

Graduate Model of the Educational Program

7M07103 – Mechanical Engineering

Upon graduation, the graduate should be able to:

Skills:

- Demonstrate evolving knowledge and understanding in the field of modern materials, nanotechnology, and contemporary research methods.
- Professionally apply knowledge to calculate components and assemblies, carry out design projects, and prepare technical and economic documentation.
- Use applied software tools to address practical issues, utilizing personal computers with general and specialized software.
- Evaluate the technical condition of professional activity objects, analyze them, and develop recommendations for further operation.

Knowledge and Understanding:

- Understand the concept of scientific experimentation, the reflective stage of scientific research, theoretical and experimental models, and methods for their comparison.
- Grasp the architecture of modern enterprises and business processes.
- Be aware of the state and trends in the development of modern information technologies.
- Understand contemporary problems in the field of mechanical engineering production.
- Apply methodologies for effectively organizing the work of operational enterprises.
- Classify and understand the main types of modern equipment and their operating principles.
- Comprehend the fundamental characteristics of software.
- Understand manufacturing technologies, rules of mathematical process modeling, and tools of mechanical engineering production.
- Apply innovative technologies in mechanical engineering, including the conditions and tools for automating production processes in the field.

Competencies:

- Analyze problems and make informed decisions.
- Independently manage activities within the strategy of enterprise operations, coordinating work with other divisions.
- Take responsibility for the production of finished products, including manufacturing, assembly, and preliminary testing of machine components and equipment.
- Prepare, maintain, and plan production tools, machine assemblies, and processes that may lead to significant changes or development.
- Continuously update knowledge and skills throughout life.