

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRICULTURAL UNIVERSITY**

Management Department

“CONFIRMED”

Head of Department

 _____ **(Mykhailov A.N.)**

«09» _____ 06 2020 p.

CURRICULUM WORKING PROGRAM (SILABUS)

OK 25 Operational management

Specialty: 073 «Management»

Educational program: Management of Organization and Administration

Faculty: Economics and management

2020- 2021 academic year

Work program on Operational Management for students specialty 073
«Management».

Developers:
PhD in Economics, Senior Lecturer,
of Management Department

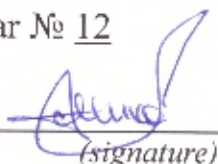
Tkachenko V.V
last name, initials


signature

The work program was approved at a meeting of the Department of Management.

Protocol from "09" 06.2020 year № 12

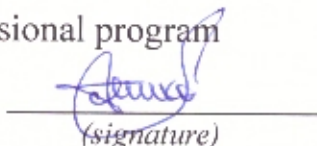
Head of the Department


(signature)

(Mykhailov A.N.)
(surname and initials)

Confirmed:

Guarantor of educational and professional program


(signature)

(Mykhailov A.N.)
(surname and initials)

Dean of the Faculty of Economics
and Management



(Strochenko N.I.)

Methodist of the Department
of education quality,
licensing and accreditation


(H. Haparik)

Registered in the electronic data base: 21.07 20 20 year
date

SNAU, 2020

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1. Description of the discipline

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the discipline	
		full-time education	external form of education
Number of loans -3	Field of knowledge: 07 Management and administration	<i>Normative</i>	
	Specialty: 073 Management		
Modules -2		Year of preparation:	
Content modules: 4		2020-2021	
		Course	
		4	
		Semester	
The total number of hours is 90		8	
		Lectures	
		20 hours	
		Practical, seminar	
		10 hours	
		Laboratory	
		Independent work	
		60 hours	
		Course work	
		Type of control:	
		Exam	

The ratio of the number of hours of classroom classes to independent and individual work is (%):

for full-time education - 33/67 (30/60)

2. The purpose and objectives of the discipline

Goal: Formation of students' competence in basic principles, basic categories, modern concepts, theoretical principles and practical methods of managing the main activities of enterprises and skills to develop operational strategy, creation and use of industry operating subsystems as a basis for achieving the mission of the organization.

Task: Assimilation of principles and methods of rational organization, planning and control over the operation of operating systems of various types, acquiring skills to develop operational strategy of the enterprise, acquiring skills to justify decisions regarding the operating system, maintaining proper operation, ensuring the quality of operational activities, obtaining knowledge of the features of operational management in enterprises of various industries.

The study of the discipline "Operational Management" involves the formation of students' competencies:

№	Type of program competencies	Program competence	Code
	General		
1		Ability to work in a team and establish interpersonal interaction in solving professional problems.	GC 5
	Professional (special)		
1		Ability to manage the organization and its departments through the implementation of management functions.	PC 4
2		Ability to choose and use modern management tools.	PC 5
3		Ability to plan and manage time.	PC 6
4		Ability to create and organize effective communications in the management process.	PC 8

2.3 Program learning results

As a result of studying the discipline "Operational management" the student must be able to demonstrate the following learning results:

№	Program learning results to be achieved by the OK (indicate the number according to the numbering given in the OP)	Code
1	Ability to manage the organization and its departments through the implementation of management functions.	PLR 5
2	Ability to choose and use modern management tools.	PLR 7
3	Ability to plan and manage time.	PLR 17
4	Ability to create and organize effective communications in the management process.	PLR 19

3. Curriculum of the discipline

(is under approbation, the protocol of the meeting of the department № 12 from 09.06.2020 year)

Content module 1. The essence and objectives of operational management.

Topic 1. Theoretical basis and main components of operational management.

Historical development of operational management: the industrial revolution, the development of management theory, the development of management science and systems. The current state of production and the evolution of operational management. The role and place of operational management in the management system. The main content of the production process. Production system and its main functions.

