

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION
Federal State Autonomous Educational Institution
higher education
NORTH CAUCASIAN FEDERAL UNIVERSITY

I APPROVE

Dean of the Faculty of Mathematics
and computer science named after
Professor N.I. Chervyakov, candidate
physical and mathematical sciences,
associate professor
Grobova T.A.
Full name

**ASSESSMENT TOOLS FUND
FOR INDUSTRIAL PRACTICE**

Technological (Project and Technological) Internship / Технологическая (проектно-
технологическая) практика
name of the discipline (module)

Direction of training	02.04.01 Mathematics and Computer Science
Directionality (profile)	Training Program for Electronic Information
Year of commencement of studies	2026
Form of study	full-time
Implemented in a semester	4

Introduction

1. Purpose: conducting ongoing monitoring of academic performance and midterm certification for industrial practice "Technological (Project and Technological) Internship / Технологическая (проектно-технологическая) практика"

2. FOS is an appendix to the industrial practice program "Technological (Project and Technological) Internship / Технологическая (проектно-технологическая) практика"

3. Developer Maria Anatolyevna Lapina – Candidate of Physical and Mathematical Sciences, Associate Professor, Associate Professor of the Department of Computational Mathematics and Cybernetics

4. An examination of the FOS was carried out
Members of the expert group:

Chairman L.B. Kopytkova – Chairman of the Teaching and Methodological Complex of the Faculty of Mathematics and Computer Science named after Professor N.I. Chervyakov

(Full name, position)

Members of the Commission: Gladkov A.V. – member of the Teaching and Methodological Committee of the Department of Computational Mathematics and Cybernetics

Andrukhiv L.V. – member of the teaching and methodological committee of the Department of Mathematical Modeling;

Belokon L.V. – member of the teaching and methodological committee of the Department of Mathematical Analysis, Algebra and Geometry;

Representative of the employer organization Podoprigora N.B. – General Director of LLC “Medicine IT”

(Full name, position)

Expert opinion: the fund of assessment tools corresponds to the educational program for the specialty 02.04.01 Mathematics and computer science, profile «Training Program for Electronic Information» and is recommended for conducting ongoing monitoring of students’ academic performance and midterm assessment.

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

1. Description of the criteria for assessing competence at various stages of its development, description of assessment scales

Competence (ii), indicator (s)	Levels of development competence (s),			
	The minimum level has not been reached (Unsatisfactory) 2 points	Minimum level (satisfactorily) 3 points	Intermediate level (Fine) 4 points	High level (excellent) 5 points
<i>Competence: UK-3 Able to organize and manage the work of a team, developing a team strategy to achieve the set goal</i>				
<p>ID-1 <small>UK-3</small> Manages the production activities of employees</p> <p>ID-2 <small>UK-3</small> Prepares and presents presentations of plans and results of personal and team activities</p>	<p>There is no clear distribution of responsibilities and there is chaos in the work.</p> <p>Planning is absent or is carried out formally, and control over implementation is minimal.</p> <p>The management is ineffective, there is a lack of motivation and control over employees.</p> <p>Emerging problems are ignored or not resolved in a timely manner.</p> <p>Production processes are not optimized, which can lead to significant losses of time and resources.</p> <p>Production activities are carried out with serious violations of regulatory requirements.</p> <p>The presentation does not have a clear structure, and the sequence of information delivery is chaotic.</p> <p>The main aspects of the topic are poorly covered or absent, and the materials are</p>	<p>There are gaps in the distribution of responsibilities and coordination of employees.</p> <p>Planning is underway, but there are significant deviations from deadlines and insufficient control.</p> <p>Human resources management is at a basic level and employee motivation is weak.</p> <p>Problems are resolved with delays or not in full.</p> <p>There is no systematic approach to improving efficiency and reducing costs.</p> <p>Production activities are carried out with violations; there are organizational and regulatory shortcomings.</p> <p>The presentation has a weak structure, and the logic of presentation is</p>	<p>Responsibilities are distributed, but minor shortcomings in work coordination are possible.</p> <p>The work plan has been drawn up and is being implemented, however, minor deviations from the schedule are possible.</p> <p>Management is good, but there may be minor problems with staff motivation.</p> <p>Problems are resolved in a timely manner, but minor delays or shortcomings in the process are possible.</p> <p>are applied , but the optimization potential is not fully realized.</p> <p>Production</p>	<p>Employee responsibilities are clearly distributed, and effective coordination of work is ensured.</p> <p>A detailed work plan was developed and implemented, including deadlines, resources, and milestones.</p> <p>Modern methods of personnel management are successfully applied , and employee motivation is ensured.</p> <p>Problems arising in the</p>

	<p>poorly prepared. The slides are overloaded with text, unreadable, or poorly formatted. The speaker reads the text without expression, does not use intonation, and makes many hesitations. There is no interaction with the audience and the material is presented formally. There is a lack of coordination within the team; speakers do not coordinate information with each other. Either he doesn't answer questions, or he does so uncertainly, with mistakes and deviations from the topic.</p>	<p>broken in places. Only the main aspects are presented, important details or evidence base are missing. The slide design contains too much text, poor color combinations, or sloppy elements. The report is read monotonously, there may be frequent hesitation and a lack of expressiveness. Interaction with the audience is minimal, the performance is more like a monologue. During a team presentation, there is a lack of coordination among the speakers and an uneven distribution of roles. Answers to questions from the audience are given with difficulty, uncertainty or deviation from the topic are possible.</p>	<p>activities comply with basic standards, but minor omissions may occur. The presentation is logically structured, but there may be some minor flaws in the logic of presentation. The basic information is presented, but some aspects may be covered superficially. The presentation design is generally high quality, but there may be some text overload or minor visual flaws. The speaker presents the material confidently, but slight hesitation or monotony of speech is possible. There are attempts to interact with the audience, but they are not always effective. There is interaction between</p>	<p>production process are quickly and effectively resolved. Strategies are applied to improve labor efficiency and minimize costs. Production activities are organized in full compliance with regulatory requirements. The presentation is clearly structured and contains a logical sequence of presentation of the material. All key aspects of the plan or performance results are presented and reliable data is</p>
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			<p>speakers, but there may be inconsistency or uneven distribution of roles. Generally answers audience questions, but some answers may not be detailed enough.</p>	<p>used. The slides are professionally designed, the graphics are discreet, the fonts are legible, and the color scheme is not overloaded. The speaker presents the material confidently and clearly, uses expressive means of speech, and maintains eye contact. The presentation is accompanied by explanations, examples, and may include questions for the audience or interactive elements. During a</p>
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				team presentation, the speakers were coordinated, roles were distributed logically, and interaction within the team was smooth. Confidently answers questions from the audience, demonstrating an understanding of the topic and the ability to argue their point of view.
<i>Competency: UK-6 Able to determine and implement priorities of one's own activities and ways to improve them based on self-assessment</i>				
ID-1 UK-6 Ready for self-development, self-realization, and use of creative potential ID-2UK-6 Defines and implements priorities of own activities	Does not show initiative in learning and professional development. Lack of clear goals and desire to achieve them. Does not show creativity, is not interested in finding new solutions. Does not analyze his actions, does not draw conclusions from mistakes. Does not plan his	Shows interest in development, but does so irregularly or formally. Has a general vector of development, but experiences difficulties in achieving set goals. Sometimes he suggests unconventional ideas, but rarely puts them into practice.	Strives for development, but may show insufficient regularity or depth in studying new areas. Sets goals for himself, but does not always clearly define the ways to achieve them. Shows	Constantly works on his professional and personal growth, strives to acquire new knowledge and skills. Clearly formulates personal

