

INS5050 Management of Construction Projects					
Semester	Course Code	Course Name	L+P	Credit	ECTS
1	INS5050	Management of Construction Projects	3	3	6,5

**Language of Instruction:**

Turkish

**Course Level:**

Master's Degree

**Work Placement(s):**

No

**Department / Program:**

Civil Engineering (MSc) (With Thesis)

**Course Type:**

Zorunlu Seçmeli

**Goals:**

The aim is to provide a foundation for students to develop the knowledge and skills necessary for project management in the construction industry. To achieve this goal, this course is designed to provide an integrative perspective on construction project management issues by introducing students to the units included in the Project Management Knowledge Center and included under the term project management. In addition, the course prepares students for the PMI body of knowledge through classroom lectures leading to the possibility of enrolling in PMP certification.

**Teaching Methods and Techniques:**

This course provides a comprehensive introduction to the management of construction projects. The following topics are covered: organizational structures, people-based project manager skills, scope management, time management, cost management, risk management, and engineering economics.

**Prerequisites:**

**Course Coordinator:**

Asst. Prof. Dr. Işık Ateş Kırıl

**Instructors:**

**Assistants:**

**Recommended Sources**

<b>Textbook</b>	: It can be downloaded from the BTU Ecampus website.
<b>Resources</b>	: A Guide to the Project Management Body of Knowledge (PMBOK Guide) Seventh Edition and The Standard for Project Management
<b>Documents</b>	:
<b>Assignments</b>	:
<b>Exams</b>	:

**Course Category**

<b>Mathematics and Basic Sciences</b>	:	<b>Education</b>	:
<b>Engineering</b>	: 70	<b>Science</b>	:
<b>Engineering Design</b>	:	<b>Health</b>	:
<b>Social Sciences</b>	: 30	<b>Field</b>	:

**Course Content**

Week	Topics	Study Materials	Materials
1	Orientation, Introduction to Management of Construction Projects		
2	Organizational Structures		
3	The Role and Individual Skills of Project Manager in Construction Projects		
4	Scope Management, Time Management		
5	Time Management		
6	Time Management, Cost Management		
8	Cost Management		
9	Risk Management		
10	Risk Management		
11	Risk Management, Quantity Surveying, Exploration and Entitlement in Cost Management		
12	Quantity Surveying, Exploration and Entitlement in Cost Management		
13	Engineering Economics		
14	Engineering Economics		

**Course Learning Outcomes**

No	Learning Outcomes
C01	To develop necessary skills and improve the knowledge level about the concepts of basics of the construction project management such as the definition of project, project life-cycle, organizational strategy and organizational project management.
C02	To develop necessary skills and improve the knowledge level about the concepts of organizational structures such as organic structure, functional structure, projectized structure, matrix structure and composite structure.
C03	To develop necessary skills and improve the knowledge level about the concepts of human-based skills of project manager such as leadership and motivation.
C04	To develop necessary skills and improve the knowledge level about the concepts of scope management such as work breakdown structures.
C05	To develop necessary skills and improve the knowledge level about the concepts of schedule management such as scheduling, resource levelling, and network diagrams.
C06	To develop necessary skills and improve the knowledge level about the concepts of cost management such as cost estimating methods, earned value management, cost crashing and cost categorization.
C07	To develop necessary skills and improve the knowledge level about the concepts of risk management such as risk definition, framing, decision-making processes, risk classification, checklist, brainstorming, swot analysis and decision trees.
C08	To develop the necessary skills and improve the level of knowledge about quantity surveying and entitlement types such as Grid Surveying, Cross Section Method, Reinforcement Quantity Surveying.
C09	To develop necessary skills and improve the knowledge level about the concepts of engineering economics such as net benefit, marginal principle, and cost - benefit plot, net present value, payback period, internal rate of return, profitability index.

**Program Learning Outcomes**

No	Learning Outcome
P01	Adequate knowledge in mathematics, science and related engineering disciplines; ability to use theoretical and practical knowledge in these areas in complex engineering problems.
P02	Ability to identify, interpret, formulate and solve complex engineering problems; ability to select and apply appropriate methods for this purpose.
P03	Ability to design a complex system, process, device or product under realistic constraints and conditions to meet specific requirements; ability to apply modern design methods for this purpose.
P04	Ability to select and use modern techniques and tools required for the analysis and solution of complex problems encountered in engineering applications; ability to use information technologies effectively.

P05	Ability to design and conduct experiments, collect data, analyze and interpret results in order to investigate complex engineering problems or discipline-specific research topics.
P06	Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually.
P07	Ability to communicate effectively in written and verbal Turkish; knowledge of at least one foreign language; ability to write effective reports and understand written reports; to prepare production and design reports; to make effective presentations; to give and receive clear and understandable instructions.
P08	Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology, to constantly renew oneself.
P09	Acting in accordance with ethical principles; awareness of professional and ethical responsibility; knowledge of standards used in engineering practices.
P10	Knowledge of project management, risk management and change management in engineering practice; awareness of entrepreneurship and innovation; knowledge about sustainable development.
P11	Knowledge about global and social effects of engineering applications on health, environment and safety with contemporary engineering problems; awareness of the legal consequences of engineering solutions.

Assessment		
In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
<b>Total</b>		<b>%100</b>

ECTS Allocated Based on Student Workload			
Activities	Quantity	Duration	Total Work Load
Course Duration	14	3	42
Hours for off-the-c.r.stud	1	49	49
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	1	2	2
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	2	2
Study period for final exams	1	50	50
Study period for mid-term exams	1	50	50
<b>Total Work Load</b>			<b>195</b>
<b>ECTS Credit of the Course</b>			<b>6</b>

Course Contribution To Program							
Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant							

	P02	P03	P04	P05	P06	P10
C01					3	5
C02					5	5
C03					5	5
C04			3			5
C05			3			5
C06			3			5
C07	2	3	5	3	4	5
C08			4			5
C09	3	3	4	4		5