

**Degree Programme Profile**  
**«Environmental protection technology»**  
**in the specialty 183 Environmental protection technology**

<b>1- General Information</b>	
<b>Full name of the higher educational institution</b>	O.M. Beketov National University of Urban Economy in Kharkiv
<b>Degree Title and name of qualification in Original Language</b>	Bachelor in Environmental Protection Technology Бакалавр з технологій захисту навколишнього середовища
<b>Official Title of the Degree Programme</b>	Environmental Protection Technology
<b>Degree Type, Scope and Terms of Study of the Degree Programme</b>	Bachelors' Degree, singular, 240 ECTS credits, terms of study – 3 years and 10 months
<b>Accreditation Agency</b>	Ministry of Education and Science of Ukraine, Accreditation Certificate УД № 21008296, valid till 01.07.2028
<b>Cycle / Level</b>	The first (bachelors') degree NQF of Ukraine – the 6 <sup>th</sup> level FQ-EHEA – the 1 <sup>st</sup> cycle EQF-LLL – the 6 <sup>th</sup> level
<b>Entrance Requirements</b>	High school degree
<b>Language(s) of Instruction</b>	Ukrainian
<b>Term of Validity of the Degree Programme</b>	5 years
<b>Internet address of the permanent placement of the description of the educational program</b>	<a href="https://ecology.kname.edu.ua">https://ecology.kname.edu.ua</a>
<b>2 - The Aim of the Degree Programme</b>	
	Forming general and professional competencies necessary for solving environmental protection tasks
<b>3 - Features of the Degree Programme</b>	
<b>Subject</b>	<i>Object:</i> technological processes and environmental components <i>Learning objectives:</i> formation of general and professional competences necessary for solving environmental problems <i>Theoretical content of the subject area:</i> Fundamental theories and methodology of natural sciences and engineering, principles of ecocentrism and environmental imperative, interdisciplinary concepts of sustainable development, complexity and a systems approach, life cycle analysis at assessing the state of the environment; basic terms and principles of environmental design and functioning; the essence and parameters of technological processes; principles of innovation and improvement of existing environmental protection technologies; rules of applying actual legislation and norms. <i>Methods, techniques and technologies:</i> methods of modeling systems and

	processes of technogenic and ecological safety, theoretical and laboratory research, qualitative and quantitative chemical, physical, physicochemical, biological, microbiological methods, and methods of designing environmental protection systems and technologies.
<b>Orientation of the Degree Programme</b>	Applied Professional Education
<b>Main Focus of the Degree Programme</b>	General Key words: environmental protection, rational use of nature resources, technogenous and environmental safety, environmental engineering, urban environment.
<b>Specific Features</b>	The degree programme ensures acquiring theoretic knowledge and practical skills in solving environmental problems of urban areas.
<b>4 - Employment Opportunities and Further Education of Alumni</b>	
<b>Employment Opportunities</b>	Alumni graduated as Bachelors in Environmental Protection Technology are able to perform the following jobs according to the State Job Classifier (ДК 003:2010): 3119 – Technicians in the fields of physical sciences and engineering; 3211 – Laboratory assistants in life sciences: - Environmental technician; 3212 –junior fellows in agronomy, forestry, water resources management and nature reserve management: - Water resource use officer; - Environmental protection officer; 3439 – Other technicians in the field of management: - Technology and environment procurement officer; 3449 - State controllers: - State inspector; - State inspector on civil defence and technology safety
<b>Further Education</b>	Earning the Masters' Degree.
<b>5 - Teaching and Evaluation</b>	
<b>Teaching and Learning</b>	Student-centred learning, independent learning, learning by doing, distant learning
<b>Evaluation</b>	Written exams, differentiated tests, reports from practical training, presentations on individual assignments, public defence of bachelor's thesis.
<b>6 - Program competencies</b>	
<b>Integral competence</b>	To be able to solve complex specialized problems and to solve practical problems of technical and technological nature in the field of ecology, environmental protection, balanced nature management, or in the learning process, which involves the application of theoretical foundations and methods of environmental protection technologies, and characterized by complexity and uncertainty of conditions
<b>General competencies (GC)</b> defined by the standard of higher education specialty	GC01. To be able to abstract thinking, analysis and synthesis. GC02. Knowledge and critical understanding of the subject area and professional activity. GC03. To be able to communicate in a foreign language. GC04. Skills in the use of information and communication technologies. GC05. To be able to make informed decisions. GC06. . To be able to develop and manage projects. GC07. The desire to preserve the environment and ensure the sustainable development of society. GC08. To be able to exercise one's rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, rule of law, human and civil rights and freedoms

