

Tool manufacturing design

(course title)

COURSE SYLLABUS ABSTRACT

1-36 01 03 – Machine-building process equipment

(speciality code and name)

	STUDY MODE
	full-time
Year	4
Semester	8
Lectures, hours	36
Practical classes (seminars), hours	24
Pass/fail, semester	8
Contact hours	60
Independent study, hours	48
Total course duration in hours / credit units	108/3

1. Course outline

Main motion drives. Formula of the drive structure. Connecting group transmissions. Feed drives. Kinematic calculation of the drive. Spindle assemblies. Stepless drives. Load-bearing system of the machine. Traction devices. Machine control systems.

2. Course learning outcomes

Upon completion of the course, students will be expected to
know: Main motion drives. Formula of the drive structure. Connecting group transmissions. Feed drives. Kinematic calculation of the drive. Spindle assemblies. Stepless drives. Load-bearing system of the machine. Traction devices. Machine control systems;
be able to: outline the options for the equipment arrangement according to the performed technical process; outline and determine the number of transport and lifting technical systems and the scheme of their interaction with process equipment; determine the number of process equipment and the area occupied by it; Determine the number of vehicles determine the number of workers in the workshop and in the area, the flow line; develop the layout of the production line, section, workshop taking into account the rational organizational structure; develop the construction part of the workshop layout design (cross section of the workshop span); develop a project of auxiliary departments of the workshop;
possess: the basis for designing tool production; methods of conducting patent research, protecting intellectual property, scientific and technical approach to solving engineering problems, creating and introducing innovations.

3. Competencies

SK-10 – Know the main tasks and sequence of designing tool areas and workshops, methods of calculating and quantity of equipment, rules of its location, design of auxiliary divisions of tool shop.

4. Requirements and forms of midcourse evaluation and summative assessment

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