

Engineering Management & Economics

Course Description Form

1. Course Name:	
Engineering Management & Economics	
2. Course Code:	
CIV31206	
3. Semester / Year:	
First semester / Third year	
4. Description Preparation Date:	
1/10/2025	
5. Available Attendance Forms:	
In class	
6. Number of Credit Hours (Total) / Number of Units (Total)	
The. 2 hr. / 3 Units	
7. Course administrator's name (mention all, if more than one name)	
Name: Mohammed Wasea Sabbar Email: mohammed.w.sabbar@muc.edu.iq	
8. Course Objectives	
Course Objectives	1. Provide engineering students with an awareness of specific planning and scheduling techniques that can be used to implement and monitor new activities in construction projects 2. Evolution of management thought, theories, concepts and tools; and The key dimensions of the discipline of management. 3. . Understand importance of engineering economics, and gain a working knowledge of money management and how to make economic comparisons of alternative engineering designs or projects. 4. Understand the impact of depreciation, inflation, taxation, economic basis for replacement, project scheduling, and applied to economic investment and project-management problems. 5. Appreciation of ethical and other economic issues related to professional and personal financial and economic decisions.
9. Teaching and Learning Strategies	
Strategy	The main adopted strategy in delivering this module, encourage students' participation in the exercises, refining and expanding their critical thinking skills comprised: Lectures. Tutorials. Homework and Assignments. Tests and Exams. In-Class Questions and Discussions. Connection between Theory and Application. Extracurricular Activities. In- and Out-Class oral conservations.

10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1.	2	Introduce students to definitions of projects management, Life cycle of project, Project parties and responsibilities, types of contracts , and definition of the Iraqi standard documents approved in order to defend decisions made relating to ethics, legal, and safety requirements made as a civil engineer	Construction Management Approach	1. Interactive Learning 2. Collaborative Learning 3. Technology-enhanced 4. Learning Problem-based Learning	Several Ways (Exams + Assignments)
2.	2		Project Delivery Method , Project Construction Phases, Iraqi Standard Documentation		Several Ways (Exams + Assignments)
3.	2	Describe the general theories, methods, and tools for managing (a) time (b) resources, (c) cost and (d) information for enhanced decision-making in engineering and business environments.	Construction projects planning and scheduling - Bar-chart (Gantt chart) Planning Technique		Several Ways (Exams + Assignments)
4.	2		Construction projects planning and scheduling - Network Scheduling – Critical Path Method		Several Ways (Exams + Assignments)
5.	2		Construction projects planning and scheduling - Program Evaluation &		Several Ways (Exams + Assignments)

			Review Technique		
6.	2		Construction projects planning and scheduling - Line of Balance Method		Several Ways (Exams + Assignments)
7.	2		Resource allocation & Analysis – Time Limitation method		Several Ways (Exams + Assignments)
8.	2		Resource allocation & Analysis – Resource Limitation method		Several Ways (Exams + Assignments)
9.	2	Explain the principles and terminology of engineering economy, time value of	Introduction - Description and Role in Decision Making		Several Ways (Exams + Assignments)
10.	2	money and element of cost Apply the concepts, principles and techniques in engineering economy using engineering economy factors (F/P, P/F, P/A, A/P, F/A, A/F, P/G, A/G factors)	Interest Rate and Rate of Return, Cash Flows: Estimation and Diagramming, Simple and Compound Interest		Several Ways (Exams + Assignments)
11.	2	and interest rate. Apply complex problems and scenario to compute	The time value of money - Economic Equivalence		Several Ways (Exams + Assignments)
12.	2	equivalent amount for cash flows,	Equivalence , nominal and effective interest rate		Several Ways (Exams + Assignments)

13.	2	depreciations, and economic studies	Uniform gradient series		Several Ways (Exams + Assignments)
14.	2	Evaluate alternatives using suitable methods	Deprecation and		Several Ways (Exams + Assignments)
15.	2	such as Present Worth, Future Worth, Annual Worth Analysis, and Replacement Analysis for different project/investment opportunities to select the most beneficial by applying the appropriate evaluation method	The basic methods for economic studies and Compression between alternatives		Several Ways (Exams + Assignments)

16. Course Evaluation

1. Final Exam: 60%
2. Monthly Exams: 15%
3. Reports and Assignments: 10%
4. Attendance and Daily Participation: 10%
5. Oral Evaluation: 5%

17. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- PROJECT PLANNING, SCHEDULING, AND CONTROL A Hands-On Guide to Bringing Projects in on Time and on Budget, 4TH edition 2- ENGINEERING ECONOMY, Leland Blank, P. E., Anthony Tarquin, P. E., 7TH EDITION
Main references (sources)	Engineering Economics, R. Panneerselvam Professor School of Management Pondicherry University.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	