

Ministry of Education and Science of Ukraine
Sumy National Agrarian University
Biological and technological faculty
Department of feed technology and animal feeding

MODULE SYLLABUS

Entrepreneurship in Aquaculture (selective)

Implemented within the Technologies in aquaculture educational program

specialty 204 - Technology of production and processing of animal husbandry products
at the second (master's) level of higher education

Sumy - 2024

Information on viewing the work program (syllabus):

The academic year in which changes are made	The Academic program attachment number with changes description	The changes were reviewed and approved		
		Minutes No and date of the department meeting	Head of Department	Guarantor of the Academic program

1. MODULE OVERVIEW

	The name is OK	Entrepreneurship in aquaculture					
	Faculty/department	Biological-technological/Forage and animal feeding technologies					
	The status is OK	Selective					
	Program/Specialty (programs), the component of which is OK for	Technologies in aquaculture					
	OK can be offered for	204 Technology of production and processing of animal husbandry products 207 Aquatic biological resources and aquaculture					
	NRK level	seventh					
	Semester and duration of study	the second, 11 weeks					
	Number of ECTS credits	5					
	The total number of hours and their distribution	Contact work (class)					
		Lectures		Practical/seminar		Independent work	
		Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
		22	-	22	-	-	106
	Language of education	Ukrainian					
	Teacher/Coordinator of the educational component	Mykhalko Oleksandr Gryhorovych					
	Contact Information	Associate Professor of the Department of Feed Technology and Animal Feeding office 322 of the main building email address: snau.cz@ukr.net consultations: every Tuesday 14 ⁰⁰ -15 ⁰⁰ .					
	Module description	The discipline is aimed at mastering a set of knowledge on the basics of entrepreneurship, familiarization with the general provisions, principles, methods, and conditions of entrepreneurial activity in aquaculture; will contribute to the development of abilities and the formation of skills that will allow to carry out entrepreneurial and innovative activities regarding the establishment of one's own business; formation of knowledge regarding the use of management methods.					
	The purpose of the educational component	Educational component: - promotes the perception of the latest knowledge in the field of scientific achievements in aquaculture; - formsthe ability to use and characterize world fish farming and fishing, the world market of aquaculture products and apply the acquired knowledge for international cooperation in the field of fish farming and fishing; - enablespractically apply basic knowledge of economics for the cost and legislative provision of production of aquaculture facilities in natural and artificial water bodies;					

		<ul style="list-style-type: none"> - formsthe ability to organize business activities, calculate economic indicators based on the results of activities and evaluate economic efficiency in fish farms of various forms of ownership for the production and fishing of water resources and aquaculture facilities; - makes it possible to assess the expediency and possibility of applying new methods and technologies in aquaculture; - helps to make optimal management decisions, taking into account the balanced use of nature, which will contribute to the stabilization and development of business activities.
	Prerequisites for studying OK, connection with other educational components of OP	The educational component is based on the educational components «Technology of production of aquaculture products»
	Policy of academic integrity	The policy of academic integrity at SNAU is governed by the Code of Academic Integrity http://docs.snau.edu.ua/documents/education/quality/kodeks_akadem_dobrochesnosti.pdf In accordance with it, the requirements for the student to observe academic integrity during the study of the educational component are as follows: to be responsible for one's duties, to fulfill the tasks prescribed by the educational program on time and in good faith; to be present at all classes; perform independent work; honestly and responsibly prepare for current, modular and final control; submit for assessment only self-made work. It is unacceptable for a student to: show a disrespectful and incorrect attitude towards the teacher; being late for classes and missing them without valid reasons; during the educational process, use hints, other people's work, telephones; provide and receive assistance from third parties during current, modular and final control; receive or offer a bribe for receiving any benefits in educational activities. For violating the rules of academic integrity, students may be held liable for the following forms of responsibility: <ul style="list-style-type: none"> - repeated assessment (test, exam, credit, etc.); - repeated completion of the training course; - warning; - issuing a reprimand; - expulsion from the university (Part 5 of Article 48 of the Law of Ukraine «About Education»);
	Link to the course in the Moodle system	

