



<b>1. Subject name</b>	<b>Production planning &amp; scheduling</b>				
<b>2. Subject name in Hungarian</b>	Termelésprogramozás				
<b>3. Code</b>	<b>BMEKOALM329</b>	<b>4. Evaluation type</b>	<b>exam grade</b>	<b>5. Credits</b>	<b>4</b>
<b>6. Weekly contact hours</b>	<b>2 (9) Lecture</b>	<b>0 (0) Practice</b>	<b>1 (5) Lab</b>		
<b>7. Curriculum</b>	<b>Logistics Engineering MSc (L)</b>	<b>8. Role</b>	<b>Specialization (sp) at Logistics Engineering MSc (L)</b>		
<b>9. Working hours for fulfilling the requirements of the subject</b>					<b>120</b>
<b>Contact hours</b>	42	<b>Preparation for seminars</b>	11	<b>Homework</b>	30
<b>Reading written materials</b>	23	<b>Midterm preparation</b>	4	<b>Exam preparation</b>	10
<b>10. Department</b>	<b>Department of Material Handling and Logistics Systems</b>				
<b>11. Responsible lecturer</b>	Dr. Tokodi Jenő				
<b>12. Lecturers</b>	Dr. Tokodi Jenő, Nagyné Csóti Beáta				
<b>13. Prerequisites</b>	<b>week: KOALM328 - Demand planning and inventory management</b>				
<b>14. Description of lectures</b>					
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 utilization. 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.					
<b>15. Description of practices</b>					
<b>16. Description of laboratory practices</b>					
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.					
<b>17. Learning outcomes</b>					
A. Knowledge					
<ul style="list-style-type: none"> <li>• Knowledge of the procedure of creating a production plan.</li> <li>• Knowledge of the database of BOM list and routing.</li> <li>• Knowledge of the Gantt-diagram representation in practical circumstance.</li> <li>• Knowledge of the practical application of MS Project environment.</li> <li>• Knowledge of the linear nonlinear, complete programming tasks, dynamic algorithm of production programs in practical circumstance.</li> <li>• Knowledge of the MRP I.-II.-III. methodology.</li> </ul>					
B. Skills					
<ul style="list-style-type: none"> <li>• Can design IT systems of production application by the above mentioned knowledge and the additional professional knowledge.</li> </ul>					
C. Attitudes					
<ul style="list-style-type: none"> <li>• 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.</li> </ul>					
D. Autonomy and Responsibility					
<ul style="list-style-type: none"> <li>• 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.</li> </ul>					
<b>18. Requirements, way to determine a grade (obtain a signature)</b>					

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For signature: successful 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)

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**19. Opportunity for repeat/retake and delayed completion**

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

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**20. Learning materials**

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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.

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<b>Effective date</b>	10 October 2019	<b>This Subject Datasheet is valid for</b>	2023/2024 semester II
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