MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRARIAN UNIVERSITY

Cybernetics and Informatics Department
Faculty of Economics and Management

MODULE SYLLABUS

Economical Informatics

(compulsory)

Implemented in the "_Administrative Management" Academic Program

Area of specialization _073 "Management"

at the second (master's) level of higher education

Sumy-2021

Author: _____ (S. Ahadzhanova)

Module syllabus agreed at the Cybernetics and Informatics Department meeting	Minutes No _15___ dated June_9_ 2022
	Head of Cybernetics and Informatics Department _____ (S. Ahadzhanova)

Approved by:

Guarantor of the Academic program _____ (_L.Kalachevska)

Dean of the Faculty _____ (_____)

Syllabus review (attached) is provided by : _____ (_____)
_____ (_____)

Representative of the Department of Education Quality assurance,
licensing and accreditation _____ (_____)

Registered in electronic data base _____

@SNAU, 2022

Syllabus review data:

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

1. MODULE OVERVIEW

1.	Title	Economical Informatics
2.	Faculty/Department	Economics and Management
3.	Type (compulsory or optional)	compulsory
4.	Program(s) to which module is attached (to be filled in for compulsory types)	073 Management
5.	Module can be suggested for (to be filled in for optional types)	
6.	Level of the National Qualifications Framework	7-th
7.	Semester and duration of module	1 semester, 1-15 weeks
8.	ECTS credits number	5-th

9.	Total workload and time allotment	Directed study			Self-directed study
		Lectures	Practicals	Labs	
		46	**30**		**74**

10.	Language of instruction	english
11.	Module leader	Svitlana Ahadzhanova, Associated Pofessor, Ph.D
12.	Module leader contact information	svitlana.ahadzhanova@snau.edu.ua; room 307e.
13.	Module description	The course "Economic Informatics" highlights the main principles and methods of applying modern information technologies in solving economic problems. The purpose of the course is to form in future professionals the necessary level of information and computer culture, the acquisition of practical skills in PC and the use of modern information technology to solve various problems in the process of learning and working in the specialty. The acquired skills of working on a personal computer with an operating system and major software packages such as MS Word, MS Power Point, MS Excel and online systems will enhance the performance of the tasks by future specialists.
14.	Module aim	To get theoretical and practice knowledge of modern information technology, which will give the opportunity to work on a personal computer, rapidly and properly solve the problem for future profile specialty.
15.	Module Dependencies (prerequisites, co-requisites, incompatible modules)	1.The educational component is based on educational component Informatics and computer technologies, Mathematical Programming. 2. The educational component is the basis for the following educational component – Business Management.
16.	The policy of academic integrity	The student must follow the rules of academic integrity during the performing practical work, writing essays, attestation, test and examination papers. If the facts of write-off or academic dishonesty are revealed, the work done by the student is canceled.

17	Link in Moodle	https://cdn.snau.edu.ua/moodle/course/view.php?id=3908

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

MLOs: On successful completion of the module the learner will be able to:	**PLOs**				**How assessed**
	PLO 1. Critically comprehend, select and use the necessary scientific, methodical and analytical tools for management in unpredictable conditions.	**PLO 8** Apply specialized software and information systems for solving problems of organization management	**PLO 11.** Provide personal professional development and planning your own time.	**PLO 13.** Be able to plan and implement information, methodological, material, financial and staffing of the organization (unit).	
MLOs 1.Ability to abstract thinking, analysis and synthesis.	+				Multiple choice tests, calculation tasks
MLOs 2. Ability to apply conceptual and basic knowledge, understanding the subject area and the profession of manager.		+			Multiple choice tests, calculation tasks
MLOs 3. Skills in the use of information and communication technologies to search, process, analyze and use information from various sources.			+		Multiple choice tests, calculation tasks
MLOs 4. Ability to create and organize effective communications in the management process.				+	Multiple choice tests, calculation tasks

