

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
SUMY NATIONAL AGRARIAN UNIVERSITY

EDUCATIONAL AND SCIENTIFIC PROGRAMME  
"MANAGEMENT"

level

LEVEL OF HIGHER EDUCATION The third (educational and scientific)

HIGHER EDUCATION DEGREE Doctor of philosophy  
(the name of the degree of higher education )

BRANCH OF KNOWLEDGE 07 Management and Administration  
(code and name of the branch of knowledge )

SPECIALTY 073 Management  
(code and specialty name)

«APPROVED »  
Academic Council of Sumy NAU  
« 24 » 05 2024  
(Protocol № 16 )  
Chairman of the Academic Council  
[Signature] Volodymyr LADYKA

The educational and scientific program was put into  
effect with

« 24 » 05 2024  
Acting rector [Signature] Volodymyr LADYKA  
(order № 249/09  
« 28 » 05 2024) from



S U M Y 2 0 2 4

**LETTER OF APPROVAL**  
**educational and scientific program**  
**"Management"**  
**at the third (educational and scientific) level of higher education**

**The project team consisted of:**

**Head of the project team, guarantor of the ESP:**

Doctor of Science, Professor of Management Department  
 named after L. Mykhailova



Inna SOKHAN

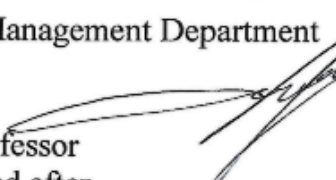
**Members of the project team:**

Doctor of Science, Professor, Head of Management Department  
 named after L. Mykhailova



Alvina ORIEKHOVA

Doctor of Science, Professor of Management Department  
 named after L. Mykhailova



Natalia STOYANETS

PhD in Economics, Associate Professor  
 of Management Department named after  
 Professor L.I. Mykhailova



Tetyana KHARCHENKO

The educational and scientific program "Management" at the third (educational and scientific) level of higher education was reviewed and approved at an expanded meeting of Management Department named after Professor L.I. Mykhailova with the participation of student activists and stakeholders (protocol № 10-p from 20.02 2024).

Head of the educational department,  
 PhD in Economics, Associate Professor



Nataliya KOLODNENKO

Acting head of the quality department  
 education, licensing and accreditation,  
 PhD, Associate Professor



Olena RYBINA

Vice-rector for scientific and pedagogical  
 and educational work, Doctor of Science, Professor



Ihor KOVALENKO

The educational and scientific program "Management" at the third (educational and scientific) level of higher education was reviewed and approved at the meeting of the Academic Council of the Faculty of Economics and Management (protocol № 8 from 21.03 2024).

Head of the academic council of the faculty  
 economics and management,  
 Doctor of Science, Professor



Marharyta LYSHENKO

## INTRODUCTION

The educational and research programme is a normative document that contains a system of educational components at the third (educational and research) level of higher education within the specialty 073 "Management" of the field of knowledge 07 Management and Administration, which defines the requirements for the level of education of persons who can start studying in this programme, the list of disciplines and the logical sequence of their study, the number of ECTS credits required to complete this programme, as well as the expected learning outcomes that the applicant for the degree of "Doctor of Science" must master.

The educational and scientific programme takes into account the requirements of the Law of Ukraine "On Higher Education" and the National Qualifications Framework.

### **Stakeholder reviews:**

**Maslak O.M.**, Director of the Department of Agro-Industrial Development of the Sumy Regional State Administration;

**Skrypnyk D.M.**, PhD in Management, Vice president of "First energetic cooperative";

**Yuanyuan X.**, Doctor of Philosophy in Management, Director of the Educational and Scientific Department of the Henan Institute of Science and Technology, PRC;

**Chortenko A.M.**, PhD of Historical Sciences, Deputy Director for Educational Work of the Sumy Vocational College of the National Academy of Sciences of Ukraine;

