

# PROGRAMMING AUTOMATED WELDING EQUIPMENT

## COURSE SYLLABUS ABSTRACT

### 7-06-0714-02 Innovative technologies in mechanical engineering

(speciality code and name)

### Welding technologies

(concentration)

Advanced higher education

|   | STUDY MODE |           |
|---|------------|-----------|
|   | full-time  | part-time |
| Year  | 1          | 2         |
| Semester                                      | 2          | 4         |
| Lectures, hours                               | 34         | 8         |
| Laboratory classes, hours                     | 34         | 8         |
| Exam, semester                                | 2          | 4         |
| Contact hours                                 | 68         | 16        |
| Independent study, hours                      | 148        | 200       |
| Total course duration in hours / credit units | 216/6      |           |

#### 1. Course outline

The purpose of teaching the discipline is for undergraduates to obtain ideas, knowledge and skills in the field of programming automated control systems for welding installations, principles of software control of equipment for arc and resistance welding.

#### 2. Course learning outcomes

Upon completion of the course, students will be expected to know:

- main technical characteristics and operation of welding equipment as part of robotic complexes and automated systems;
- types of presentation of welding equipment operating programs for various methods of arc and resistance welding.

be able to:

- develop control programs for welding equipment for arc and resistance welding.

to possess a skill:

- programming of main technological and peripheral equipment to solve specific problems of production automation.

#### 3. Competencies

SK-6. Possess programming skills for welding equipment, automatic lines and robots

#### 4. Requirements and forms of midcourse evaluation and summative assessment

To assess the quality of students' assimilation of educational material, including acquired competencies, ongoing certification is carried out during training sessions based on the results of laboratory and test work. Interim certification of students is carried out based on the results of the current certification and includes an exam. Intermediate monitoring of progress is aimed at ensuring maximum efficiency of the educational process and increasing motivation to study.