

Code: 25 „PRODUCTION TECHNOLOGIES”

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|---|-------------------------------------|
| ECTS credits: 5   | Number of hours per week:           |
| Forms of assessments: Exam  | 2+0+1+1                             |
|   | Types of assessment: Exam - written |
| Department, providing instruction on the discipline:<br>Department: <i>INDUSTRIAL MANAGEMENT</i><br><i>FACULTY OF MECHANICAL ENGINEERING AND TECHNOLOGIES</i> |                                     |

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**Annotation:**

The "Production Technologies" discipline discusses the main theoretical issues related to the manufacturing technologies in machine building. The aim is to acquaint the students with the characteristics of the individual methods of processing, their technological characteristics, the basic principles and methods of designing the technological processes in the production of the parts and the assembling of the units and the machines. The quantitative and qualitative indicators of the technological processes, the precision problems in the processing of the preforms, as well as the technological prerequisites for increasing the labor productivity are analyzed. This provides a foundation on which students can build on their knowledge in the organization and management of production in the business unit.

The laboratory exercises include the study of the main types of production machines, technological equipment, the technological capabilities of the individual production processes, as well as monitoring under real production conditions. In the exercises the students are trained in the development of technological processes and are acquainted with the methods for determination of the parameters of the cutting modes in mechanical processing, calculation of the economic efficiency of the technological processes. The coursework in the course enables the students to perform a practical task on the basis of the lessons learned and the laboratory exercises.

The discipline directly corresponds to the following disciplines: Industrial Engineering and Production Management.

**Main issues of the syllabus content:**

- General methodology and sequence of the design of the technological processes;
- Methods of mechanical processing;
- Metal cutting machines, tools and tools for machining;
- Parameters of cutting regime for different types of machining;
- Processes for assembling and testing of prefabricated units;
- Technical and economic evaluation of the developed technological process.

**Content presentation:**

The content is taught in lectures and laboratory exercises. Course work is also planned.

