



Module (Course Syllabus) Catalogue 2022-2023

College/ Institute	Erbil Technology College	
Department	Construction and Materials Technology Engineering	
Module Name	CONSTRUCTION MANAGEMENT	
Module Code	COM 353	
Degree	Technical Diploma <input type="checkbox"/>	Bachelor <input checked="" type="checkbox"/>
	High Diploma <input type="checkbox"/>	Master <input type="checkbox"/> PhD <input type="checkbox"/>
Semester	Semester 5	
Qualification	Ph.D. in Civil/Environmental Engineering	
Scientific Title	Assistant Professor	
ECTS (Credits)	7	
Module type	Prerequisite <input type="checkbox"/>	Core <input checked="" type="checkbox"/> Assist. <input type="checkbox"/>
Weekly hours	4 hrs.	
Weekly hours (Theory)	(2)hr Class	(2)Total hrs Workload
Weekly hours (Practical)	(2)hr Class	(161)Total hrs Workload
Number of Weeks	16	
Lecturer (Theory)	Dr.Abdulfattah Ahmad Amin	
E-Mail & Mobile NO.	abdufattah.amin@epu.edu.iq	
Lecturer (Practical)	Dr.Abdulfattah Ahmad Amin	
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Websites	/	

<p>Corse Description</p>	<p>In the Proposed Changes to the 2020-2021 Criteria for Accrediting Engineering Programs, ABET defines engineering design as “the process of devising a system, component or process to meet desired needs, specifications, codes and standards within constraints such as health and safety, cost, ethics, policy, sustainability, constructability, and manufacturability. It is an iterative, creative, decision-making process in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally into solutions.”¹ This semester course strives to provide students with practice while learning the basic concepts of engineering management.</p> <p>The course consists of a Four hours lecture period once per week to the entire class of students on topics necessary to engineering design and engineering management. There are also one- and one-half hour laboratory sections each week given to three separate sections in which students work in teams and at computers in a computer lab. on tutorials and team design activities. In the first semester, Engineering management majors at this university are also taking their math and basic sciences courses in their first year. Students learn about teaming and team management project management techniques, design for the environment, standards and regulations, engineering ethics, and receive instruction in technical writing and oral presentation using PowerPoint. Teaming is a section of the Leadership and Organizational Management domain as identified in the Engineering Management Body of Knowledge (EMBOK)². The Management of Technology, Research and Development Domain in the EMBOK. Project Management represents an entire domain in EMBOK. Standards and regulations fall under the Legal Issues in Engineering Management Domain.</p>
<p>Course objectives</p>	<p>The general objectives of this module are:</p> <ul style="list-style-type: none"> - Understand the theory of engineering (construction) management to tackle real live engineering problems - Apply principles of statics to solve engineering problems. - Involve in team working and collaborate with colleagues.
<p>Student's obligation</p>	<p>To pass this module the students should attend all lectures and complete all tests, exams and assignments.</p>
<p>Required Learning Materials</p>	<p>Forms of teaching Oral presentations lectures, Group discussions, Seminars, Problem-solving based learning, Project based learning</p>

Evaluation	Task		Weight (Marks)	Due Week	Relevant Learning Outcome
	Paper Review		/		
	Assignments	Homework	10	1-12	Improve to solving problems
		Class Activity	6	1-12	To analyze and solve engineering management problems
		Report	8		To learn how to write technical reports
		Seminar	8	1-12	Improve the ability of presentation
		Essay	/		
		Project	/	1-12	
		Quiz	8	1-12	Improve the ability of answering
	Lab.	/			
	Midterm Exam	20	1-12	To check his level	
	Final Exam	40	1-12		
Total	100				
Specific learning outcome:	<p><i>On successful completion of this module the learner will be able to:</i></p> <ol style="list-style-type: none"> 1. Recognize basic concepts of construction management. 2. Graduates will demonstrate the ability to communicate effectively both orally and in writing. 3. Graduates will demonstrate knowledge of the legal and ethical environment impacting business organizations and exhibit an understanding and appreciation of the ethical implications of decisions. 4. Graduates will demonstrate an understanding of and appreciation for the importance of the impact of globalization and diversity in modern organizations. 				

	<p>5. Graduates will demonstrate an ability to engage in critical thinking by analyzing situations and constructing and selecting viable solutions to solve problems.</p> <p>6. Graduates will demonstrate an ability to work effectively with others.</p> <p>7. Graduates will demonstrate knowledge of current information, theories and models, and techniques and practices in all of the major business disciplines including the general areas of Accounting and Finance, Information Technologies, Management, Marketing, and Quantitative Analysis.</p>	
Course References:	<ul style="list-style-type: none"> - Lecture notes. - 1) Managing Engineering and Technology, Daniel L. Babcock and Lucy C. Morse, Prentice Hall, 2002. - 2) Lecture notes of Prof. B. Gültekin Çetiner, Department of Industrial Engineering, Istanbul Technical University, 2011. 	
Course topics (Theory)	Week	Learning Outcome
Historical development of engineering (construction) management.	Week 1	1
Introduction to engineering construction.	Week 2	1, 2 and 7
Construction Project Definition.	Week 3	3 and 7
Construction Project Planning.	Week 4	3
Construction Project Management.	Week 5	1,2, 4 and 6
Critical Path Method – CPM for Construction Project.	Week 6	2, 3, 4 and 5
Midterm Examination.	Week 7	
Midterm Examination.	Week 8	
Strategies for Construction Project Managing.	Week 9	4, 5 and 6
Construction Project Budget.	Week 10	5, 6 and 7

Laws of Construction Project Management.	Week 11	4, 7
Core of Construction Project Management Tools.	Week 12	4, 5 and 6
CIVIL / Construction ENGINEERING CONTRACTS.	Week 13	4, 5 and 6
MODERN CONSTRUCTION MANAGEMENT THEORY	Week 14	2, 7
Final Examination	Week 15	
Final Examination	Week 16	
Practical Topics	Week	Learning Outcome
N.A		
- Examinations (question design): The following is an example of the examination and its answer:		

ERBIL POLYTECHNIC UNIVERSITY

Erbil Technology College | Date: Sunday 14/1/2021
 Construction and Materials Technology Engineering | Duration: 130 minutes
 Course: Construction Management Code: CCM 353 | Type of Exam: Quiz Term Exam
 Semester: Fall | Final Exam Make-up Exam

NOTE: All number without unit will be neglected and calculator device is allowed.

Q1/
 a) Draw a chart showing the evolution of management theory? (10 marks)
 b) What are (AOA) and (AON) in building network? (10 marks)


Q2/
 Find the Critical Path for the below given table using CPM method? (20 marks)

Activity	Predecessor	Duration
a	--	5 days
b	--	4
c	a	3
d	a	4
e	a	6
f	b, e	4
g	d	5
h	d, e	6
i	f	6
j	g, h	4

Q3/
 e) What are the Levels of Management in details? (20 marks)
 b) What the 3Ms in Management??

Q4/
 What are Project Management Main (Function) Activities, explain by using a diagram? (10 marks)

Q5/
 Calculate Cumulative present Value of Benefits for a present value of 3000 E invested at 15% interest at the end of 5th year? (20 marks)

Instructor's Name: Dr. Abdulafattah, Ahmad | Signature: 

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- **Extra notes:**

This Course catalogue has been prepared by:

1- Assist. Prof. Dr. Abdulafattah Ahmed Amin.

- **External Evaluator:**
 Assist. Prof. Dr. Saad Xalis Essa.