- **MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**
  SUMY NATIONAL AGRARIAN UNIVERSITY

PROGRAMME OF STUDY
"SUSTAINABLE AGRICULTURE AND FOOD SECURITY"

Second (master's) level of higher education

specialty 201 Agronomy

(According to ISCED 0811 Crop and livestock production)

fields of study 20 Agricultural sciences and food

Qualification: Master of Science

(Recruitment year 2023)

APPROVED
SCIENTIFIC COUNCIL OF SUMY NAU
«10» 08 2023 y., protocol № 18
Chairman of the Scientific Council _____ /Volodymyr LADYKA/

The educational program will put into operation from 1.09.2023 y.
(order № 419-С from «10» 08 2023y.)
Rector _____ /Volodymyr LADYKA/

Sumy – 2023

Considered and approved at an extended meeting of the chair with the participation of student activists and stakeholders protocol № 9 from 29 March 2023 y.

Head of educational department Nataliya KOLODNENKO

Acting Head of the department of quality,
licensing and accreditation, Ph.D., Associate Professor Olena RYBINA

Vice-rector for scientific-pedagogical
and educational work, Doctor of Biology, Professor Ihor KOVALENKO

Approved at the meeting of the Scientific Council of the Faculty of Faculty of Agricultural Technologies and Nature Management from **May 24, 2023 y.**, protocol № 12

Chairman of the Scientific Council
of the Faculty of Agricultural Technologies and
Nature Management,
Ph.D., Associate Professor Olha BAKUMENKO

LETTER OF AGREEMENT

Educational and professional program
201 «Agronomy» EP «Sustainable agriculture and food security»

Project group consisting of:

Chairman of the project group:

PhD (Economics), Associate Professor of Public Management and Administration Department — Svitlana LUKASH

Members of the project group:

PhD (Economics), Associate Professor of Management Department named after prof. L.I. Mykhailova, researcher Royal Agricultural University (RAU) — Iryna SKLIAR

Doctor in Ag.Sc., professor of Agricultural Technologies and Soil Science Department — Yurii MISHCHENKO

PhD in Ag.Sc., associate professor of Horticulture and Forestry Department — Olena OSMACHKO

PhD in Ag.Sc., associate professor of Agricultural Technologies and Soil Science Department — Elina ZAKHARCHENKO

PhD in Ag.Sc., associate professor of Biotechnology and Phytopharmacology Department — Vladyslav KOVALENKO

PhD in Ag.Sc., associate professor Department of Breeding and Seed Production Department named after M.D. Goncharov — Ihor VERESHCHAHIN

PREFACE

Theeducationalandprofessionalprogram (EP) forsecond (master's) levelhighereducationapplicantsinthespecialty 201 Agronomy EP "SustainableAgricultureandFoodSecurity" containstheamountof ECTS creditsrequiredforobtainingthecorrespondinghighereducationdegree:

formulatedintermsoflearningoutcomes;

formsofattestationofhighereducationapplicants, requirementsfortheexistenceof a systemofinternalqualityassuranceofhighereducation.

The EP forthetrainingofspecialistsofthesecond (master's) levelofhighereducationinthespecialty 201 "Agronomy" wasdevelopedinaccordancewiththeLawofUkraine "OnHigherEducation" datedJuly 1, 2014, ResolutionoftheCabinetofMinistersofUkrainedatedNovember 23, 2011 "OntheApprovaloftheNationalFrameworkofQualifications" datedDecember 30, 2015 No. 1187,"Ontheapprovaloflicensingconditionsforconductingeducationalactivitiesofeducationali nstitutions" of December 20, 2015, the Standard ofHigherEducationofUkraineforthesecond (master's) specialty 201 Agronomy (OrderNo. 1420 of November 17, 2020), methodologicalrecommendations "Developmentofeducationalprograms. Methodologicalrecommendations" (2014).

Thiscoursewillequipyouwiththespecialistknowledgeandskillsneededtotacklesomeofth ebiggestchallengesintheagricultureandfoodsectorstoday.

