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| **Module card** |
| I. GENERAL INFORMATION |
| **Witelon Collegium State University****DEPARTMENT FACULTY OF TECHNICAL AND ECONOMIC SCIENCE** |
| **Field** | Management, Economy |
| **Module title** | Production logistics (ME.2) |
| **Language of lecture** | English |
| **ECTS points** | 4 |
| **Preliminary conditions:** | None |
| II. Education aims |
| **1.** Discuss a fundamentals of production logistics principles, objectives and models.2. Show some methods and tools of production logistics management3.  |
| III. Education outcomes |
| EF1. Student can describe the essence, principles and objectives of logistics production management. EF2. Student knows Order to Delivery process and the main issues of OTD management. EF3. Student can make analysis of MRP II added production planning process in an enterprise. Student knows using MRP logic, how to create feasible MPS. Student knows production control logic of Kanban system. EF4. Student knows the JIT/LP manufacturing system. Student knows TOC principles. Student can make production plan in bottle neck circumstances. EF5. Student can compare advantages and disadvantages of MRP II/ERP, JIT/LP and OPT/TOC strategies. |
| IV. EDUCATIONAL METHODS |
| **Assesment method:** Multimedia presentations, computer tools activities. |
| **Student workload:** Project, paper work, test |
| V. MODULE TYPE AND CONTENTS |
| The essence of production logistics. Logistics management principles and objectives. OPT model of logistics production management. Management of the Order to Delivery process. Logistics production management strategies (MRPII, JIT/LP, OPT/TOC). Structure of logistics production management integrated MRP II/ERP system. Sales and operations planning (SOP), Master Production Scheduling (MPS), Materials Requirements Planning (MRP logic), Capacity Requirements Planning, Production Activity Control (PAC). The essence and goals of JIT/LP strategy. Elements of JIT/LP manufacturing system. JIT production planning and control. Kanban system. Lean Production implementation. Constraints Management strategy (OPT/TOC – Theory of Constraints). Theory of Constraints principles. Comparison of MRP II, LP, TOC strategies |
| VII. ECTS POINT BALANCE SHEET - STUDENT'S WORKLOAD |
| **Category** | **Student’s workload** |
| ***Contact hours*** | 30 |
| Participation in lectures | 15 |
| Participation in classes, workshops | 15 |
| Exam | - |
| ***Independent student’s work*** | 70 |
| Preparation for the lecture | 15 |
| Preparation for the classes, workshops | 15 |
| Preparation for the test | 20 |
| Preparation for the exam | - |
| Preparing the project | 20 |
| Preparing multimedia presentation | - |
| ***Total numer of hours*** | 100 |
| ***ECTS points***  | 4 |
| VIII. Recommended literature |
| 1. J. Heizer, B. Render, Ch. Munson, *Operations management. Sustainability and supply chain management,* Global Edition, Pearson Education, 20192. R. Monczka, R.B. Handfield, L.C. Giunipero, J.L. Patterson, *Purchasing and supply chain management*, Cengage Learning 20163. S. Chopra, *Supply chain management: Strategy, planning and operations*, Global Edition, Pearson Education, 2019 |