

Code	B12GMK15E		Credit	7
Term:	spring	Level:	6	
Module Title:	OPERATIONS MANAGEMENT			
Module Leader:	Dr. József Vörös, DSc. professor Dr. Zsuzsanna Hauck, assistant professor Dr. Sándor Danka, assistant professor	Office Hours:	Tuesday, 15:30-17:00, B119 Monday, 15:00-17:00, B120	
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Short Description:	Operations management deals with the efficient utilization of resources to produce products and services. Operations play a crucial role in achieving business objectives, helps understanding how companies should gain competitive advantage. Operations management comprehends three broad issues: how to design the operating system to serve business strategy, planning and controlling operations processes, and scheduling operations.			
Sessions (weeks):				
Schedule is tentative and subject to change.				
Week 1	Using operations to compete. What is operations management? Differences and similarities between manufacturing and services. Book (<i>Heizer, J. - Render, B. M. - Munson, C.: Operations Management: Sustainability and Supply Chain Management, Pearson, 12th, Global Edition 2017</i>): Chapter 1 (Operations and Productivity) Exercises (<i>Hauck Zs. – Kiss V.: Operations Management, collection of exercises 2014 (available on Neptun)</i>): Productivity			
Week 2	Developing missions and strategies. Positioning strategy. Competitive priorities. Shifts in competitive priorities. Trends in OM. Product life cycle. Process Structure in Manufacturing. Book: Chapter 2 (Operations Strategy in Global Environment) Exercises: Decision Tree			
Week 3	Major process decisions. Designing processes. Principles of process strategy. Product-Process matrix. Product Design. Product Strategy options. New product opportunities. Quality function deployment. House of Quality. Book: Chapter 5 (Design of Goods and Services) and 7 (Process Strategy) Exercises: House of Quality			
Week 4	Capacity planning. Measures of capacity. Capacity strategies. Decision trees. Economies and diseconomies of scale. Break-even analysis. Book: Chapter S7 (Capacity and Constraint Management) Exercises: Capacity planning, Identification and management of bottleneck			

Week 5	Facility location. Location analysis, location decisions. Locating single facility. Book: Chapter 8 (Location Strategies) Exercises: Locating facilities
Week 6	Midterm test for 15% 5% theoretical question 5% case study 5% calculation
Week 7	Aggregate planning. Aggregate planning problems. The objective of aggregate planning. Planning strategies. Book: Chapter 13 (Aggregate Planning and S&OP) Exercises: Staffing Plan, Production Plan
Week 8	Material requirement planning. Bill of materials. Master production schedule. Outputs from MRP. Book: Chapter 14 (Material Requirements Planning (MRP) and ERP) Exercises: Master Production Scheduling, Material Requirements Planning
Week 9	Managing inventory. Functions and types of inventory. Economic order quantity. Continuous review system. Book: Chapter 12 (Inventory Management) Exercises: Inventory management
Week 10	<i>Spring break</i>
Week 11	Lean systems. Just in Time Systems. The essence of JIT. Strategic implications. Kanban system. JIT quality tactics and scheduling. Heijunka. Jidoka. Quality. Total Quality Management. The cost of quality. Book: Chapter 16 (Lean Operations)
Week 12	<i>Easter Monday</i>
Week 13	Supply chain management. Managing sustainable supply chains. Book: Chapter 11 (Supply Chain Management) Exercises: Make-or-buy, Life-cycle ownership
Week 14	Revision week
Rationale Including Aims:	The source of success at the majority of top 500 companies is inevitably based on outstanding products and/or efficient operations processes. Thus operations are one of the most important functions in a company. Additionally, any activity that has outcome is a process and the knowledge and skills provided by operations management can be applied in many other functional areas as well. This line of argument describes the basic rationale of the module.

Learning Outcomes: Knowledge	<p>On completion of this module the student will be able to</p> <ol style="list-style-type: none"> 1. understand the key aspects of Operations Management and implement learnt material to business problems 2. analyze the role of operations in the value creation process and have the knowledge to recognize different operations systems required to help achieve company aims. 3. understand the boundaries of the learnt material, and use the acquired knowledge to overcome these boundaries
Learning Outcomes: Skills	<p>On completion of this module the student will be able to</p> <ol style="list-style-type: none"> 1. design and control operations systems, make long, medium, and short term decisions 2. actively participate in teamwork connected to operations, selection, delegation, development and management. 3. demonstrate and present operation related problems and their solutions 4. analyze the boundaries of the learnt material
Teaching and Learning Strategies:	<p>Continuous learning is required. The learning process is checked at each class through home assignments, presentation, case discussions and problem solving.</p>
Assessment Scheme:	<p>Assessment:</p> <p>15% Classwork 15% Midterm test 70% Final exam + extra points available for classroom activities</p>
Core Learning Materials:	<p>Heizer, J. - Render, B. M. - Munson, C.: Operations Management: Sustainability and Supply Chain Management, Pearson, 12th, Global Edition 2017 Hauck Zs. – Kiss V.: Operations Management, collection of exercises 2014 (available on Neptun)</p>
Optional Learning Material:	<p>Krajewski, L.J. – Ritzman, L P. – Malhotra, M.K.: Operations Management, 10th ed., Pearson, 2013 Slack, N. – Brandon-Jones, A. – Johnston, R.: Operations Management, 7th edition – Pearson 2013</p>