

Fundamentals of research and innovation

(course title)

COURSE SYLLABUS ABSTRACT

1-36 01 03 – Machine-building process equipment

(speciality code and name)

	STUDY MODE
	full-time
Year	2
Semester	3
Lectures, hours	34
Practical classes (seminars), hours	16
Pass/fail, semester	3
Contact hours (including hours for controlled independent work)	50 (6)
Independent study, hours	58
Total course duration in hours / credit units	108/3

1. Course outline

Organization of scientific research. Search for information sources. Methods of processing the results of the experiment. Theoretical foundations of innovation. The essence of innovation. Innovation Process Structure.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know: goals and objectives of basic and applied research; methodological foundations of experimental work; main stages and methods of processing research results; innovative laws and goals of innovation activities; content, methods of innovative activity and the basis of its organization; patterns of development of innovative strategies;

be able to: conduct research on new technologies, equipment, projects and solutions in order to assess their innovative potential;

possess: basics of research of new technologies, equipment, projects and solutions with the aim of their innovative potential.

3. Competencies

SK-3 – Be able to create mathematical models of drives and other components of process equipment, performing virtual tests in order to optimize their designs and parameters.

4. Requirements and forms of midcourse evaluation and summative assessment

– verbal-written: protection of practical classes, test.