The syllabus of the course
Software Engineering

Specialty	*121 Software Engineering*
Educational program	*Software engineering*
Educational level	*The first (Bachelor) level of higher education*
Discipline status	*Mandatory / elective*
Language of instruction	*English*
Course / semester	*3rd year 5th semester*
Number of ECTS credits	*5*
Distribution by types of classes and hours of study	*Lectures - 16 hours.*
	Laboratory - 32 hours.
	Self-study - 102 hours.
Form of final control	*Grading including Exam*
Chair	*Information Systems, 61166, Kharkiv, 9a Nauki Ave., KhNEU named after S. Kuznets,*Tel. +38 (057) 702-18-31, *E-mail: kafis@hneu.edu.ua*
Teacher (s)	*Zolotaryova Iryna Olexandrivna, Professor, Candidate of Economic Sciences*
Contact Information	*Zolotaryova I.O.: iryna.zolotaryova@hneu.net*
Class days	*Lectures:according to the current schedule of classes* *Laboratory:according to the current schedule of classes*
Consultations	*At the Department of Information Systems, full-time, according to the schedule of consultations, individual*

The goal of the course: formation of the ability to work with software requirements: detection, analysis, specification, verification of requirements; design of architecture, composition of components, interfaces and other characteristics of the software, management of the software development process.

Prerequisites for learning
List of previously listened disciplines: introduction to the specialty; system analysis

The content of the course
Topic 1. Software Requirements as a field of knowledge in software engineering. Requirements management and communication with SWEBOK tasks

Topic 2. Software life cycle models

Topic 3. Features of definition and analysis of business requirements. Defining requirements as a stage of software development. Problems of software requirements development process management

Topic 4. Object-oriented approach to software design. UML language.

Topic 5. UML language. Diagram of usage options.

Topic 6. Methods of object analysis and modeling. Activity chart.

Topic 7. The process of requirements analysis. Advanced analysis of software system requirements

Topic 8. Advanced analysis of software system requirements. Formation of functional and non-functional requirements for software.

Topic 9. Software design stage. State diagram

Topic 10, 11. System architecture design. Class diagram.

Topic 12. Prototyping of the user interface.

Topic 13. Refactoring.

Topic 14. Team work. Software developers.

Logistics (software) of the course: draw.io, lucidchart	
Course page on the Moodle platform (personal training system)	*https://pns.hneu.edu.ua/*

Learning outcomes assessment system

The system of assessment of the formed learning outcomes in the course is carried out on the basis of assessment of tasks during lectures, laboratory classes, as well as the performance of self study. Assessment of student learning outcomes is carried out on a cumulative 100-point system. The current control, which is carried out during the semester during laboratory classes and self study, is estimated by the sum of points scored. The maximum possible number of points for the current and final control during the semester - 100 and the minimum possible number of points - 60.

More detailed information on assessment is given in the technological map of the course.

Course policies

The teaching of the course is based on the principles of academic integrity. Violations of academic integrity are: academic plagiarism, fabrication, falsification, write-off, deception, bribery, biased evaluation. For violation of academic integrity, students are brought to the following academic responsibility: re-assessment of the relevant type of educational work

More detailed information on competencies, learning outcomes, teaching methods, assessment forms, self study is given in the Work program of the discipline

The syllabus was approved at the meeting of the Department of Minutes №17 of June 10, 2022.