	<p>development, does not use available educational and professional resources.</p> <p>Does not share experience, does not show interest in teaching others.</p> <p>Doesn't know how to prioritize, chooses unimportant or non-urgent tasks.</p> <p>Either completely absent or has no logical structure.</p> <p>Does not achieve set goals, work is not completed on time or is of poor quality.</p> <p>Unable to adapt to changing conditions, has difficulty adjusting his plans.</p> <p>There is no analysis of one's own activities; the same mistakes are repeated.</p> <p>Avoids responsibility, requires constant external control.</p>	<p>Poor analysis of one's achievements and mistakes, lack of behavioral adjustments based on experience.</p> <p>Self-development planning is chaotic and available resources are not always used.</p> <p>Shares knowledge sporadically, without a systematic approach.</p> <p>Prioritization is not always effective; errors in assessing the importance of tasks are possible.</p> <p>Plans his work, but often deviates from the plan or does not complete it completely.</p> <p>Achieves goals with delays or requires additional support.</p> <p>Difficulty adapting to changes, requires significant time for restructuring.</p> <p>Poorly analyzes the results of activities and does not use the experience gained for further improvement.</p> <p>Can perform tasks, but without the proper level of initiative and responsibility.</p>	<p>creativity, but does not always apply it in practice.</p> <p>Analyzes his actions, but does not always draw conclusions for further growth.</p> <p>Generally effective in planning his/her learning and development, but sometimes has difficulty with time management.</p> <p>Ready to share knowledge, but does not always do so actively.</p> <p>correctly , but can sometimes underestimate important tasks.</p> <p>Makes a work plan, but does not always adhere to it strictly.</p> <p>In most cases, it successfully completes the assigned tasks, but minor delays are possible.</p> <p>Can change plans when circumstances change, but sometimes this requires additional time.</p> <p>Evaluates the</p>	<p>and professional goals, successfully achieves them, demonstrating initiative.</p> <p>Demonstrates a high level of creativity, offers unconventional solutions, and implements innovative ideas.</p> <p>Analyzes his achievements and mistakes, adjusts self-development strategies.</p> <p>Manages time effectively and uses a variety of methods and resources for learning and development.</p> <p>Shares experience, inspires and</p>
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			<p>results of work, but does not always apply the findings in practice. Takes a responsible approach to completing tasks, but may require outside supervision.</p>	<p>motivates others to develop.</p> <p>Able to correctly prioritize activities, taking into account importance, urgency, and long-term goals. Develops detailed work plans and successfully allocates resources and time. Achieves assigned tasks on time, demonstrates organization and independence. Quickly adapts to changes, adjusting priorities as necessary without loss of efficiency.</p> <p>Evaluates the results of his activities, identifies strengths</p>
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				and weaknesses, and uses this for further development. Takes responsibility for decisions made and their implementation.
<i>Competence: PC-1 Able to demonstrate fundamental knowledge of mathematical and natural sciences, programming and information technology</i>				
<p>ID-1_{PC-1}</p> <p>In his professional activities, he demonstrates fundamental knowledge of mathematics and natural sciences.</p> <p>ID-2_{PC-1} Solves problems of professional activity using programming and information technology tools</p>	<p>Has limited knowledge in mathematics and natural sciences, which is insufficient for professional activity</p> <p>Incapable of applying knowledge in professional practice or does so extremely rarely and with a large number of errors.</p> <p>Difficulties in solving problems that require even basic knowledge often require help and correction.</p> <p>Shows no interest in updating knowledge and scientific development.</p> <p>Does not understand basic concepts and principles, or understands them only partially.</p> <p>Has limited knowledge and skills in programming and information technology and is</p>	<p>Has basic knowledge in mathematics and science.</p> <p>Can apply basic concepts but has difficulty solving more complex problems.</p> <p>Sometimes makes mistakes in applying knowledge in professional activities.</p> <p>Requires additional assistance to solve problems that require deeper understanding.</p> <p>Understands the basic principles, but does not actively improve his knowledge.</p> <p>Can use basic programming tools and information technology, but has difficulty solving more complex problems.</p> <p>Requires assistance in solving non-</p>	<p>Has fairly deep knowledge in the field of mathematics and natural sciences.</p> <p>Applies knowledge to professional activities with little or no assistance.</p> <p>Can solve most problems, although sometimes additional explanation is required.</p> <p>Understands basic concepts and principles, but may make minor errors in complex situations.</p> <p>Regularly updates his knowledge, but may not be as active in mastering</p>	<p>Demonstrates deep and comprehensive knowledge of mathematics and science.</p> <p>Freely and confidently applies acquired knowledge in professional practice.</p> <p>Explains theoretical concepts logically and reasonably and solves complex problems.</p> <p>Identifies and effectively solves</p>

