

MASTER`S DEGREE

1. Qualification: Degree, Program Subject Area (if necessary Study program, Educational program, Professional qualification)

Master Degree, Program Subject Area: Applied Mechanics, Educational program: Manufacturing Engineering

1.1 Field of study

Механічна інженерія / Mechanical Engineering

2. INFORMATION ABOUT THE LEVEL OF THE QUALIFICATION

2.1 Level of qualification

2.2 Second (Master's) level of higher education corresponds to level 8 of National Qualification Framework and comprises the ability of a person to solve complex tasks and problems in applied mechanics, which involve conducting research and / or innovations implementation and is characterized by uncertainty of conditions and requirements.

2.3 Official duration of programme

1 year 5 months (90.00 ECTS credits)

2.3 Admission requirements(s)

First (Bachelor's) level of higher education. Admission is carried out by the results of entrance examinations.

3. INFORMATION ABOUT THE CONTENTS AND OUTCOMES GAINED

3.1. Mode of study

Full-time

3.2. Programme requirements

Learner must satisfy the programme requirements in the Programme Specification, which includes:

- The theoretical core (60 ECTS credits) includes lectures, seminars, laboratory classes, practical classes and student's out-of-class activities;
- Pre-Diploma Practical Training (4 weeks, 6 ECTS credits);
- Preparations of Master's Thesis (24 ECTS credits).

Credits are assigned to the student when he/she successfully (see Grading scheme in 4.4) passes written (or oral) tests and examinations in subjects, defends course papers, reports results of his/her practical training, passes final examinations.

The competences acquired:

Knowledge and understanding:

- Specialized conceptual knowledge gained in the process of training and / or professional activity at the level of the latest achievements, which are the basis for original thinking and innovation, in particular in the context of research work
- Critical understanding of problems in learning and / or professional activities and within subject areas.

Application of knowledge and understanding (Applying knowledge and understanding):

- solving complex problems and problems requiring updating and integration of knowledge, often under conditions of incomplete / insufficient information and contradictory requirements;
- conducting research and / or innovation activities;
- the use of methodology, methods and techniques for the development and production of a new type

of product, in particular at the stages of execution of research and development works and / or the development of technological support for the process of its production;

-the use of principles of construction and functioning of automation systems for technological research, design and engineering works, technological preparation and engineering analysis in mechanical engineering;

-perform simulation, static and dynamic analysis of structures, mechanisms, materials and processes at the design stage using modern computer systems;

-use of theoretical knowledge and practical skills of using modern methods of searching optimal parameters of technical systems by means of system analysis, mathematical, simulation and computer simulation, in particular in the case of incomplete and contradictory information;

-independent decision of the set tasks of an innovative character, ability to argue and protect the received results and decisions made, in particular in public;

-to substantiate and evaluate innovative projects, to know the methods of their promotion in the market, the ability to perform econometric and scientific-metric evaluations;

-use the foundations of organization and management of personnel;

demonstrate knowledge of the structure, functioning, technical and software of information-measuring computerized systems in machine-building production;

-demonstrate knowledge and understanding of the bases of the organization of the production process;

-demonstrate knowledge of the organization, functioning, technical and software of information-measuring computerized systems in scientific researches of mechanical systems and processes;

-demonstrate knowledge and understanding of the foundations of the organization of the research (scientific) process;

-demonstrate the knowledge, understanding and practical application of the theory of experiment, the methods of planning the experiment, assessing the reliability of the results of the experiment, methods for analyzing experimental data and constructing mathematical models based on them, in particular, using the latest methods based on the use of modern information technologies.

Making judgments:

problems of General ecology and its role in preserving and renewing the environment, the impact of production on the environment, and the means of attaining modern technologies to protect and reduce the negative impact of the equipment on the environment.

4. INFORMATION ABOUT ACADEMIC AND PROFESSIONAL RIGHTS

4.1. Академічні права Access to further studies

Access to a philosophy doctor programs (Third cycle of higher education).

4.2. Professional status

This diploma authorizes professional activity according to education and qualification