Usersoftheeducationalandprofessionalprogram:

-studentsofhighereducationwhoarestudyingatSumyNationalAgrarianUniversityatthesecond (master's) levelinthespecialty 201 AgronomyEP "SustainableAgricultureandFoodSecurity";

-faculty staffofSumyNationalAgrarianUniversity, whotrainmastersinthespecialty 201 AgronomyEP "SustainableAgricultureandFoodSecurity";

-AdmissionsCommitteeofSumyNationalAgrarianUniversity;

-theexaminationcommitteeofthespecialty 201 AgronomyEP "Sustainableagricultureandfoodsecurity".

Reviewsofexternalstakeholders:

DeputyDirectoroftheInstituteofAgriculture
oftheNorthEastoftheNationalAcademyofSciences,
Doctor in Agricultural Sciences Mykola SOBKO

Directorof LLC "UKRAVIT SCIENCESPARK" Oleksandr TKACHENKO

1. Profile of the programe of study

1. General information	
Full name of the higher educational institution	Sumy National Agrarian University, Faculty of Agricultural Technologies and Nature Management The Royal Agricultural University,Schoolof Agriculture, Food and Environment
The degree of higher education and the title of the qualification in the original language	Master of Science Sustainable Agriculture and Food Security
Official name of the programme	Sustainable Agriculture and Food Security
Type of degree and scope of the programme of study	Master's degree, double, 90 ECTS credits, period of study is 1 year 4 months
Accreditation	Not accredited
Academic level	National Qualification Framework of Ukraine – 7 levels Framework for Higher Education Qualifications (FHEQ) of the UK – Level 7 FQ-EHEA–second cycle EQF-LLL–7 level
Entry requirements	Bachelor's degree or specialist educational qualification level, master's degree in another specialty Students whose first language is not English must achieve a minimum IELTS score of 6.5.or Pearson Test of English Academic (PTE Academic) Min. overall 61 with no individual element below 51 – CEFR B2 (find details here https://www.rau.ac.uk/student-life/international-students/english-language-requirements)
Language of study	English
The term of validity	July 1, 2028
The Internet address of the permanent placement of the description of the educational program	https://agro.snau.edu.ua/studentu/magisterski-programi/

2. The aim of the programme

'To enable participants to gain the specialised knowledge, understanding, skills and attitudes necessary to contribute effectively and ethically to strategic decision making, opinion forming and operational management for the development of sustainable agriculture and food supply systems in both developed and developing regions'

With specific themes in:

- Human exploitation of the Earth's resources for food production and the global and local implications of human development.
- The ecological basis for resource utilisation allied to wider environmental and landscape considerations of food production and supply.
- The role and function of institutional structures in relation to development, resource exploitation, social, cultural, ethical and inter-generation considerations.
- The application of development paradigms models and tools to build capacity within communities, institutions and individuals.

3. Characteristics of the programme	
Subject area (field of study, specialty, specialization)	20 201 Agronomy
Description of the subject area (according to academic standard of MES of Ukraine)	**Object of study and activity**: technological processes of growing agricultural crops. **Learning objectives:** development of students' ability to solve complex tasks and problems in the field of agronomy. **Theoretical content of the subject area:** crop production and management of soils, varietal resources and conservation of biological diversity. **The objects** of the master's professional activity are agricultural crops and their varieties (hybrids), selection process, agro-landscapes, natural fodder lands, soil and preservation and improvement of its fertility, optimization of plant nutrition, harmful organisms and means of protection against them, production technologies, storage and primary processing of plant products. **Methods, techniques, and technologies**: general scientific (hypothesis, experiment, analysis, induction, deduction, modeling, generalization) and special (laboratory, vegetation, lysimeter, vegetation-field, field) research methods in agronomy, statistical methods of data analysis, agrotechnical measures, general technologies for growing agricultural crops. **Tools and Equipment:** Equipment, facilities, tools, and software required for laboratory, laboratory-field, and field research in agronomy.
Orientation of the programme	Professionally oriented programme
The focus of the programme and specialisation	The programme explores five key challenges, namely: 1) Balancing future demand and supply sustainably. 2) Ensuring that there is adequate stability in food supplies – and protecting the most vulnerable from the volatility that does occur. 3) Achieving global access to food and ending hunger. This recognises that producing enough food in the world so that everyone can potentially be fed is not the same thing as ensuring food security for all. 4) Managing the contribution of the food production to the mitigation of climate change. 5) Maintaining biodiversity and ecosystem services while feeding the world. By focusing on sustainable resource management within the agricultural sector, students will explore a series of food-producing strategies, including large-scale conventional agriculture, organic farming, small-scale production and linkage with policy and development. The programme allows students to specialise through electives in innovative and technological solutions or methods that are more traditional.
Features of the programme	The programme is double degree programme which is delivering by Royal Agricultural University, the United Kingdom, and Sumy National Agrarian University, Ukraine. The study programme is developed based on 1) Subject Benchmark Statement Agriculture, Horticulture, Forestry, Food, Nutrition and Consumer Sciences October2019 and 2) the academic standards of the Ministry of Education and Science of Ukraine, specialty 201 Agronomy. Food security has risen-up the global agenda since the COVID-19 pandemic as manypeople experienced the fragility of food supply chains and the devastating environmental, social and economic impacts of the crisis. The FAO1 (2020) highlighted theinterconnected nature of agriculture, people, animals, plants and their shared environmentand highlight the necessary

