UNIVERSITY OF ECONOMICS - VARNA

FACULTY OF ECONOMICS

DEPARTMENT OF INDUSTRIAL BUSINESS AND LOGISTICS

Adopted by the FC (record № 11/ 25. 04. 2024)

Adopted by the DC (record № 9/ 16. 04. 2024)

ACCEPTED BY:

Dean:

(Assoc.prof.Denka Zlateva, PhD)

SYLLABUS

SUBJECT: OPERATIONS MANAGEMENT

DEGREE PROGRAMME: Business and management; BACHELOR`S DEGREE

YEAR OF STUDY: 3; SEMESTER: 6

TOTAL STUDENT WORKLOAD: 210 hours; incl. curricular 75 hours

CREDITS: 7

DISTRIBUTION OF STUDENT WORKLOAD ACCORDING TO THE CURRICULUM

TYPE OF STUDY HOURS	**WORKLOAD, hours**	**TEACHING HOURS PER WEEK, hours**
CURRICULAR: incl. • LECTURES • SEMINARS / LAB. EXERCISES	 45 30	 3 2
EXTRACURRICULAR	135	-

Prepared by:

1. ……..
(assoc. prof. Silvia Blagoeva, PhD)

2. ……
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Head of department
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I. ANNOTATION

Operations management has been a key element in the improvement in productivity in business around the world. Creating a competitive advantage through operations requires an understanding of how the operations function contributes to productivity growth.
The aim of this course is to provide a clear, well structured and interesting treatment of operations management as it applies to a variety of businesses and organizations. The course provides both a logical path through the activities of operations management and an understanding of their strategic context.

More specifically, after the completion of the course the students should be able to:

- determine how best to design, supply and run the processes;
- understand how to set the strategic direction of a company from an operations standpoint;
- decide what technology should be used taking into account the specifics of the demand;
- explain how the decisions for facilities allocation are being taken;
- manage a facility that makes products or provides services.

In the course of training in the discipline, the following key competencies are acquired and developed to the greatest extent:

- entrepreneurial competence – developing critical thinking, analytical skills and forecasting, designing, planning skills; acquisition of management skills, as well as teamwork, responsibility and social commitment skills;

- mathematical competence - problem solving; formulating decisions, developing the ability to use and apply formulas, models, concepts.

The Operations management course is based on the knowledge given in the courses of "Management theory" and "Marketing" and interferes with the courses "Business planning" and "Human resources management". The acquired knowledge in the operations field forms an excellent foundation for the subjects "Business logistics", "Quality management" and "Investments".

II. THEMATIC CONTENT

No. по ред	TITLE OF UNIT AND SUBTOPICS	NUMBER OF HOURS		
		L	S	L.E.
UNIT 1. OPERATIONS MANAGEMENT– NATURE AND PRINCIPLES		**3**	**2**	
1.1	The nature of operation management			
1.2	The activities of operations management			
1.3.	The model of operations management			
UNIT 2. THE STRATEGIC ROLE AND OBJECTIVES OF OPERATIONS		**2**	**2**	
2.1	The role of the operations function			
2.2	Operations performance objectives			
2.3.	The polar representation of performance objectives			
UNIT 3. OPERATIONS STRATEGY		**4**	**2**	
3.1.	The process of operations strategy			
3.2.	The market requirements perspective			
3.3.	The operations resources perspective			
UNIT 4. PROCESS DESIGN		**4**	**4**	
4.1.	The design activity			
4.2.	Process types – the volume–variety effect on process design			
4.3.	Detailed process design			
4.4.	The effects of process variability			
UNIT 5. THE DESIGN OF PRODUCTS AND SERVICES		**4**	**2**	

5.1.	Concept generation and screening			
5.2.	Preliminary design			
5.3.	Design evaluation and improvement			
5.4.	Prototyping and final design			
UNIT 6. SUPPLY NETWORK DESIGN		**3**	**2**	
6.1.	The supply network perspective			
6.2.	Configuring the supply network			
6.3.	The location of capacity			
6.4.	Long-term capacity management			
UNIT 7. LAYOUT AND FLOW		**3**	**2**	
7.1.	What is layout? The basic layout types			
7.2.	Detailed design of the layout			
UNIT 8. JOB DESIGN AND WORK ORGANIZATION		**3**	**2**	
8.1.	What is job design?			
8.2.	Designing the human interface – ergonomicworkplace design			
8.3.	Designing task allocation – the division of labour			
8.4.	Designing job methods – scientific management			
8.5.	Work measurement in job design			
8.6.	Designing for job commitment – behavioural approaches to job design			
UNIT 9. PLANNING AND CONTROL		**3**	**4**	
9.1.	The nature of supply and demand			
9.2.	Planning and control activities			
9.3.	Capacity planning and control			
9.4.	Choosing a capacity planning and control approach			
9.5.	Capacity planning as a queuing problem			
UNIT 10. INVENTORY PLANNING AND CONTROL		**3**	**2**	
10.1.	What is inventory? Types of inventory			
10.2.	The volume decision – how much to order			
10.3.	The timing decision – when to place an order			
10.4.	Inventory analysis and control systems			
UNIT 11. ENTERPRISE RESOURCE PLANNING (ERP).		**6**	**2**	
11.1.	Materials requirements planning (MRP) . MRP calculations			
11.2.	Manufacturing resource planning (MRP II)			
11.3	Enterprise resource planning (ERP)			
UNIT 12. LEAN OPERATIONS AND JIT		**4**	**2**	
12.1.	What is lean and just-in-time?			
12.2.	The lean philosophy			
12.3.	JIT techniques			
12.4.	JIT planning and control			
12.5.	JIT in service operations			
UNIT 13. OPERATIONS IMPROVEMENT		**3**	**2**	
13.1.	Measuring and improving performance			
13.2.	Improvement priorities			
13.3	Approaches to improvement			
13.4	The techniques of improvement			
	Total:	**45**	**30**	

III. FORMS OF CONTROL:

№	TYPE AND FORM OF CONTROL	Number	extracur-ricular, hours
1.	**Midterm control**		
1.1.	Individual work over specified topic	**1**	**20**
1.2.	Case studies	**2**	**30**
1.3.	E-test	**1**	**20**
	Total midterm control:	**4**	**70**
2.	**Final term control**		
2.1.	Examination (test, definitions and resolving a mathematical task)	**1**	**65**
	Total final term control:	**1**	**65**
	Total for all types of control:	**5**	**135**

IV. LITERATURE

REQUIRED (BASIC) LITERATURE:

1. Slack, N., Alistair Brandon-Jones and Nikola Burges. Operations management, 10 th edition,Pearson ed., 2022.

RECOMMENDED (ADDITIONAL) LITERATURE:

1. Heizer, J., Barry Render and Chuck Munson. Operations management: Sustainability and supply
chain management, 12 th ed, Pearson ed, 2020.
2. Jacobs,R.F. and Richard Chase - Operations and Supply Chain Management:The Core. 6th edition, McGraw Hill , 2022
3. Krajewski, L.J and Manoj Malhotra. Operations management: Processes and supply chains. 13th global edition, Pearson, 2022
4. Schroeder, Roger G. and Susan Goldstein. Operations Management in the Supply Chain. 8th edition, McGraw Hill , 2021
5. Slack, N., A. Brandon-Jones, R. Johnston. Operations Management. 7 ed., Pearson, 2013.
6. Stevenson, W. J. Operations Management. McGraw-Hill, 2020.