**Volovyk I.A.**, Head of International department Dnipro State University.

**Profile of the educational and scientific program  
in the specialty 073 “Management”**

| <b>1. General information</b>                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Full name of the higher education institution and structural unit</b> | Sumy National Agrarian University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Level of higher education</b>                                         | Third (educational and scientific) level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Degree of higher education</b>                                        | Doctor of Philosophy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Field of knowledge</b>                                                | 07 Management and Administration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Speciality</b>                                                        | 073 Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Official name of the educational programme</b>                        | Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Educational qualifications</b>                                        | PhD in management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Qualification in the diploma</b>                                      | Degree of higher education – Doctor of Philosophy<br>Speciality – D3 Management<br>Educational programme «Management»                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Type of diploma and scope of the educational programme</b>            | single,<br>60 ECTS credits (educational component of the programme),<br>term of study 4 years                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Restrictions on forms of education</b>                                | absent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Availability of accreditation</b>                                     | Accredited by the National Agency for Higher Education Quality Assurance, certificate dated 08.09.2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Cycle / Programme level</b>                                           | National Qualifications Framework of Ukraine – 8 level, FQ-EHEA – third cycle, EQF-LLL – 8 level                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Prerequisites</b>                                                     | Persons who have completed a complete higher education and passed the Unified Entrance Examination (UEE) may apply for the degree of Doctor of Philosophy in the speciality 073 Management. In the case of admission to the programme of a person who has received a previous degree of higher education in other specialities, the programme of professional entrance examinations for persons provides for verification of the person's acquisition of competencies and learning outcomes defined by the standard of higher education in the speciality 073 Management for |

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|                                                                                        | the second (master's) level of higher education. The conditions of admission to the educational and scientific programme are determined by the Admission Rules of Sumy NAU. |
| <b>Language of teaching</b>                                                            | Ukrainian, English                                                                                                                                                          |
| <b>Validity of the educational programme</b>                                           | by 01.07.2026                                                                                                                                                               |
| <b>Internet address for permanent posting of the educational programme description</b> | <a href="https://science.snau.edu.ua/aspirantura/">https://science.snau.edu.ua/aspirantura/</a>                                                                             |

## 2. Objective of the educational programme

Training of specialists capable of generating new ideas and implementing development concepts, solving complex problems in the field of management and administration, including those related to the implementation of sustainable development principles in management practice at various levels, planning and performing original research, integrating their education and experience into professional activities and academic practice.

## 3. Characteristics of the educational programme

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Description of the subject area</b> | <p><b>The object of study:</b> management of organisations and their divisions.</p> <p><b>Learning objectives:</b> training of specialists capable of producing new ideas, solving complex problems in the field of management and administration, which involves a deep rethinking of existing and creating new holistic knowledge and/or professional practice, applying the latest methodologies of scientific and pedagogical activities, conducting their own research, the results of which have scientific novelty, theoretical and practical significance.</p> <p><b>Theoretical content of the subject area:</b></p> <ul style="list-style-type: none"> <li>- paradigms, laws, regularities, principles, historical prerequisites for the development of management;</li> <li>- concepts of systemic, situational, adaptive, anti-sympathetic, anti-crisis, innovative, project management, etc;</li> <li>- functions, methods, technologies and management decisions in management.</li> </ul> <p><b>Methods, techniques and technologies:</b></p> <ul style="list-style-type: none"> <li>- research methods and techniques (calculation and analytical, economic and statistical, economic and mathematical, expert evaluation, factual, sociological, psychological, documentary, balance sheet, empirical, etc);</li> <li>- methods of implementing management functions (methods of marketing research; methods of economic diagnostics; methods of forecasting and planning; methods of designing organisational management structures; methods of motivation;</li> </ul> |
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|                                                                | <p>methods of control; methods of creating and developing organisational culture, methods of assessing social, organisational and economic efficiency in management, etc);</p> <ul style="list-style-type: none"> <li>- management methods (administrative, economic, social and psychological, technological);</li> <li>- technologies for substantiating management decisions (economic analysis, SPPR, modern tools of artificial intelligence in management.</li> </ul> <p><b>Tools and equipment:</b> information systems and software products used in management.</p>                                                                                                                                                                                                                                                   |
| <b>Orientation of the educational and scientific programme</b> | <p>The educational and research programme is focused on the development of research and teaching competencies and communication skills. The EPP has an academic orientation. The educational and research programme includes an educational and scientific component.</p> <p><i>The educational component of the programme is 60 ECTS credits, of which 45 ECTS credits are compulsory courses for all cycles and 15 ECTS credits are elective courses.</i></p> <p><i>The scientific component of the programme involves conducting your own research under the guidance of a supervisor(s) with the results presented in the form of a dissertation. This component of the programme is not measured by ECTS credits, but is drawn up separately in the form of an individual plan of research work of a PhD student.</i></p> |
| <b>Programme focus</b>                                         | <p>The educational and scientific programme is focused on specialised education in management, with a focus on researching the problems of implementing the principles of sustainable development in management practice.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Features of the programme</b>                               | <p>The EPD training model provides for professional training focused on the development of the applicant's competencies in accordance with the topic of his or her dissertation and research areas conducted by university researchers, combined with general training that involves the development of teamwork skills, academic writing, teaching competencies, and project management. At the same time, professional training is implemented mainly in the elective component of the EPP, and general training is mainly in the mandatory component of the programme. This model allows the applicant to develop social skills, as well as to combine their own research with the study of professional training.</p>                                                                                                      |
| <b>4. Employment and further education</b>                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Employment</b>                                              | <p>Graduates have wide opportunities for career development depending on their personal interests, in particular: research, teaching, expert, managerial, administrative activities in the</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|                                            | field of management and administration. Employment in research institutions, higher education institutions, other institutions and organisations engaged in research and/or training in the field of management.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Continuing education</b>                | Obtaining a doctoral degree and additional qualifications in the adult education system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>5. Teaching and assessment</b>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Approaches to teaching and learning</b> | <p>Approaches to teaching and learning:</p> <ul style="list-style-type: none"> <li>- active learning (interactive teaching methods that provide a personality-oriented approach and the development of systemic, creative and strategic thinking; collaborative learning in interdisciplinary groups; "flipped classroom")</li> <li>- learning through teaching (learning by teaching) (pedagogical practice);</li> <li>- learning through research (including participation in the implementation of budgetary and commercial research works, participation in research projects);</li> <li>- Personalised Learning: individual consultations with supervisors; selective professional disciplines);</li> <li>- Selfmanagement.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Evaluation system</b>                   | <p><b><i>Educational component of the programme.</i></b> Depending on the main goal, which is realised through assessment, the University implements: summative assessment - assessment of the degree to which a higher education student has achieved the expected learning outcomes within an educational component (module) or educational programme as a whole. Summative assessment is carried out in accordance with the criteria and allows you to form a judgement on the extent to which students have achieved the expected learning outcomes. Summative assessment is carried out on a 100-point scale, of which 30 points are allocated to the exam, and the remaining 70 points are distributed by the teacher among the types of assessment in such a way that they provide an opportunity to assess the degree to which the student has achieved the learning outcomes. Formative assessment - "formative assessment" - is intended to enable a student to track his or her progress in learning and identify areas for further improvement.</p> <p><b><i>Scientific component of the programme.</i></b> Evaluation of the scientific activity of applicants is carried out in accordance with the scientific plan of the graduate student through</p> <ul style="list-style-type: none"> <li>- intermediate certification of the postgraduate student in the form of a semesterly report on the implementation of the individual plan;</li> </ul> |

