



Syllabus of the educational discipline
«Object-Oriented Programming»

Specialty	<i>I21 Software Engineering</i>
Educational program	<i>Software Engineering</i>
Level of education	<i>The first (Bachelor) level of higher education</i>
Discipline status	<i>Mandatory</i>
Teaching language	<i>English</i>
Course / semester	<i>2 year, 3,4 semesters</i>
Number of credits ECTS	<i>12</i>
Distribution by types of trainings and hours of study	<i>Lectures – 64 hours. Laboratory studies – 68 hours. Self-study – 228 hours.</i>
Form of final assessment	<i>Grading- 3 sem, Grading including Exam 4 sem</i>
Department	<i>Department of Information Systems, 61166, Kharkiv, Nauky Av., 9a, Simon Kuznets KhNUE, main building, office 413, tel. +38(057)702-18-31, extension tel.: 4-37, web site: https://kafis.hneu.net/</i>
Teacher (-s)	<i>Yurii Eduardovich Parfonov, Associate Professor of the Information Systems Department, Senior Researcher</i>
Teacher's contacts	<i>Parfonov Y. E.: ypa2350@gmail.com</i>
Days of the classes	<i>According to the schedule</i>
Consultations	<i>At the Information Systems Department, in-person, according to the schedule of consultations, individual, chat on the pns web site</i>
The purpose of the discipline is to form competencies to use object-oriented approach and modern programming languages required to develop object-oriented applications	
Prerequisites for learning The basics of algorithms, Programming	
Content of the educational discipline	
Content module 1 The basics of the Object-Oriented Paradigm	
Theme 1. The basics of Microsoft .NET and Java SE platforms	
Theme 2. The fundamentals of an object oriented programming language	
Theme 3. Object-oriented analysis (OOA), Object-oriented design (OOD) and Object-oriented programming (OOP)	
Content module 2 <i>Technology of OOP</i>	
Theme 4. Data abstraction and encapsulation	
Theme 5. Code reuse	
Theme 6. Basic usage of Git version control system	
Theme 7. Object-oriented design principles SOLID	
Theme 8. Introduction to design patterns	
Theme 9. Class libraries	
Content module 3 <i>Exception Handling and Class Libraries</i>	
Theme 10. Exception handling	
Theme 11. Standard class libraries of Microsoft .NET та Java SE	
Material and technical support (software) of the discipline	
<i>Multimedia projector, IntelliJ IDEA or Eclipse & JetBrains Rider or Microsoft Visual Studio IDEs</i>	
Course page on the Moodle platform (personal training system)	https://pns.hneu.edu.ua/



Assessment system of learning outcomes

The assessment system of gained competencies takes into account the types of classes that are lectures, laboratory classes, as well as the doing of independent work. Assessment of the gained competencies of students is carried out on a cumulative 100-point system. Current control, conducted during the semester during the laboratory classes and independent work, is assessed by the sum of the accumulated points.

The maximum possible number of points for the coursework and final control during the 1st semester is 100 and the minimum possible number of points is 60.

The maximum number of points for the coursework during the 2nd semester - 60, and the minimum possible number of points, which allows the student to qualify for taking exam - 35 points.

The maximum possible number of points for the final exam in the 2nd semester - 40 and the minimum possible number of points - 25.

Coursework includes the following activities: assignments on the topics of laboratory works; tests

More detailed information about the assessment and accumulation of points on the academic discipline is given in its working plan.

Policies of the Discipline

The teaching of the discipline is based on the principles of academic integrity. Violations of academic integrity include: academic plagiarism, fabrication, falsification, write-off, deception, bribery, or 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 about competencies, learning outcomes, teaching methods, assessment forms, independent training is given in the working plan of the educational discipline.

Syllabus approved at the meeting of the Department of Information Systems. Protocol № 17 from 10.06.2022