	<p>in Ukraine.</p> <p>GC09. To be able to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, place in the general system of knowledge about nature and society and in the development of society, techniques and technologies, to use different types and forms of physical activity for active recreation and healthy living.</p>
<p><b>Professional competencies (PC)</b> defined by the standard of higher education specialty</p>	<p>PC01. To be able to prevent environmental pollution and crisis phenomena and processes.</p> <p>PC02. To be able to substantiate, select, calculate, design, modify, prepare for work and use modern machinery and equipment for protection and rational use of air and water environments, land resources, waste management.</p> <p>PC03. To be able to conduct observations and instrumental and laboratory control of the environment, the impact of external factors, with sampling of natural components.</p> <p>PC04. To be able to control pollution of the air basin, water bodies, soil cover and geological environment.</p> <p>PC05. To be able to develop methods and technologies for waste management and recycling.</p> <p>PC06. To be able to design systems and technologies for environmental protection and ensure their functioning.</p> <p>PC07. To be able to control (placement and disposal) waste.</p> <p>PC08. To be able to ensure environmental safety.</p> <p>PC09. To be able to assess the impact of industrial and other economic activities on the environment.</p>
<p><b>7 - Programme learning outcomes</b></p>	
<p><b>Learning outcomes</b> defined by the standard of higher education specialty</p>	<p>PR01 To comprehend modern theories, approaches, principles of environmental policy, fundamentals of Biology, Chemistry, Physics, Math, Biotechnology, as well as special and applied engineering disciplines for modelling and solving specific environmental tasks in manufacturing.</p> <p>PR02 To be able to process foreign sources in order to obtain information necessary for solving environmental protection tasks.</p> <p>PR03 To be able to use information technologies and communication networks in environmental protection activity.</p> <p>PR04 To be able to justify environmental technologies, based on understanding the mechanisms of human impact on the environment and the processes that occur in it.</p> <p>PR05 To be able to develop environmental protection projects and manage their implementation.</p> <p>PR06 To justify and utilise both natural and artificial systems and processes in environmental protection technologies following the environmental imperative and the concept of sustainable development.</p> <p>PR07 To implement scientifically sound technical, technological and organizational measures to prevent environmental pollution..</p> <p>PR08 To be able to demonstrate skills in selection, planning, designing and calculating performance parameters of certain equipment, facilities and technologies of environmental protection, by applying the knowledge on physical and chemical properties of environmental pollutants, parameters of technological processes and environmental quality norms.</p> <p>PR09 To be able to carry out observations, instrumental and laboratory control of environmental quality, ensure internal control on environmental protection equipment at industries on the base of acquired knowledge on modern measurement techniques and modern measuring</p>

	<p>equipment and apparatuses together with the use of relevant technical guidelines and norms.</p> <p>PR010 To be able to apply knowledge on control and assessment of pollution and industrial emissions, to analyse their dynamics and changes in relation to environmental conditions and technologies of cleaning the components of the environment.</p> <p>PR011 To be able to apply knowledge on selection and justifying technologies of waste collection, sorting, storing, transportation, removal, sanitation, utilisation, and prevention, to assess their impacts on the quality of the environment, living conditions and human safety.</p> <p>PR012 To be able to select engineering measures to protect the environment, search for innovative technical, technological and organisational solutions aiming at implementation into production prospective environmental protection developments and modern equipment, to analyse pathways of improvement of existing environmental protection and restoration technologies for securing environmental safety.</p> <p>PR013 To be able to apply basic patterns of safe, resource-efficient, and environment-friendly technologies to environmental management, via environmental management and auditing systems according to international standards, as well.</p> <p>PR014 To be able to justify the degree of conformity of actual or forecasted environmental conditions to the objectives of environmental protection and restoration.</p>
<b>8 - Teaching and learning resources</b>	
<b>Teaching Staff</b>	<p>Programme director is Associate Professor, Dr. Iryna V. Stalinska.</p> <p>The Department responsible for the Degree Programme is the Department of Urban Environmental Engineering &amp; Management.</p> <p>All learning disciplines are taught by experienced, qualified and certified teachers who have been trained at leading universities and research institutions</p> <p>All teachers have a confirmed level of scientific and professional activity.</p>
<b>Material support</b>	<p>The condition of the material and technical base corresponds to the existing norms and provides an opportunity to carry out the educational process effectively.</p> <p>The educational process according to the educational program is provided:</p> <ul style="list-style-type: none"> <li>– classrooms, including multimedia equipment, for lectures and practical classes;</li> <li>– 2 computer laboratories and a specialized office;</li> <li>–10 training laboratories, equipment and facilities in which fully provides laboratory and practical classes.</li> </ul> <p>Social infrastructure is relevant to satisfy living and social requirements of students.</p>
<b>Information and curricula resources</b>	<p>Information and educational support includes:</p> <ul style="list-style-type: none"> <li>– resources of the scientific library of O.M. Beketov National University of Urban Economy in Kharkiv, which contains the required number of textbooks, manuals, reference and other literature;</li> <li>– professional periodicals corresponding to the specialty profile, stored in the scientific library;</li> <li>– lecture notes, methodical recommendations for practical, laboratory classes and independent work of students on the components of the educational program, which are placed in the digital repository;</li> <li>– internet resources, access to which is free at the university;</li> </ul>

	– the library of the department of engineering ecology of cities.
<b>9-Academic mobility</b>	
<b>National Credit Mobility</b>	Students can participate in the national credit mobility programmes at universities providing for bachelors' degree programme in Environmental Protection Technology (183) via short study courses, seminars, summer and winter schools organised by these universities, with further transfer of learning credits in the frames of practical trainings.
<b>International Credit Mobility</b>	Students have a possibility to participate in international academic mobility programmes up to 10 months (2 semesters) during 3 <sup>rd</sup> or 4 <sup>th</sup> years of studies under ERASMUS+ programme at University of Nova Gorica (Republic of Slovenia) and Middle East Technical University (ODTU-METU) (Ankara, Turkey Republic)
<b>Options for International Students</b>	