

Machining tool

(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	6
Lectures, hours	50
Laboratory classes, hours	16
Practical classes (seminars), hours	16
Exam, semester	6
Contact hours	82
Independent study, hours	26
Total course duration in hours / credit units	108/3

1. Course outline

Incisors. Rotating rod tools for hole machining. Broaching and firmware. Cutters. Threaded tools. Tooth cutting instruments. Abrasive and diamond tools. Selection of cutting material and method of cutting elements fixation. Design of cutting tools. Basics of operation of cutting tools.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know: requirements for cutting tools taking into account the specified quality, accuracy and accuracy of processing; features of structures of the main types of cutting tools; requirements for operation of cutting tools;

be able to: select the materials and design of the cutting tool based on the processing conditions and the requirements for its results; evaluate the characteristics of the cutting tool during its operation; design a cutting tool using CAD.

possess: scientific basis of design of cutting tools with specified characteristics; methods of control of structural and geometric parameters of cutting tools; methods of scientific and technical creativity and patent research.

3. Competencies

SK-5 – Own knowledge about the design of the main types of processing tool and the ability to design it using CAD, master modern methods of material processing, including methods of processing with concentrated energy flows.

4. Requirements and forms of midcourse evaluation and summative assessment

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