

# SIMULATION AND OPTIMIZATION OF BUSINESS PROCESSES IN INDUSTRY

## COURSE SYLLABUS ABSTRACT

7-06-0311-01-1 «Economy»

(speciality code and name)

Economic development of industrial and transport organizations

(profiling)

Advanced higher education

	STUDY MODE	
	full-time	part-time (shortened program)
Year	1	1
Semester	1	1
Lectures, hours	18	4
Practical classes, hours	18	4
Abstract, semester	–	1
Pass/fail, semester	1	1
Contact hours	36	8
Independent study, hours	72	100
Total course duration in hours / credit units	108 / 3	

### 1. Course outline

Essence and basic concepts of discipline; graphical methods for modeling and managing production business processes; network methods for modeling and managing business processes in industry; business process modeling tools.

### 2. Course learning outcomes

Upon completion of the course, the student will be expected to

#### **know:**

- the main business processes in the organization;
- technology, methods and tools for improving business processes;
- principles of construction, structure and technology of using software tools for modeling SADT (IDEF0); IDEF3 process modeling; modeling DFD data flows; ARIS modeling of business processes of various types of enterprise activities (production and technological, organizational and managerial, design and development, research and development);

#### **be able to:**

- conduct research and analysis of business systems in order to identify business processes;
- carry out the description of business processes in the form of appropriate formal models;
- conduct research and analysis of business processes in order to formulate proposals for their improvement;
- determine the optimal parameters of business processes for the implementation of measures to improve the efficiency of business processes in industry;

#### **to possess skills:**

- of using methods for modeling business processes in industry;
- approaches to solving problems of analysis and parametric optimization of business processes in industry;
- of using business process modeling tools.

### 3. Competencies

SC-4 Be able to model and optimize business processes in industry.

### 4. Requirements and forms of midcourse evaluation and summative assessment

Midcourse evaluation is carried out in the form of midcourse progress control (MPC) which is performed in the form of individual assignments on practical classes and abstracts. The form of the midcourse evaluation (ME) is a pass/fail.