IM 231 CONSTRUCTION MANAGEMENT AND TECHNOLOGY			CIVIL ENGINEERING
Semester	**Credit Structure**		
	Lecture	**Recitation**	**Laboratory**
3	3	0	0
Language	English		
Compulsory/Elective	Compulsory		
Prerequisites			
Catalog Description	Definition and description of construction tasks and project management. Cost and quantity calculations. Preparation of projects and tender documents. Technical specifications, bill of quantities, unit price analysis, tender document preparation scheduling methods (CPM and PERT), health and safety policies. Site equipment and production calculations.		
Course Objectives	Introduction of practical, technical and legal aspects of all stages of construction starting from planning to the completion of a project and legal responsibilities.		
Course Outcomes	Understanding the principles and the procedures of construction management and gaining knowledge on the laws and other legal requirements and procedures.		
Textbook and /or References	Harris, F. and McCaffer, R., "Modern Construction Management", 5th Edition, Blackwell Publishing, Oxford UK, 2001. Lockyer, K. and Gordon, J., "Critical Path Analysis and other Project Network Techniques, 5th ed.", Pitman Publishing, London, England, 1991. Chudley, R., "Advanced Construction Technology, 3rd Ed.", Pearson Education Limited, Essex, England,1999 Pancarcı, A. M.E. Öcal, Yapı İşletmesi ve Maloluş Hesapları, 5. Baskı, Birsen Yayınevi, İstanbul, 1996. Yapı İşletmesi, Şantiye Tekniği, Maliyet Hesapları, K.Sunguroğlu, Bilim Yayınları, No:37,1. Baskı, 1996. Yapı İşleri 2002 yılı Birim Fiyat Tarifleri Eki Fiyat Listesi, Bayındırlık ve İskan Bakanlığı, Yüksek Fen Kurulu Başkanlığı, 2002. Akçalı, G., "2002 Yili İnşaat Birim Fiyat Analizleri", Şafak Matbaacılık, Ankara, 2002		
Assessment Criteria		**Quantity**	**Percentage**
	Midterm Exams	2	40
	Quizzes		
	Homework		
	Projects		
	Term Paper	1	10
	Laboratory Work		
	Other		
	Final Exam	1	50
Course Category by Content (%)	**Mathematics and Basic Sciences**		
	Engineering Science	75	
	Engineering Design		
	Social Sciences	25	
Instructors	**Öğr. Gör. Dr. Bengi AYKAÇ**		

COURSE PLAN	
Week	**Topics**
1	Parties in construction projects and interrelationships, Stages of construction
2	Construction materials and site organization
3	Structural elements and construction Techniques
4	Unit Price Analysis
5	Quantity take-offs
6	Cost estimating
7	1. Midterm Exam
8	Scheduling: Bar Charts and CPM
9	Scheduling and Control: PERT and line of balance methods
10	Types of construction contracts, the Bidding Act, bidding methods
11	Construction licenses at various stages
12	2. Midterm Exam
13	Construction safety and the Labor Law
14	Legal responsibilities of engineers, contracting firms and owners

RELATIONSHIP BETWEEN THE COURSE AND DEPARTMENT CURRICULUM				
	Program Outcomes	**1**	**2**	**3**
1	An ability to apply knowledge of mathematics, science, and engineering		X	
2	An ability to design and conduct experiments, as well as to analyze and interpret data		X	
3	An ability to design a system, component, or process to meet desired needs		X	
4	An ability to function on multi-disciplinary teams		X	
5	An ability to identify, formulate, and solve engineering problems		X	
6	An understanding of professional and ethical responsibility			X
7	An ability for effective written and oral communication in Turkish and English		X	
8	The broad education necessary to understand the impact of engineering solutions in a global and societal context			X
9	A recognition of the need for, and ability to engage in life-long learning		X	
10	A knowledge of contemporary issues			X
11	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice			X
	Contribution of the course : 1:None 2:Partially 3:Completely			