	<p>unable to effectively solve problems using them.</p> <p>Does not solve problems independently or solves them with significant errors that require significant intervention.</p> <p>Does not use modern programming tools or information technologies, despite the availability of such capabilities.</p> <p>He practically does not update his knowledge in this area and does not apply new approaches.</p>	<p>standard problems or uses ineffective methods.</p> <p>Applies standard approaches to problem solving, but sometimes makes mistakes or misses important details.</p> <p>Knowledge in programming and IT is limited and requires additional practice to improve.</p>	<p>innovations.</p> <p>Uses programming tools and information technology to solve problems, effectively handling most situations.</p> <p>Can develop standard solutions, but in some cases additional assistance or time is required to resolve complexities.</p> <p>Understands basic tools and technologies, but sometimes does not use them fully or with maximum effectiveness.</p> <p>Constantly improves his knowledge, but is sometimes slow to master new approaches or technologies.</p>	<p>problems requiring an interdisciplinary approach. Constantly improves his knowledge and actively follows new achievements in the field of science.</p> <p>Confidently and effectively uses various programming tools and information technologies to solve professional problems.</p> <p>Develops complex and custom software solutions, taking into account all necessary requirements and details.</p> <p>Initiates and applies new tools</p>
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				<p>and technologies to improve work efficiency</p> <p>· Solves problems logically, consistently and with high accuracy, demonstrating a creative approach to problem solving. Actively improves his skills and knowledge in the field of programming and information technology, follows the latest trends and implements innovations.</p>
<p><i>Competence: PC-7 Able to create and explore new mathematical models in the natural sciences, industry and business, taking into account the capabilities of modern information technology, programming and computer equipment</i></p>				
<p>ID-1 PC-7</p> <p>With the help of modern information technologies, explores newly created mathematical models in the</p>	<p>Ineffective or outdated information technologies are used, resulting in the creation of inaccurate or incomplete mathematical models. These</p>	<p>Basic or outdated information technology methods are used to study mathematical models. The models are created</p>	<p>Modern information technologies are used to study mathematical models, but some aspects</p>	<p>Utilizes advanced information technologies to research and create</p>

<p>natural sciences of industry;</p> <p>ID-2 <small>PC-7</small></p> <p>Conducts Parallel Computer and Network Technologies as part of his professional activities</p> <p>ID-3 <small>PC-7</small></p> <p>Uses modern programming languages and application software packages to implement specific algorithms and mathematical models</p>	<p>models do not meet modern standards and do not take into account key parameters necessary for problem solving. Appropriate software and analysis tools are either lacking or inadequately applied. Model analysis is superficial or nonexistent, and the research results are not meaningful or useful.</p> <p>Does not utilize parallel computing and networking technologies or utilizes them with minimal effectiveness. Knowledge and skills are insufficient to solve professional problems using these technologies. Technologies are not applied properly, leading to significant errors or inefficiencies. Important aspects such as performance, reliability, or security are not considered when using parallel computing and networking solutions.</p> <p>Ineffective use of modern programming languages and application packages leads to significant errors in the implementation of algorithms and mathematical models. The</p>	<p>taking into account basic principles, but lack accuracy or do not account for all possible variables. The use of software tools is limited to standard functions, without in-depth data analysis. Simple approaches to problem solving are used, and the research results remain superficial, without providing new proposals or</p> <p>Utilizes parallel computing and network technologies but encounters difficulties in their application. Knowledge and skills allow for solving only basic problems or applying standard solutions without considering the specifics and peculiarities of work processes. Use of technologies is limited, and additional efforts may be required to achieve the desired results. Errors related to insufficient consideration of parallel computing or network interactions may be encountered during work.</p> <p>The</p>	<p>may not be fully developed. The models comply with basic principles and standards, but could be improved in terms of accuracy and the use of additional analytical methods. Current programs and algorithms are used, but more suitable tools for specific tasks could be used. The analysis results yield good conclusions, but are not always supported by additional hypotheses or proposals for</p> <p>Successfully utilizes parallel computer and network technologies in their professional work, applying them to solve standard problems. These technologies are used effectively, but there are minor shortcomings in the selection</p>	<p>mathematical models in various fields of natural science and industry. The models are developed with high accuracy and meet current scientific and technical requirements. The research process includes comprehensive data analysis, model optimization, and the use of specialized software. Based on the results obtained, new hypotheses or improvements to existing models are proposed, demonstrating a deep understanding of</p>
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	<p>development process may be unstructured or rely on outdated and inappropriate tools, reducing productivity and decision accuracy. A lack of understanding of the correct selection of tools for task implementation leads to ineffective results.</p>	<p>implementation of algorithms and mathematical models relies on basic or outdated programming languages and application packages, which limits the capabilities and effectiveness of problem solving. The work relies on standard solutions that are not always suitable for more complex or specific tasks. The implementation of algorithms and models may be functional, but requires improvements in terms of optimization, performance, and the use of current tools.</p>	<p>of tools or algorithms. The results meet basic requirements but can be optimized. Overall, their understanding of these technologies is sufficient for solving most problems; however, more complex situations may require additional effort.</p> <p>Uses modern programming languages and application packages to implement algorithms and mathematical models, but sometimes the choice of tools may be subject to improvement or optimization. The implemented solutions effectively solve the assigned tasks, but in some cases, more modern or specialized tools may be used. The work was completed with a sufficient</p>	<p>the subject matter. A high level of detail and precision of presentation is ensured.</p> <p>Expertise in parallel computing and network technologies to solve problems in their work. Demonstrates deep knowledge and experience in applying these technologies to improve work efficiency. Applies advanced methodologies and solutions, optimizes processes and operations, and achieves high results. Utilizes complex tools and algorithms for</p>
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			<p>degree of accuracy and performance, but some elements may require refinement or improvement.</p>	<p>parallel computing and networking, ensuring high reliability and performance. Knowledge and skills enable not only task completion but also the development of new approaches and improvements.</p> <p>Utilizes modern programming languages and application packages to implement complex algorithms and mathematical models. The work utilizes cutting-edge tools and technologies, enabling high productivity</p>
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				ty, accuracy, and optimization of solutions. Demonstrated deep knowledge and skills in various programming languages and software, as well as in selecting the most appropriate tools for each task. The work is characterized by a high degree of automation and implementation efficiency, as well as innovative solutions.
<i>Competence: PC-6 Able to use modern methods of development and implementation of specific algorithms of mathematical models based on programming languages and application packages for modeling</i>				
ID-1 PC-6 Using modern software packages for modeling, it explores newly created mathematical models;	You're using modeling software packages ineffectively, resulting in models that don't meet requirements. Model analysis and diagnostics are	You use basic modeling software, but your approach to model analysis and diagnostics is limited. Some model elements require refinement, and a systems	You're choosing the right mathematical modeling packages, but in some cases, your choice of tools or	Expertly selects and applies modern software packages for mathemati

