

## 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.