	strengthening required to improve the resilience of foodsystems to withstand other disease outbreaks and shocks. This Master's programme specifically addresses sustainable agriculture and food securityglobally and is equally relevant both to UK and Ukraine from perspective after war Ukrainian agricultural sector recovery; to those looking forintensive solutions or local, low tech solutions to food production. It is also of relevanceto public administrations, international aid/funding agencies, and business sectors. The programme attracts students from a wide range of nationalities, backgrounds,previous experiences and age ranges. The diversity of the participants is an importantdynamic in this programme and will play a key role in discussing and addressing theSustainable Development Goals (SDG) related to food and farming globally with the aim orrethinking agricultural and food systems to improve livelihoods and protect the environment.

4. Employment and further education	
Employability	The global focus of this programme addresses the United Nations Sustainable Development Goals and thereby leaves the graduates prepared for a wide range of careers in the private sector or for national Governments or Non-Governmental Organisations (NGOs) including trade associations. The graduates will be equipped to work in international, national, regional or local based roles. The skills gained throughout the programme will equip graduates for working in policy, advisory, food chain, management, retail, production, research, educational services or for further study in the higher education sector
Academic rights of graduates	Students can continue studying on the third level of higher education – doctorate study. Acquisition of additional qualifications is possible.
5. Teaching, learning and assessment	
Teaching, learning	The format of the programme is a mixture of residential learning and blended learning approaches supported by a range of learning materials and activities presented on the RAU VLE. Delivering of the programme is going to carry out by the academic stuff of SNAU based on learning materials presented on the RAU VLE. The delivery is through a combination of lectures, seminars, speakers, case studies, workshops and with activities presented through the Virtual Learning Environment (VLE) which is also used to host other supporting material including videos, webinars, quizzes, podcasts and other relevant presentations. Teaching will include group discussions, tutorials, facilitated discussions, workshops, guided independent study and a research project. The programme is available 1year and 4 months full time. According to the UK regulation a Postgraduate Certificate can be obtained by accumulating 30 ESTC credits (60 the UK credits) through successful completion of any 4 taught core modules. A Postgraduate Diploma can be obtained by accumulating 60 ESTC credits (120 the UK credits) through successful completion of 8 taught modules without the dissertation. Study support for overseas students and those who have been out of education for a while. The Induction Week programmes for September starters provide sessions focusing on what to expect and what is expected from the student when studying at Masters level. Students are also inducted to IT services, the library, health care, Student Support Services and the Students Union during this time and introduced to key figures so they know where and how they can gain extra support if required. Student Support Services provide a series of study skills sessions to support international students in transitioning to the UK and the conventions of UK HE. This provision continues throughout the duration of their study: students may request support such as proofreading, module brief interpretation, help with academic writing skills, dyslexia and disability support as well as any kind of pastoral support. Additionally, the International Orientation takes place immediately prior to Induction Week every September for students who feel they would benefit from learning more about the country, it traditions, heritage and culture prior to commencing their study. This ten-day residential programme is open to all UG and PG international students arriving to study at the RAU for the first time, and focuses on integrating students from across the globe joining a variety of programmes, in order to build community and enhance Inclusivity, Equality and Diversity in this small, specialist institution.