<p>ID-2 <small>PC-6</small></p> <p>Uses modern methods for developing algorithms for mathematical models</p>	<p>performed without taking into account important factors, making it difficult to identify and resolve problems. Models are not optimized, and approaches to their analysis require significant improvement to achieve accurate results. Experiencing difficulties applying modern algorithm development methods to mathematical models, resulting in low algorithm accuracy and performance. Their choice of methods does not always match the task requirements, making problem solving difficult. Significant improvement in skills in selecting and applying methods for developing effective algorithms is needed.</p> <p>Struggles to use modern programming languages to implement algorithms and mathematical models. Code is often inconsistent, poorly structured, and inappropriate for the task. Algorithm implementation results in poor performance, and the choice of tools is inappropriate. Significant effort is</p>	<p>approach is not always applied adequately. Modeling results may require improvement in accuracy and efficiency, and problem identification and resolution are often limited to superficial analysis.</p> <p>uses standard algorithm development methods, but their accuracy and efficiency leave much to be desired. Algorithms solve problems, but in some cases, optimization or the use of more complex approaches is required to achieve better results. It is necessary to work on improving our methods and increasing the efficiency of algorithm development.</p> <p>It uses modern programming languages, but the implementation of algorithms and mathematical models leaves much to be desired. The code solves the problem, but has optimization or performance issues. The code structure and</p>	<p>approaches could be improved. Your model analysis and diagnostics are conducted within standard procedures, but not all possible aspects are always considered. The work is high-quality, but additional efforts are needed to optimize and improve the accuracy of the models.</p> <p>Successfully applies current methods for developing algorithms for mathematical models and achieves good results. Algorithms perform tasks correctly, but can be improved in terms of accuracy or performance. Proficient in existing approaches, but more complex situations may require the use of more specific methods to improve</p>	<p>cal modeling. You successfully identify key aspects of models, conduct comprehensive analysis, and diagnose them using a systems approach. Your models are highly accurate and meet current standards. You effectively research and optimize models, identify and resolve problems, allowing you to propose new solutions and improvements.</p> <p>He confidently utilizes cutting-edge methods for developing</p>
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	<p>required to improve programming skills and optimize code.</p>	<p>readability could be improved, and the choice of tools is not always optimal for the task. Further development is required to achieve a higher level.</p>	<p>results.</p> <p>Correctly uses modern programming languages to implement algorithms and mathematical models. The algorithms work, but could be improved in terms of performance and optimization. The code is readable and structured, but there is room for improvement. Overall, the approach is sound, but more suitable tools or methods could be used to improve efficiency.</p>	<p>algorithms for mathematical models, achieving high accuracy and optimization. His developed algorithms solve complex problems and fully meet modern requirements. He effectively applies cutting-edge tools and approaches, demonstrating a deep understanding of the subject and a capacity for innovation. His work not only solves current problems but also proposes new, more effective solutions. She expertly</p>
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				<p>utilizes modern programming languages to implement algorithms and mathematical models. Her code is highly performant, readable, and optimized. Her algorithms are implemented with all requirements in mind and deliver excellent results. Her choice of tools and methods is fully justified, allowing her to solve problems with maximum efficiency and accuracy.</p>
<p><i>Competence: PC-8 Capable of participating in the management of projects for the creation of information systems and software systems at various stages of the life cycle</i></p>				
ID-1 _{PC-8} Manages the	Struggles to manage the development of	Manages the development of	Effectively manages the	Expertly manages

<p>development, development and maintenance of information systems and software systems</p> <p>ID-2 PC-8</p> <p>Knows and applies software development trends in his/her professional activities</p>	<p>information systems and software packages. The development process is disorganized , and errors are made in the design and maintenance of systems. Management and maintenance tasks are performed irregularly or with serious shortcomings, resulting in non-compliance with requirements. It is impossible to ensure the stable operation of software packages and timely support.</p> <p>Struggles to identify and apply software development trends in their professional activities. Knowledge of current trends is limited, and their use in work is minimal. Unable to adapt their work to new technologies and approaches, which reduces the effectiveness of their work with software. Significant improvement is required in understanding and applying current software trends.</p>	<p>information systems and software packages, but with some errors in the process. System development and support are underway, but in some cases, there is a lack of organization or attention to detail. Project management sometimes fails to meet all standards, leading to slowdowns or some flaws in software packages.</p> <p>Has basic knowledge of software development trends, but their application in professional work is limited. Knowledge of current trends is not always fully utilized. Sometimes, new technologies and methods fail to be effectively applied, which can reduce the effectiveness of software development and support processes. Potential exists for improvement and more active implementation of new approaches.</p>	<p>development, implementation, and maintenance of information systems and software systems. The development process is organized, tasks are accomplished effectively, but in some cases, improved interactions between the development and maintenance phases could be achieved. Project management complies with standards, but there is room for further process optimization and improved system maintenance.</p> <p>He is well-versed in software development trends and utilizes them in his professional work. His knowledge of current trends is often applied to project work, but could be further enhanced by deepening the</p>	<p>the development, implementation, and maintenance of information systems and software suites. All stages of system development and maintenance are organized and executed to a high standard, using advanced methods and tools. The project management process is optimized , allowing for prompt response to changes and ensuring stable system operation.</p> <p>She is knowledgeable and actively applies current software developm</p>
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			<p>implementation of new technologies or more widely applying advanced methods. Overall, he utilizes trends effectively, but there is room for further growth and improvement in this area.</p>	<p>ent trends in her professional work. Knowledge of trends and the latest technologies is integrated into development processes, allowing for increased efficiency and innovation. Her application of new technologies and methods fully meets modern requirements and is actively implemented into projects to improve their quality and performance.</p>
<p><i>Competence: PC-9 Able to take into account knowledge of problems and trends in the development of the software market in professional activities</i></p>				
<p>ID-1 PC-9</p> <p>Selects software for their professional activities, taking into account market development trends.</p>	<p>Struggles to select software for their professional activities without considering current market trends. They often choose</p>	<p>They select software for their professional activities, but to some extent ignore current market trends. Sometimes,</p>	<p>Selects software appropriately for their professional activities, taking into</p>	<p>She wisely selects software for her professional work,</p>