2. CORRELATION BETWEEN MODULE LEARNING OUTCOMES (MLOs) AND PROGRAM LEARNING OUTCOMES (PLOs)

Study results for OK:	How assessed
<p>MLOs 1. To know the current state of fishery use of inland water bodies of Ukraine, the economic and useful features of the main objects of fishing and the main requirements for users of water resources of fishery water bodies. To be able to determine the efficiency of using fish stocks of natural reservoirs of various types.</p>	<p>Current survey, discussion questions</p>
<p>MLOs 2. To know the main methodological and technological approaches to the complex use of natural reservoirs by methods of aquaculture, animal husbandry and crop production, with the aim of rational use of productive potential and obtaining the maximum possible profit from production activities.</p>	<p>Report, Testing</p>
<p>MLOs 3. To know the current state of aquaculture development in the world and the main leading countries in the production of marine hydrobiont products. To understand the irreversibility of the process of aquaculture development and its role in providing the world's population with food. To be able to evaluate the potential opportunities for the development of aquaculture in Ukraine, focusing on the available natural resources and the experience of the countries of the world. To be able to evaluate the development prospects of the production of certain types of aquaculture products.</p>	<p>Cases, Essay, Testing</p>

3. MODULE INDICATIVE CONTENT

Topic. List of issues to be considered within the topic	Distribution of hours <i>Full-time</i>			Learning resources
	Directed study		Self-directed study	
	Lectures	Practicals		
Topic 1. Introduction. Entrepreneurship in the system of market relations. 1. Development of entrepreneurship theories 2. Content and characteristic features of entrepreneurship 3. Subjects and objects of entrepreneurial activity in the market economy 4. Production costs and their types 5. Income of the enterprise. Profit, its purpose, distribution and redistribution	2	2	10	1, 2, 3, 4, 6
Topic 2. The main forms of entrepreneurship. 1. Forms business organizations 2. Kinds entrepreneurial activity 3. Infrastructure production enterprise 4. Features small business	2	2	10	1, 2, 3, 4, 6
Topic 3. State of production of aquaculture products in the world and in Ukraine. 1. Global and national trends in the growth and development of aquaculture 2. Analysis of the evolution of the national system of state regulation of the development of aquaculture production 3. Regulation of the development of fish reproductive complexes	2	2	10	1, 2, 3, 4, 6, 7, 8, 9, 10
Topic4. Business creation mechanism (own business). 1. Choosing an idea and defining a rational start-up strategy 2. Formation of the statutory fund and the procedure for creating a new enterprise 3. Preparation of founding documents 4. Termination of business structures	2	2	10	1, 2, 3, 4, 8, 12, 13
Topic5. Features organization of production in aquaculture. 1. General characteristics and structure of the production process 2. Features of the production process in fish farming 3. Principles of production process organization 4. Organizational types of production 5. The main elements of the production process in fish farming 6. The main factor indicators of the work of fish farms enterprises	2	2	10	1, 2, 3, 4, 7, 10
Topic6. Planning entrepreneurial activity in aquaculture. 1. The essence of business planning 2. Planning principles and methods 3. Factors affecting the choice of planning form 4. A system of planned norms and indicators	2	2	10	1, 2, 3, 4,

Topic. List of issues to be considered within the topic	Distribution of hours <i>Full-time</i>			Learning resources
	Directed study		Self-directed study	
	Lectures	Practicals		
Topic 7. Organization investment activities of aquaculture enterprises. 1. Content of investment activities of fish farming enterprises 2. Justification of the need for the main and revolving capital for the formation of production funds 3. Purpose and content of business plans of the enterprise	2	2	10	1, 2, 3, 4, 9, 14
Topic 8. Standardization aquaculture products. 1. Organs and the system of standardization of aquaculture products in Ukraine 2. International standards, their structure and sphere of activity 3. Branches bodies and system of standardization of aquaculture products	2	2	10	1, 2, 3, 4, 7
Topic 9. Entrepreneurial risk in aquaculture and its management. 1. The essence of risk as an economic category 2. Risk factors and its functions 3. Methods of assessing business risks 4. Methods of risk management and reduction	2	2	6	1, 2, 3, 4, 6, 7, 8, 9, 10
Topic 10. Performance and efficiency management activities of aquaculture enterprises. 1. The productivity of production activity as a measure of the effectiveness of production management 2. Performance indicators of production systems 3. Modeling of the production system productivity management process 4. Ways of increasing the productivity of the production system	2	2	10	1, 2, 3, 4, 6, 7, 8, 9, 10
Topic 11. State regulation of entrepreneurial activity in aquaculture. 1. The need for state regulation of entrepreneurial activity in aquaculture 2. Prerequisites and mechanisms of state regulation of entrepreneurship 3. ZU "About Aquaculture". Rights and obligations in the field of aquaculture 4. Accounting and analytical support for aquaculture enterprises	2	2	10	1, 2, 3, 4, 6, 7, 8, 9, 10
That's all	22	22	106	

