FUNDAMENTALS OF SCIENTIFIC RESEARCH AND INNOVATION
COURSE SYLLABUS ADSTRACT

6-05-0714-03 Engineering and technical design and production of materials and products made from them
(Speciality code and name)

Equipment and technology for welding production
(Concentration)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	**4**	**4**	**4**
Semester	7	7	7
Lectures, hours	16	4	4
Practical classes (seminars), hours	16	4	4
Pass/fail, semester	7	7	7
Contact hours	32	8	8
Independent study, hours	76	100	100
Total course duration in hours / credit units	108/3		

1. Course outline.

The aim of the academic discipline is to develop in students a holistic understanding of the organization and conduct of scientific research and innovation activities, the training of scientific personnel, as well as training in modern methods of theoretical and experimental research, the processing of their results and the transmission of information materials.

2. Course learning.

Upon completion of the course, students will be expected to

know:

- a system for training scientific personnel;
- methodological foundations of scientific knowledge;
- methods of scientific and technical creativity;
- methods of empirical and theoretical research;
- rules for the presentation of scientific materials;
- innovative developments in welding production;
- principles of work organization in a scientific team;

be able to:

– compile a literature review in the research area;
– select and justify the direction of scientific research;
– develop an experimental methodology;
– organize and conduct scientific research;
– prepare a scientific research report;
– prepare a report abstract based on research materials;
– present a paper at a seminar or conference;
– prepare a presentation on an innovative development;

to prossess a skill:

– apply search and processing of scientific information;
– apply methods of organizing and conducting scientific research;
– present information materials.

3. Competencies.

Capable of solving standard professional tasks based on information and bibliographic culture using information and communication technologies.

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

To assess the quality of students' learning, including acquired competencies, ongoing assessments are conducted during class periods based on the completion and defense of practical assignments, as well as the defense of individual assignments. Interim assessments are conducted based on the results of ongoing assessments and include a credit assessment.

Estimated assessments consist of oral defenses of practical assignments and oral defense of individual assignments. Interim assessments consist of a credit assessment, both oral and written.