Table S2.6.4. Preparition form of information lists of course (course syllabus)

Course name: OPERATIONS MANAGEMENT

Course code	Course status	Semester	Number of ECTS credits	Classes fund
	Mandatory	III	7	2P + 2V

Study programs for which it is organized: ACADEMIC PROGRAME IN ENGLISH LANGUAGE UNIVERSITY DEGREE PROGRAME IN BUSINESS AND ECONOMICS BSC

Conditionality to other courses: None

Aim of studying the course:
The aim of the course is to provide students with knowledge and skills for understanding, analyzing, and improving operations within organizations, with a balance between conceptual understanding and quantitative methods. Special emphasis is placed on decision-making models and linear programming as advanced analytical tools for solving complex operational problems.

Course content (teaching units, forms of individual student work, forms of knowledge testing) presented according to working weeks in the academic calendar:

Preparatory week	Introduction to Operations Management – role, evolution, importance
I week	Operations Strategy and Competitiveness (cost, quality, flexibility, delivery)
II week	Forecasting – basic concepts
III week	Forecasting (continuation) – regression, accuracy measures
IV week	Project Management (PERT/CPM) – concepts and examples
V week	Capacity Planning – concepts and decisions
VI week	Location and Layout Strategies (overview, key factors)
VII week	Inventory Management – basic concepts
VIII week	Inventory Management – JIT and Lean systems
IX week	Aggregate Planning – concepts and methods
X week	Supply Chain Management – concepts and practice
XI week	Decision-makin models under risk
XII week	Linear programming models – graphical solution
XIII week	Linear programming models – simplex method for the models with the maximum value of the goal function
XIV week	Linear programming models – simplex method for the models with the minimum value of the goal function
XV week	Linear programming models – special cases

Education methods:
The course combines lectures, where theoretical concepts and frameworks are explained, with exercises focused on solving problems through quantitative methods, case studies, and software tools. Students are expected to engage in independent study of literature, assignments, and project tasks. Group work and discussions based on real-world examples will encourage collaborative learning and critical thinking.

Student workload

Per week	Per semester
7 credits x 40/30 = 9 hours 20 minutes Structure: 1 hour and 30 minutes for lectures 1 hour and 30 minutes for exercise classes 6 hours and 20 minutes of student independent work, including consultations.	Total workload for the course 7 x 30 = 210 hours Structure: Teaching and final exam: 9 sati 20 min x 16 nedelja= 149 hours 20 min Necessary preparations before the beginning of the semester (administration, enrollment, certification): 9 hours 20 min x 2 = 18 hours 40 minutes. Additional work for preparation and taking the exam in the correctional period: 42 hours.

Student obligations during classes:

- Regular attendance at lectures and exercises
- Active participation in class discussions and problem-solving sessions
- Completion of homework assignments and case studies
- Preparation of individual and/or group presentations on selected topics
- Participation in mid-term and final assessments

Literature:

Mandatory:

1. Heizer, J., Render, B.: «Operations Management», Pearson, 11th edition, 2013

Additional/Recommended:

2. Ritzman, L., Krajewski, L.: «Foundations of Operations Management», Prentice Hall, 2003
3. Schroeder, R.:»Operations Management: Contemporary Concepts and Cases», McGraw Hill, 2007
4. Stevenson, W., «Operations Management», McGraw Hill, 14th edition, 2020
5. Goldratt, E. M:, «The Goal: A Process of Ongoing Improvement», North River Press, 2014

Learning outcomes (aligned with the outcomes of the study program):

Upon successful completion of the course, students will be able to:

- Explain the role of operations management and its importance for organizational competitiveness.
- Understand and discuss key theoretical concepts of operations management (strategy, capacity, location, layout, supply chain, lean systems).
- Apply forecasting, project management, and basic inventory models to real decision-making situations.
- Analyze and solve decision-making problems under risk using payoff tables, decision trees, and expected values.
- Formulate and solve linear programming models using graphical and simplex methods, for both maximization and minimization problems, including special cases.
- Integrate theoretical knowledge and quantitative methods to evaluate alternative solutions and support managerial decisions.

Forms of knowledge testing and assessment:

- Mid-term exam (theoretical and quantitative problems)
- Practical assignments (homework, case studies, project work)
- Final exam (comprehensive, combining theory and application)
- Active participation during lectures and exercises

Name and surname of teacher and assistant:

doc. dr Tamara Backović, dr Bojan Pejović

Specifics that need to be emphasized for the course:

The course emphasizes a balanced integration of theory and quantitative methods. In the first part of the course, students gain broad understanding of operational concepts and basic analytical tools. In the second part, the focus shifts to decision-making models and linear programming, enabling students to develop advanced analytical and problem-solving skills. The use of software (e.g., Excel, Solver) will be encouraged to support practical applications. Critical thinking, teamwork, and communication of analytical results are integral elements of the learning process.