3. MODULE INDICATIVE CONTENT

Autumn semester

Topics	Distribution of hours				Learning resources
	Directed study			Self-directed study	
	Lectures	Practicals	Labs		
Topic 1. *Theoretical basis of economic informatics* 1.1 The latest trends in IT. Information, its types and	4	2		10	Basic: 1(pp. 5-38) Additional: 1(pp. 17-22)

quantitative dimension. 2.1 Classification of economic information. 3.1 Data, their types and structure. Data carriers. 4.1 Main directions of computer science development. 5.1 The value of computer technology in improving the efficiency of the agroindustrial complex of Ukraine.					
Topic 2. *Basic characteristics of hardware and software* 1.1 Theoretical foundations and hardware of a personal computer. 2.1 Configuring the operating system and data management skills in the Windows environment. Data management 3.1 Network office. Working with Google Apps.	**4**	**2**		**10**	Basic: 1(pp. 40-48) Additional: 1(pp. 27-32)
Topic 3. *Formats of electronic documents* . 1.1 Creating illustrative material with desktop publishing tools and developing an animation movie. 2.1 Study of the features of the development of illustrative material for scientific information	**8**	**4**		**10**	Basic: 1(pp. 55-68) Additional: 1(pp. 37-42)
Topic 4. *Basics of working with text documents in MS Word.* 1.1 Create new documents. Formatting text. Unmarked characters are displayed. 2.1 Work with non-tangible objects in MS Word. Working with tables. Create and remove tables. 3.1 Using styles and auto text elements in text documents. Formatting structured documents and working with non-text objects.	**8**	**4**		**10**	Basic: 1(pp. 70-88) Additional: 1(pp. 47-52)
Topic 5. *Introduction to spreadsheet MS Excel.* 1.1 Data entry. Introduction of formulas. Allocate cells, cell ranges, rows, or columns. 2.1 Creating a formula. Mathematical operators. Absolute and relative addressing. Enter the date and time formula 3.1 The construction of graphs from one variable $y = f(x)$ and from two variables $z = f(x, y)$.	**6**	**6**		**10**	Basic: 1(pp. 82-88) Additional: 1(pp. 57-62)
Topic 6. *Functions of spreadsheet MS Excel* 1.1Calculation of values of logic	**8**	**6**		**10**	Basic: 1(pp. 82-88) Additional: 1(pp. 57-62)

functions with two and three conditions. 2.1 Creating graphs on two axes and charts with refinement and summation.					
Topic 7. *«Data Analysis», «Pivot tables» and «Solver» tools in MS Excel* 1.1 Organization of the database 2.1 Using Auto Filter. Using AutoFormat. Advanced filter. Functions for working with databases. 3.1 Automate the execution of procedures in MS Excel by creating macros and applying a package of analysis for financial and scientific data. 4.1 Working with the Pivot tables in MS Excel.	**8**	**8**		**14**	Basic: 1(pp. 88-98) Additional: 1(pp. 60-62)
Total hours	**46**	**30**		**74**	

4. TEACHING AND LEARNING METHODS

MLOs	Teaching methods (directed study)	Hours	Learning methods (self-directed study)	Hours
MLOs 1.Ability to abstract thinking, analysis and synthesis.	Lecture, practical lesson, discussion of topical issues	18	Elaboration of theoretical material, solution of calculation tasks	14
MLOs 2. Ability to apply conceptual and basic knowledge, understanding the subject area and the profession of manager.	Lecture, practical lesson, discussion of topical issues	18	Elaboration of theoretical material, solution of calculation tasks	20
MLOs 3. Skills in the use of information and communication technologies to search, process, analyze and use information from various sources.	Lecture, practical lesson, discussion of topical issues	20	Elaboration of theoretical material, solution of calculation tasks	20
MLOs 4. Ability to create and organize effective communications in the management process.	Lecture, practical lesson, discussion of topical issues	20	Elaboration of theoretical material, solution of calculation tasks	20
Total hours		76		74

