

Heat Transfer

(course title)

COURSE SYLLABUS ABSTRACT

6-05-0611-01 Information systems and technologies

(speciality code and name)

Information systems and technologies in designing and producing

(concentration)

6-05-0714-02 – Mechanical engineering technology, metal-cutting machines and tools

(speciality code and name)

Machine-building process equipment

(concentration)

	STUDY MODE	
	full-time	part-time (shortened program)
Year	3	2
Semester	6	4
Lectures, hours	34	6
Practical classes (seminars), hours	16	4
Pass/fail, semester	6	4
Contact hours	50	10
Independent study, hours	58	98
Total course duration in hours / credit units	108/3	

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;

to possess a skill:

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

3. Competencies

6-05-0611-01 – Use the basic laws of natural sciences in professional activities.

6-05-0714-02 – Master the basics of designing machinery mechanisms, technological equipment and technological processes of machine-building production. Be able to design technological processes for processing parts and assembling machines. Be able to concentrate metal cutting machines and their technological equipment. 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.