Topic 2. The main functions of operational management. Production as a process of transforming the resources of the organization into raw materials. Objective laws of production management (operating activities). The essence of the operational function. Sectoral features of the operational function. Category "operating activities" and "production activities", their relationship and discrepancy. Production and operational management: common and different characteristics. The essence and place of operational management in the management system of the organization.

Topic 3. Organizational aspects of operational management. Functions and purpose of management. Objects of production management. Characteristics of types of production.

Topic 4. Features of production in the field of services. Characteristics of services. Technologies in the field of services. Development of services.

Content module 2. Operating system of the organization: concepts, composition and types.

Topic 5. Classification of operating systems of the organization. Classification approaches to operating systems. Specific features of a single operating system. Features of the serial type operating system. Characteristics of the operating system of mass production. Operating system with a continuous process as a kind of operating system of mass production.

Topic 6. Production strategy and competitiveness. Production strategy and competitive priorities. Formation of production strategy. Strategy development and competitiveness issues

Topic 7. Product design. Traditional product design. Modern methods of accelerated product design. Quality management in product design.

Topic 8. Management of the current operation of the operating system. Long-term, medium-term and short-term planning of operations, aggregate planning. Basic planning strategies. Logistics management. Functions, tasks and basic requirements for operational production management. Content and phases of operational management. Types of operational production management systems. Organization of operational scheduling. Operating process control: significance and technology. Quality control of raw materials, goods and services. Inventory control.

Content module 3. Management of the operating system design process.

Topic 9. Fundamentals of project management. The essence of the project approach to organizational management. Significance and main tasks in the project management process. Project planning. Postoperative list of works. Creating work schedules using G. Gantt charts.

Topic 10. Design and development of the production process. Choice of production process and design. Organizational and technological aspects of equipment placement. Flexibility of the production process.

Topic 11. Production capacity design. Factors that determine power. Choosing the location of the enterprise. Calculation of production capacity.

Topic 12. Production program planning. General principles of formation of the production program. Planning to load the production capacity of the organization.

Calendar planning. Logistics planning.

Topic 13. Planning and organization of inventories. The essence and purpose of stockpiling. The role, accounting and valuation of inventories. Inventory management systems. Determining the level of reserve stock.

Topic 14. Exactly on time support system and logistics. Organization and implementation of the system "Exactly on time". Logistics solutions and logistics processes. Stock storage and placement systems.

Content module 4. Fundamentals of quality management.

Topic 15. Fundamentals of quality management. The concept, meaning and factors of quality assurance of goods and services. Quality indicators and methods of their evaluation. Basic approaches to quality management. Quality system. Quality planning. Organizational quality assurance

Topic 16. Ensuring quality management. Quality control tools. Analysis of existing quality assurance programs: the approach of U.E. Deming, D. Juran, P. Crosby, K. Isikawa. Approach from the standpoint of general quality management. Development of a quality assurance program. Standardization and certification. System of standards ISO 9000. Price of quality.

Topic 17. Operational performance management. Performance indicators of production and non-production systems. Productivity of operational activity as a measure of efficiency of operational management. An integrated approach to performance issues.

4. The structure of the discipline

Names of content modules and topics	Number of hours											
	Full-time						Correspondence form					
	Total	including					Total	including				
		l	p	lab	ind	i.w.		l	p	lab	ind	i.w.
1	2	3	4	5	6	7	8	9	10	11	12	13
Module 1. The essence and objectives of operational management.												
Content module 1. The essence and objectives of operational management.												
Topic 1. Theoretical basis and main components of operational management	4	2	-			2						
Topic 2. The main functions of operational management	8	2	2			4						
Topic 3. Organizational aspects of operational management	4	-	-			4						
Topic 4. Features of production in the field of services	4	-	-			4						
Together on the content module 1	20	4	2			14						
Content module2. Operating system of the organization: concepts, composition and types.												
Topic 5. Classification of operating systems of the organization	4	2	-			2						
Topic 6. Production strategy and competitiveness	2	-	-			2						
Topic 7. Product design.	6	2	2			2						
Topic 8. Management of the current operation of the operating system	2	-	-			2						
Together on the content module 2	14	4	2			8						
Total for module 1	34	8	4			22						
Module 2. Operating system design process management.												
Content module 3. Operating system design process management.												
Topic 9. Fundamentals of project management	6	2	2			2						
Topic10. Design and development of the production process	4	2	-			2						
Topic 11. Production capacity design	2	-	-			2						
Topic 12. Production program planning	2	-	-			2						
Topic 13. Planning and organization of inventories	6	2	2			2						