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|                                                                      | <ul style="list-style-type: none"> <li>- participation in the department's seminars and conferences;</li> <li>- review of scientific papers;</li> <li>- recommendations of the supervisor;</li> <li>- preparation and defence of a dissertation.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Form for monitoring the progress of a PhD student (applicant)</b> | <p><b><i>Educational component of the programme.</i></b></p> <p>The final assessment of the educational components of the control of the applicant's academic performance is carried out in the form of</p> <ul style="list-style-type: none"> <li>- exam - based on the results of studying the mandatory components of the educational programme of the cycle of general scientific training, the cycle of research training, the cycle of language training, as well as the cycle of special (professional) training;</li> <li>- credit - based on the results of studying all other educational components provided by the curriculum.</li> </ul> <p><b><i>Scientific component of the programme.</i></b></p> <p>The scientific component of the EPP provides for the current certification of postgraduate students at a meeting of the department twice a year. The purpose of the intermediate certification is to assess the level of implementation of the individual plan, provide support and feedback to the applicant.</p> <p>The purpose of the final attestation is to establish the compliance of the level of educational and scientific training of graduate students with the requirements of the Doctor of Philosophy programme in the speciality D3 "Management" and ends with a public defence of the dissertation. The dissertation is defended in public at a meeting of a one-time specialised academic council.</p> <p>A prerequisite for defending a dissertation is the successful completion of an individual research plan, including testing of research results and the main points of scientific novelty at scientific conferences and their publication in professional and international scientific journals, in accordance with applicable requirements.</p> |
| <b>6. Programme competences</b>                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Integral competence</b>                                           | Ability to generate new ideas, solve complex problems in the field of management and administration, which involves a deep rethinking of existing and creation of new holistic knowledge and/or professional practice, to apply the latest methodologies of scientific and pedagogical activity, to conduct own scientific research, the results of which have scientific novelty, theoretical and practical significance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>General competences</b>                                           | GC01. Ability to identify, define and solve problems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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|                                                                                                                                                                                                                                                                                                                                                                                                           | <p>GC02. Ability to search, process and analyse information from various sources.</p> <p>GC03. Ability to work in an international context.</p> <p>GC04. Ability to solve complex problems in the field of management on the basis of a systematic scientific outlook and general cultural outlook in compliance with the principles of professional ethics and academic integrity.</p> <p><b><i>Competences defined by the SNAU</i></b></p> <p>GC05. The ability to develop and improve oneself.</p> <p>GC06. Ability to generate new ideas.</p> <p>GC07. Good communication skills.</p> <p>GC08. Ability to use information and communication technologies.</p> <p>GC09. Ability to act in a socially responsible and conscious manner.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Special (professional, subject) competences</b>                                                                                                                                                                                                                                                                                                                                                        | <p>SC01. Ability to perform original research, achieve scientific results that create new knowledge in management and related interdisciplinary areas.</p> <p>SC02. Ability to present and discuss the results of scientific research and/or innovative developments in Ukrainian and English, to process scientific literature on management and administration and to effectively use new information from various sources.</p> <p>SC03. Ability to carry out research and teaching activities in the field of management in higher education institutions.</p> <p>SC04. Ability to initiate, develop, implement and manage research projects in management and related interdisciplinary areas and/or to prepare proposals for funding research, registration of intellectual property rights.</p> <p><b><i>Competences defined by the SNAU</i></b></p> <p><i>SC05. Ability to identify, evaluate and commercialise intellectual property in the industry.</i></p> <p><i>SC06. Ability to introduce innovations in management to solve the problems of own research and practical management problems by researching strategic innovative solutions both at the state level and in the global space.</i></p> <p><i>SC07. Ability to expand conceptual and methodological knowledge on the boundaries of management theories and the concept of sustainable development.</i></p> |
| <b>Programme learning outcomes</b>                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>After completing the educational programme, the applicant will be able to:</b>                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>PLO01. Apply modern tools and technologies for searching, processing and analysing information, in particular, statistical methods for analysing large and/or complex data, specialised databases and information systems.</p> <p>PLO02. Freely present and discuss with specialists and non-specialists research results, scientific and applied problems of public and English languages, and to</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

