

# DEVICES AND METHODS OF THERMAL AND RADIO WAVE CONTROL

## COURSE SYLLABUS ABSTRACT

Specialty: 6-05-0716-03 Information and measuring instruments and systems

Concentration: Information systems and technologies of non-destructive testing and diagnostics

|                                               | STUDY MODE |                               |
|-----------------------------------------------|------------|-------------------------------|
|                                               | full-time  | Part-time (shortened program) |
| Year                                          | 3          | 3                             |
| Semester                                      | 6          | 6                             |
| Lectures, hours                               | 34         | 6                             |
| Laboratory classes, hours                     | 16         | 4                             |
| In-class test (semester, hours)               |            | 6 (2 h)                       |
| Exam, semester                                | 6          | 6                             |
| Contact hours                                 | 50         | 12                            |
| Independent study, hours                      | 58         | 96                            |
| Total course duration in hours / credit units | 108/3      |                               |

1. Course outline. The academic discipline is aimed at students studying the theoretical foundations, methods and areas of application of thermal and radio wave control in the volume that is necessary for students to obtain a complete understanding of the current state, prospects and development paths of this type of control.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know: physical principles of thermal and radio wave control; principles of construction of thermal imaging and radio wave devices for various purposes;

be able to: correctly select and apply methods of thermal and radio wave control; be able to set up and use devices and use them to solve the corresponding measurement problems;

to possess a skill: implementation of modern technologies of thermal and radio wave control of materials, products, skills of quality assessment of controlled objects.

3. Competencies. Be able to select technical means of thermal and radio wave non-destructive testing in accordance with the characteristics of the area.

4. Requirements and forms of midcourse evaluation and summative assessment. exam (written form). To be admitted to the exam, the student, in accordance with the curriculum, is required to complete and defend laboratory work, as well as intermediate tests.