<table>
<tr><td>Assessment</td><td>Assessment will be a balance between individual and group work and will consist of a range of critical reports, written examinations, poster presentations, sustainability plans, policy summaries, oral presentations, critical reflections and dissertation / applied project. Each module is supported by a comprehensive resource list that is maintained through the RAU and SNAU Library Talis system.
The programme has been designed to offer a range of assessment methods which consist of individual and group work, exams and coursework. There is a diversity in the range of assessments to be completed from reports, policy briefs and critical appraisals.
Assessments based on core modules:
Level 7 Coursework 100%
Exam 0%
Practical 0%
Assessment is an integral part of the learning experience of students.
Programmeis assessed by a range of assessment activities, each developed to provide the most appropriate means of demonstrating the student’s achievement of a specified learning outcome. An assessment may assess more than one learning outcome.
Programme is assessed based on RAU Regulations taking into consideration requirements of academic standard of Ukrainian Ministry.
The normal basis for awards will be the overall average score in the final assessment, graded as follows:
<table>
<tr><td>Distinction weighted average of</td><td>70%</td></tr>
<tr><td>Merit weighted average of</td><td>60% - 69%</td></tr>
<tr><td>Pass weighted average of</td><td>40% - 59%</td></tr>
<tr><td>Fail average</td><td>0% - 39%</td></tr>
</table>
In addition to assigning a percentage mark to the work, the teacher adds comments; usually about the strengths and weaknesses of the piece as well as advice about improving the work. All assessment decisions are subject to moderation of RAU lecturer (moderator) and SNAU teacher, who is responsible for module.
Grades, obtained by students will be transferred into SNAU institutional scale based on the statistical distribution of grades in a reference group Agronomy master's studentsof SNAU.</td></tr>
<tr><td colspan="2">6. The programme competences</td></tr>
<tr><td>General competences (GC)</td><td>GC 1. Ability for abstract thinking, analysis and synthesis
GC 2. Ability to act on the basis of ethical reasoning.
GC 3. Ability to identify, pose and resolve problems.
GC 4. Ability to work in an international context.
GC 5. Ability to design and manage projects.
GC 6. Commitment to the conservation of the environment</td></tr>
<tr><td>Subject specific competences (SSC)</td><td>SSC 1. Ability to manage a team, ensure staff development, and tolerantly perceive social, ethnic and cultural differences.
SSC 2. The ability to analyse and evaluate current problems, development prospects and scientific and technical policy in the field of agronomy.
SSC 3. The ability to create new technologies and apply modern technologies of agronomy, taking into consideration their features and using the advanced experience of their implementation, to develop the scientific basis of technologies for growing crops.
SSC 4. The ability to assess the soil for the cultivation of crops, taking into consideration the requirements for ensuring the quantity and quality of product.</td></tr>
</table>

