

TECHNOLOGY OF FUNCTION WELDING AND THERMAL CUTTING

(наименование дисциплины)

COURSE SYLLABUS ABSTRACT

Speciality 6-05-0714-02 Engineering design and production of materials and products made from them

Profiling Equipment and technology for welding production

	Form of higher education		
	Full-time	part-time abbreviated	part-time
Year	2,3	2	2,3
Semester	4,5	3,4	4,5
Lectures, hours	84	18	18
Practical (seminar) classes, hours	16	4	4
Laboratory, hours	32	8	8
Course project, semester	5	4	5
Test, semester	4	3	4
Exam, semester	5	4	5
Classroom hours per academic discipline	132	30	30
Independent work, hours	156	258	258
Total hours per academic discipline / credit units	288 / 8		

1. Brief content of the academic discipline

The purpose of teaching the discipline is to develop students' understanding, knowledge and skills on the physical foundations of various fusion welding methods, the peculiarities of their use in industry, the principle of development of welding materials, and technical techniques for welding various metals and alloys.

2. Learning outcomes

As a result of mastering the academic discipline, the student must know:

- types and methods of fusion welding used in production;
- features of technological processes and welding technology of various classes of steels, cast iron and non-ferrous metals;

— standards in force in the Republic of Belarus related to technological processes of fusion welding;

be able to:

— choose the method of fusion welding and thermal cutting, welding materials, equipment and modes that ensure high-quality welding process;

— evaluate various options for fusion welding technological processes;

— develop effective welding technologies for a given design, taking into account real production conditions;

own:

— methods of monitoring the production of welding work;

— safety requirements for welding operations;

— rules for monitoring technological parameters of fusion welding and thermal cutting.

3. Competencies being developed

Master the technologies of fusion welding and thermal cutting of metals and alloys, know the equipment, welding materials and be able to select welding mode parameters that ensure the quality of welded joints.

4. Requirements and forms of current and intermediate certification.

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 tests. Interim certification of students is carried out based on the results of the current certification. Intermediate monitoring of academic performance is aimed at ensuring maximum efficiency of the educational process and increasing motivation to study. Current certification is carried out in the form of oral defense of laboratory work and a written test. Interim certification is carried out in the form of an exam in oral and written form