reflect the results of research in scientific publications in leading international scientific journals.

PLO03. Develop and research conceptual, mathematical and computer models of processes and systems, effectively use them to obtain new knowledge and/or create innovative products in the field of management and related interdisciplinary areas.

PLO04. To develop and implement scientific and applied projects that provide the opportunity to rethink the existing and create new holistic knowledge and/or professional practice in the field of management and administration and solve significant scientific and technological problems in management in compliance with the norms of academic ethics and taking into account social, ethical, economic, environmental and legal aspects.

PLO05. Deeply understand the general principles and methods of management sciences, as well as the methodology of scientific research, and apply them in their own research in the field of management and in teaching practice.

PLO06. Plan and perform scientific and applied research in management and related interdisciplinary areas using modern tools, critically analyse the results of own research and the results of other researchers in the context of the whole complex of modern knowledge on the problem under study; to make proposals for funding research and / or projects.

PLO07. To test and implement the results of its own research in the field of management.

PLO08. Develop and teach specialised management disciplines in educational institutions.

***Competences defined by the SNAU***

PLO09. *Demonstrate a systematic scientific outlook, rationally comprehend the challenges facing science in the context of socio-economic and environmental problems of our time (ethical dilemmas, values, global social transformations).*

PLO10. *Develop theories, concepts and principles of management to implement the principles of sustainable development at various levels of management, integrate the research results into logical structures to solve theoretical and practical management problems in accordance with the topic of their own research.*

## **7. Forms of certification of PhD students**

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Forms of certification of PhD students</b> | The certification of applicants for the educational level of Doctor of Philosophy is carried out in the form of a public presentation of research results in the form of a dissertation of the Doctor of Philosophy, provided that the postgraduate student fulfils his or her individual curriculum and research plan.                                                                                                                                                                   |
| <b>Requirements for qualification work</b>    | The doctoral dissertation involves solving an actual theoretical and/or practical problem with the definition of scientific novelty in the speciality of management or on the border of specialities and demonstrates the applicant's ability to initiate, plan, implement and adjust a consistent process of thorough scientific research. The dissertation is the result of the independent scientific work of a postgraduate student, which has the status of an intellectual product. |
| <b>Requirements for public protection</b>     | The dissertation is defended in public at a meeting of a one-time specialised academic council. A prerequisite for defending a dissertation is the testing of research results and                                                                                                                                                                                                                                                                                                        |

