

<b>IE 314: Industrial Operations Management -2- 3(3, 2, 0)</b>		
<b>Catalog Data</b>	Aggregate Planning. Material Requirements Planning (MRP) and ERP. Scheduling for the Short Term. Decision Modeling.	
<b>Prerequisite</b>	IE 214	
<b>Level</b>	8	
<b>Textbook and Reference</b>	Operations Management. Global Edition. Tenth Edition. By Jay Heizer and Barry Render. PEARSON. (2011).	
<b>Learning objectives</b>	To introduce students to the managerial concepts and quantitative techniques required in the areas of aggregate planning, MRP, scheduling for the short term, and decision modeling. To enable students to make efficient operations management decisions in practice.	
<b>Topics (classes)</b>	<b>1. Aggregate Planning</b> The planning process, the nature of aggregate planning, aggregate planning strategies, methods for aggregate planning, aggregate planning in services and yield management.	9 classes
	<b>2. Material requirement planning (MRP)</b> Master production schedule, bill of material, MRP plan, lot size techniques (lot for lot, EOQ, PPB, Wagner-Whitin algorithm), introduction to MRP-II, ERP and SAP.	9 classes
	<b>3. Scheduling for the Short Term</b> The strategic importance of short-term scheduling, scheduling issues, scheduling process-focused facilities, loading jobs, sequencing jobs, finite capacity scheduling (FCS), theory of constraints, scheduling repetitive facilities, scheduling services.	9 classes
	<b>4. Assembly Line Balancing</b>	9 classes
	<b>5. Decision Modeling</b> The decision process in operations, fundamentals of decision making, decision tables, types of decision-making environments, decision trees.	9 classes
<b>Laboratory Topics:</b> None		
<b>Project work:</b> Two cases analysis		
<b>Computer Usage:</b> Usage of MS Excel is motivated to solve exercises on the above topics		
<b>Estimated Category Content :</b> Engineering Science 3 credit hours		
<b>Prepared by:</b> Dr Abdelghani Bouras		
<b>Preparation Date:</b> January 2015 (1435-36) (Semester 2)		

**Grading Policy: Course will be determined by the following weights: 60% + 40%**

<b>Case Presentations</b>	10%	<b>First Mid Term</b>	15%
<b>Quizzes</b>	10%	<b>Second Mid Term</b>	15%
<b>Lecture</b>	10%	<b>Final Exam</b>	40%

**Midterm Examination Schedule:**

<b>First Midterm:</b> Topics 1 and 2 16th March 2015 Monday After Maghrib Prayer	<b>Second Midterm:</b> Topics 3,4 and maybe 5 6th May 2015 Wednesday After Maghrib Prayer
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