

CAD OF TECHNOLOGICAL SYSTEMS

(name of the discipline)

ANNOTATION TO THE CURRICULUM OF A HIGHER EDUCATION INSTITUTION

Specialty 1-53 01 01 « Automation of technological processes and productions »

	Form of higher education
	Full-time (daytime)
Course	4
Semester	8
Lectures, hours	30
Laboratory classes, hours	24
Test, semester	8
Classroom hours in the academic discipline	54
Independent work, hours	46
Total hours of academic discipline / credits	100/3

1. Summary of the academic discipline

The purpose of teaching the discipline "CAD of technological systems" is to train, on the basis of selected theoretical knowledge in the field of CAD construction, specialists who possess modern methods of automating the design of technological processes and automation tools for mechanical assembly production using electronic computing technology to solve an urgent problem of mechanical engineering - reducing time, labor intensity and improving the quality of technological preparation of production.

2. Learning outcomes

The task of the discipline is to acquire the skills of automation of the design of technological systems.

As a result of mastering the discipline, the student should **know**:

- structure and principles of construction of CAD technological systems;
- modern terminology in the field of automation of design of technological systems;
- basic methods of automation of design of technological systems;
- methods of setting computer-aided design tasks for various design procedures, operations, their formalization and algorithmization;
- current state of CAD technological systems;
- the methodology of working in the CAD environment of technological systems with different levels of design automation.

As a result of mastering the discipline, the student should **be able to**:

- design technological systems of various degrees of detail in the environment of modern CAD;
- perform configuration of CAD databases and knowledge bases for automated solution of logical and computational design tasks;
- perform the formulation and algorithmization of the main tasks of designing technological systems.

As a result of mastering the discipline, the student must **possess**:

- skills of using basic CAD software in the development of automated design procedures for designing, modeling and analyzing technological systems;
- methods of automation of design, modeling and digital prototyping of automation of mechanical assembly production.

3. Formed competencies

Mastering this discipline should ensure the formation of the competence of SK-14.2 - to know the theoretical foundations and technology of designing technical systems, the principles of work in modern CAD packages, to possess knowledge of the regulatory and technical base for solving design tasks.

4. Educational technologies: multimedia, using computers.