Basics of design automation
(course title)

COURSE SYLLABUS ABSTRACT

1-40 05 01 Information systems and technologies (majors in)
(speciality code and name)

1-40 05 01-01 Information systems and technologies (in designing and producing)
(specialisation code and name)

	STUDY MODE	
	full-time	part-time (shortened program)
Year	3	2, 3
Semester	5, 6	4, 5
Lectures, hours	50	8
Laboratory classes, hours	68	12
Pass/fail, semester	5	4
Exam, semester	6	5
Contact hours	118	20
Independent study, hours	106	204
Total course duration in hours / credit units	224/6	

1. Course outline
Introduction to CAD. Mid-level CAD. Top-Level CAD.

2. Course learning outcomes
Upon completion of the course, students will be expected to
know**:**
main types of design tasks, methods of their formalization and solution; methodology of automation of engineering design of technical systems; method of solid modeling of machine building parts and assemblies by means of modern systems of automation of design and design works;
be able to**:**
design technical objects interactively; Develop programs and methodical tools for design design;
possess:
skills in working with geometric modeling systems.

3. Competencies
AK-1 – Be able to apply basic scientific and theoretical knowledge to solve theoretical and practical problems; AK-2 – Own system and comparative analysis; AK-3 – Own research skills; AK-4 – Be able to work independently; AK-5– Be able to generate new ideas (have creativity); AK-6 – Have a multidisciplinary approach to problem solving; AK-7 – Have skills related to the use of technical devices, information management and computer work; AK-8 – Have oral and written communication skills; AK-9 – Be able to study, improve your qualifications throughout your life; AK-10 – Use the basic laws of natural sciences in your professional activity; AK-11 – Own the main methods, methods and means of obtaining, storing, processing information using computer equipment; AK-14 – Organize your work on a scientific basis, independently evaluate the results of your work; SLK-6 – Be able to work in a team; PK-1 – Be proficient in modern methods, languages, technologies and tools for designing and developing software products; PK-2 Own the principles and basic skills, techniques, methods of setting up, adapting and maintaining software tools; PK-3 Analyze and justify the selection of technical, software and systems for automated support of professional activities; PK-4 Develop software tools and systems for providing automated support for solutions to professional tasks; PK-6 Test software products and applied software for compliance with technical requirements; PK-10 Develop technical and design documentation for the created software tools for solutions to professional problems; PK-31 – Design new and modernize technological processes that ensure the required technical and economic indicators.

4. Requirements and forms of midcourse evaluation and summative assessment
– verbal-written: laboratory protection, test, exam.