|                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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|                                                         | main conclusions at scientific conferences and their publication in professional Ukrainian and international journals included in the Scopus and/or Web of Science databases in accordance with the current requirements. Certification is carried out by a one-time specialised academic council of a higher education institution accredited by the National Agency for Higher Education Quality Assurance on the basis of a public defence of scientific achievements in the form of a dissertation. The state of readiness of a postgraduate student's dissertation for defence is determined by the supervisor (or by a consensus decision of the two supervisors). |
| <b>8. Resource support for programme implementation</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Personnel support</b>                                | The academic staff meets the requirements of the current legislation of Ukraine. The academic staff involved in the implementation of the educational and research programme are employees of Sumy NAU with relevant scientific and academic experience, involved in the implementation of scientific and educational projects. 100% of the academic staff involved in teaching disciplines have academic degrees and academic titles. Academic staff undergoes advanced training and internships at least once every five years.                                                                                                                                        |
| <b>Material and technical support</b>                   | The provision of classrooms, computer workstations, and multimedia equipment meets the needs. For the implementation of the educational and scientific programme, there are specialised training and computer laboratories, including those created within the framework of the Erasmus+ KA2 project, equipped with the necessary hardware and software. Distance learning is implemented on the Moodle platform with the use of online conferencing services such as ZOOM, GoogleMeet, Teams.                                                                                                                                                                           |
| <b>Information and educational support</b>              | Use of the collection of scientific libraries of HEIs of the city of Sumy, the Vernadsky National Library of Ukraine, Internet resources and copyright developments of the scientific and pedagogical staff of SNAU. Applicants are provided with free and remote access to the Scopus and WoS databases.                                                                                                                                                                                                                                                                                                                                                                |
| <b>9. Academic mobility</b>                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>National credit mobility</b>                         | National individual academic mobility is implemented within the framework of agreements on the establishment of scientific and educational relations to meet the needs of education and science development: NSC "IAE", National University of Life and Environmental Sciences of Ukraine.                                                                                                                                                                                                                                                                                                                                                                               |
| <b>International credit mobility</b>                    | On the basis of bilateral agreements between Sumy NAU and higher education institutions of foreign partner countries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## 2. List of components of the educational and research program and their logical sequence

### 2.1. List of components of the ESP

| No.                                               | Components of the educational programme (academic disciplines, practices)        | Number of credits | Semester |   |   |   | The form of the final control |
|---------------------------------------------------|----------------------------------------------------------------------------------|-------------------|----------|---|---|---|-------------------------------|
|                                                   |                                                                                  |                   | 1        | 2 | 3 | 4 |                               |
| 1. Mandatory components of general training       |                                                                                  |                   |          |   |   |   |                               |
| MU1                                               | Philosophy of science                                                            | 3,0               | x        |   |   |   | exam                          |
| MU 2                                              | Modern information technologies in scientific activity                           | 3,0               | x        |   |   |   | exam                          |
| MU 3                                              | Communication in the scientific environment                                      | 4,0               | x        |   |   |   | exam                          |
| MU 4                                              | Methodology of scientific research                                               | 4,0               | x        | x |   |   | test, exam                    |
| MU 5                                              | Strategic innovation                                                             | 3,0               |          | x |   |   | test                          |
| MU 6                                              | Modern theories and concepts of management                                       | 3,0               |          | x |   |   | exam                          |
| MU 7                                              | Registration of intellectual property rights                                     | 3,0               |          | x |   |   | exam                          |
| MU 8                                              | Introduction to teaching and learning                                            | 3,0               | x        |   |   |   | test                          |
| MU 9                                              | Organization of preparation of scientific publications and writing of PhD thesis | 3,0               |          | x |   |   | exam                          |
| MU 10                                             | Management of research projects                                                  | 3,0               |          |   | x |   | test                          |
| MU 11                                             | Academic writing in a foreign language                                           | 3,0               |          |   | x |   | exam                          |
| MU 12                                             | Agrarian management                                                              | 3,0               |          |   | x |   | test                          |
| MU 13                                             | Foreign language                                                                 | 3,0               |          |   | x |   | exam                          |
| MU 14                                             | Pedagogical practice                                                             | 4,0               |          |   |   | x | test                          |
| Total for all cycles of the main part of the plan |                                                                                  | 45,0              |          |   |   |   |                               |
| 2. Elective units *                               |                                                                                  |                   |          |   |   |   |                               |
| EU1                                               | Elective discipline 1 in the speciality                                          | 5,0               |          |   | x |   | exam                          |
| EU2                                               | Elective discipline 2 in the speciality                                          | 5,0               |          |   | x |   | exam                          |
| EU3                                               | Elective discipline 3 in the speciality                                          | 5,0               |          |   | x |   | exam                          |
| Total at the choice of the PhD student            |                                                                                  | 15,0              |          |   |   |   |                               |
| Total by cycles of normative and variable parts   |                                                                                  | 60,0              |          |   |   |   |                               |

