



## Operational Management

### Syllabus

### ВПП 2.4

### MGMT-431

Quarter/Year: Spring/2022

ECTS Credits: 6

Instructor: Olena Bielova, PhD

US Credits: 3

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Prerequisites: Principles of Management

### Course Description

The course examines the methods of planning, coordination, and execution of activities in transformation processes in manufacturing and service organizations. The role of the operations manager is explored, and attention is given to analytical methods that improve production processes and enhance competitiveness. The course illustrates how manufacturing and service operations can apply quantitative tools to decisions using queuing theory, staffing, scheduling or product mix planning using linear programming, and using simulation in inventory control. Emphasis is given on application to real life situations.

### Course Outcomes

PH1. Responsibly treat professional self-improvement, realizing the need for lifelong learning, show tolerance and readiness for innovative changes.

PH4. Systematize and streamline the information received on the processes and phenomena in the world economy; evaluate and explain the influence of endogenous and exogenous factors on them; formulate conclusions and develop recommendations, considering the peculiarities of the national and international environment.

PH5. Possess the skills of introspection (self-control), be understandable for representatives of other business cultures and professional groups of different levels (with specialists from other fields of knowledge / activities) on the basis of appreciating diversity, multiculturalism, tolerance and respect for them.

PH6. Plan, organize, motivate, evaluate and increase the effectiveness of teamwork, conduct research in a group under the leadership of a leader, taking into account today's requirements and features in a limited time.

PH7. Apply the acquired theoretical knowledge to solve practical problems and meaningfully interpret the results.

- PH8. Understand, highlight and describe new phenomena, processes and trends of global development, mechanisms and tools for the implementation of economic policy and world integration / disintegration processes, including Euro-Atlantic integration.
- PH9. Understand and be able to apply, in accordance with other requirements of the educational program, modern theories and methods of solving specialized complex problems and practical problems in the field of international trade in goods and services, international capital flow, international monetary and financial relations, mobility of human resources, international technology transfer.
- PH10. Identify and highlight the features of the functioning of the subjects of international relations and models of their economic development.
- PH11. Substantiate own opinion regarding the specific conditions for the implementation of forms of international economic relations at the mega-, macro-, meso- and micro-levels.
- PH13. Select and skillfully apply analytical tools for studying the state and development prospects of individual segments of the international markets for goods and services using modern knowledge about the methods, forms and tools for regulating international trade.
- PH14. Understand and apply theories, principles, means and tools for the implementation of international monetary and financial and credit relations.
- PH15. Determine the functional features, nature, level and degree of interconnections between subjects of international economic relations of different levels and establish communications between them.
- PH18. Investigate economic phenomena and processes in the international sphere based on an understanding of categories, laws; highlighting and summarizing trends, patterns of functioning and development of the world economy, taking into account the cause-effect and space-time relationships.
- PH19. Understand and apply current legislation, international regulations and agreements, reference materials, current standards and specifications, etc. in the field of international economic relations.
- PH20. Defend the national interests of Ukraine, taking into account the security component of international economic relations.
- PH23. Recognize the need for lifelong learning in order to maintain a high level of professional competence.
- PH24. Substantiate the choice and apply information and analytical tools, economic and statistical calculation methods, complex analysis techniques and methods of monitoring world markets.
- PH25. Present the results of the research on the basis of which recommendations and measures for adaptation to changes in the international environment are developed

### **Competencies**

- IK. The ability to solve complex specialized tasks and practical problems in the field of international relations in general and international economic, in particular, as well as in the learning process, which involves the use of new theories and methods in conducting comprehensive research of world economic relations, is characterized by complexity and uncertainty.
- 3K3. Ability to learn and be modernly trained.
- 3K4. Ability to plan and manage time.
- CK4. Ability to substantiate the peculiarities of international economic relations forms implementation on mega-, macro-, meso- and micro-levels.

CK8. The ability to determine the functional features, nature, level and degree of relationships between the subjects of international economic relations at different levels and to establish communication between them.

CK12. Ability to use regulatory documents and reference materials in the implementation of professional activities in the field of international economic relations.

**Internationality:** The international aspect of the discipline includes study of the features of international methods that influence operational management and their practical use in modern enterprises.

## **Communications**

For individual issues, students should contact the professor **ONLY** by given e-mail or by Moodle. In the Subject line they should put: UACUFirstNameLastName. E-mail messages will normally be answered within 24 hours.

Note! Only emails sent from the student's corporate email address will be answered.

## **Student Responsibilities**

### **Time Commitment**

The study of technical courses is cumulative (i.e., an understanding of earlier material is necessary to grasp concepts covered later). Past experience has shown a high correlation between procrastination and low grades. Students must be committed to completing tasks on time.

### **Technical Aspects**

The student is obliged to provide himself/herself with all the necessary technical equipment for the educational process (laptop or computer, webcam, headsets or headphones and microphone), as well as access to the Internet.

Only students signed-in with their own first and last name are allowed into video lectures in Zoom.

### **Grading Policy**

The course is based on mastery of course outcomes. Student grades for this course will be calculated based on performance.