5. ASSESSMENT
5.1. Diagnostic assessment
5.2. Summative assessment

5.2.1. Intended learning outcomes methods:

No	Summative assessment methods	Grades	Deadline
	Autumn semester		
1.	Practical Work 1-5	25 points / 25 %	7 week
2.	Practical Work 6-10	30 points / 30 %	14 week
3.	Test	15 points / 15 %	During semester
4.	Exam	30 points / 30 %	15 week

5.2.2. Grading criteria

Summative assessment method	Unsatisfactory	Satisfactory	Good	Excellent
Practical Works 1-5.	*0 балів*	*5-10 балів*	*11-19 балів*	*20-25 балів*
	Task not completed (method and answers are incorrect)	The progress is correct, but there are significant errors, the answers are mostly wrong	The task is completed, but there are minor errors	Task completely done. Mistakes missing
Practical Works 6-10	*0 балів*	*5-10 балів*	*11-20 балів*	*21-30 балів*
	Task not completed (method and answers are incorrect)	The progress is correct, but there are significant errors, the answers are mostly wrong	The task is completed, but there are minor errors	Task completely done. Mistakes missing
Multiple choice test	*0-3 балів*	*3-5 балів*	*5-9 балів*	*10-15 балів*
	Depends on the number of correct answers to the test	Depends on the number of correct answers to the test	Depends on the number of correct answers to the test	Depends on the number of correct answers to the test
	Task not completed (method and answers are incorrect)	The progress is correct, but there are significant errors, the answers are mostly wrong	The task is completed, but there are minor errors	Task completely done. Mistakes Missing
Exam	*0-9 балів*	*10-16 балів*	*17-24 балів*	*25-30 балів*
	Depends on the number of correct answers to the test	Depends on the number of correct answers to the test	Depends on the number of correct answers to the test	Depends on the number of correct answers to the test

5.3. Formative assessment
Formative exercises are designed to enable students to develop particular aspects of their learning, prior to summative assessments. Formative exercises are designed to help students use feedback and self-reflection to manage and develop their learning so that they can see how to improve their work.

No	Formative Assessment elements	Date

Autumn semester		
1.	Oral interview after studying each topic	After completing the study of the topic
2.	Passing the test on certification and modular control with feedback from the teacher	According to the schedule of the educational process
3.	Passing the test after the end of the study of each topic for independent control of knowledge and preparation for the test (exam)	Regulated by the student independently
4.	Protection of practical works	One week after their delivery
5.	Oral feedback from the teacher while working on practical work during classes	Throughout the semester

Self-assessment can be used both an element of formative and summative assessment.

6. LEARNING RESOURCES

6.1. Key resources
1. Agadzhanova, S., Barchenko, N., Lecture notes for English-speaking Students of Economics and Management Faculty, 1rd year study master's degree, specialty: 073 Management, EP "Administrative management". September, 2018. - 96 p.
2. Kenneth C. Laudon and Jane Price Laudon. Management Information Systems: Organization and Technology, 6th edition, by Kenneth C. Laudon and Jane Price Laudon, produced by Prentice-Hall, a division of Pearson Education.
3. Rainer, R. Kelly and Cegielski, Casey G. (2019). "Introduction to Information Systems: Enabling and Transforming Business, 3rd Edition".

6. 2 Methodical resourses
1. S.Ahadzhanova Economical Informatics(e-course in Moodle:Address –
https://cdn.snau.edu.ua/moodle/course/view.php?id=3908

6.3. Additional resources
1. Lindsay, John (2016). Information Systems – Fundamentals and Issues. Kingston University, School of Information Systems.
2. Dostal, J. School information systems (Skolni informacni systemy). In Infotech 2017 - modern information and communication technology in education. Olomouc, EU: Votobia, 2017. p. 540 – 546. ISBN 978-80-7220-301-7.
3. O'Leary, Timothy and Linda. Computing Essentials Introductory 2018. McGraw-Hill on Computing 2018.com.