	SSC 5. The ability to solve complex problems in broad or multidisciplinary contexts based on specialist conceptual knowledge that include modern scientific achievements in agronomy. SSC 6. Ability to present the results of professional and scientific activities to specialists and non-specialists. SSC 7. Ability to organise and conduct research independently using research methods and standards of soil and plant samples. SSC 8. Ability to develop and deliver courses/modules at the HEIs and at the professional pre-higher education institutions
7. The programme intended learning outcomes (PILOs) On successful programme completion students will be able to:	
Knowledge and Understanding	
PILOs1. Critically evaluate the principles of agriculturalproduction for both large- and small-scale systems	
PILOs 2. Critically evaluate issues of sustainable development consideringpeople, place and planet	
PILOs 3. Appraise the complex issues of sustainable management ofnatural resources	
PILOs 4. Decipher and evaluate the impacts of climate science and changeon agricultural systems and food supply	
PILOs 5. Determine factors influencing the provision of food quality, supplyand security	
PILOs 6. Ascertain and evaluate the processes of policy formulation inagriculture and food production	
Intellectual, Professional, Key skills	
PILOs 7. Lead and manage time and resources appropriately in bothindividual and team situations to enable successful projectdelivery	
PILOs 8. Develop lifelong skills which enable the synthesise and analyse of data and information from a wide range of sources to support andevaluate solutions to complex practical problems and policy challenges	
PILOs 9. Evaluate, cite and reference sources of data and information with academic integrity in an appropriate manner whilst ensuringthe avoidance of plagiarism	
PILOs 10. Critically and creatively think, design and analyse aninvestigation to test a hypothesis. collect appropriate results,analyse data and present conclusions using a variety of methods	
PILOs 11. Develop and recognise leadership skills to critically analysesituations for addressing diverse organisational, business andsocial issues	
Programme specific skills	
PILOs 12. Appreciate the role of self-reflection and critical analysis in one's own and others personal attributes for a range of situationsincluding resilience, open-mindedness, reflection, ethical consideration, motivation, professional behaviours, and employability	
PILOs 13. Understand and evaluate complex information analysis toinfluence decisions and policy within a range of political,economic, and social systems and institutions for strategicdecision making.	
PILOs 14. Appraise and develop project management solutions forsustainable agricultural and food assessments by effectively andcreatively analysing and reporting of results and findings	
PILOs 15. Effectively communicate through a variety of mediums on foodand agricultural topics to a wide range of audiences	
PILOs 16. Design teaching and learning activities and identify appropriate assessment practices.	
8. Resources for programme delivering	
Academic stuff	
Resources	The campus and laboratory base of the Faculty of Agricultural Technologies and Nature Management allows organizing and conducting classes in all academic disciplines at a satisfactory level. The faculty has 14 educational laboratories, a demonstration and

	collection field of agricultural crops, an educational and scientific park. Labs are equipped with the necessary devices and tools. Among the latter, there are unique ones, in particular electronic and fluorescent microscopes, sets of devices for immunoenzymatic analysis (mycotoxins, GMOs), quality analyzers grains (moisture, protein content, gluten, fat content, erucic acid); available equipment for conducting diagnostic studies by the molecular genetic method (PCR reaction). Departments have all the necessary equipment and devices.
9. Academic mobility	
National credit mobility	Academic mobility is implemented within the framework of cooperation agreements with higher education institutions and scientific research institutions of Ukraine (NULES, Mykolaiv National Agrarian University, Institute of Potato Growing of the National Academy of Sciences of Ukraine, Institute of Agriculture of the Northeast of the National Academy of Sciences of Ukraine).
International credit mobility	On the basis of bilateral agreements between Sumy National Agrarian University and foreign partner educational institutions https://international.snau.edu.ua/mizhnarodni-proekti/akademichna-mobilnist/ https://international.snau.edu.ua/mizhnarodni-partneri/; Under long-term international projects that provide for a dual system of student education (Erasmus+ KA2 Project "Training of Laboratory Specialists" (Agr-Lab), etc.).
Studying of international students	Possible after accreditation of the programme

2.1 List of the programme modules

Module code		Module title	Credit value		Semester	Assessment
SNAU	RAU		SNAU	RAU		
Core (mandatory) modules						
CPU 1	4038a	Integrated Agricultural Systems	5	15	2	Exam
CPU 2	4409	Facing the Global Challenges in Food and Agriculture	5	15	2	Coursework
CPU 3	4413	Research Skills	5	15	2	Coursework
CPU 4	4727	Managing Global Soils in a Changing Climate	5	15	2	Coursework
CPU 5	4753	International Rural Development and Food Security	10	30	2	Coursework
CPU 6		Management of agrocenoces	5	15	1	
CPU 7		Psychology and pedagogy in higher education	5	15	1	
CPU 8		Work placement	10	30	3	Coursework
CPU 9	4414	Dissertation	15	45	3	Coursework
		Total core	**65**	**195**		
Plus FIVE Electives from (4 in 1 semester and 1 in 2 semester)						
EPU 1	4722	Climate Change and Sustainability	5	15	1	
EPU 2	4203	Small Scale Farming and Local Food Supply	5	15	1 or 2	
EPU 3	4724	Environmental Science in Agriculture	5	15	1	
EPU 4	4278	Organic Systems	5	15	1	
EPU 5	4723	Crop Production Technology and Innovation	5	15	1 or 2	
EPU 6	4726	Livestock Production Technology and Innovation	5	15	1 or 2	
EPU 7	4725	Environmental Technology and Innovation	5	15	1	
EPU 8	4263	Entrepreneurship and Business Planning	5	15	1	
		Total elective from the list	25	75		
		Total credits	90	270		

