the educational program.

1. Описание показателей и критериев оценивания на различных этапах их формирования, описание шкал оценивания

Competency(ies), indicator(s)	Levels of Competency Formation			
	Minimum level not achieved (Unsatisfactory) – 2 points	Minimum level (Satisfactory) – 3 points	Medium level (Good) – 4 points	High level (Excellent) – 5 points
<i>PC-1 Capable of participating in research and development activities in the field of electrical power engineering</i>				
Conducts systematic analysis and processing of scientific and technical information on the research topic. ID-1 Performs calculation and analysis of the economic and technical characteristics of the object being designed;	Cannot find and process information, lacks systematic approach in analysis	Finds and processes information, but the analysis is superficial, without deep systematization	Conducts analysis with systematization, but inaccuracies in data interpretation are possible	Demonstrates in-depth analysis, systematization, and critical evaluation of information
Conducts an experiment according to a given methodology; processes the obtained data, performs their analysis, interprets the results taking into account errors and possible improvements to the methodologies. ID-2. Conducts experiments according to a given methodology; processing and analyses research results;	Cannot perform the experiment or process the data	Performs the experiment and data processing, but with errors; interpretation is superficial	Conducts the experiment and analysis correctly, but the interpretation is not sufficiently in-depth	Fully correct execution of the experiment, in-depth analysis and interpretation with suggestions for improving the methodologies
Prepares a report on the work performed, including visualizing the obtained results using modern digital technologies. ID-3. Compiles reports and presents the results of completed work;	The report is missing or does not meet the requirements	The report is prepared, but the structure is violated, visualization is absent or incorrect	The report meets the requirements, visualization is present but could be improved	The report is clearly structured, contains professional visualization and in-depth analysis
<i>PC-2. Capable of participating in the design of objects of professional activity</i>				

Determines the technical characteristics of the research object. ID-1. Performs calculation and analysis of the economic and technical characteristics of the object being designed;	Is unable to determine the characteristics of the research object	Determines the characteristics of the research object; is unable to compile a list of possible solutions to the assigned tasks	Determines the characteristics of the research object; compiles a list of possible solutions to the assigned tasks	Accurately determines the characteristics of the research object; provides a comprehensive and well-reasoned list of possible solutions to the assigned tasks
Compiles a list of possible solutions to the assigned tasks. ID-2. Evaluates the feasibility of implementing an investment project and selects the most optimal investment alternative.	Cannot propose any options	Proposes options, but without analysis or justification	Proposes options with partial analysis	Provides a complete list of options with in-depth analysis and justification

Assessment criteria for competencies

Grade «Excellent» is awarded to the student if the student fully understands the principles of project management, describes the stages of the project lifecycle in detail, and is able to apply risk control tools in real-world situations; demonstrates a deep understanding of team roles and leadership styles, and can analyze their impact on team performance; effectively distributes tasks, taking into account the competencies of the performers, and ensures the achievement of set goals; works fluently with foreign sources, is able to analyze and use information without a dictionary; translates text accurately and competently, using a dictionary only for rare terms; interacts effectively while respecting cultural and religious differences, demonstrating a high level of tolerance; effectively forms a team, considering individual characteristics and assigning roles to achieve project goals; independently defines clear, achievable goals and objectives, taking into account all available resources and requirements; accurately and logically determines the sequence of task execution, taking into account all stages; accurately formulates risks, creates a detailed risk matrix, and proposes methods for their mitigation; independently selects the optimal research method and justifies his/her choice; conducts comprehensive analysis, uses modern tools, and draws accurate and well-founded conclusions; effectively presents the results, uses modern tools, and the structure and content are impeccable.

Grade "Good" is awarded to the student if the student understands the stages of the project lifecycle, can describe them and provide examples, but is not always able to apply risk control tools; knows team roles and leadership styles and can explain their significance, but experiences difficulties in applying this knowledge in practice; is able to distribute tasks taking into account the competencies of the performers, but sometimes makes mistakes in planning; is able to find and understand information from foreign sources, but sometimes requires the use of a dictionary; translates text with minor errors and uses a dictionary for complex terms; is able to conduct business communication and takes into account cultural differences, but sometimes makes mistakes; forms a team taking into account individual characteristics, but experiences difficulties in role distribution; clearly formulates the goal and objectives, but sometimes does not take into account available resources; correctly determines the sequence, but sometimes requires adjustments; formulates risks and creates a matrix, but the assessment is not always accurate; selects an appropriate method, but sometimes requires assistance in its application; conducts analysis and uses software tools, but the conclusions are not always accurate; logically presents the results and uses software tools, but sometimes lacks depth.

