

<b>Course Description</b>					
<b>Name</b>	<b>Code</b>	<b>Semester</b>	<b>T+A Hour</b>	<b>Credit</b>	<b>ECTS</b>
PRODUCTION PLANNING and CONTROL	IND3149120	Fall Semester	3+0	3	6
<b>Prerequisites Courses</b>	MODELLEME VE OPTİMİZASYONA GİRİŞ				
<b>Recommended Elective Courses</b>					
<b>Language of Instruction</b>	English				
<b>Course Level</b>	First Cycle (Bachelor's Degree)				
<b>Course Type</b>	Required				
<b>Course Coordinator</b>	Assoc.Prof. Melis Almula KARADAYI				
<b>Name of Lecturer(s)</b>	Assoc.Prof. Melis Almula KARADAYI				
<b>Assistant(s)</b>					
<b>Aim</b>	The objective of this course is to teach basic concepts of production planning and inventory control systems; obtaining a fair understanding of capacity planning, aggregate production planning, and inventory analysis; recognizing the relationships among the strategic, tactical and operational levels of planning in production systems by understanding the mathematical foundation behind these tools.				
<b>Course Content</b>	This course contains; Introduction to Production Systems and Facility Layout Types,Demand Forecasting I,Demand Forecasting II,Demand Forecasting III,Aggregate Production Planning I,Aggregate Production Planning II,Inventory Control Subject to Known Demand I,Inventory Control Subject to Known Demand II,Inventory Control Subject to Unknown Demand I,Inventory Control Subject to Unknown Demand II,Master Production Schedule (MPS),Material Requirements Planning (MRP) I,Material Requirements Planning (MRP) II,Term Project Presentations.				
<b>Course Learning Outcomes</b>			<b>Teaching Methods</b>	<b>Assessment Methods</b>	
Differentiate production layouts			16, 9	A, F, G	
Explain basic concepts of production, production planning and inventory control systems			12, 16, 9	A, F	
Use forecasting techniques to forecast demand			12, 16, 9	A, F, G	
Construct aggregate production plans			12, 16, 9	A, G	
Manage inventory control subject to known and uncertain demand			12, 16, 9	A, G	
Construct Master Production Schedule (MPS)			12, 16, 9	A	
Construct Materials Requirement Planning (MRP) and solve lot sizing techniques			12, 16, 9	A, G	
<b>Teaching Methods</b>	12: Problem Solving Method, 16: Question - Answer Technique, 9: Lecture Method				
<b>Assessment Methods</b>	A: Traditional Written Exam, F: Project Task, G: Quiz				
<b>Lecture Schedule</b>					
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
1	Introduction to Production Systems and Facility Layout Types	Lecture Notes			
2	Demand Forecasting I	Lecture Notes			
3	Demand Forecasting II	Lecture Notes			
4	Demand Forecasting III	Lecture Notes			
5	Aggregate Production Planning I	Lecture Notes			
6	Aggregate Production Planning II	Lecture Notes			
7	Inventory Control Subject to Known Demand I	Lecture Notes			
8	Inventory Control Subject to Known Demand II	Lecture Notes			
9	Inventory Control Subject to Unknown Demand I	Lecture Notes			
10	Inventory Control Subject to Unknown Demand II	Lecture Notes			
11	Master Production Schedule (MPS)	Lecture Notes			
12	Material Requirements Planning (MRP) I	Lecture Notes			
13	Material Requirements Planning (MRP) II	Lecture Notes			
14	Term Project Presentations	Term Project Report			
<b>Evaluation Methods</b>		<b>Weight(%)</b>			
Midterm Exam		30			
General Exam		70			

<b>Resources</b>
Steven Nahmias, Tava Lennon Olsen Production and Operations Analysis, 7th Edition, McGraw-Hill. ISBN-10: 1478623063 Sipper D., R.L. Bulfin, Production: Planning, Control, and Integration, McGraw-Hill, 1997
Zipkin, Paul H. Foundations of Inventory Management. Boston: McGraw-Hill, 2000, ISBN-10: 0256113793