<p>ID-2 PC-9</p> <p>Takes into account the development trends of the software market and applies these development trends in professional activities</p>	<p>outdated or inappropriate software, which reduces work efficiency. They lack a deep understanding of current trends, and their software choices don't align with the needs of the modern market. Significant improvements are needed in selecting software solutions based on market dynamics.</p> <p>Fails to consider software market development trends in their professional activities. Lack of understanding of current software trends leads to the selection of outdated and ineffective solutions. New technologies are not implemented, reducing professional effectiveness. Significant improvement is needed in the analysis and application of software market development trends.</p>	<p>the chosen solutions do not meet all the requirements of the modern industry, which can reduce their effectiveness. Knowledge of market trends is applied to a limited extent, and the software choice is not always optimal from a long-term perspective. While it takes into account certain software market development trends, the application of these trends in professional work is limited. Knowledge of new technologies and trends is not always used effectively. In some cases, it is not possible to fully integrate modern approaches and methods into work, which hinders the improvement of work processes. The application of development trends requires further development.</p>	<p>account market trends. Knowledge of current software trends is used to inform decision-making, but new or more suitable solutions may sometimes be missed. Overall, software selection is up-to-date, but there is room for improvement by considering a broader picture of trends. Considers current software market trends and applies them to their professional work. Modern technologies and methods are integrated into work processes, but there are sometimes opportunities for deeper implementation of new solutions. Adopting software development trends contributes to improved work results,</p>	<p>taking into account current market trends. She carefully analyzes current and emerging developments, enabling her to select the most effective and innovative solutions. She skillfully adapts her solutions to changes in the software market, which helps increase productivity and maintain a high level of work. She intelligently considers and actively applies current software market trends in her profession</p>
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			but there is room for further refinement.	al work. She continuously analyzes market changes and implements cutting-edge technologies and methods, which contributes to increased efficiency and innovation. Applying these trends leads to significant improvements in professional performance, ensuring high results and competitiveness.
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Competency assessment criteria *

" Excellent " grade if employee responsibilities are clearly assigned and effective coordination is ensured. A detailed work plan, including deadlines, resources, and milestones, is developed and implemented. Modern personnel management methods are successfully applied, and employee motivation is ensured. Emerging issues in the production process are quickly and effectively resolved. Strategies for improving labor efficiency and minimizing costs are implemented. Production activities are organized in full compliance with regulatory requirements. The presentation is clearly structured and contains a logical sequence of presentation. All key aspects of the plan or performance results are presented, and reliable data is used. The slides are professionally designed, with discreet graphics, legible fonts, and a uncluttered color scheme. The presenter presents the material confidently and clearly, uses expressive language, and maintains eye contact. The presentation is accompanied by

explanations and examples, and questions for the audience or interactive elements are possible . During a team presentation, the speakers are coordinated, roles are logically assigned, and teamwork is smooth. Confidently answers audience questions, demonstrating an understanding of the topic and the ability to argue their point of view. Constantly works on their professional and personal growth, striving to acquire new knowledge and skills. Clearly articulates personal and professional goals and successfully achieves them, demonstrating initiative. Demonstrates a high level of creativity, offers unconventional solutions, and implements innovative ideas. Analyzes their achievements and mistakes, and adjusts self-development strategies. Effectively manages their time, using a variety of methods and resources for learning and development. Shares experience, inspires, and motivates others to develop. Ability to wisely prioritize activities, considering importance, urgency, and long-term goals. Develops detailed work plans, successfully allocates resources and time. Achieves assigned tasks on time, demonstrating organization and independence. Quickly adapts to changes, adjusting priorities when necessary without losing effectiveness. Evaluates their performance, identifies strengths and weaknesses, and uses these for further development. Takes responsibility for decisions made and their implementation. Demonstrates deep and comprehensive knowledge of mathematics and the natural sciences. Fluently and confidently applies acquired knowledge in professional practice. Explains theoretical concepts logically and clearly and solves complex problems. Identifies and effectively solves problems requiring an interdisciplinary approach. Continuously improves knowledge and actively monitors new advances in science. Confidently and effectively uses various programming tools and information technologies to solve professional problems. Develops complex and unconventional software solutions, taking into account all necessary requirements and details. Initiates and applies new tools and technologies to improve work efficiency. Solves problems logically, consistently, and with high accuracy, demonstrating a creative approach to problem solving. Actively improves skills and knowledge in programming and information technology, monitors the latest trends, and implements innovations. Uses advanced information technologies to research and create mathematical models in various areas of the natural sciences and industry. Models are developed with high accuracy and meet current scientific and technical requirements. The research process includes comprehensive data analysis, model optimization, and the use of specialized software. Based on the obtained results, the candidate proposes new hypotheses or improvements to existing models, demonstrating a deep understanding of the subject matter. A high level of detail and accuracy of presentation is ensured. The candidate professionally utilizes parallel computer and network technologies to solve problems in their work. Demonstrates deep knowledge and experience in applying these technologies to improve work efficiency. Applies advanced methods and solutions, optimizes processes and operations, achieving high results. Utilizes complex tools and algorithms for implementing parallel computing and working with network technologies, ensuring a high level of reliability and performance. Knowledge and skills enable them not only to complete tasks but also to develop new approaches and improvements. Utilizes modern programming languages and application packages to implement complex algorithms and mathematical models. The work utilizes current tools and technologies, which enables high performance, accuracy, and optimization of solutions. Demonstrates deep knowledge and skills in various programming languages and software, as well as in selecting the most appropriate tools for each task. The work is characterized by a high degree of automation and implementation efficiency, as well as the presence of innovative solutions. Expertly selects and applies modern software packages for mathematical modeling. You successfully identify key aspects of models, conduct comprehensive analysis, and diagnose them using a systems approach. Your models are highly accurate and meet current standards. You effectively research and optimize models, identifying and resolving problems, allowing you to propose new solutions and improvements. You confidently utilize the latest methods for developing algorithms for mathematical models, achieving high accuracy and optimization. The developed algorithms solve complex problems and fully comply with modern requirements. You effectively apply cutting-edge tools and

approaches, demonstrating a deep understanding of the subject and a capacity for innovation. Your projects not only solve current problems but also propose new, more effective solutions. You competently use modern programming languages to implement algorithms and mathematical models. Your code is characterized by high performance, readability, and optimization. The algorithms are implemented in accordance with all requirements and produce excellent results. The choice of tools and methods is fully justified, allowing you to solve problems with maximum efficiency and accuracy. Expertly manages the development, implementation, and maintenance of information systems and software suites. All stages of system development and maintenance are organized and executed to a high standard, using advanced methods and tools. A streamlined project management process enables rapid response to changes and ensures stable system operation. Expertly understands and actively applies current software development trends in his/her professional activities. Knowledge of trends and the latest technologies is integrated into development processes, enabling increased efficiency and innovation . The use of new technologies and methods fully meets modern requirements and is actively implemented in projects to improve their quality and performance. Expertly selects software for his/her professional activities, taking into account current market trends. Carefully analyzes current and future developments, enabling him/her to select the most effective and innovative solutions. Expertly adapts his/her solutions to changes in the software market, which contributes to increased productivity and maintaining a high level of work. Expertly considers and actively applies current software market trends in his/her professional activities. Continuously analyzes market changes and implements cutting-edge technologies and methods, which contributes to increased efficiency and innovation . Adopting these trends leads to significant improvements in professional performance, ensuring high results and competitiveness.

