

**INFORMATICS**  
(course title)  
**COURSE SYLLABUS ABSTRACT**

6-05-0713-04 Automation of technological processes and productions

(speciality code and name)

Automation of technological processes and productions in mechanical engineering

(concentration)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	1		
Semester	1, 2		
Lectures, hours	50		
Laboratory classes, hours	32		
Pass/fail, semester	2		
Exam, semester	1		
Contact hours	82		
Independent study, hours	134		
Total course duration in hours / credit units	216/6		

1. Course outline

The discipline studies modern information technologies and means of converting, processing, storing and transmitting information.

2. Course learning outcomes

Upon completion of the course, students will be expected to know:

- the structure and technical means of a personal computer;
- system and application software;
- basics of modern multimedia and networking technologies and their tools and capabilities;
- basics of algorithmization of engineering problems;
- at least one programming language and basic techniques of its use;

be able to:

- work in the environment of the operating system MSWindows;
- Use standard office software packages, including MS Word word processor, MS Excel spreadsheet processor, MS Power Point presentation tools;
- use packages of special programs for mathematical purposes;
- build mathematical models and develop algorithms for solving applied tasks;
- implement algorithms in the form of their own programs in the VBA programming language;
- use programming skills in professional activities.

to possess a skill:

- methods of algorithmic engineering tasks;
- practical creation and support of automated workstations based on personal computers;
- methods of managing programs, data and equipment on the basis of modern operating systems for personal computers.

3. Competencies

UC-2 Solve standard tasks of professional activity on the basis of the use of information and communication technologies

BPC-1 Use the laws of natural sciences in professional activities.

4. Requirements and forms of midcourse evaluation and summative assessment

In the study of the discipline uses a module-rating system for assessing students' knowledge. Protection of laboratory works, intermediate control of progress, exam, credit.