REA DESIGN

ANNOTATION
TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Speciality1-54 01 02 - "Methods and instruments for quality control and diagnostics of the state of objects

	Form of higher education
	Full-time (daytime)
Well	3
Semester	5
Lectures, hours	34
Practical (seminar) classes, hours	34
Coursework, semester	5
Exam, semester	5
Classroom hours per academic discipline	68
Independent work, hours	40
Total hours per academic discipline / credit units	108/3
Total hours for term paper in academic discipline / credits	36/1

1. Brief content of the discipline.

The discipline "Designing electronic equipment" includes three main blocks: the main stages of development of design documentation for electronic components; basics of choice of materials and components of REA; issues of reliability and protection of electronic equipment from external influences. The objectives of the discipline are to systematize and consolidate the theoretical knowledge necessary for an engineer in the development of electronic components of technical devices; development of skills and abilities for the complex solution of technical problems with electronic devices.

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

know: the main factors determining the design features of REA; methods of electrical installation of electronic equipment units; features and main criteria for the design of printed circuit boards; methods of REA protection from external influences; reliability indicators of radio equipment elements; assessment of the reliability of REA nodes and blocks.

- be able to: analyze the electrical circuit diagram of the electronic equipment unit; choose the method of mounting REE units; to design printed circuit boards for REA; to calculate the reliability of the developed printed circuit assembly; correctly draw up design documentation for the development of printed circuit assemblies and blocks.
- own: methods for assessing reliability indicators; methods of computer-aided design of printed circuit boards; knowledge of printing technology

3. Formed competencies: CK-8 - Be able to design electronic circuits and printed circuit boards of devices using computer-aided design systems.

4. Requirements and forms of current and intermediate certification: exam (oral and written form). In order to be admitted to the exam, the student, in accordance with the program, must complete and defend a term paper.