" good " rating is given to the student if responsibilities are assigned, but minor coordination gaps are possible. The work plan is developed and implemented, but minor deviations from the schedule are possible. Management is good, but minor issues with staff motivation may exist. Problems are resolved in a timely manner, but minor delays or shortcomings in the process are possible. Basic efficiency improvement methods are applied, but the full potential for optimization has not been realized. Production activities meet key standards, but minor omissions may occur. The presentation is logically structured, but minor flaws in the presentation logic are possible. The main information is presented, but some aspects may be superficial. The presentation design is generally high-quality, but text overload or minor visual flaws may occur. The presenter presents the material confidently, but minor hesitations or monotony are possible. There are attempts to interact with the audience, but this is not always effective. There is interaction between the speakers, but there may be a lack of coordination or an uneven distribution of roles. The presentation generally answers the audience's questions, but some answers may not be fully detailed. Striving for development, but may lack regularity or depth in exploring new areas. Sets goals, but does not always clearly define the path to achieving them. Demonstrates creativity, but does not always apply it in practice. Analyzes their actions, but does not always draw conclusions for further growth. Generally plans their training and development effectively, but sometimes experiences difficulties with time management. Ready to share knowledge, but does not always do so proactively. Prioritizes correctly, but may sometimes underestimate the importance of tasks. Creates a work plan, but does not always adhere to it strictly. In most cases, successfully completes assigned tasks, but minor delays are possible. Can revise plans when circumstances change, but this sometimes requires additional time. Evaluates work results, but does not always apply the findings in practice. Takes a responsible approach to completing tasks, but may require outside supervision. Has a fairly deep knowledge of mathematics and the natural sciences. Apply knowledge in professional activities with little or no assistance. Can solve most problems, although additional clarification is sometimes required. Understands basic concepts and principles, but may make minor errors in

complex situations. Regularly updates knowledge, but may be slow to adopt new ideas. Uses programming tools and information technology to solve problems, effectively handling most situations. Can develop standard solutions, but may require additional assistance or time to resolve difficulties. Understands basic tools and technologies, but may not use them fully or with maximum effectiveness. Continuously improves knowledge, but may be slow to adopt new approaches or technologies. Uses modern information technology to explore mathematical models, but some aspects may not be fully developed. Models comply with basic principles and standards, but could be improved in terms of accuracy and the application of additional analysis methods. Uses current programs and algorithms, but more suitable tools for specific tasks could be used. Analysis results yield good conclusions, but are not always supported by additional hypotheses or proposals. Successfully uses parallel computer and network technologies in their professional activities, applying them to solving standard problems. Technologies are used effectively, but there are minor shortcomings in the choice of tools or algorithms. The results meet basic requirements but could be optimized. Overall, the understanding of these technologies is sufficient for solving most problems; however, more complex situations may require additional effort. Uses modern programming languages and application packages to implement algorithms and mathematical models, but sometimes the choice of tools could be improved or optimized. The implemented solutions effectively solve the assigned problems; however, in some cases, more modern or specialized tools could be used. The work is completed with a sufficient degree of accuracy and performance, but some elements may require revision or improvement. You correctly select packages for modeling mathematical models, but in some cases, the choice of tools or approaches could be improved. Your analysis and diagnostics of models are carried out within standard procedures; however, not always all possible aspects are taken into account. The work is completed to a high standard, but additional effort is required to optimize and improve the accuracy of the models. Successfully applies current methods for developing algorithms for mathematical models and achieves good results. The algorithms correctly perform tasks, but could be improved in terms of accuracy or performance. The candidate is well-versed in existing approaches, but more complex situations may require the use of more specific methods to improve results. The candidate correctly uses modern programming languages to implement algorithms and mathematical models. The algorithms work, but could be improved in terms of performance and optimization. The code is readable and structured, but there is room for improvement. Overall, the approach is correct, but more appropriate tools or methods could be used to increase work efficiency. The candidate correctly manages the development, implementation, and maintenance of information systems and software systems. The development process is organized, tasks are accomplished effectively, but in some cases, the interaction between the development and maintenance phases could be improved. Project management complies with standards, but there is room for further process optimization and improved system maintenance quality. The candidate is well-versed in software development trends and applies them in their professional activities. Knowledge of current trends is often applied in project work, but could be improved by deeply implementing the latest technologies or more widely applying advanced methods. Overall, trends are used effectively, but there is room for further growth and improvement in this area. The candidate correctly selects software for their professional activities, taking into account market trends. Knowledge of current software trends is used to make decisions, but new or more suitable solutions may sometimes be missed. Overall, software selection is up-to-date, but there is room for improvement by considering a broader picture of trends. The company considers current software market trends and applies them to its professional activities. Modern technologies and methods are integrated into work processes, but there is sometimes room for deeper implementation of new solutions. Adopting software development trends contributes to improved performance, but there is room for further refinement.

