

Process equipment

(course title)

COURSE SYLLABUS ABSTRACT

1-36 01 04 – Equipment and technologies for highly efficient material processing processes

(speciality code and name)

	STUDY MODE
	full-time
Year	3
Semester	5
Lectures, hours	68
Practical classes (seminars), hours	34
Laboratory classes, hours	16
Course paper, semester	6
Exam, semester	5
Contact hours	118
Independent study, hours	42
Total course duration in hours / credit units	160/4

1. Course outline

Main components and mechanisms of machine tools. Machine control systems. Turning, drilling, boring, milling, tothing, threading, drawing, planing, running machines.

2. Course learning outcomes

Upon completion of the course, students will be expected to know: basic design principles for metal cutting machines; design features of machines for different types of machining; principles of construction of automatic lines and flexible production systems; technological equipment development trends;

be able to: design a machine that provides the necessary characteristics of the workpiece (surface); evaluate the technical and economic indicators of the metal-cutting machine; develop the terms of reference for the metal cutting machine control system.

possess: methods for designing kinematic schemes, general arrangement of individual assemblies of metal cutting machines taking into account their purpose and the adopted control system; skills in assessing the performance of a metal cutting machine in production conditions; methods of predicting the reliability of metal-cutting machines, development of technical specifications for their operation.

3. Competencies

BPK-19 – Know the design and design philosophy of machines, equipment and devices for different types of material processing and have the skills of their design and operation.

4. Requirements and forms of midcourse evaluation and summative assessment

– verbal-written: protection of practical classes, laboratory protection, protection of heading work, exam.