

## 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.