


**Syllabus of discipline**  
**(selective, 192 Architecture and Construction)**  
**"Engineering site investigations"**  
**Educational level - bachelor**  
**Specialty " Building and Civil Engineering "**  
**Language of teaching - Ukrainian, English**

<b>The name of the discipline</b>	<b>"Engineering site investigations"</b>	Abbreviation	ESI
<b>Form to take of the discipline</b>	Lectures: 34 hours. Practical 17 hours.	Semester	<b>6</b>
<b>Load volume</b>	Classroom communication - 51 hours Independent study - 54 hours	Credits Hours	4 120
<b>Head of Department</b>	Department of Construction, Geotechnics and Geomechanics - Professor SM Gapeev	DCGG	
<b>Teachers who teach</b>	Maksymova Ella Aleksandrovna <a href="mailto:maksymova.e.o@nmu.one">maksymova.e.o@nmu.one</a>	Candidate of Geological and Mineralogical Sciences, Associate Professor of DCGG	
			
<b>Course page in MOODLE NTU "DP":</b>	<b>Course link</b> <a href="https://do.nmu.org.ua/course/view.php?id=1147">https://do.nmu.org.ua/course/view.php?id=1147</a>		
<b>Consultations</b>	<b>according to a separate schedule agreed with the applicants for higher education</b>		
<b>Online consultations:</b>	<b>e-mail or group in Teams (according to the schedule agreed with the applicants for higher education)</b>		

<b>Previous knowledge</b>	Basic knowledge of disciplines: the nobility of geological processes and basic laws of the formation of geological rocks
<b>The purpose of studying the discipline</b>	<p>Formation of knowledge and skills of future civil engineers for making decisions about the engineering and geological conditions of the area and obtaining the necessary initial data, which will further ensure the development of technically sound and cost-effective solutions in the design and construction of buildings and structures.</p> <p>Based on a certain category of complexity of engineering and geological conditions, determine the volume of engineering and geological exploration and the features of future construction and operation of structures.</p> <ul style="list-style-type: none"> <li>- to be able to do and draw up technical assignments for intelligence work, to carry out their expertise.</li> <li>- <i>A future civil engineer (designer), a student who has completed this course, will be able to reasonably choose a construction site, type of foundation, structure, layout of structures, as well as develop the necessary engineering measures in various geomorphological conditions both to protect the designed object and to protect natural environment in the construction area. Recognize and distinguish between the types of stable and subsidence soils. Distinguish between the types of drilling and exploration workings. To be able to identify indirect signs of landslide zones, landslides and man-made disasters.</i></li> </ul>
<b>Content and learning outcome</b>	Students will receive fundamental theoretical knowledge in the basics of geology, engineering geology, engineering geological surveys, soil science and will be able to distinguish the types and properties of soils of foundations of structures and foundations, decipher engineering and geological documentation. To master the basics of hydrogeological conditions of development territories, methods protection of built-up areas from flooding and flooding.
<b>Form classes</b>	Lectures and practical exercises - multimedia materials, presentations, video films, archival materials on engineering and geological reports, a tour of landslide-prone areas of the Dnipro city, core samples for drilling on metro in the city Dnipro.
<b>Form of control</b>	<p>The theoretical differential test has been successfully passed.</p> <p>The test on the ability to work with maps and sections of the territory of cities was successfully completed.</p>
<b>Literature</b>	<ol style="list-style-type: none"> <li>1. Synopsis of lectures on the discipline "Engineering Research" Assoc. Prof. Department of BGHM Maksymova E.A. on the website Dniprovsk Polytechnic <a href="https://do.nmu.org.ua/course/view.php?id=1147">https://do.nmu.org.ua/course/view.php?id=1147</a></li> <li>2. DBN A.2.1-1-2014 Engineering surveys for construction M.: Ministry of Regional Development - 2014 MSmeta <a href="http://msmeta.com.ua/">http://msmeta.com.ua/</a></li> <li>3. DBN V.1.1.-24 2009 "Engineering protection of territories and structures from flooding and flooding. Ministry of Regional Development and Construction of Ukraine. Kiev, 2009.</li> <li>4. DBN V.1.1-XX: 200X "Buildings, structures and structures in complex engineering and geological conditions. General design provisions". SE "State Research Institute of Building Structures" (NIISK).K.: Ministry of Regional Development of Ukraine, 2016.</li> <li>5. DSTU-N B V.1.1-XX: 201X. MANUAL FOR ENGINEERING PREPARATION of territories for construction. State standard of Ukraine. 2017.</li> <li>6. Lomtadze V.D. Special engineering geology / V.D. Lomtadze. -Textbook for universities - L: Nedra, 1978-- 496 p.</li> </ol>