ENGINEERING GRAPHICS

Information about the lecturer

Lecturer	Oleksandr Bobukh
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About course

Code and name of the course	122 Computer science and information technology, 161 Chemical technology and engineering
Level of Higher Education	First (bachelor's degree)
Course status	Normative course of the general training
Scope of the course	3 ECTS credits
Course studying terms	1 term
Name of the department	Metal Forming
Language of instruction	English

Interaction with the lecturer

The main channel of communication between the students and the lecturer during the course is Microsoft Teams.

E-mail can be an additional communication channel. Students need to use a student e-mail (with a domain @ st.metal-forming.org), this will make it easier to work with e-mail.

Recommended literature

1. K. Vencata Reddy Textbook of Engineering Drawing / K.V. Reddy. – New Delhi: BS Publications, 2008. – 377 p. ISBN: 81-7800-149-7

2. Morling, K. Geometric and engineering drawing / K. Morling. – London: Elsevier, 2010 p. 360 ISBN 978-0-08-096768-4

Microsoft Teams

At the beginning of the academic term, students will be added to the channel of the course "Engineering Graphics" in Microsoft Teams.

In Microsoft Teams the student will have access to: a schedule of lectures, listening to lectures in Microsoft Teams, the necessary materials of this course (lecture presentations, files with examples which are reviewed during practical classes, and etc.).

The student will upload completed individual tasks to Microsoft Teams.

Course goals

The goal of the course is to digest the knowledge and skills which are necessary for Computer-Aided Design, understanding and creating drawings.

Studying the course provides the formation of the following skills:

- Ability to analyze drawings and design documentation
- Ability to develop the necessary 2D and 3D drawings of parts

As a result of the course studying there should be achieved the following learning results:

- Create computer models of elements equipment and technological processes based on existing source data.

Course description

All stages of designing, testing and launching the production of steel products carry out only with the usage of modern software. A modern engineer must apply software that allows him to optimize and speed up the execution of tasks.

A student of a technical specialty must have the skills to use CAD and CAE, in order to be more experienced and competitive in the labour market, in addition to theoretical knowledge.

In this course, students will be able to consolidate and expand their knowledge of designing parts in a CAD system.

The usage of licensed software at the Metal Forming department will allow students to prepare and pass the exam for obtaining an official certificate in the future (outside the course).

Course format

This course includes lectures, practical exercises and individual tasks.

Individual tasks consist of self mastering of individual topics and completing individual tasks.

Estimation methods

The level of students' knowledge formation, skills and abilities in the course is estimated on a 100-point scale. Compliance of the 100-point scale with the internal assessment system of NMetAU, the national system and the ECTS system is shown in the table:

Grades on a 100-point scale	Grades on a 12-point scale	ECTS rating
93-100	12	A
84 - 92	11	
76 - 83	10	B
68 - 75	9	
59 - 67	8	C
51 - 58	7	
43 - 50	6	D
31 - 42	5	
26 - 30	4	E
18 - 25	3	FX
9 - 17	2	
0 - 8	1	F

The overall score for the course is the sum of the following components (maximum values are indicated):

- writing an exam – maximum 34 points;
- practical task №1 – maximum 11 points;
- practical task №2 – maximum 11 points;
- answers to questions during lessons – maximum 16 points;
- completing an independent task - maximum 10 points;
- protection of practical and independent tasks – maximum 18 points (6 points maximum for each task).

Specific training tools

The training process involves the usage of such programs as Microsoft Teams, COMPAS-3D and others.

Academic integrity

All participants in the educational process should be guided by the principles and rules of academic integrity in order to ensure confidence in the results of training and/or scientific (creative) achievements.

Compliance with the principles and rules of academic integrity by participants is regulated by the code of academic integrity of NMetAU: http://nmetau.edu.ua/file/kodeks.pdf