4. TEACHING AND LEARNING METHODS

MLOs	Teaching methods (work to be carried out by the teacher during classroom classes, consultations)	Number of hours	Learning methods (self-directed study)	Number of hours
MLOs 1	Lectures-discussions, use of electronic learning tools (multimedia equipment), thematic discussion, analysis of specific production situations.	12	Working with lecture notes, working with a textbook, generalization, systematization, deepening of the material, performance individual tasks	35
MLOs 2	Lectures-discussions, use of electronic learning tools (multimedia equipment), analysis of specific production situations, individual and group form of work, testing.	16	Working with lecture notes, working with a textbook, generalization, systematization, deepening of the material, performance individual tasks	36
MLOs 3	Lectures-discussions, use of electronic learning tools (multimedia equipment), analysis of specific production situations, individual and group form of work, testing.	16	Working with lecture notes, working with a textbook, generalization, systematization, deepening of the material, performance individual tasks	35

5. ASSESSMENT

5.1. Diagnostic assessment

5.2. Summative assessment

5.2.1. Intended learning outcomes methods:

No	Summative assessment methods	Grades	Deadline
1.	Current survey, assessment of theoretical knowledge, solution of debatable issues	35 points/35%	For 5 week
2.	Implementation of practical tasks, cases	20 points/20%	During 10 week
3.	Multiple choice test	15 points / 15%	For 6 week
4.	Essay	15 points / 15%	During 10 week
5.	Current survey, seismic testing	15/15%	During 11 week

5.1.2 Grading criteria

Summative assessment method	Unsatisfactorily	Satisfactorily	Good	Excellent
Current survey, assessment of theoretical knowledge, solution of debatable issues	<i><21 points</i>	<i>21-25 points</i>	<i>26-31 points</i>	<i>32-35 points</i>
	Task requirements not met	Most of the requirements are fulfilled, but some parts are missing, there is no analysis of the received data	All requirements of the task have been fulfilled	All the requirements of the task were fulfilled, the obtained results were clearly interpreted, creativity, thoughtfulness was demonstrated, an own solution to the problem was proposed
Implementation of practical tasks, cases	<i><12 points</i>	<i>12-14 points</i>	<i>15-17 points</i>	<i>18-20 points</i>
	Fewer than 6 correct answers to a test question	6-9 correct answers to the test questions	10-12 correct answers to the test questions	13-15 correct answers to the test questions
Intermediate certification (multiple choice test)	<i><9 points</i>	<i>9-10 points</i>	<i>11-13 points</i>	<i>14-15 points</i>
	Less 9 correct answers to test questions	9-10 correct answers to test questions	11-13 correct answers to test questions	14-15 correct answers to test questions
Essay	<i><9 points</i>	<i>9-10 points</i>	<i>11-13 points</i>	<i>14-15 points</i>
	Task requirements not met	The presentation does not correspond to the content of the report, the report is not properly prepared, does not meet the requirements	The presentation corresponds to the content of the report, but the report is not properly prepared	The presentation corresponds to the content of the report, but the report is properly prepared
Current survey, testing	<i><9 points</i>	<i>9-10 points</i>	<i>11-13 points</i>	<i>14-15 points</i>
	Task requirements not met	60% to 74% of the task was answered	Tasks are completed from 75% to 89%, some tasks are incomplete	The task was completed in full and in compliance with the requirements

5.3 Formative assessment:

To assess the current progress in learning and understand the directions for further improvement is provided

No	Elements of formative assessment	Date
1.	Oral survey after studying each topic OK	At the next practical session after the presentation of the material on the topic
2.	Verbal feedback from the teacher on the written survey of the current control	Immediately after the end of the presentation
3.	Verbal feedback from the teacher and students regarding completion of an individual task	At the next class after the student has completed the assignment
4.	Monitoring of student activity (teacher assessment, student self-assessment)	Upon completion of each module and the course as a whole

