

PROGRAMMABLE DIGITAL DEVICES

ANNOTATION TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-54 01 02 - "Methods and devices for quality control and diagnostics of the state of objects"

	Form of higher education
	Full-time (daytime)
	3
Semester	6
Lectures, hours	34
Laboratory classes, hours	16
Exam, semester	6
Classroom hours per academic discipline	50
Independent work, hours	58
Total hours per academic discipline / credits	108/3

1. Brief content of the discipline.

The discipline deals with: the basic principles of construction and operation of typical circuits and nodes of programmable digital devices; fundamentals of software development for programmable digital devices; physical and computer modeling of programmable digital devices and programs developed for them.

2. Learning outcomes. As a result of mastering the academic discipline, the student must

– **know:** basic principles of construction and operation of typical circuits and units of programmable digital devices; rules for the development and design of electrical circuits of programmable digital devices; electronic element base of hardware support devices for programmable digital devices; software development methodology;

– **be able to:** develop instrument circuits based on programmable digital devices; develop software for designed devices; perform physical and computer modeling of designed devices and programs developed for them;

– **own:** calculation methods for typical circuits and units of programmable digital devices; skills in designing instrument circuits based on programmable digital electronic devices; skills to perform experimental studies of programmable digital electronic devices.

3. Formed competencies: SC-9 - "To be able to develop software for programmable devices."

4. Requirements and forms of current and intermediate certification.

- Written form: tests, written examinations.
- Oral and written form: reports on laboratory work with their oral defense.
- Technical form: visual labs.