#### \* List of elective units EU1-EU3

1. System technologies in management
2. Human capital management
3. Management of economic sectors
4. Regional management
5. European green deal
6. Methods of substantiating management decision-making

\*A higher education applicant (PhD student) chooses 3 (three) out of 6 (six) elective disciplines from the list.

## 2.2. Structural and logical scheme of training of doctors of philosophy

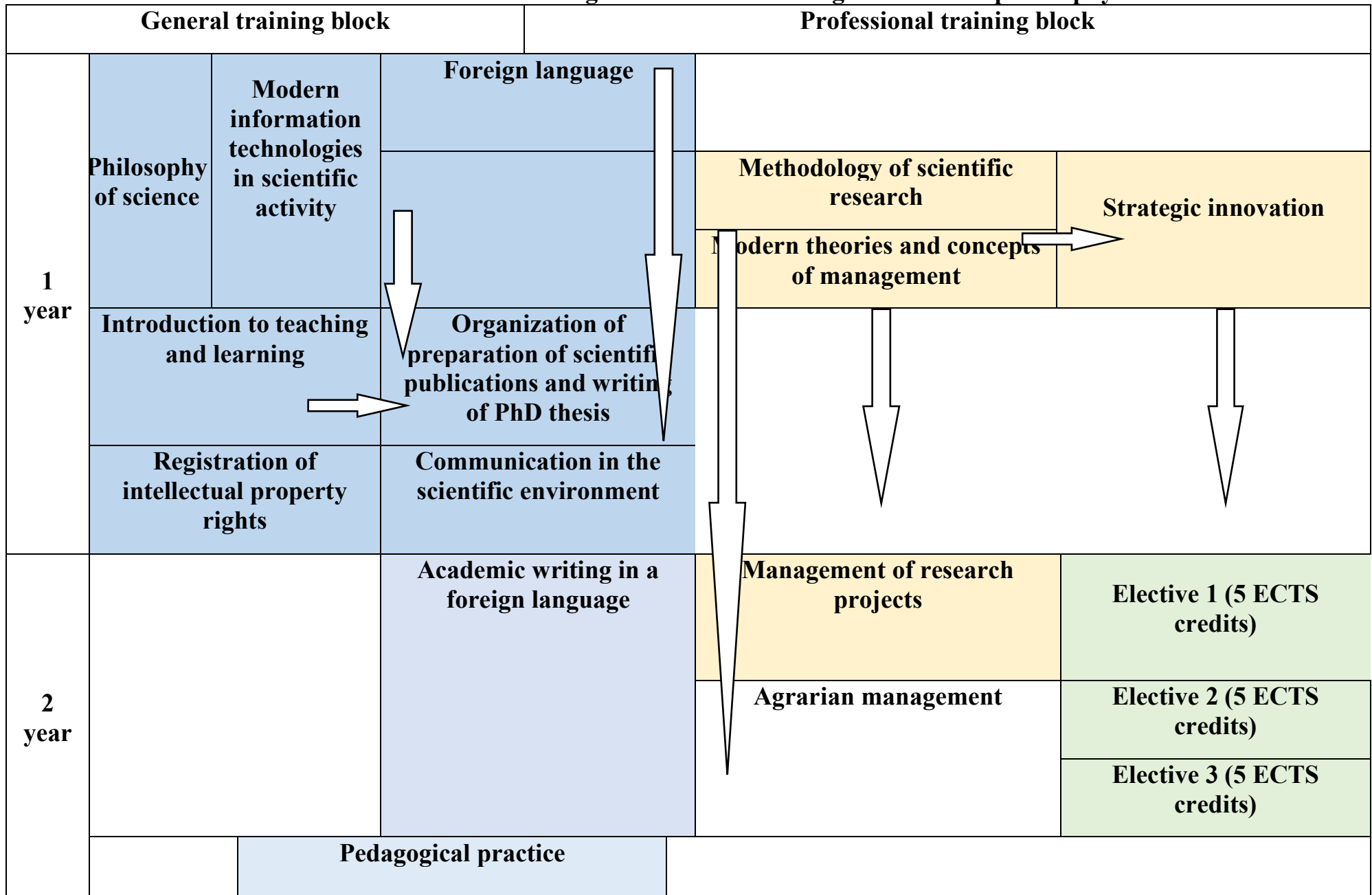


Table 1

**Matrix of correspondence between competences defined in ESP and descriptors in NCF**

| Competence classification according to NCF | <b>Knowledge</b><br>KN1:<br>Conceptual and methodological knowledge in a field or at the border of fields of knowledge or professional activity | <b>Skills</b><br>S1: Specialized skills and methods required to solve significant problems in the field of professional activity, science and/or innovation, to extend and re-evaluate existing knowledge and professional practice<br>S2: Initiate, plan, implement and adjust a consistent process of sound scientific research with due academic integrity<br>S3: Critically analyze, evaluate and synthesize new and complex | <b>Communication</b><br>C1: free communication on issues related to the provision of scientific and expert knowledge with colleagues, the wider scientific community, and society in general<br>C2.: use of academic Ukrainian and foreign languages in professional activities and research | <b>Responsibility and Autonomy</b><br>RA1: Demonstrated significant authority, innovation, high degree of independence, academic and professional integrity, ongoing commitment to developing new ideas and processes in cutting-edge professional and scientific contexts<br>RA2: Ability for continuous self-development and self-improvement |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General competencies                       |                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                 |
| GK01                                       | KN1                                                                                                                                             | S1, S3                                                                                                                                                                                                                                                                                                                                                                                                                           | C1                                                                                                                                                                                                                                                                                           | RA2                                                                                                                                                                                                                                                                                                                                             |
| GK 02                                      | KN1                                                                                                                                             | S2, S3                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              | RA1, RA2                                                                                                                                                                                                                                                                                                                                        |
| GK 03                                      |                                                                                                                                                 | S1, S3                                                                                                                                                                                                                                                                                                                                                                                                                           | C1, C2                                                                                                                                                                                                                                                                                       | RA1                                                                                                                                                                                                                                                                                                                                             |
| GK 04                                      | KN1                                                                                                                                             | S1, S2                                                                                                                                                                                                                                                                                                                                                                                                                           | C1                                                                                                                                                                                                                                                                                           | RA1, RA2                                                                                                                                                                                                                                                                                                                                        |
| GK 05                                      |                                                                                                                                                 | S1, S3                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              | RA1, RA2                                                                                                                                                                                                                                                                                                                                        |
| GK 06                                      |                                                                                                                                                 | S2                                                                                                                                                                                                                                                                                                                                                                                                                               | C1, C2                                                                                                                                                                                                                                                                                       | RA2                                                                                                                                                                                                                                                                                                                                             |
| GK 07                                      | KN1                                                                                                                                             | S1, S3                                                                                                                                                                                                                                                                                                                                                                                                                           | C2                                                                                                                                                                                                                                                                                           | RA1, RA2                                                                                                                                                                                                                                                                                                                                        |