6. LEARNING RESOURCES

6.1 Key resources

6.1.1 Textbooks, manuals

1. Adams, R., Jeanrenaud, S., Bessant, J., Denyer, D., Overy, P., 2016. Sustainability-oriented innovation : a systematic review. *Int. J. Manag. Rev.* 18, 180–205
2. Leschen, W., Little, D., Squires, D., Thilsted, S.H., Troell, M., Williams, M., 2016.
3. Xie, Z., Hall, J., Mccarthy, I.P., Skitmore, M., Shen, L., 2016. Technovation standardization efforts: the relationship between knowledge dimensions, search processes and innovation outcomes. *Technovation* 48–49, 69–78.
4. Western KI. Competitiveness, Competence Management and Transfer of Knowledge in Food Fish Production in Norwegian and International Context. Report to RFF Nord. Levanger: Nord University; 2019

6.2. Guidelines

5. Training course in the Moodle system:

6.3. Other sources

6. Fishery and Aquaculture Statistics, 2019. URL: <http://www.fao.org/3/ca5495t/CA5495T.pdf>
5. United States Department of Agriculture. URL: <http://www.fas.usda.gov/data/us-fish-and-seafood-exportsreach-recordlevels>
6. Statistics Explained. URL: <http://ec.europa.eu/eurostat/statisticsexplained/index.php/>
7. Ridler, N. and Roderick, W. 1991. Financial feasibility and farm systems in cultivating *ostrea edulis*. *Journal of Shellfish Research*, 10 : 395 – 398 .
8. Stephanis, J. and Divanich, P. 1993 . “Farming of Mediterranean finfish species: present status and potential”. In *Abstracts of the World Aquaculture Conference 47* Torremolinos, Spain : World Aquaculture .
9. FAO. The State of World Fisheries and Aquaculture 2020: Sustainability in Action. Rome: FAO; 2020. Available from: <http://www.fao.org/state-of-fisheries-aquaculture>

6.2. Additional sources

10. Ariel D. Zajdband, Integrated Agri-Aquaculture Systems, Genetics, Biofuels and Local Farming Systems, 10.1007/978-94-007-1521-9_4, (87-127), (2011).
11. Fishing & Aquaculture. URL: <https://www.theglobaleducationproject.org/earth/fisheries-and-aquaculture.php>

12. P. Mafwila Kinkela, B. Kambashi Mutiaka, D. Dochain, X. Rollin, J. Mafwila & J. Bindelle, «Smallholders' Practices of Integrated Agriculture Aquaculture System in Peri-urban and Rural Areas in Sub Saharan Africa», *Tropicultura*, Volume 37 (2019), Numéro 4, URL : <https://popups.uliege.be:443/2295-8010/index.php?id=1396>
13. Brummett R.E. & Jamu D. M., 2011, From researcher to farmer: partnerships in integrated aquaculture - agriculture systems in Malawi and Cameroon, *Int. J. Agr. Sustain.*, 9, 1, 282-289.

6.3. Software

14. Software Zoom is a platform for organizing video conferences.
15. Moodle distance learning system software.
16. Internet service for online testing and creation of quizzes Quizizz.com

Modul syllabus review _____

Developed by the teacher of the Management Department Tkachenko V.V.

The parameter by which the work program (syllabus) of the educational component is evaluated	Yes	No	Comment
Learning outcomes for the educational component (MLOs) correspond to the EK			
The results of the study by the educational component (MLOs) correspond to the prescribed PLOs (for mandatory EKs)			
Learning outcomes by educational component provide an opportunity to measure and evaluate the level of their achievement			

EK project team member _____
 (name) (surname) (signature)

The parameter by which the work program (syllabus) of the educational component is evaluated	Yes	No	Comment
General information about the educational component is sufficient			
The results of the educational component correspond to the EC			
The results of the study in the educational component correspond to the prescribed national educational requirements (for mandatory ECs)			
Learning outcomes by educational component provide an opportunity to measure and evaluate the level of their achievement			
Learning outcomes relate to students' competencies, not the content of the discipline (contain knowledge, abilities, skills, and not the topics of the discipline's curriculum)			
Educational activity (teaching and learning methods) enables students to achieve the expected learning outcomes			
The educational component involves learning through research			
The assessment strategy within the educational component is in accordance with University/faculty policy			
The provided assessment methods make it possible to assess the degree of achievement of learning outcomes by educational component			
The workload of students is adequate to the volume of the educational component			
Recommended learning resources are sufficient to achieve learning outcomes			
The literature is relevant			

Reviewer (lecturer of the department) _____
 (name) (surname) (signature)