2.2 Final summative assessment

Forms of attestation (final summative assessment) of students	Public defense of dissertation
Requirements	The dissertation involves the independent solution of a complex problem in agronomy, which involves conducting research and/or innovations. The dissertation should not contain academic plagiarism, fabrication, or falsification. The dissertation must be placed in the repository of the SNAU.

The matrix of alignment of the programme intended learning outcomes with the competences defined by the academic standards of the Ministry of Education and Science of Ukraine

	Competences													
	Generic competences						**Subject specific competences**							
	GC 1.	GC 2.	GC 3.	GC 4.	GC 5.	GC 6.	SSC 1.	SSC 2.	SSC 3.	SSC 4.	SSC 5.	SSC 6.	SSC 7.	SSC 8.
PILOs1. Critically evaluate the principles of agriculturalproduction for both large- and small-scale systems	x		x					x		x	x			
PILOs 2. Critically evaluate issues of sustainable development consideringpeople, place and planet	x	x	x	x		x	x				x			
PILOs 3. Appraising the complex issues of sustainable management ofnatural resources		x	x			x		x						
PILOs 4. Decipher and evaluate the impacts of climate science and changeon agricultural systems and food supply	x			x		x								
PILOs 5. Determine factors influencing the provision of food quality, supplyand security			x								x			
PILOs 6. Ascertain and evaluate the processes of policy formulation inagriculture and food production								x						
PILOs 7. Lead and manage time and resources appropriately in bothindividual and team situations to enable successful projectdelivery					x		x							
PILOs 8. Develop lifelong skills which enable the synthesise and analyse of data and information from a wide range of sources to support andevaluate solutions to complex practical problems and policy challenges	x							x	x					
PILOs 9. Evaluating, citing and referencing sources of data and information with academic integrity in an appropriate manner whilst ensuringthe avoidance of plagiarism	x	x											x	
PILOs 10. Ability to critically and creatively think, design and analyse aninvestigation to test a hypothesis. collect appropriate results,analyse data and present conclusions using a variety of methods	x		x						x	x	x		x	

