



Course Code & Name	CE372 CONSTRUCTION MANAGEMENT
-------------------------------	-------------------------------

Course Schedule	Wednesday 14:00-17:00
Room	B318
Instructor's Name	Assist. Prof. Dr. Özgür KÖYLÜOĞLU
Phone	0216-578 00 00 / 1724
E-mail	ozgur.koyluoglu@yeditepe.edu.tr
Office Hours	Tuesday 11:00-12:00; Wednesday 13:00-14:00; Thursday 11:00-12:00
Assistant's Name	
Phone	
E-mail	
Midterm Dates	Midterm 1: November 1, 2023 (Wednesday) Midterm 2: December 6, 2022 (Wednesday)
Additional Information	<p><i>Grading out of 100 is as follows:</i> Midterm 1: 15% Midterm 2: 15%</p> <p>Homeworks (3 assignments): 15% (1 point deducted for each day of delay; homeworks copied from others will be graded as zero) Homeworks will be submitted by the students on YULEARN at the designated space, the file given the name as in the following format: Student number_Name_Surname_A1</p> <p>Inter-disciplinary team project report: 15% Project reports will be submitted by the students on YULEARN at the designated space.</p> <p>Final Exam 40%</p> <p><i>Attendance:</i> 80% attendance is required by the university regulations (20% non-attendance only for sick-leave or similar; to be proven)</p>



COURSE INFORMATION				
Course Code	CE 372	Course Title	Construction Management	
<i>Semester</i>	<i>Credits</i>	<i>ECTS</i>	<i>C + P + L Hour</i>	<i>Prerequisites</i>
5	3	4	3+0+0	---

Language of Instruction	Course Level	Course Type
English	Bachelor's Degree	Core
Course Coordinator	Assist. Prof. Dr. Özgür Köylüoğlu	
Instructors	Assist. Prof. Dr. Özgür Köylüoğlu	
Assistants		
Goals	The goal of this course is to recognize project management concepts necessary for physical realization of the construction projects including participants of a construction project, project delivery systems, procurement systems, public procurement law, cost control and financial management; and to acquire the abilities to prepare a work schedule, calculate bill of quantities, cost estimate and ability to carry out necessary calculations for resource management.	
Content	Characteristics of the construction industry, types of construction, project management, construction project life cycle, design and construction processes; Construction project participants, interactions of the design and construction stakeholders; Project delivery systems, contract types; Project award process, bidding systems, Turkish Public Procurement Law and regulations; Bill of quantity and cost estimate calculations; Scheduling techniques and Critical Path Method (CPM) calculations; Advanced scheduling techniques and PERT calculations; Project acceleration; Earned value analysis; Resource management and levelling of resources; Cost control; Project financial management, cash flow management, feasibility parameters; Project coordination, business performance.	
Contribution of the Course to the Professional Education	By developing knowledge on the project management concepts and tools necessary for planning and realization of the construction projects within a defined scope, duration and cost performance criteria, engineers who are planning to work at construction sites will be prepared for career positions starting from site engineer to the higher positions such as site supervisor or project manager.	



Course Learning Outcomes	Detailed Program Outcomes	Teaching Methods	Assessment Methods
(1) Ability to describe the objectives and benefits of project management in a construction project	10a	1	A,B
(2) Ability to identify project delivery systems and interactions of the owners, designers and contractors in construction projects	6c, 7b, 7c, 8a, 8b, 9a, 10a, 13	1,8	A,B,E
(3) Ability to analyze project award mechanisms, tendering procedures and contract types in construction projects; ability to identify requirements of the Public Procurement Law	6a, 6b, 6c, 7b, 7c, 8a, 8b, 9a, 9b, 10a, 11c, 12	1,8,11	A,B,E,F
(4) Ability to apply methods of analyses and calculations for planning, scheduling, cost estimation, cost control, time management and resource management in construction projects	6a, 6b, 7b, 7c, 9b, 10a	1,3, 11	A,B,E,F
(5) Ability to describe project control and change management systems in construction process	10a, 11c, 13	1	A,B
(6) Ability to carry out basic project financial calculations and awareness on business performance assessment of construction jobs	6c, 10a, 10b	1,3,5	A,B,E

Teaching Methods:	1: Lecture by instructor, 2: Lecture by instructor with class discussion, 3: Problem solving by instructor, 4: Use of simulations, 5: Problem solving assignment, 6: Reading assignment, 7: Laboratory work, 8: Term research paper, 9: Presentation by guest speaker, 10: Sample Project Review, 11: Interdisciplinary group working, 12: ...
Assessment Methods:	A: Written exam, B: Multiple-choice exam C: Take-home quiz, D: Experiment report, E: Homework, F: Project, G: Presentation by student, H: ...

