



1. Subject name	Production planning & scheduling				
2. Subject name in Hungarian	Termelésprogramozás				
3. Code	BMEKOALM329	4. Evaluation type	exam grade	5. Credits	4
6. Weekly contact hours	2 (9) Lecture	0 (0) Practice	1 (5) Lab		
7. Curriculum	Logistics Engineering MSc (L)	8. Role	Specialization (sp) at Logistics Engineering MSc (L)		
9. Working hours for fulfilling the requirements of the subject					120
Contact hours	42	Preparation for seminars	11	Homework	30
Reading written materials	23	Midterm preparation	4	Exam preparation	10
10. Department	Department of Material Handling and Logistics Systems				
11. Responsible lecturer	Dr. Tokodi Jenő				
12. Lecturers	Dr. Tokodi Jenő, Nagyné Csóti Beáta				
13. Prerequisites	week: KOALM328 - Demand planning and inventory management				
14. Description of lectures					
Definition of calendar, useful, duty list and productive time basis. Definition and utilization of production capacity . Push & pull approaches. Forward and backward scheduling. Calculation of capacity utilization index. Involving open reserves in production. Extensive and intensive methods for increasing capacity utilisation. Connections of PP module. Manufacturing planning and execution. Basic data of PP module. Master data in PP module: BOM , Routing, material allocation. Sales and operations planning: SOP. MRP: Forward and backward scheduling. Production cycle.					
15. Description of practices					
16. Description of laboratory practices					
Routing operation sequences. Sales and operations planning steps. Product grouping. The planning table. Make-to-stock production. Planning with/without final assembly. Calculating BOM and Route. Application of SAP PP module with case studies. Linear and non-linear program solutions. Strategic, tactic and operative control of production. Master production scheduling. Role of forecasting in MRP systems. Shop floor control. Gantt-diagrams, routing and network projection in MS Project environment. Case study solution for each student in MS Project and SAP B1 Production system.					
17. Learning outcomes					
A. Knowledge <ul style="list-style-type: none">• Knowledge of the procedure of creating a production plan.• Knowledge of the database of BOM list and routing.• Knowledge of the Gantt-diagram representation in practical circumstance.• Knowledge of the practical application of MS Project environment.• Knowledge of the linear nonlinear, complete programming tasks, dynamic algorithm of production programs in practical circumstance.• Knowledge of the MRP I.-II.-III. methodology.					
B. Skills <ul style="list-style-type: none">• Can design IT systems of production application by the above mentioned knowledge and the additional professional knowledge.					
C. Attitudes <ul style="list-style-type: none">• Strive to maximize their abilities to make their studies at the highest possible level, with a profound and independent knowledge, accurate and error-free, in compliance with the rules of the applicable tools, in collaboration with the instructors.					
D. Autonomy and Responsibility <ul style="list-style-type: none">• Take responsibility for the quality of the work and the ethical standards that set an example for the classmates, using the knowledge acquired during the course.					
18. Requirements, way to determine a grade (obtain a signature)					

For signature: successfull solving the SAP Learning HUB at least 4 test min. 50 % , 1 pcs of midterm test (20% weight), 1 pcs homework (30% weight), exam (50% weight)

19. Opportunity for repeat/retake and delayed completion

1 retake of midterm test, home work closing 1 week later.

20. Learning materials

Wayne L.Winston: Operation Research. Thomson/Brooks/Cole 200- Planning of logistics information systems: production planning. SAP B1 Logistics dedicated eLearning for University Appliance Program in August 20- SH & SAP Learning HUB eLearning (moodle system). MS Project system.

Effective date	10 October 2019	This Subject Datasheet is valid for	2024/2025 semester II
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