COURSE DESCRIPTION CARD - SYLLABUS

Course name
Computer design of technological and cooling systems

Course

Field of study

Construction and Exploitation of Means of Transport

Year/Semester

4/7

Area of study (specialization)

Food Industry Machines and Refrigeration

Profile of study

general academic

Level of study

First-cycle studies

Course offered in

polish

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
45	15	0

Tutorials	Projects/seminars	
15	0	

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

dr hab. inż. Przemysław Tyczewski

Faculty of Civil and Transport Engineering

Responsible for the course/lecturer:

dr hab. inż. Arkadiusz Stachowiak, prof. PP

Faculty of Civil and Transport Engineering

Prerequisites

KNOWLEDGE: Knowledge of technical drawing and numerical methods within the scope of the studies.

SKILLS: Can prepare a layout diagram, select appropriate elements and perform basic calculations using ready-made calculation packages.

SOCIAL COMPETENCES: Understands the need for continuous training

Course objective

Using AutoCAD as a supporting tool in the creation of technical design documentation. Developing the ability to create tools supporting design calculations.

Course-related learning outcomes

Knowledge

He has a basic knowledge of standardized rules of notation of structures and engineering graphics. He is aware of the latest trends in machine construction, i.e. automation and mechatronization, automation

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of machine design and construction processes, increased safety and comfort of operation, and the use of modern construction materials.

Skills

He can prepare a technical descriptive and drawing documentation of an engineering task.

Social competences

He can prepare a technical descriptive and drawing documentation of an engineering task.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Credit based on current control of the effects of laboratory exercises

Programme content

Learning the basic features and functions of AutoCAD. Getting to know drawing and modification tools. Working with functions: hatching, filling. Getting to know the tools supporting dimensioning. Using the Delphi programming environment to create software tools supporting the design. Characteristics of the Delphi environment (types of components). Creating the program code in the Delphi environment. Using complex statements in the program. Characteristics of the basic elements of the Visual Basic language. Create modules in an Excel spreadsheet. Development of a computer program on the basis of an exemplary calculation algorithm.

Teaching methods

Lectures with multimedia presentation. Laboratory exercises - solving problems

Bibliography

Basic

1. Pikoń A., AutoCad 2007 PL. Helion, Warszawa, 2007.

2. Reisdorph K., Delphi 6 dla każdego. Helion, Warszawa, 2001.

3. Tor A., Excel 2002/XP. Visual Basic. TORTECH, Warszawa 2004.

Additional

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Breakdown of average student's workload

	Hours	ECTS
Total workload	105	3,0
Classes requiring direct contact with the teacher	75	2,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1]	30	1,0

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[1] delete or add other activities as appropriate