



Faculty: Engineering Technology	
Department: Energy	Program: Bachelor Degree
Academic year: 2022-2023	Semester: 2st (Fall)

Course Plan

First: Course Information

Course No. 0906402	Course Title: Engineering Economy and Management	Credit Hours: 3
Prerequisite: 80 hours	Section No.: 1	Lecture Time: 11-10:30, Sat, Mon, Wed
Type Of Course:	<input type="checkbox"/> Obligatory Faculty Requirement <input type="checkbox"/> University Requirement <input type="checkbox"/> Obligatory University Requirement <input checked="" type="checkbox"/> Faculty Requirement <input type="checkbox"/> Course Elective Specialty Requirement Obligatory Specialization requirement	
Type of Learning:	<input type="checkbox"/> Face-to-Face Learning <input checked="" type="checkbox"/> Blended Learning (2 Face-to-Face + 1 Asynchronous) <input type="checkbox"/> Online Learning (2 Synchronous + 1 Asynchronous)	

Second: Instructor's Information

Name: Dr. Ghanim Bakr	Academic Rank: Associate Professor	
Office Number: 138 L	Ext. Number: 2038	E-mail: ghbekr@zu.edu.jo
Office Hours:	Sunday Monday Tuesday Wednesday Thursday 10-119-1010-119-1010-11	

Third: Course Description

1. The objectives of this course are to cover the concepts and techniques of engineering economy and project management. More specifically, the course consists of three main parts:
2. Part I: introduction to Engineering Economy.
3. Part II: Interest formulas and equivalence
4. Part III: Economic analysis of alternatives.
5. Part IV: Principles of project management

Fourth: Learning Source

Main Reference:	Engineering Economy	
Author:by Blank and Tarquin	Issue No.:6th,ed	Publication Year: (2017)
Additional Sources&Websites:	<ul style="list-style-type: none"> • • 	
Teaching Type:	<input checked="" type="checkbox"/> Classroom <input type="checkbox"/> Laboratory <input type="checkbox"/> WorkshopMS <input type="checkbox"/> Teams <input type="checkbox"/> Moodle	

Fifth: Learning Outcomes

Course Code	CourseIntendedLearning Outcomes (CILOs)	Connection To Program ILOs Code
Knowledge		
**K1	Formulate and solve time value of money problems.	*PK1
K2	Identify relevant and pertinent data and apply net present value and internal rate of return methods to solve economic problems.	PK2
K3	Be able to evaluate multiple alternatives to determine the best alternative using several different methods.	PK3
Skills		
***S1	Developing the base of conventional methods to deal with the effect of time on the value of the money	PS1
S2	Developing the base to deal with incremental payments whether the get increase by fixed amount or fixed percentage.	PS2
S3	Developing the base for the comparisons between two or more alternatives in selecting the best solution	PS3
S4	Learn to understand, analyze the profitability of a single project	PS4
S5	Ability to handle the time value of money, economic realities, inflation, cost estimation, and tax considerations	PS5
Competencies		
****C1	Communication and flexibility	PC1
C2	Problem solving and information technology	PC2

* P: Program, **K: knowledge, ***S: skills, ****C: competencies.

Sixth: Course Structure

Day	ILO	Topic(s)	Teaching Procedure*	Teaching Methods**	References* **
6/3/2023	1	Chapter 1: Terminology & Cash flow diagrams	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
8/3/2023	1	Chapter 1: Terminology & Cash flow diagrams	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
11/3/2023	1	Activity No.1	Self-learning online activity	Education Video	Moodle
13/3/2023	1	Chapter 2: Factors and their use	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
15/3/2023	1	Chapter 2: Factors and their use	Interactive lectures,using PPT slides/class notes, digital pen	lecturing, discussion, problem solving.	University actual attendance
18/3/2023	1	Activity No.2	Self-learning online activity	Education Video	Moodle
20/3/2023	1	Chapter 3: Nominal and effective IR & continuous compounding	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
22/3/2023	1, 2	Chapter 3: Nominal and effective IR & continuous compounding	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
25/3/2023	1	Activity No.3	Self-learning online activity	Education Video.	Moodle
27/3/2023	1, 2	Chapter 3: Nominal and effective IR & continuous compounding	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
29/3/2023	1, 2	Chapter 4: Use of multiple factors	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
1/4/2023	1	Activity No.4	Self-learning online activity	Education Video.	Moodle
3/4/2023		Chapters 1 and 2 and 3		Quiz 1	University actual attendance

