



## The syllabus of the discipline «Program and data security»

<b>Specialty</b>	<i>121 Software Engineering</i>
<b>Educational</b>	<i>Software Engineering Program</i>
<b>Educational level</b>	<i>The first (Bachelor) level of higher education</i>
<b>Discipline status</b>	<i>Mandatory</i>
<b>Language of instruction</b>	<i>English</i>
<b>Course / semester</b>	<i>4 year, 7 semester</i>
<b>Number of ECTS credits</b>	<i>5</i>
<b>Distribution by types of classes and hours of study</b>	<i>Lectures – 24 hours. Practical (seminar) – 0 hours. Laboratory – 36 hours. Self-study – 90 hours.</i>
<b>Form of final control</b>	<i>Grading</i>
<b>Department</b>	<i>Cybersecurity and Information Technologies, Kharkiv, 9-A Nauki Ave., 057-702-18-31, <a href="http://www.kafcbit.hneu.edu.ua/">http://www.kafcbit.hneu.edu.ua/</a></i>
<b>Teacher (s)</b>	<i>Semenov Serhii, doctor of technical sciences, prof.</i>
<b>Teacher (s) Contact Information</b>	<i>serhii.semenov@hneu.net</i>
<b>Class days</b>	<i>According to the current class schedule</i>
<b>Consultations</b>	<i>According to the schedule</i>

**The aim** of the course "Software and Data Security" is to study the principles of building next-generation NGN networks based on the latest technologies and information security in the provision of next-generation communication services.

### **Prerequisites for learning**

*Information and communication systems security engineering, Internet of Things security*

### **The content of the discipline**

Topic 1. General architecture and tasks of information and communication systems based on mobile technologies. Security formation in X- "G" technologies  
Topic 2. Networks based on fiber-optic channels. Standards of fiber optic channels.  
Topic 3. Classification of wireless networks. Principles of security formation.  
Topic 4. Principles of formation of next generation networks (NGN).  
Topic 5. Distribution systems in next generation networks.  
Topic 6. Methods and tools for quality assurance in NGN.  
Topic 7. Principles of management of next generation networks.  
Topic 8. IP Multimedia Subsystem.  
Topic 9. Wireless Internet of Things security.  
Topic 10. Protection in NGN networks.

### **Material and technical (software) of the discipline**

*Internet, MS Office*

**Course page on the Moodle platform (personal training system)** <https://pns.hneu.edu.ua/>

### **Learning outcomes assessment system**

*A student should be considered certified if the sum of points obtained as a result of the final / semester performance test is equal to or exceeds 60. The final grade in the discipline is calculated taking into account the points obtained during the test and points obtained during the current control of the accumulation system. The total result in points for the semester is: "60 or more points - credited", "59 or less points - not credited" and is entered in the test "Statement of success" of the discipline.*



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

**Discipline policies**

*Policy of academic integrity,*

*Class omission policy,*

*Policy to perform tasks later than the deadline, etc.*

*More detailed information on competencies, learning outcomes, teaching methods, forms of assessment, independent work is given in the Work program of the discipline "Security of programs and data", 2022*

The syllabus was approved at the meeting of the department "03" in June 2022. Minutes № 16