Grade "Satisfactory" is awarded to the student if the student knows the main stages of the project lifecycle but cannot describe them in detail; can name the main team roles and leadership styles but does not understand their impact on team performance; can distribute simple tasks but does not always take into account the competencies of the performers; can find simple information using a dictionary but experiences significant difficulties; translates text with a large number of errors and requires constant use of a dictionary; is able to communicate but does not always take into account cultural differences; forms a team but does not always take into account individual characteristics; formulates the goal and objectives, but they are not always clear or achievable; determines the sequence, but with errors or omissions; identifies some risks but is unable to classify or assess them; selects a method but not always with justification; conducts a simple analysis, but with errors or incomplete results; presents the results, but the structure and formatting require improvement.

Grade "Unsatisfactory" is awarded to the student if the student lacks an understanding of project management principles and cannot name the stages of the project lifecycle; does not know team roles and does not understand the differences between leadership styles; is unable to distribute tasks and does not take into account the competencies of the performers; is unable to search for information in foreign sources and does not understand key terms; cannot translate even simple sentences and does not understand the structure of the text; is unable to conduct business communication and does not take into account cultural differences; cannot form a team and does not understand the individual characteristics of the participants; cannot formulate the goal and objectives of the research; cannot determine the sequence of actions; cannot identify risks or create a risk matrix; cannot select a research method; cannot conduct an analysis or interpret the results; cannot present the results or does so in an illogical manner.

2. Assessment Tools for the Placement “Pre-Graduation Internship”

2.1 Tasks to assess the knowledge acquired during the placement

Competencies, indicators		Task Formulation
Competency Code	Formulation	
ID-3PC-1	Compiles reports and presents the results of completed work;	Prepare a description – a general overview of the work performed within the research framework of the final qualifying work, namely, to reflect the following aspects: – relevance of the research; – extent to which the problem has been studied; – goal and objectives of the research; – subject and object of the research.
ID-1PC-2	Performs calculation and analysis of the economic and technical characteristics of the object being designed;	
ID-2PC-2	Evaluates the feasibility of implementing an investment project and selects the most optimal investment alternative.	– scientific novelty of the research results; – theoretical and practical significance of the work.

2.2 Tasks Allowing for the Assessment of Skills and Abilities Acquired During the Practice

Competencies, indicators		Task Formulation
Competency Code	Competency Code	
ID-3 _{PC-1}	Compiles reports and presents the results of completed work;	Perform calculation and analysis of the characteristics of the research object.

ID-1 _{PC-2}	Performs calculation and analysis of the economic and technical characteristics of the object being designed;	Describe the scientific results obtained within the research framework of the final qualifying work. Describe the practical significance of the results obtained within the research framework of the final qualifying work.
ID-2 _{PC-2}	Evaluates the feasibility of implementing an investment project and selects the most optimal investment alternative.	

3. Methodological materials defining the procedures for assessing knowledge, skills, abilities and (or) experience of activities characterizing the stages of competency formation

The procedure for completing the work placement ("introductory practice") includes the following stages:

- introductory lecture;
- health and safety briefing;
- formulation of the goals and objectives of the placement;
- development of a work plan for the assignment;
- completion of the individual task;
- processing of empirical data;
- systematization of empirical and literary sources;
- presentation of the results.

At each stage of the practice, ongoing control of the competency formation process is carried out.

The tasks offered to the student allow testing of competencies: **PC-1, PC-2**

During the placement, the student is required to produce a report containing the following sections:

- an **introduction** reflecting the relevance of the issues under consideration;
- a **main body** containing the results of the individual task, supported by explanations, figures, tables, calculations, and photographs;
- a **conclusion** reflecting the key findings and results of the work performed;
- a **list of references**.

Formatting of the report in accordance with state standards.

When assessing the assignment, evaluators consider the sequence and rationality of the presentation, the quality of the literary sources used, including the use of foreign language materials.

The final grade is awarded based on the results of a final conference held in the format of a presentation and discussion, during which the student defends the outcomes of their work. The conference takes place within two weeks following the end of the placement and any subsequent holidays (if applicable).

During the defense of the report, the following are assessed:

- the ability to present the results of the work clearly, competently, and concisely, including through the use of modern multimedia computer technologies;
- the ability to understand follow-up questions and provide appropriate responses promptly.