


Discipline	PROJECT OF INDUSTRIAL ENGINEERING code: 37 summer semester	
Specialty	INDUSTRIAL MANAGEMENT	
ECTS credits: 4	Form of assessment: Continuous assessment	
Lecturer	Assoc. prof. PhD Eng. / scientific title/ Krasimira Dimitrova /name/ Room NUK 508 Phone: +359878011079 E-mail: krasimira.dimitrova@tu-varna.bg	
Department	INDUSTRIAL MANAGEMENT	
Faculty	<i>FACULTY OF MECHANICAL ENGINEERING AND TECHNOLOGIES</i>	

#### Learning objectives:

The main objective of the discipline is the development of the organizational and technological part of an investment project for construction of new or reconstruction of existing enterprises. The developed project must 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.

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

The creation or rebuilding of an enterprise must first of all be economically justified and its activity 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 set in the program;
- selection of the necessary basic and auxiliary machinery and equipment and the design of their location in space.
- determination of the composition and number of the necessary workforce, quantity of raw materials, materials, fuels and energy;
- development of transport, energy, lighting, heating, ventilation, water supply and sewerage issues;

- selection and development of the construction of the buildings for the enterprise, etc.

Tasks related to organization of production:

- technological development of the production processes;
- selection of technological machines and equipment;
- form of the organization of the main production processes;
- organizational and production structure of the enterprise;
- organization of work and jobs;
- management of production process and enterprise, etc.

Management tasks:

- developing the management structure;
- distribution of functions and relations between departments;
- training of staff and providing favorable working conditions;
- establishing the order for receipt of requests, documentation, forms of accountability and control.

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

CONTENTS:		
Training Area	Hours lectures	Hours seminar exercises
Preliminary feasibility studies of the production system project		2
Analysis of the production program		2
Determining the type of production		2
Technological design of production system - development of several working options		4
Determination of the necessary areas in the production system for each developed variant		4
Choice of industrial building for the production system for each developed variant		2
Design of the spatial location of the production areas, warehouses and premises in the production workshops for each developed variant		4
Design of the energy part of the production system for each developed variant		4
Drawing the master plan of the production system developed for each option		2
Technical and economic evaluation of the technological part of the project for each developed variant		2
Risk assessment for the investment project for each option developed		1
Selection of an option for realization and completion of the project documentation		1
<b>TOTAL:</b>	<b>30 h</b>	<b>30</b>