Topic14. Exactly on time support system and logistics.	4	2	-			2					
Together on the content module 3	24	8	4			12					
Content module 4. Fundamentals of quality management.											
Topic15. Fundamentals of quality management	4	2	-			2					
Topic 16. Ensuring quality management.	2	-	-			2					
Topic 17. Operational performance management	6	2	2			2					
Together on the content module 4	12	4	2			6					
Total for module 2	36	12	6			18					
Individual task	20				CW	20					
Hours in general	90	20	10			60					

5. Topics and plan of lectures (full-time education)

№ s / n	Name topics	Number hours
1.	<p>Topic 1. Theoretical basis and main components of operational management Plan. 1. The current state of production and the evolution of operational management. 2. The role and place of operational management in the management system.</p>	2
2.	<p>Topic 2. The main functions of operational management. Plan. 1. Production as a process of transforming the resources of the organization into raw materials. 2. The essence of the operational function.</p>	2
3.	<p>Topic 5. Classification of operating systems of the organization. Plan. 1. Classification approaches to operating systems. 2. Features of operating systems of different types.</p>	2
4.	<p>Topic 7. Product design. Plan. 1. Traditional product design. 2. Modern methods of accelerated product design.</p>	2
5.	<p>Topic 9. Fundamentals of project management Plan. 1. The essence of the project approach to the management of the organization 2. Project planning.</p>	2
6.	<p>Topic 10. Design and development of the production process. Plan. 1. Choice of production process and design. 2. Organizational and technological aspects of equipment placement.</p>	2
7.	<p>Topic 13. Planning and organization of inventories. Plan. 1. The essence and purpose of inventory.</p>	2

	2.The role, accounting and valuation of inventories.	
8.	Topic 14. Exactly on time support system and logistics. Plan. 1. Organization and implementation of the system "Exactly on time". 2. Logistic solutions and logistics processes.	2
9.	Topic 15. Fundamentals of quality management. Plan. 1. The concept, meaning and factors of quality assurance of goods and services. 2. Quality indicators and methods of their evaluation.	2
10.	Topic 17.Operational performance management. Plan. 1. Indicators of performance of production and non-production systems. 2. Productivity of operational activities as a measure of the effectiveness of operational management.	2
	Total	20

6. Topics of practical classes (full-time education)

№ s / n	Name topics	Number hours
1.	The main functions of operational management.	2
2.	Product design.	2
3.	Fundamentals of project management	2
4.	Planning and organization of inventories.	2
5.	Operational performance management.	2
	Total	10

7. Independent work (full-time education)

№ s / n	Topic title and list of questions	Number hours
1.	Topic 1. Theoretical basis and main components of operational management. 1. Basic provisions and concepts of general management theory as a component of the course methodology. 2. Basic provisions and concepts of modern economic theory as a methodological basis of the course.	2
2.	Topic 2. The main functions of operational management. 1. Production and operational management: common and different characteristics. 2. The relationship of operational management with other functional types of management. 3. Functional characteristics of operational management.	4
3.	Topic 3. Organizational aspects of operational management. 1. Organization of the operational process in space and time. 2. The concept of the operating cycle, its structure and duration. 3. The life cycle and mode of operation of the operating system.	4
4.	Topic 4. Features of production in the field of services. 1. Characteristics of services. 2. Technologies in the field of services. 3. Development of services.	4
5.	Topic 5. Classification of operating systems of the organization. 1. The essence of a systematic approach to operational management.	2

