Offered by:

Endüstri Mühendisliği

Course Title: PRODUCTION SCHEDULING	**Course Org. Title:** PRODUCTION SCHEDULING
Course Level: Lisans	**Course Code:** IND 4916
Language of Instruction: İngilizce	**Form Submitting/Renewal Date** 15/02/2013
Weekly Course Hours: 3	**Course Coordinator:** YRD.DOÇENT DERYA EREN AKYOL

Theory	Application	Laboratory	National Credit: 3
3	0	0	ECTS Credit: 4

Offered to:	Course Status: Compulsory/Elective
Name of the Department:	
Industrial Engineering	**Elective Course**

Instructor/s:

YRD.DOÇENT DERYA

Course Objective:

The objective of this course is to introduce students various scheduling scheduling problems that arise in manufacturing and service organizations. In this course, optimization and heuristic methods used for solving single machine scheduling, paralel machine scheduling, flow shop and job shop scheduling problems will be taught.

Learning Outcomes:

1	To describe scheduling problems that arise in manufacturing and service
2	To define scheduling and sequencing concepts
3	To identify real life scheduling problems
4	To distinguish appropriate solution approaches for different performance measures
5	To be able to solve single and multi machine scheduling problems defined for different performance measures, using a scheduling software

Learning and Teaching Strategies:

Assessment Methods:

Name	Code	Calculation formula
Vize	VZ	
Ödev	OD	
Final	FN	
Bütünleme Notu	BUT	
BNS	BNS	VZ * 025 + D * 025 + FN * 050
Bütünleme Sonu Başarı Notu	BBN	VZ * 025 + D * 025 + BUT * 050

Further Notes about Assessment Methods:

Assessment Criteria:

Textbook(s)/References/Materials:

Scheduling: Theory, Algorithms, and Systems by Michael L. Pinedo, 2008
Elements of sequencing and scheduling/ by Kenneth R. Baker, 1998.

Course Policies and Rules:

Contact Details for the Instructor:

derya.eren@deu.edu.tr, Tel. +90-232-3017604

Office Hours:

Course Outline:

Week	Topics:	Notes:
1	Introduction to Scheduling, classification of scheduling problems	
2	Single machine problems: simple dispatching rules	
3	Single machine problems: real time scheduling, NP-hard scheduling problems, branch and bound, dynamic programming, approximations	
4	Parallel machine scheduling	
5	Parallel machine scheduling	
6	Flow shop scheduling	
7	Flow shop scheduling	
8	Midterm	
9	Job shop scheduling	
10	Job shop scheduling, Open shop scheduling	

11	Lekin software applications
12	Stochastic scheduling
13	Developing mathematical models to solve scheduling problems
14	Student presentations

ECTS Table

Course Activities	Number	Duration (hour)	Total Work Load (hour)
In Class Activities			
Lectures	13	3	39

Exams			
Final	1	2	2
Midterm	1	2	2
Presentations	2	4	8

Out Class activities			
Preparations before/after weekly lectures	13	2	26
Preparation for midterm exam	1	6	6
Preparation for final exam	1	6	6
Preparing group assignments	4	3	12
Total Work Load (hour)			101
ECTS Credits of the Course= Total Work Load (hour) / 25			4