

Economic and mathematical methods and models

(course title)

COURSE SYLLABUS ABSTRACT

6-05-0311-02 Economics and Management

(speciality code and name)

Economics and management in industrial, trade and transport enterprises

(concentration)

	STUDY MODE	
	full-time	part-time (shortened program)
Year	3	3
Semester	5	5
Lectures, hours	50	10
Laboratory classes, hours	34	8
In-class test (semester, hours)		5, 2
Pass/fail, semester	5	5
Contact hours	84	20
Independent study, hours	96	160
Total course duration in hours / credit units	180 / 5	

1. Course outline

The aim of the academic discipline is to study methods for constructing economic and mathematical models of socio-economic systems, methods for determining their parameters and analyzing their functioning; mastering practical skills in constructing econometric models in the study of economic phenomena and processes using computer technologies.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know: general methodological foundations and principles of constructing economic and mathematical models of economic systems; basic types of economic and mathematical models; fundamental concept of economic and mathematical analysis of complex economic phenomena; methods and models of inter-industry balance, optimal programming, game theory, network planning and management; techniques for interpreting the results of economic and mathematical modeling;

be able to: formulate problems of economic systems analysis; construct mathematical models of economic systems; determine the parameters of economic systems; conduct an analysis of the functioning of economic systems; correctly specify econometric models;

to possess a skill: in developing economic and mathematical models of socio-economic systems; in assessing the adequacy of economic and mathematical models and analyzing socio-economic systems; in using standard application software packages for information processing.

3. Competencies

Ability to apply quantitative and qualitative methods of analysis when making management decisions and to build economic, financial and organizational-managerial models.

4. Requirements and forms of midcourse evaluation and summative assessment

When studying the discipline, a modular-rating system of assessing students' knowledge is used. Intermediate control of academic performance involves assessing the performance of laboratory work. The form of interim assessment is a credit.