| GK 08                                      | KN1                                                                                                                                             | S2, S3                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              | RA1, RA2                                                                                                                                                                                                                                                                                                                                        |
| GK 09                                      |                                                                                                                                                 | S1,S2,S3                                                                                                                                                                                                                                                                                                                                                                                                                         | C1                                                                                                                                                                                                                                                                                           | RA1, RA2                                                                                                                                                                                                                                                                                                                                        |
| Special (professional) competencies        |                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                 |
| SC01                                       | KN1                                                                                                                                             | S1, S2, S3                                                                                                                                                                                                                                                                                                                                                                                                                       | C1                                                                                                                                                                                                                                                                                           | RA1                                                                                                                                                                                                                                                                                                                                             |
| SC 02                                      |                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                  | C1, C2                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                 |
| SC 03                                      | KN1                                                                                                                                             | S1, S2                                                                                                                                                                                                                                                                                                                                                                                                                           | C1                                                                                                                                                                                                                                                                                           | RA2                                                                                                                                                                                                                                                                                                                                             |
| SC 04                                      | KN1                                                                                                                                             | S1, S2                                                                                                                                                                                                                                                                                                                                                                                                                           | C1, C2                                                                                                                                                                                                                                                                                       | RA1                                                                                                                                                                                                                                                                                                                                             |
| SC 05                                      | KN1                                                                                                                                             | S1, S2, S3                                                                                                                                                                                                                                                                                                                                                                                                                       | C1                                                                                                                                                                                                                                                                                           | RA1                                                                                                                                                                                                                                                                                                                                             |
| SC 06                                      | KN1                                                                                                                                             | S1, S2, S3                                                                                                                                                                                                                                                                                                                                                                                                                       | C1                                                                                                                                                                                                                                                                                           | RA1, RA2                                                                                                                                                                                                                                                                                                                                        |
| SC 07                                      | KN1                                                                                                                                             | S1, S3                                                                                                                                                                                                                                                                                                                                                                                                                           | C1                                                                                                                                                                                                                                                                                           | RA1, RA2                                                                                                                                                                                                                                                                                                                                        |

