

Fluid and gas mechanics

(course title)

COURSE SYLLABUS ABSTRACT

1-36 01 03 – Machine-building process equipment

(speciality code and name)

	STUDY MODE
	full-time
Year	3
Semester	6
Lectures, hours	50
Practical classes (seminars), hours	34
Pass/fail, semester	6
Contact hours (including hours for controlled independent work)	84 (6)
Independent study, hours	36
Total course duration in hours / credit units	120/3

1. Course outline

Fluid and gas static. Fluid and gas kinematics. Fluid and gas dynamics. Hydraulic and pneumatic drive of process equipment.

2. Course learning outcomes

Upon completion of the course, students will be expected to know:

- basic properties of liquids and gases;
- basic laws of fluid and gas mechanics;

be able to:

- solve the problems of statics, kinematics and dynamics of liquid and gas;

possess:

- methods of solving the problems of statics, kinematics and dynamics of liquid and gas;
- methods of calculation of hydraulic and pneumatic systems.

3. Competencies

BPK-10 – Be capable on the basis of knowledge about the mechanics of liquid, gases, solids, their behavior under thermal or force effects, using analytical and numerical methods, including the method of finite elements, to solve professional problems in mechanical engineering.

4. Requirements and forms of midcourse evaluation and summative assessment

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