

<b>COURSE DESCRIPTION FORM</b>	
<b>Course Code and Title</b>	CE231 CONSTRUCTION MANAGEMENT AND TECHNOLOGY
<b>Semester</b>	3
<b>Catalog Description</b>	Construction Project Preparation and Process, Tender/Bid Preparation and Process, Construction Contracts, Construction Cost Estimation and Calculations, Construction and Project Planning, Establishment of Construction Sites, Construction and Technology Knowledge, Site Preparation and Process, Construction Machinery, Health and Safety
<b>Required Reading</b>	<b>K.Sunguroğlu</b> , ‘Yapı İşletmesi, Şantiye Tekniği, Maliyet Hesapları’, Bilim Yayınları, No:37, 1.Baskı, İstanbul 2002
<b>Recommended Reading</b>	<p><b>1)Allen, E.</b>, ‘Fundamentals of Building Construction: Materials and Methods’, Wiley, New York, 1999.</p> <p><b>2)Olin, H.B and Lewis, W.H.</b>, ‘Construction: Principles, Materials and Methods, 7th Ed., John Wiley and Sons, NY , 1994.</p> <p><b>3)Simmons, L.</b>, ‘Construction: Principles,Materials and Methods, 8<sup>th</sup> Ed., John Wiley and Sons, NY , 2001</p> <p><b>4)Özcan, K.</b>, ‘Yapı’ , Bilim Yayınları No:40, 8. Baskı, Ankara, 2000</p> <p><b>5)Chudley, R.</b>, ‘Advanced Construction Technology’, 3<sup>rd</sup> Ed., Pearson Education Limited, Essex, england, 1999</p> <p><b>6)Gözü, Ş.U.</b>, ‘İnşaat Metraj ve Keşif İşlemi’ 6. Baskı, Vega Yayınları, Ankara, 2001.</p> <p><b>7)Pancarlı, A. M.E. Öcal</b>, ‘Yapı İşletmesi ve Maloluş Hesapları’, Birsen Yayınevi, 7. Baskı, İstanbul 2002</p>
<b>ECTS</b>	3
<b>Prerequisites and co-requisites</b>	No prerequisite Required attendance to lectures is at least 70%.
<b>Compulsory / Elective</b>	Technical course
<b>Language of Instruction</b>	English
<b>Aim of Course</b>	To help students in gaining insight and consciousness about the processes during the design of a structure (preconstruction / construction phases), construction cost, planning, machinery, and health and safety.
<b>Learning outcomes of the course unit</b>	<ol style="list-style-type: none"> <li>1) Gaining knowledge on technical and practical issues about the process between the planning of a structure and its completion,</li> <li>2) Learning the responsibilities of various project participants,</li> <li>3) Learning cost estimation and planning techniques such as CPM and PERT,</li> <li>4) Gaining insight on construction machinery,</li> <li>5) Gaining detailed knowledge about construction components,</li> <li>6) Gaining insight on tender documents and construction contracts,</li> <li>7) Becoming more conscious about health and safety issues,</li> <li>8) Becoming more conscious about ethical issues, duties, and responsibilities.</li> </ol>
<b>Mode of delivery</b>	Face to face
<b>Course Content</b>	<ol style="list-style-type: none"> <li><b>1)</b> Definitions of basic construction terms, project participants and their duties</li> <li><b>2)</b> Project Preparation Process and Construction Contracts</li> <li><b>3)</b> Tender / Bid Preparation</li> </ol>

	<p>4) Preparation and Establishment of Construction Sites and Construction Machinery</p> <p>5) Phases of Construction and Manufacturing Processes</p> <p>6) Introduction of Construction Components</p> <p>7) Introduction of Construction Components</p> <p>8) Midterm</p> <p>9) Construction Phase and Documents Used, Health and Safety</p> <p>10) Unit Cost Analysis</p> <p>11) Construction Cost Estimation and Calculations: Quantity Takeoff and Related Calculations</p> <p>12) Construction Cost Estimation and Calculations: Project work and Understanding Project Drawings</p> <p>13) Construction Project Planning: Planning process, Preparation of Construction Plans, Gantt Charts, CPM Technique</p> <p>14) Construction Project Planning: Calculation of Project Duration, Critical Path Method by CPM and PERT – applications and examples</p> <p>15) Midterm / Construction Project Planning: Calculation of Project Duration, Critical Path Method by CPM and PERT – applications and examples</p>																																			
<b>Planned learning activities and teaching methods</b>	<p>3 hours of theoretical class (3+0)</p> <p>Reading</p> <p>Preparing Reports</p> <p>Midterms and preparations</p> <p>Final examination and preparations</p>																																			
<b>Assessment methods and criteria</b>	<table border="1"> <thead> <tr> <th></th> <th>Number</th> <th>Total Impact (%)</th> </tr> </thead> <tbody> <tr> <td>Midterm</td> <td>2</td> <td>40</td> </tr> <tr> <td>Assignment</td> <td>1</td> <td>15</td> </tr> <tr> <td>Exercises</td> <td>-</td> <td>-</td> </tr> <tr> <td>Projects</td> <td>-</td> <td>-</td> </tr> <tr> <td>Practice</td> <td>-</td> <td>-</td> </tr> <tr> <td>Quiz</td> <td>2</td> <td>5</td> </tr> <tr> <td>Contribution of In-term Studies to Overall Grade (%)</td> <td></td> <td>60</td> </tr> <tr> <td>Contribution of Final Examination to Overall Grade (%)</td> <td></td> <td>40</td> </tr> <tr> <td>Attendance</td> <td></td> <td></td> </tr> </tbody> </table>				Number	Total Impact (%)	Midterm	2	40	Assignment	1	15	Exercises	-	-	Projects	-	-	Practice	-	-	Quiz	2	5	Contribution of In-term Studies to Overall Grade (%)		60	Contribution of Final Examination to Overall Grade (%)		40	Attendance					
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		issues of the century reflected into the field of <u>engineering</u> .				X	
	17	Awareness of the legal consequences of engineering solutions.				X	
<b>Name of lecturers and contact information</b>	Assoc. Dr. Bengi Aykaç, <a href="mailto:baykac@gazi.edu.tr">baykac@gazi.edu.tr</a> Instructor Dr. Mehmet Çağatay BELGİN <a href="mailto:cmbelgin@gazi.edu.tr">cmbelgin@gazi.edu.tr</a>						