Table 2

**Matrix of correspondence between defined ESP learning outcomes and competencies**

| Program learning outcomes                                                                                                                                                                                                                                                                                                                                                                                                               | Competencies         |    |    |    |    |    |    |    |    |                                     |    |    |    |    |    |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----|----|----|----|----|----|----|----|-------------------------------------|----|----|----|----|----|----|
|                                                                                                                                                                                                                                                                                                                                                                                                                                         | General competencies |    |    |    |    |    |    |    |    | Special (professional) competencies |    |    |    |    |    |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                         | 01                   | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 01                                  | 02 | 03 | 04 | 05 | 06 | 07 |
| PLO01. Apply modern tools and technologies for searching, processing and analyzing information, in particular, statistical methods for analyzing large-scale and/or complex data, specialized databases and information systems.                                                                                                                                                                                                        | +                    | +  |    | +  |    | +  |    | +  |    |                                     |    |    |    |    |    |    |
| PLO02. Freely present and discuss with specialists and non-specialists research results, scientific and applied management problems in the state and English languages, competently reflect research results in scientific publications in leading international scientific journals.                                                                                                                                                   |                      |    | +  | +  | +  | +  | +  |    |    | +                                   | +  |    |    |    |    |    |
| PLO03. Develop and investigate conceptual, mathematical and computer models of processes and systems, effectively use them to obtain new knowledge and/or create innovative products in the field of management and related interdisciplinary areas.                                                                                                                                                                                    |                      |    |    |    | +  | +  |    | +  |    |                                     |    |    |    |    | +  |    |
| PLO04. Develop and implement scientific and applied projects that provide an opportunity to rethink existing and create new holistic knowledge and/or professional practice in the field of management and administration and solve significant scientific and technological problems in management in compliance with the norms of academic ethics and taking into account social, ethical, economic, environmental and legal aspects. |                      |    | +  | +  | +  | +  |    |    | +  | +                                   |    |    | +  | +  |    |    |
| PLO05. Deeply understand the general principles and methods of management sciences, as well as the methodology of scientific research, apply them in their own research in the field of management and in teaching practice.                                                                                                                                                                                                            | +                    |    |    |    |    |    |    | +  |    |                                     |    | +  |    |    |    | +  |
| PLO06. Plan and carry out scientific and applied research in management and related interdisciplinary areas using modern tools, critically analyze the results of their own research and the results of other researchers in the context of the entire complex of modern knowledge on the problem under study; make proposals for funding research and/or projects.                                                                     | +                    | +  |    |    | +  |    |    |    | +  |                                     |    |    |    | +  | +  |    |
| PLO07. To test and implement the results of one's own research in the field of management.                                                                                                                                                                                                                                                                                                                                              |                      |    | +  |    | +  | +  | +  |    |    |                                     | +  |    |    |    |    |    |
| PLO08. To develop and teach special academic disciplines in management in educational institutions.                                                                                                                                                                                                                                                                                                                                     |                      |    |    |    | +  | +  |    |    |    |                                     |    | +  |    |    |    |    |
| PLO09. To demonstrate a systematic scientific worldview, to rationally understand the challenges facing science in the context of socio-economic and environmental problems of our time (ethical dilemmas, values, global social transformations).                                                                                                                                                                                      | +                    | +  |    | +  | +  |    | +  | +  | +  |                                     |    |    |    |    |    | +  |
| PLO10. To develop theories, concepts and principles of management to implement the principles of sustainable development at different levels of management, to integrate the obtained research results into logical structures to solve theoretical and practical management problems in accordance with the topic of one's own research.                                                                                               |                      |    | +  | +  | +  |    |    | +  | +  |                                     |    |    |    |    | +  | +  |

Table 3

[illegible]