	2. Features and properties of the operating system. 3. Classification approaches to operating systems.	
6.	Topic 6. Production strategy and competitiveness. 1. Formation of product production strategy. 2. Development of process strategy. 3. Features of the service sector that affect the operational strategy. 4. Application of the "decision tree" in product or process design.	2
7.	Topic 7. Product design. 1. Quality management in product design. 2. Characteristics of projects. 3. Stages of project implementation.	2
8.	Topic 8. Management of the current operation of the operating system. 1.Characteristics of the operating system of mass production. 2. Operating system with a continuous process as a kind of operating system of mass production.	2
9.	Topic 9. Fundamentals of project management. 1. Creating work schedules using G. Gantt charts. 2. Project control. 3. Project management techniques by the method of evaluation and review of the program (PERT) and the method of critical path (CPM).	2
10.	Topic 10.Design and development of the production process. 1. Decision making on the spatial organization of the enterprise. 2. Design of enterprises, types of projects.	2
11.	Topic 11. Production capacity design. 1. Production capacity of the enterprise. 2. Models of production and service.	2
12.	Topic 12. Production program planning. 1. Design and location of the enterprise: factors of micro- and macro-environment. 2. Location of equipment and workplaces for production: post-operational and functional, flow linear and fixed positional planning.	2
13.	Topic 13. Planning and organization of inventories. 1. Inventory control. 2. The role, objectives and principles of material resources and inventory management. 3.Management decisions in the field of inventory management.	2
14.	Topic 14. "Just in time" supply system and logistics. 1. Logistics solutions and logistics processes. 2. Storage and inventory systems.	2
15.	Topic 15. Fundamentals of quality management. 1. Design of service organizations. 2. Criteria for the location of production facilities. 3. Elements of the process of placement of material and technical objects.	2
16.	Topic 16. Quality management. 1. Quality control tools. 2. Analysis of existing quality assurance programs: the approach of UR Deminga, D. 3. Juran, P. Crosby, K. Isikawa. 4. Approach from the standpoint of general quality management.	2
17.	Topic 17. Operational performance management. 1. Integrated approach to productivity issues. 2. Factors influencing the dynamics of productivity. 3. Ways to increase its productivity.	2
	Total	40

8. Individual tasks *(Topics of course works)*

1. Operating system of the enterprise.
2. Operational strategy to ensure crop production.
3. Operational strategy to ensure the production of livestock products.
4. Operational strategy to ensure the production of processing products.
5. Organization of work of operational managers of the enterprise support subsystem.
6. Organization of work of operational managers of the processing subsystem of the enterprise.
7. Organization of work of managers of the subsystem of planning and control of the enterprise.
8. Technology of management decisions by managers of the processing subsystem of the enterprise.
9. Technology of management decisions by managers of the enterprise subsystem.
10. Technology of management decisions by managers of the subsystem of planning and control of the enterprise.
11. Product quality management at the enterprise.
12. Management of the production project of the enterprise.
13. Operating system for the production of certain products.
14. Flow production.
15. Management of machine-tractor park of the enterprise.
16. Management of the car fleet of the enterprise.
17. Management of the use of tractors in transport works.
18. Management of the use of technical means in animal husbandry.
19. Management of the use of electrical equipment.
20. Operational management of production in agriculture.
21. Operational management of production in animal husbandry.
22. Operational production management in the processing industry.
23. Organization, rationing and remuneration of labor in production.
24. Management of fuel use in production.
25. Management of electricity use in production.
26. Logistics management in the field of crop production.
27. Logistics management in the field of animal husbandry.
28. Logistics management in the processing industry.
29. Management of production infrastructure of the enterprise.
30. Crisis management of the operating system of the enterprise.
31. Productivity (performance) management of the enterprise.