Note: the minimal grade to pass a subject is 60%.

### **Graduate Grading Guidelines**

The assignment of a letter grade for a course is an indication of the student's overall success in achieving the learning outcomes for the course. The course letter grade may be viewed as a summary statement of the student's achievement in individual assessments (assignments & activities). These assessments are intended to identify for students their strengths as well as those areas in need of improvement. Student work is assessed according to the guidelines below.

### **Course-level Grading guidelines:**

| <b>Grade</b> | <b>ECTS Grade</b> | <b>International Grade</b> |
|--------------|-------------------|----------------------------|
|--------------|-------------------|----------------------------|

|            |    |   |
|------------|----|---|
| 90% - 100% | A  | 5 (Excellent)                                 |
| 83% - 89%  | B  | 4 (Very Good)                                 |
| 75% - 82%  | C  | 4 (Good)                                      |
| 70% - 74%  | D  | 3 (Good)                                      |
| 60% - 69%  | E  | 3 (Acceptable)                                |
| 35% - 59%  | FX | Not acceptable, possible repetition of course |

### Criteria for grading:

| ECTS grade | Requirements for the student  |
|------------|---|
| A          | The student demonstrated a comprehensive systemic and in-depth knowledge of program material; processed basic and additional literature; obtained a solid grasp of the conceptual apparatus, methods, techniques and tools provided by the program; found creative abilities in the presentation of the educational program material both on this issue and on related modules of the course and related courses, or the student had a current control of 90-100 points |
| B          | The student demonstrated good knowledge of program material; processed the basic literature, mastered the conceptual apparatus, methods, techniques and tools provided by the program, but with some inaccuracies   |
| C          |   |
| D          | The student showed mediocre knowledge of the core program material; learned information mainly from a lecture course or just one textbook; mastered only certain methods, techniques and tools provided by the program  |
| E          |   |
| FX         | The student has significant gaps in knowledge of the main program material; fragmentary mastered the basic concepts, techniques and tools; significant mistakes are made when using them  |

Maximum total possible points – 375 points incl. (Midterm and Final exam are 60% of overall evaluation, where Midterm – 20% and Final – 40%)

Test / Assignment / Project – 150 points (several times during the course)

Midterm exam – 75 points

Final exam – 150 points

### Student Workload

It is assumed that for each out of 17 class sessions a student spends about 10.5 academic hours of work. This includes 3.5 academic hours of lectures with the instructor and 7 academic hours of personal work. Personal work includes working on theoretical material, preparation for assignments.

Please pay attention that 1 academic hour equals to 40 minutes.

## **Assignment Format**

- All work should be shown in time. If the student misses the deadline – the task is failed.
- Midterm covered topics from previous lectures (weeks 1-8). It included multiple choice questions and cases (essays) and took about 1.5 hours.
- The Final exam covered all course material and included multiple choice questions and cases (essays). It lasts for 1.5 hours. Admission to the Final exam is possible only if all the tasks of the curriculum are covered.
- After the Midterm and Final is graded a student has access to the grade only. Access to the attempt, corrects answers and information whether the answer is correct cannot be granted.

## **Academic dishonesty**

· Academic integrity is submitting one's own work and properly acknowledging the contributions of others. Forms of academic dishonesty include:

1. Plagiarism – submitting all or part of another's work as one's own in an academic exercise such as an examination, a computer program, or written assignment.
2. Cheating – using or attempting to use unauthorized materials on an examination or assignment, such as using unauthorized texts or notes or improperly obtaining (or attempting to obtain) copies of an examination or answers to an examination.
3. Facilitating Academic Dishonesty – helping another commit an act of dishonesty, such as substituting for an examination or completing an assignment for someone else.
4. Fabrication – altering or transmitting, without authorization, academic information or records.

Any violation of these rules constitutes academic dishonesty and is liable to result in a failing grade and disciplinary action. In case of any academic dishonesty a student is not allowed to continue or retake the assessment activity and for the Final the unsatisfactory grade (“0”) is assigned for the course total. Cases of the academic dishonesty are not considered by the Academic Council.

Midterm and Final are valid only if they are taken on-campus (room defined by the dean's office) and on UACU's computer/laptop or online on the student's computer/laptop using Zoom and other conditions defined by the dean's office to avoid the cases of academic dishonesty. Students who will not meet this requirement will be expelled from the course with grade “0”.

In case of missed Midterm or Final exam (for a valid reason like sickness or an emergency) a request to repeat the exam is possible. Permit to repeat a midterm or final exam is done through a letter to the dean's office with request and approval of subject lecturer.

Submission or retaking of any assessment activities after deadlines are forbidden.

## Submission & Return Policy

Assignments must be submitted to the professor on or before the due date indicated in the Course Schedule. The assignments submitted after the due dates receive zero points.