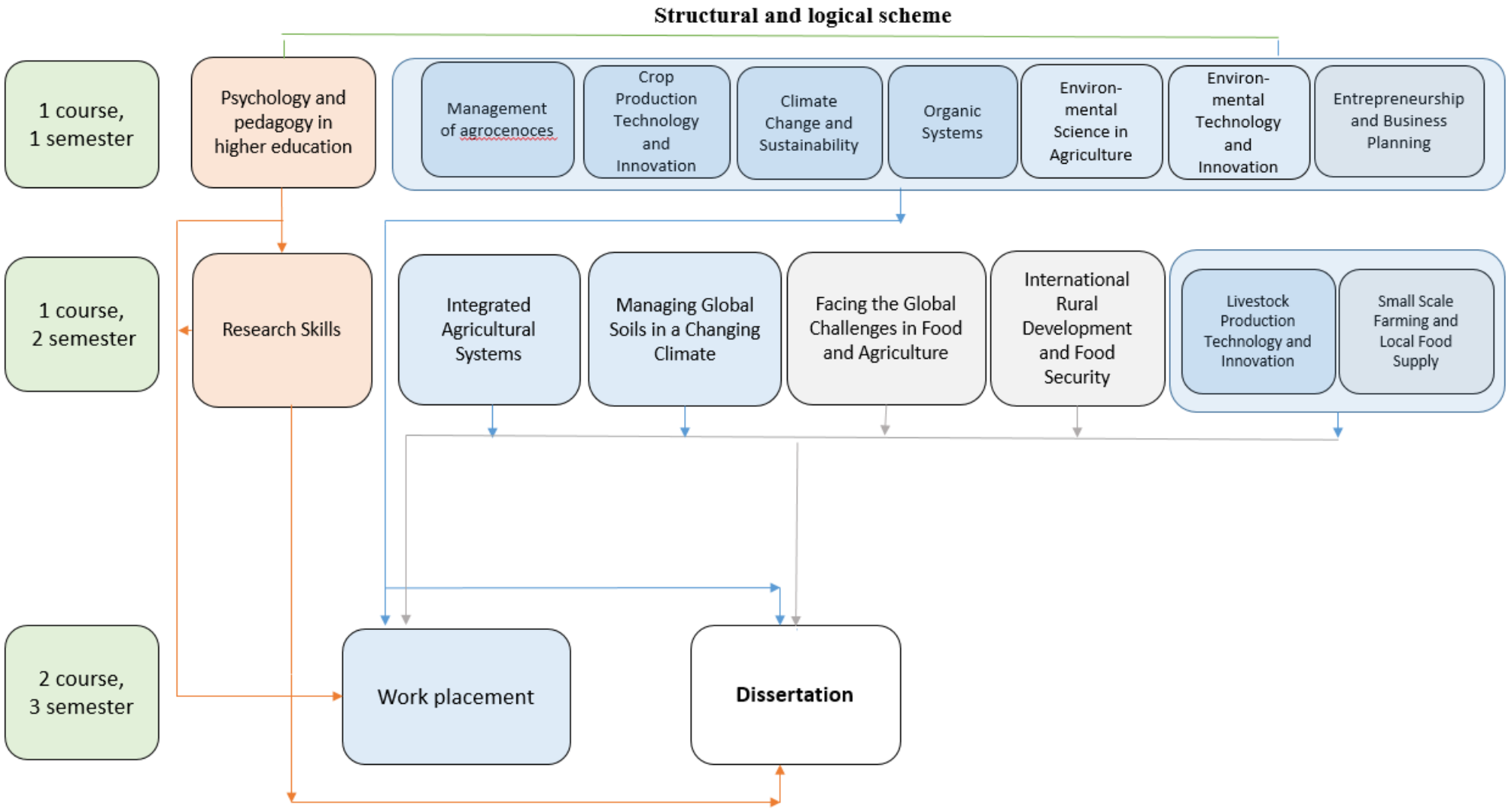
PILOs 11. To develop and recognise leadership skills to critically analysesituations for addressing diverse organisational, business andsocial issues							x							
PILOs 12. Appreciate the role of self-reflection and critical analysis in one's own and others personal attributes for a range of situationsincluding resilience, open-mindedness, reflection, ethical consideration, motivation, professional behaviours, and employability	x	x					x					x		x
PILOs 13. To understand and evaluate complex information analysis toinfluence decisions and policy within a range of political,economic, and social systems and institutions for strategicdecision making.								x			x			
PILOs 14. To appraise and develop project management solutions forsustainable agricultural and food assessments by effectively andcreatively analysing and reporting of results and findings			x		x	x				x			x	
PILOs 15. To effectively communicate through a variety of mediums on foodand agricultural topics to a wide range of audiences				x								x		x
PILOs 16. To design teaching and learning activities and identify appropriate assessment practices														x

The matrix of displaying how programme learning outcomes are ensured by programme modules.

	Core modules									Elective modules							
	4038a	4409	4413	4753	4727	SNAU 1	SNAU 2	WP	Diss 4414	4722	4203	4724	4278	4723	4726	4725	4263
PILOs1. Critically evaluate the principles of agriculturalproduction for both large- and small-scale systems	x					x		x						x	x		
PILOs 2. Critically evaluate issues of sustainable development consideringpeople, place and planet				x						x	x						x
PILOs 3. Appraising the complex issues of sustainable management ofnatural resources					x	x						x				x	
PILOs 4. Decipher and evaluate the impacts of climate science and changeon agricultural systems and food supply					x					x							
PILOs 5. Determine factors influencing the provision of food quality, supplyand security				x		x											
PILOs 6. Ascertain and evaluate the processes of policy formulation inagriculture and food production		x														x	
PILOs 7. Lead and manage time and resources appropriately in bothindividual and team situations to enable successful projectdelivery	x			x				x		x					x		x
PILOs 8. Develop lifelong skills which enable the synthesise and analyse of data and information from a wide range of sources to support andevaluate solutions to complex practical problems and policy challenges			x		x				x				x	x			x
PILOs 9. Evaluating, citing and referencing sources of data and information with academic integrity in an appropriate manner whilst ensuringthe avoidance of plagiarism			x				x		x	x	x			x	x		
PILOs 10. Ability to critically and creatively think, design and analyse aninvestigation to test a hypothesis. collect appropriate results,analyse data and present conclusions using a variety of methods		x	x						x								x
PILOs 11. To develop and recognise leadership skills to critically analysesituations	x						x	x									x

