# Syllabus of the educational discipline «Databases»

| 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                  | 2 year, 4 semester  |  |
| <b>Number of credits ECTS</b>      | 6   |  |
| Distribution by types of trainings | Lectures – 24 hours.  |  |
| and hours of study                 | Practical studies (seminars) – 0 hours.   |  |
|                                    | Laboratory studies – 36 hours.  |  |
|                                    | Self-study – 120 hours.   |  |
| Form of final assessment           | Grading including Exam  |  |
| Department                         | Information System, Room 413 (Main Building), (057)702-18-31, <a href="https://kafis.hneu.net/">https://kafis.hneu.net/</a> |  |
| 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 the schedule   |  |
| Consultations                      | According to the schedule at the Information System Department, chat PNS  |  |

**The purpose** of the discipline is forming competencies in the use of programming tools and technologies for developing databases.

## **Prerequisites for learning:**

Object-Oriented Programming / Knowledge and skills in application program, skills to understand code.

Algorithms and Data Structures / Knowledge and skills in basics of algorithms and data structures

# Content of the educational discipline

Content module 1 Basics of SQL and Database structure

Theme 1 Data Definition

Theme 2 Data Manipulation

Theme 3 Data analysis in Databases

Content module 2 Database Design and use

Theme 4 Relational Database Structure

Theme 5 Database Modelling

Theme 6 Database administrating



| 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.

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

### **Discipline policies**

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 «Information Systems». Protocol №17 from June 10, 2022