COURSE CONTENT		
Week	Topics	Study Materials
1	Characteristics of the construction industry, types of construction, project management, construction project life cycle; design and construction processes	Lecture Notes and Textbook
2	Construction project participants; Project delivery systems; Contract types	Lecture Notes and Textbook
3	Project award process, bidding systems, Turkish Public Procurement Law and regulations	Lecture Notes and Textbook
4	Bill of quantities and cost estimate calculations	Lecture Notes and Textbook
5	Midterm Exam - 1	Lecture Notes and Textbook



6	Scheduling techniques and Critical Path Method (CPM) calculations	Lecture Notes and Textbook
7	Advanced scheduling techniques and PERT calculations	Lecture Notes and Textbook
8	Project Time Acceleration	Lecture Notes and Textbook
9	Cost Control & Earned value analysis	Lecture Notes and Textbook
10	Midterm Exam - 2	Lecture Notes and Textbook
11	Resource management and levelling of resources	Lecture Notes and Textbook
12	Project financial management, cash flow management, feasibility parameters	Lecture Notes and Textbook
13	Interactions of the design and construction stakeholders; Change management	Lecture Notes and Textbook
14	Project coordination; Data collection for reporting; Business performance	Lecture Notes and Textbook

RECOMMENDED SOURCES	
Textbook	<p>Slide presentations</p> <p>Book: Construction Project Management: A Practical Guide to Field Construction Management Authors: S.Keoki Sears, Glenn A. Sears and Richard H. Clough; Wiley, 2015</p> <p>Book: Construction Project Management Authors: Frederick Gould, Nancy Joyce; Pearson, 2011</p> <p>Book: Managing the Construction Process: Estimating, Scheduling and Project Control Authors: Frederick Gould, Nancy Joyce; Pearson, 2012</p>
Additional Resources	

MATERIAL SHARING	
Documents	Slides are shared with the students on electronic media (Moodle)
Assignments	In term homeworks are shared on Moodle system and students are required to upload their research reports on Moodle system for grading; in-term group research study is also shared on Moodle system, students are required to select the group members from CE Department and join with a group from Faculty of Architecture to carry out the inter-disciplinary group project report which should be delivered for grading for the relevant courses on the Moodle system.
Exams	Students can review their exam papers if they demand, and their learning is improved by learning from their mistakes.



ASSESSMENT		
IN-TERM STUDIES	NUMBER	PERCENTAGE
Mid-terms	2	50
Homeworks	3	25
Inter-disciplinary project report	1	25
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Field Course
------------------------	--------------

COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES		
No	Program Learning Outcomes	check ✓
6a	Ability to work efficiently in intra-disciplinary teams,	✓
6b	Ability to work efficiently in multi-disciplinary teams,	✓
6c	Ability to work individually.	✓
7b	Knowledge of a minimum of one foreign language,	✓
7c	Ability to write effective reports and comprehend written reports, prepare design and production reports,	✓
8a	Recognition of the need for lifelong learning, ability to access information, ability to follow developments in science and technology,	✓
8b	Ability to continue to educate him/herself.	✓
9a	Consciousness to behave according to ethical principles and professional and ethical responsibility.	✓
9b	Knowledge on standards used in engineering practice.	✓
10a	Knowledge about business life practices such as project management, risk management, change management.	✓
10b	Awareness in entrepreneurship and innovation.	✓
11c	Awareness of the legal consequences of engineering solutions.	✓



12	Knowledge about project award mechanisms and tendering procedures.	✓
13	Knowledge about the interaction of designers and constructors.	✓

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration	14	3	42
Hours for off-the-classroom study (Pre-study, practice)	2	12	24
Homeworks	3	8	24
Inter-disciplinary team project	1	18	18
Final	1	2	2
Total Work Load			110
Total Work Load / 25 (h)			4.40
ECTS Credit of the Course			4

Prepared by: Assist.Prof.Dr. Özgür Köylüoğlu	Preparation date: 26.12.2022
--	------------------------------