MANUFACTURING RESOURCES PLANNING

1	Course Title:	MANUFACTURING RESOURCES PLANNING	
2	Course Code:	END4074	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	8	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. NURSEL ÖZTÜRK	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	nursel@uludag.edu.tr +90 224 2942083 Uludağ Üniversitesi, Endüstri Mühendisliği Bölümü	
17	Website:		
18	Objective of the Course:	The objective of this course is to provide students the knowledge of Manufacturing Resource Planning and related topics.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Will be able to understand the concepts of Manufacturing Resource Planning and related topics
		2	Will be able to select the appropriate MRPII and ERP systems
		3	Will be able to understand how to follow and present new developments in this area
		4	
		5	
		6	
		7	
		8	
		9	
		10	
21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Basic concepts of materials management	
2	Design of Material Requirements Planning System. MRP inputs, MRP outputs, product structures, MRP computations.	
3	Preparation of MRP plans, Matrix method	
4	Lot sizing techniques in MRP systems	

5	Advantages and disadvantages of MRP systems, Closed-loop MRP system	
6	Capacity Requirements Planning	
7	Manufacturing Resources Planning (MRPII)	
8	Examples, Distribution Resources Planning	
9	MRP II and JIT (Hybrid systems)	
10	Enterprise Resource Planning (ERP)	
11	Repeating courses and midterm exam	
12	Critical success factors for the ERP system	
13	Selection of the appropriate ERP system	
14	Oral presentation of the home works	

22	Textbooks, References and/or Other Materials:	•N. Öztürk, Üretim Kaynakları Planlaması Course Notes •W.J. Hopp, M.L. Spearman, Factory Physics, Chapter 3, McGraw-Hill •N. Acar, Malzeme İhtiyaç Planlaması, MPM •Articles
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Contribution of Term (Year) Learning Activities to Success Grade		50.00
Contribution of Final Exam to Success Grade		50.00

Measurement and Evaluation Techniques Used in the Course

24	**ECTS / WORK LOAD TABLE**			
	Activites	Number	Duration (hour)	Total Work Load (hour)
	Theoretical	14	2.00	28.00
	Practicals/Labs	0	0.00	0.00
	Self study and preparation	14	3.00	42.00
	Homeworks	1	16.00	16.00
	Projects	0	0.00	0.00
	Field Studies	0	0.00	0.00
	Midterm Exams	1	2.00	2.00
	Others	0	0.00	0.00
	Final Exams	1	2.00	2.00
	Total Work Load			90.00
	Total work load/ 30 hr			3.00
	ECTS Credit of the Course			3.00

25	**CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	4	4	4	0	0	0	0	0	0	4	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High