

**RADIO ELECTRONIC EQUIPMENT DESIGN**  
**ANNOTATION**  
**TO THE CURRICULUM OF THE EDUCATIONAL INSTITUTION**  
**Specialty 6-05-0716-03 Information-measuring devices and systems**  
**Specialization: Information systems and technologies of nondestructive control and diagnostic**

|                                                         | Form of receipt |                       |
|---------------------------------------------------------|-----------------|-----------------------|
|                                                         | Full-time (day) | Part-time abbreviated |
| Course                                                  | 3               | 3                     |
| Semester                                                | 5               | 5                     |
| Lectures, hours                                         | 34              | 8                     |
| Practical (seminar) classes, hours                      | 34              | 8                     |
| Coursework, semester                                    | 5               | 5                     |
| Classroom hours in the academic discipline              | 68              | 16                    |
| Offset, semester                                        | 5               | 5                     |
| Independent work, hours                                 | 40              | 92                    |
| Total hours in the academic discipline/<br>credit units | 108/3           |                       |

1. Summary of the academic discipline.

This course provides training for students to acquire knowledge about the basic elements and stages of hardware design, materials used in the fabrication of electronic systems, the choice of methods of protection from external influences, design of electronic units, calculating their reliability, the correct design documentation for electronic units under development.

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

know: the main factors determining the design features of electronic assemblies; methods of electrical installation of electronic assemblies; features and main criteria of designing printed circuit boards; methods of protection of devices and equipment from external influences; reliability indicators of radio equipment elements; reliability assessment of assemblies and blocks of electronic equipment and biomedical devices;

be able to: analyse the electrical circuit diagram of the electronic equipment node; choose the method of installation of electronic equipment nodes; design printed nodes of electronic equipment; calculate the reliability of the developed printed node; correctly draw up design documentation for the development of printed nodes and blocks, correctly draw up repair documentation;

have the skill: work with application programmes for designing printed circuit boards; estimation of reliability indicators of elements and units of printed circuit boards; development of design documentation of printed circuit units and blocks.

3. Competencies to be formed.

Mastering of this academic discipline should ensure the formation of the following competences: 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: control work, test assignments, performance and defense of laboratory works, current certification - examination pro-intermediate certification (oral and written form).