

Code: 37 „PROJECT IN INDUSTRIAL ENGINEERING”

ECTS credits: 3	Number of hours per week: 0+0+2
Forms of assessments: Course project	Types of assessment: Project defense
Department, providing instruction on the discipline: Department: <i>INDUSTRIAL MANAGEMENT</i> <i>FACULTY OF MECHANICAL ENGINEERING AND TECHNOLOGIES</i>	

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Annotation:

The main objective of the discipline is the development of the organizational and technological part of an investment engineering project for a new enterprises or reconstruction (re-engineering) of an existing one. The developed project should provide high techno-economic indicators:

- Possible highest level of technology, technology and organization of production;
- Low cost of manufactured products;
- Low cost of construction or reconstruction.

Project of an industrial enterprise is a complex task that involves a large number of interrelated tasks in the fields of economics, technology and organization of production.

The creation or re-engineering of an enterprise should first of all be economically justified and cost-effective.

Economic tasks that solve a project:

- study of market needs and production opportunities for a given type of products;
- defining a real and well-founded production program of the enterprise;
- determining the location of the enterprise;
- exploring the conditions for the most appropriate supply of raw materials, materials and energy to the enterprise;
- determination of the production links of the projected enterprise with other enterprises;
- determination of the necessary basic and working capital of the enterprise;
- determination of the cost of manufactured products, etc.

Technical Tasks:

- Design of the technological processes for the production of the products according to the annual production program;
- selection of the basic and auxiliary machinery and technological equipment and determination of their location in the space.
- determination of the composition and number of the needed workforce, quantity of raw materials, fuels and energy;
- development of transport, energy, lighting, heating, ventilation, water supply and sewerage issues;
- selection and development of the construction of the enterprise buildings, etc.

Tasks related to organization of the production process:

- technological development of the production processes;

- selection of technological machines and equipment;
- organization form of the main production process;
- organizational and production structure of the enterprise;
- organization of work;

Management tasks:

- developing the management structure;
- distribution of functions and relations between departments;
- training of staff and providing favorable working conditions;
- management of production process and enterprise;

The theoretical aspects of the discipline have already been studied within the scope of the discipline "Industrial Engineering"

Main issues of the syllabus content:

- Preliminary feasibility studies on the production system project;
- Technological design of the production system;
- Technical and economic evaluation of the technological part of the project;
- Risk assessment of the investment project;
- Graphical part - drawing up the master plan of the production system.

Content presentation:

Auditory - Periodic verification the performance of the assignment points and control of the completion of each stage of the project;

Extracurricular work on the project development.