\*\*\*\* NO MAKE –UP QUIZZES AND EXAMS \*\*\*\*

## Schedule

| Lecture # | Research Projects   | Assignments Due                  | Points            |
|-----------|---|----------------------------------|-------------------|
| 1         | <b>TOPIC 1</b> <i>THEORETICAL ASPECTS OF OPERATIONAL MANAGEMENT</i>             | ► <i>Practical assignment 1</i>  | 10 points         |
| 2         | <b>TOPIC 2</b> <i>HISTORICAL DEVELOPMENT OF OPERATIONAL MANAGEMENT</i>          | ► <i>Practical assignment 2</i>  | 10 points         |
| 3         | <b>TOPIC 3</b> <i>OPERATIONAL MANAGEMENT ENVIRONMENT</i>                        | ► <i>Practical assignment 3</i>  | 10 points         |
| 4         | <b>TOPIC 4</b> <i>OPERATIONS STRATEGY IN OPERATIONAL MANAGEMENT</i>             | ► <i>Practical assignment 4</i>  | 10 points         |
| 5         | <b>TOPIC 5</b> <i>STRATEGIC ROLE OF TECHNOLOGY IN OPERATIONAL MANAGEMENT</i>    | ► <i>Practical assignment 5</i>  | 10 points         |
| 6         | <b>TOPIC 6</b> <i>PRODUCT DESIGN IN OPERATIONAL MANAGEMENT</i>                  | ► <i>Practical assignment 6</i>  | 10 points         |
| 7         | <b>TOPIC 7</b> <i>SUPPLY CHAIN IN OPERATIONAL MANAGEMENT</i>                    | ► <i>Practical assignment 7</i>  | 10 points         |
| 8         | <b>TOPIC 8</b> <i>THE ROLE OF PURCHASING IN OPERATIONAL MANAGEMENT</i>          | ► <i>Practical assignment 8</i>  | 10 points         |
|           | <b>Mid-term</b>   | ► <b>TESTS + TASKS</b>           | <b>75 points</b>  |
| 9         | <b>TOPIC 9</b> <i>DEFINING QUALITY IN OPERATIONAL MANAGEMENT</i>                | ► <i>Practical assignment 9</i>  | 10 points         |
| 10        | <b>TOPIC 10</b> <i>THE EVOLUTION OF TOTAL QUALITY MANAGEMENT IN OPERAT.MAN.</i> | ► <i>Practical assignment 10</i> | 10 points         |
| 11        | <b>TOPIC 11</b> <i>STATISTICAL QUALITY CONTROL IN OPERATIONAL MANAGEMENT</i>    | ► <i>Practical assignment 11</i> | 10 points         |
| 12        | <b>TOPIC 12</b> <i>THE PHILOSOPHY OF JIT IN OPERATIONAL MANAGEMENT</i>          | ► <i>Practical assignment 12</i> | 10 points         |
| 13        | <b>TOPIC 13</b> <i>PRINCIPLES OF FORECASTING IN OPERATIONAL MANAGEMENT</i>      | ► <i>Practical assignment 13</i> | 10 points         |
| 14        | <b>TOPIC 14</b> <i>RESOURCE PLANNING IN OPERATIONAL MANAGEMENT</i>              | ► <i>Practical assignment 14</i> | 10 points         |
| 15        | <b>TOPIC 15</b> <i>SCHEDULING OPERATIONS IN OPERATIONAL MANAGEMENT</i>          | ► <i>Practical assignment 15</i> | 10 points         |
|           | <b><u>FINAL</u>-TERM</b>  | ► <b>TESTS + TASKS</b>           | <b>150 points</b> |

## Recommended Materials

1. Arnold, J.R. Tony, Stephen N. Chapman, and Lloyd M. Clive. Introduction to Materials Management, Sixth Edition. Upper Saddle River, N.J.: Pearson Education Limited, 2008.
2. Blackstone, John H. Jr., Capacity Management. Cincinnati, Ohio: South-Western, 1989.
3. Cox, James F., III, John H. Blackstone, and Michael S. Spencer, eds. APICS Dictionary, Twelfth Edition. Falls Church, Va.: American Production and Inventory Control Society, Inc., 2005.
4. Gessner, Robert A. Master Production Schedule Planning. New York: John Wiley & Sons, 1986.
5. Narasimhan, Sim, Dennis W. McLeavey, and Peter Billington. Production Planning and Inventory Control, Second Edition. Englewood Cliffs, N.J.: Prentice-Hall, 1995.
6. Plossl, George W. Production and Inventory Control: Principles and Techniques, Second Edition. Englewood Cliffs, N.J.: PrenticeHall, 1985.
7. Slack, Nigel, Stuart Chambers, and Robert Johnston. Operations Management, Third Edition. Upper Saddle River, N.J.: Pearson Education Limited, 2001.
8. Vollmann, Thomas E., William L. Berry, D. Clay Whybark, and F. Robert Jacobs. Manufacturing Planning and Control Systems, Fifth Edition. Burr Ridge, Ill.: McGraw-Hill/Irwin, 2005.

*\* The above schedule and procedures are subject to change in the event of extenuating circumstances.*

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Проректор з навчально-методичної  
роботи



Л.І.Кондратенко

Завідувач кафедри



Л.В.Жарова

Викладач



О.І.Белова