for addressing diverse organisational, business andsocial issues																	
PILOs 12. Appreciate the role of self-reflection and critical analysis in one's own and others personal attributes for a range of situationsincluding resilience, open-mindedness, reflection, ethical consideration, motivation, professional behaviours, and employability		x								x	x						
PILOs 13. To understand and evaluate complex information analysis toinfluence decisions and policy within a range of political,economic, and social systems and institutions for strategicdecision making.	x	x	x						x						x		x
PILOs 14. To appraise and develop project management solutions forsustainable agricultural and food assessments by effectively andcreatively analysing and reporting of results and findings			x	x	x			x	x								x
PILOs 15. To effectively communicate through a variety of mediums on foodand agricultural topics to a wide range of audiences				x				x					x	x		x	
PILOs 16. To design teaching and learning activities and identify appropriate assessment practices							x										

Structural and logical scheme



List of normative documents -
base of the Standard of higher education

1. Law of Ukraine "On Higher Education" dated July 1, 2014 No. 1556-VII.
2. Law of Ukraine on Licensing of Types of Economic Activity dated March 2, 2015 No. 222-VIII.
3. Resolution of the Cabinet of Ministers dated April 29, 2015 No. 266 "On approval of the list of fields of knowledge and specialties for which higher education applicants are trained."
4. Resolution of the Cabinet of Ministers of 12/30/2015 No. 1187 "On approval of the Licensing conditions for conducting educational activities of educational institutions".
5. Order of the Ministry of Education and Culture of Ukraine dated February 19, 2015 No. 166 "Some issues of publicizing information on the activities of higher educational institutions."
6. Order of the Ministry of Education and Culture of Ukraine dated November 6, 2015 No. 1151 "On the peculiarities of introducing the list of fields of knowledge for which higher education applicants are trained, approved by Resolution of the Cabinet of Ministers of Ukraine No. 266 dated April 29, 2015."
7. National Classifier of Ukraine: "Classifier of Professions" DK 003:2010 // Publishing House "Socinform". – Kyiv: 2010.
8. Order of the Ministry of Economic Development and Trade of Ukraine dated November 18, 2014 No. 1361 "On Approval of Changes to the National Classifier of Ukraine DK 003:2010" (Amendment No. 2).
9. Rashkevich Yu. M. The Bologna process and the new paradigm of higher education: monograph / Yu. M. Rashkevich. – Lviv: Publishing House of Lviv Polytechnic, 2014. – 168 p.
10. Development of the system of quality assurance of higher education in Ukraine: informational and analytical review, National Academy of Pedagogical Sciences of Ukraine, Institute of Higher Education of National Academy of Sciences of Ukraine, National Erasmus+ Offices of Ukraine - http://ihed.org.ua/images/biblioteka/Rozvitok_sisitemi_zabesp_yakosti_VO_UA_2015. pdf.
11. TUNING (for familiarization with special (professional) competencies and examples of standards - http://www.unideusto.org/tuningeu/.
12. Development of educational programs: methodological recommendations - http://ihed.org.ua/images/biblioteka/rozroblennya_osv_program_2014_tempus-office.pdf.
13. Order of the Ministry of Education and Culture No. 600

Guarantor of the educational and professional program
(head of the project group):
Ph.D, associate professor,
Associate Professor of Public Management
and Administration Department **Svitlana LUKASH**