Course title: OPERATIONAL MANAGEMENT

Lecturers	Assoc. Prof. Nikolina Žajdela Hrustek, Ph. D.
Language of instruction	Croatian and English
Study level	Master
Study programme	Economics of Entrepreneurship
Semester	3rd (winter)
ECTS	5
Goal	The aim of the course is to acquaint students with the basic concepts of Operations Management necessary for understanding and developing the models needed to model and optimize business processes. Within the course, students will master mathematical programming with an emphasis on linear programming, dynamic programming, methods of solving transport problems, simple stock models, Markov analysis and the basics of game theory and project management. The adopted methods will be applied in the preparation of analysis and solving business problems, within which, in addition to teamwork skills, they will also develop presentation skills.
General and specific learning outcomes	
Content	1. Introduction to Operations Management - Definition, role and significance of operations management 2. Operations management and linear programming - Setting and graphical presentation of standard problems of linear programming 3. Operations management and linear programming - Linear models - simplex method - standard problem for maximum 4. Linear models - Game Theory 5. Transportation problem of linear programming - Methods for solving transportation problems 6. Methods for setting the initial basic solution - North-West Corner Method, Minimal Costs Method, Vogel method 7. Methods for testing the program and obtaining the optimal solution - Stepping Stone Method, MODI Method 8. Degeneration of transportation problems basic solutions 9. Inventory models 10. Simple Inventory models 11. Optimization of storage capacities by dynamic programming 12. Business forecasting - Determining the stability of supply and demand with Markov chains 13. Project Management 14. Quality and Quality Management 15. Modeling and Simulation - Fundamentals
Exercises	Solving practical problems in seminar classes using adopted algorithms and methods of operations management.
Realization and examination	Evaluation elements: Preliminary exam 1 (25 Points) Preliminary exam 2 (25 Points) Brief examination 1 (10 Points)

2	Brief examination 2 (10 Points)
	Activity (10 Points)
	Research seminar (20 Points)
Related courses	
Literature	Robert Jacobs, Richard Chase, (2013), Operations and Supply Chain Management 13th Edition
	Rusell R.S., B.W. Taylor III, Operations management, Along the Supply Chain, VI edition, John Wiley & Sons (Asia), 2009.
	Dilworth J.B., Operations Management, Providing value in goods and services, Third edition, The Dryden Press, Fort Worth, 2000.