Simon Kuznets Kharkiv National University of Economics

Syllabus of the educational discipline
«Programming»

Specialty	*121 "Software Engineering"*
Educational program	*Software Engineering*
Level of education	*The first (Bachelor) level of higher education*
Discipline status	*Mandatory*
Teaching language	*English*
Course / semester	*1 year, 1,2 semesters*
Number of credits ECTS	*10*
Distribution by types of trainings and hours of study	*Lectures – 24+24 hours.*
	Practical studies (seminars) – 0 hours.
	Laboratory studies – 24+24 hours.
	Self-study – 102+102 hours.
Form of final assessment	*1st semester, 2nd semester - Grading including Exam*
Department	*Information System, Room 413 (Main Building), (057)702-18-31, www.is.hneu.edu.ua*
Teacher (-s)	*Oleksandr KOLGATIN, professor of the Information System Chair, doctor of pedagogical science, PhD in technical science*
Teacher's contacts	*Kolgatin O.: Oleksandr.Kolgatin@hneu.net*
Days of the classes	*According to schedule*
Consultations	*According to the schedule at the Information System Department, chat PNS*

The purpose of the discipline is mastering the basic concepts of algorithmic structures and basic data types as well as mastering skills and techniques of the software design using C / C ++, Python.

Prerequisites for learning:
Secondary education disciplines / Knowledge and skills in using computer and its software, basics of algorithms

Content of the educational discipline
Content module 1 *C/C++ programming: lexical bases*
Theme 1 C++ as a programming technology
Theme 2 Elements of structured programming
Theme 3 Procedural programming. Recursion
Content module 2 *Data structures processing in C++*
Theme 4 Static data structures processing in C++
Theme 5 Text data processing in C++
Theme 6 Advanced use of C++ for data processing
Content module 3 *Python programming: lexical bases*
Theme 7 Python as a programming technology
Theme 8 Structured programming in Python
Theme 9 Elements of object oriented programming in Python
Content module 4 *Data structures processing in Python*
Theme 10 Text data processing in Python
Theme 11 Types for data structures in Python
Theme 12 Advanced use of Python for data processing

Material and technical support (software) of the discipline
(see personal training system)

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 number of points for the coursework - 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 - 40 and the minimum possible number of points - 25.

Coursework includes the following activities: assignements 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 Syllabus (working plan) of the educational discipline

Syllabus approved at the meeting of the Department «Informations Systems». Protocol №17 from June 10, 2022