" satisfactory " rating is given to a student if there are gaps in the distribution of responsibilities and coordination of staff. Planning is in place, but there are significant delays and insufficient control. Personnel management is basic, and employee motivation is weak. Problems are resolved late or incompletely. A systematic approach to improving efficiency and reducing costs is lacking. Production activities are irregular, and there are organizational and regulatory shortcomings. The presentation is poorly structured, with fragmented flow. Only the main points are presented, with important details or evidence missing. The slide design is overloaded with text, poor color combinations, or sloppy elements. The presentation is monotonous, with frequent hesitation and a lack of expressiveness. Interaction with the audience is minimal, and the presentation resembles a monologue. During a team presentation, there is a lack of coordination among the speakers, and roles are unevenly distributed. Answers to audience questions are difficult, and there may be uncertainty or deviations from the topic. Shows interest in self-development, but does so irregularly or formally. Has a general development vector, but experiences difficulties in achieving set goals. Sometimes offers unconventional ideas, but rarely puts them into practice. Weakly analyzes own achievements and mistakes, and does not adjust behavior based on experience. Self-development planning is chaotic, and available resources are not always utilized. Shares knowledge episodically, without a systematic approach. Prioritizes ineffectively, and may make errors in assessing the importance of tasks. Plans work, but often deviates from the plan or does not complete it completely. Achieves goals with delays or requires additional support. Difficulty adapting to change, requiring significant time for restructuring. Weakly analyzes performance results, does not use acquired experience for further improvement. Can complete tasks, but without the required level of initiative and responsibility. Has basic knowledge of mathematics and natural sciences. Can apply basic concepts, but encounters difficulties in solving more complex problems. Sometimes makes mistakes in applying knowledge in professional activities. Requires additional assistance to solve problems that require a deeper understanding. Understands basic principles but has not actively pursued advanced knowledge. Can use basic programming tools and information technology, but struggles with more complex problems. Requires assistance in solving non-standard problems or uses ineffective methods. Applies standard approaches to problem solving, but occasionally makes errors or misses important details. Knowledge of programming and information technology is limited and requires additional practice to improve. Uses basic or outdated information technology methods to explore mathematical models. Models are created with fundamental principles in mind, but lack accuracy or do not account for all possible variables. Use of software tools is limited to standard functions, without in-depth data analysis. Simple approaches to problem solving are used, and research results remain superficial, failing to provide new suggestions. Uses parallel computer and network technologies, but encounters difficulties in applying them. Knowledge and skills allow for solving only basic problems or applying standard solutions without considering the specifics and characteristics of work processes. Use of technology is limited, and additional effort may be required to achieve the desired results. During the work process, errors related to insufficient consideration of parallel computing or network interactions may be noticed. Uses basic or outdated programming languages and application packages to implement algorithms and mathematical models, which limits the capabilities and efficiency of problem solving. Standard solutions are used in the work, which are not always suitable for more complex or specific problems. The implementation of algorithms and models may be functional, but requires improvement in terms of optimization, performance, and the use of current tools. You use basic modeling programs, but your approach to model analysis and diagnostics is limited. Some model elements require refinement, and a systems approach is not always applied adequately. Modeling results may require improvement in accuracy and efficiency, and problem identification and resolution are often limited to superficial analysis. Uses standard algorithm development methods, but their accuracy and efficiency leave much to be desired. Algorithms solve problems, but in some cases, their optimization or the use of more complex approaches is required to achieve better results. It is

necessary to work on improving your methods and increasing the efficiency of algorithm development. Uses modern programming languages, but the implementation of algorithms and mathematical models leaves much to be desired. The code solves the problem, but has optimization or performance issues. The structure and readability of the code could be improved, and the choice of tools is not always optimal for the task. Further development is required to achieve a higher level. Manages the development of information systems and software packages, but with some errors in the process. System development and support are completed, but in some cases, work organization or attention to detail is insufficient. Project management sometimes does not meet all standards, which leads to slowdowns or some flaws in software packages. Has basic knowledge of software development trends, but its application in professional activities is limited. Knowledge of current trends is not always fully utilized. Sometimes it is not possible to effectively apply new technologies and methods in work, which can reduce the efficiency of software development and support processes. There is potential for improvement and more active implementation of new approaches. Selects software for their professional activities, but to some extent ignores current market trends. Sometimes the chosen solutions do not meet all the requirements of the modern industry, which can reduce their effectiveness. Knowledge of market trends is applied to a limited extent, and software selection is not always optimal from a long-term perspective. While some software market development trends are taken into account, their application in professional work is limited. Knowledge of new technologies and trends is not always used effectively. In some cases, modern approaches and methods cannot be fully integrated into work, hindering process improvement. The application of development trends requires further development.

" failing " grade if there is a lack of clear division of responsibilities and chaotic workflow. Planning is absent or perfunctory, and oversight is minimal. Management is ineffective, with a lack of motivation and control over employees. Emerging problems are ignored or resolved in a timely manner. Production processes are not optimized, potentially resulting in significant losses of time and resources. Production activities are conducted with serious violations of regulatory requirements. The presentation lacks a clear structure, and the sequence of information delivery is chaotic. Key aspects of the topic are poorly covered or missing, and the materials are poorly prepared. Slides are overloaded with text, illegible, or poorly formatted. The presenter reads without expression, uses poor intonation, and stutters frequently. There is no interaction with the audience, and the material is presented formally. The team lacks coordination, and presenters fail to coordinate information with each other. The presenter either does not answer questions or does so hesitantly, making mistakes and deviating from the topic. Lacks initiative in learning and professional development. Lacks clear goals and the desire to achieve them. Shows no creativity and is uninterested in finding new solutions. Does not analyze their actions or learn from mistakes. Does not plan their own development or utilize available educational and professional resources. Does not share their experience and shows no interest in teaching others. Fails to prioritize and chooses unimportant or non-urgent tasks. Shows no logical structure or lacks it. Fails to achieve goals, and work is completed late or of poor quality. Incapable of adapting to changing conditions and has difficulty adjusting plans. Lacks self-analysis and repeats the same mistakes. Avoids responsibility and requires constant external supervision. Has limited knowledge of mathematics and natural sciences, which is insufficient for professional work. Incapable of applying this knowledge in professional practice or applies it extremely rarely and with a high number of errors. Difficulties in solving problems that require even basic knowledge often require assistance and correction. Shows no interest in updating knowledge and scientific development. Lacks or only partially understands basic concepts and principles. Has limited knowledge and skills in programming and information technology and is unable to effectively solve problems using them. Does not solve problems independently or solves them with significant errors requiring significant intervention. Does not use modern programming tools or information technology, despite the availability of such capabilities. Virtually never updates

