

## Heat-and-mass transfer

(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	84
Independent study, hours	36
Total course duration in hours / credit units	120/3

#### 1. Course outline

Thermal conductivity. Convective heat exchange. Radiation heat exchange.

#### 2. Course learning outcomes

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

– basic laws of heat conduction, convective heat exchange and radiation heat exchange;

be able to:

– solve problems of thermal conductivity, convective heat exchange and radiation heat exchange;

possess:

– methods for solving problems of thermal conductivity, convective heat exchange and heat transfer by radiation.

#### 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.