9. Teaching methods

1. Methods of learning by source of knowledge:

1.1. Verbal: story, explanation, conversation (heuristic and reproductive), lecture, instruction, work with a book (reading, translation, writing, drawing up a plan, reviewing, taking notes, making tables, graphs, reference notes, etc.).

1.2. *Visual*: demonstration, illustration, observation.

1.3. *Practical*: laboratory method, practical work, exercise, production-practical methods.

2. Teaching methods by the nature of the logic of cognition:

Assessment scale: national and ECTS

The sum of points for all types of educational activities	ECTS assessment	Score on a national scale	
		for exam, practice	for offset
90 - 100	A	perfectly	credited
82-89	B	fine	
74-81	C		
64-73	D	satisfactorily	
60-63	E		
35-59	FX	unsatisfactory with the possibility of reassembly	not credited with the possibility of re-assembly
0-34	F	unsatisfactory with mandatory re-study of the discipline	not enrolled with mandatory re-study of the discipline

12. Methodical support

1. Vavulin OI, Yefanov VA Operational management: guidelines for conducting practical classes. Sumy: SNAU, 2010. 56 p.
2. Yefanov VA Operational management: lecture notes. Sumy: SNAU, 2012. 64 p.
3. Tkachenko VV Operational Management. Lectures for students of 4 courses training direction 073 «Management» level «Bachelor» full time. Sumy: SNAU, 2020, 68 p.
4. Educational and methodical materials based on the Moodle platform. URL: <https://cdn.snau.edu.ua/moodle/course/view.php?id=3523>

13. Recommended literature

Basic

1. David B. Grant, Alexander Trautrim and Chee Yew Wong (2017). *Sustainable Logistics and Supply Chain Management: principles and practices for sustainable operations and management*. 305p.
2. Douglas Robertson (2016). *Managing Operational Risk. Practical Strategies to Identify and Mitigate Operational Risk within Financial Institutions*. 190 p.
3. Sushil Gupta and Martin Starr (2015). *Principles and practices for sustainable operations and management*. 473 p.
4. Tang, C.S. (2015). Perspectives in supply chain risk management, *International Journal of Production Economics*. 103, 451–488.
5. Tirpak, T.M. (2016). Design-to-manufacturing information management for electronics assembly, *International Journal of Flexible Manufacturing Systems* 12(2), 189 –205.

Auxiliary

1. Guiso, L., Sapienza, P. and Zingales, L. (2015). The value of corporate culture. *Journal of Financial Economics*, 117(1), pp.60-76.
2. Kotsantonis, S. and Serafeim G. (2020). Human capital and the future of work: implications for investors and ESG integration. *Journal of Financial Transformation*, 51, pp.115-130.

3. Linnenluecke, M.K. (2017). Resilience in business and management research: A review of influential publications and a research agenda. *International Journal of Management Reviews*, 19(1), pp.4-30.
4. Lins, K.V., Servaes, H. and Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *The Journal of Finance*, 72(4), pp.1785-1824.
5. Serafeim G. (2020). Public Sentiment and the Price of Corporate Sustainability. *Financial Analysts Journal* 76(2): 26-46.
6. Stadler, C., Helfat, C.E. and Verona, G. (2015). The impact of dynamic capabilities on resource access and development. *Organization Science*, 24(6), pp.1782-1804.

14. Information resources

1. State Statistics Committee: https://ukrstat.org/en/work/contact_e.html
2. The Cabinet of Ministers of Ukraine: <https://www.kmu.gov.ua/en>
3. Humanitarian Technologies Project. URL: <http://humanitariantechnologies.net/>
4. Journal of Operations Management. URL: https://www.researchgate.net/journal/0272-6963_Journal_of_Operations_Management
5. Journal of Food Quality. URL: <https://www.hindawi.com/journals/jfq/2018/7279491/>
6. Introduction to Operations Management of Products and Services: Overview and Resources. URL: <https://managementhelp.org/operationsmanagement/>
7. Strategic Management Journal. URL: <https://onlinelibrary.wiley.com/journal/10970266>