knowledge in this area and does not apply new approaches. Uses ineffective or outdated information technology, resulting in the creation of inaccurate or incomplete mathematical models. Models do not meet modern standards and do not take into account key parameters necessary for problem solving. Appropriate software and tools for analysis are absent or inadequately applied. Analysis of models is superficial or not performed, and research results are not significant or useful. Does not use parallel computer and network technologies or applies them with minimal effectiveness. Knowledge and skills are insufficient to solve professional problems using these technologies. Technologies are not applied properly, leading to significant errors or inefficiencies. Failure to consider important aspects such as performance, reliability, or security when using parallel computing and network solutions. Ineffective use of modern programming languages and application packages, resulting in significant errors in the implementation of algorithms and mathematical models. The development process may be unstructured or outdated and inappropriate tools are used, reducing the productivity and accuracy of solutions. Lack of understanding of the correct selection of tools for task implementation, leading to ineffective results. Ineffective use of application packages for modeling, resulting in the creation of models that do not meet requirements. Analysis and diagnostics of models are conducted without taking into account important factors, which complicates problem identification and resolution. Models are not optimized, and approaches to their study require significant improvement to achieve correct results. Experiencing difficulties in applying modern methods for developing algorithms for mathematical models, resulting in low accuracy and performance of algorithms. Their choice of methods does not always meet the requirements of the problem, which complicates problem solving. Significant improvement in skills in the selection and application of methods for developing effective algorithms is needed. Difficulty using modern programming languages to implement algorithms and mathematical models. Code frequently fails to function correctly, is poorly structured, and does not meet task requirements. Algorithm implementation results in low performance, and the choice of tools is inadequate. Significant effort is required to improve programming skills and optimize code. Difficulty managing the development of information systems and software packages. The development process is disorganized, and errors are made during system design and support. Tasks related to management and maintenance are performed irregularly or with serious flaws, resulting in non-compliance with requirements. Unable to ensure the stable operation of software packages and timely support. Difficulty identifying and applying software development trends in professional activities. Knowledge of current trends is limited, and their use in work is minimal. Unable to correctly adapt their actions to new technologies and approaches, which reduces the effectiveness of working with software. Significant improvement is required in understanding and applying current trends in the software field. Difficulty choosing software for their professional activities, without taking into account current market trends. Often chooses outdated or inappropriate software, which reduces work efficiency. Lack of a deep understanding of current trends, and software selection does not meet market demands. Significant improvement is needed in selecting software solutions based on market dynamics. Failure to consider software market trends in their professional activities. Lack of understanding of current software trends leads to the selection of outdated and ineffective solutions. New technologies are not being implemented, reducing professional effectiveness. Significant improvement is needed in analyzing and applying software market trends.

Assessment tools for Internship Program
Technological (Project and Technological) Internship / Технологическая
(проектно-технологическая) практика

1. Tasks to assess knowledge gained in practice (basic level)

Controlled competencies or their parts (competence code)	Formulation of the task	
UK-3 UK-6 PC-1 PC-7 PC-6 PC-8 PC-9	Task 1	Apply methods of mathematical and algorithmic modeling in the relevant field.
	Task 2	Apply computing and computer technologies to solve a production problem.
UK-3 UK-6 PC-1 PC-7 PC-6 PC-8 PC-9	Task 1	Use mathematical and algorithmic modeling methods to solve applied problems in scientific and technical fields, economics, business, etc.
	Task 2	Analyze a mathematical model of production or management focus.

2. Tasks to assess knowledge gained in practice (advanced level)

Controlled competencies or their parts (competency code)	Formulation of the task	
UK-3 UK-6 PC-1 PC-7 PC-6 PC-8 PC-9	Task 1	Apply methods of mathematical and algorithmic modeling in the relevant field (develop a model and evaluate its adequacy and effectiveness).
	Task 2	Apply computational and computer technologies to solve a production problem (develop a model and evaluate its adequacy and effectiveness).
UK-3 UK-6 PC-1 PC-7 PC-6 PC-8 PC-9	Task 1	Use methods of mathematical and algorithmic modeling to solve applied problems in scientific and technical fields, economics, business, etc. (develop a model and evaluate its adequacy and effectiveness).
	Task 2	Develop a mathematical model of production or management focus and evaluate its adequacy.

3. Tasks to assess skills and abilities acquired in practice (basic level)

Controlled competencies or their parts	Formulation of the task
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parts (competence code)		
UK-3 UK-6 PC-1 PC-7 PC-6 PC-8 PC-9	Task 1	Apply methods of mathematical and algorithmic modeling in the relevant field.
	Task 2	Apply computing and computer technologies to solve a production problem.
	Task 1	Use mathematical and algorithmic modeling methods to solve applied problems in scientific and technical fields, economics, business, etc.
	Task 2	Analyze a mathematical model of production or management focus.
	Task 1	Use methods of mathematical and algorithmic modeling to solve applied problems in scientific and technical fields, economics, business, etc. (develop a model and evaluate its adequacy and effectiveness).
	Task 2	Develop a mathematical model of production or management focus and evaluate its adequacy.

4. Tasks that allow you to assess the skills and abilities acquired in practice (advanced level)

Controlled competencies or their parts (competency code)	Formulation of the task	
UK-3 UK-6 PC-1 PC-7 PC-6 PC-8 PC-9	Task 1	Apply methods of mathematical and algorithmic modeling in the relevant field (develop a model and evaluate its adequacy and effectiveness).
	Task 2	Apply computational and computer technologies to solve a production problem (develop a model and evaluate its adequacy and effectiveness).
	Task 1	Use methods of mathematical and algorithmic modeling to solve applied problems in scientific and technical fields, economics, business, etc. (develop a model and evaluate its adequacy and effectiveness).
	Task 2	Develop a mathematical model of production or management focus and evaluate its adequacy.
	Task 1	Use methods of mathematical and algorithmic modeling to solve applied problems in scientific and technical fields, economics, business, etc. (develop a model and evaluate its adequacy and effectiveness).
	Task 2	Develop a mathematical model of production or management focus and evaluate its adequacy.

5. Methodological materials defining the procedures for assessing knowledge, skills, abilities and (or) work experience, characterizing the stages of competence development

The procedure for completing the industrial practice “Technological (design and technological)” includes the following stages:

- preparatory;
- functional- activity-based ;
- final.

At each stage of the internship, ongoing monitoring of competency development is carried out. The tasks offered to the student allow them to test competencies: UK-3, UK-6, PC-1, PC-7, PC-6, PC-8, and PC-9.

The assignments require mastery of competencies at different levels: basic and advanced . At the basic level, students are expected to use known methods and technologies to solve production problems, while at the advanced level, a heuristic approach to solving assigned production tasks is added.

When checking assignments, the following are assessed:

- consistency and rationality of task execution;
- quantity and quality of studies conducted;
- independent contribution to the range of issues studied.

When checking reports, the following are assessed:

- correctness of design;
- quality of the results presented;
- the quality of the presented graphic and tabular material.

When defending a report, the following are assessed:

- the student's proficiency in the material being presented;
- independence of judgment;
- the ability to make informed conclusions.
-