Day	ILO	Topic(s)	Teaching Procedure*	Teaching Methods**	References* **
5/4/2023	1, 3	Chapter 5: Present worth and capitalized-cost evaluation	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
8/4/2023	1	Activity No.5	Self-learning online activity	Education Video.	Moodle
10/4/2023	1, 3	Chapter 5: Present worth and capitalized-cost evaluation	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
12/4/2023	1, 4	Chapter 5: Present worth and capitalized-cost evaluation	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
15/4/2023	1	Activity No.6	Self-learning online activity	Education Video.	Moodle
17/4/2023	1, 4	Chapter 6: Equivalent-uniform – annual-worth evaluation	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
19/4/2023	1, 4	Chapter 6: Equivalent-uniform – annual-worth evaluation	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
22/4/2023	1	Activity No.7	Self-learning online activity	Education Video.	Moodle
24/5/2023	1, 5	Chapter 6: Equivalent-uniform – annual-worth evaluation	Interactive lectures,usingPPT slides/class notes, digital pen.	Student presenting role	University actual attendance
26/5/2023	1, 5	Chapter 7: Rate-of-return computation for single projects	Interactive lectures,usingPPT slides/class notes, digital pen.	Student presenting role	University actual attendance
29/4/2023	1	Activity No.8	Self-learning online activity	Education Video.	Moodle
1/5/2023	1, 5	Chapter 7: Rate-of-return computation for single projects	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
3/5/2023	1, 5	Chapter 8. ROR computation for Multiple alternatives	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
6/5/2023	1	Activity No.9	Self-learning online activity	Education Video.	Moodle

Day	ILO	Topic(s)	Teaching Procedure*	Teaching Methods**	References***
8/5/2023	1, 5	Chapter 8. ROR computation for Multiple alternatives	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
10/5/2023	1, 5	Chapter 8. ROR computation for Multiple alternatives	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
13/5/2023	1	Activity No.10	Self-learning online activity	Education Video.	Moodle
15/5/2021	1, 5	Chapter 8. ROR computation for Multiple alternatives	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
17/5/2023	1, 5	Chapter 8. ROR computation for Multiple alternatives	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
20/5/2022	1	Activity No.11	Self-learning online activity	Education Video.	Moodle
22/5/2023	1,6	Chapter 9: Benefit cost ratio evaluation	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
24/5/2023	1,6	Chapter 9: Benefit cost ratio evaluation	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
27/5/2023	1	Activity No.12	Self-learning online activity	Education Video.	Moodle
29/5/2023	1,6	Chapter 9: Benefit cost ratio evaluation	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
31/5/2023	1,6	Chapter 9: Benefit cost ratio evaluation	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
4/6/2023		General Revision	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance
6/6/2023		General Revision	Interactive lectures,usingPPT slides/class notes, digital pen.	lecturing, discussion, problem solving.	University actual attendance


* Learning procedures: (Face-to-Face, synchronous, asynchronous). ** Teaching methods: (Lecture, video.....). *** Reference: (Pages of the book, recorded lecture, video....)

Seventh: Assessment methods

Methods	Grade	Date	Platform	CLO'S
Mid Exam	30	Fixed by the Department	Classroom	
Assign, Quizzes & Participation	20	During Semester	Classroom+Moodle	
Final Exam	50	Fixed by the Department	Classroom	

Eighth: Course Policies

- All course policies are applied on all teaching patterns (online, blended, and face-to-face Learning) as follows:
 - a. Punctuality.
 - b. Participation and interaction.
 - c. Attendance and exams.
- Academic integrity: (cheating and plagiarism are prohibited).

Approved by:	Name	Date	Signature
Head of Department	Dr. AymanAmer	6/3/2023	
Faculty Dean	Prof. TaiseerAlghanim	6/3/2023	