Faculty: Engineering Technology	
Department: Energy	**Program: Bachelor Degree**
Academic year: 2022-2023	**Semester: 2^{nd}(Fall)**

Course Plan

First: Course Information

Course No. 0906540	***Course Title:* Energy Economy and Management**	***Credit Hours:3***
Prerequisite: 0906402	***Section No.: 1***	***Lecture Time: 11-12:30, Mon ,Wed***
Type Of Course:	☐ ***Obligatory Faculty Requirement Elective*** ☐ ***University Requirement*** ☐ ***ObligatoryUniversity Requirement*** ☐ ***FacultyRequirement*** ☐ ***Course Elective SpecialtyRequirementObligatorySpecialization requirement***	
Type of Learning:	☒ ***Face-to-Face Learning*** ☐ ***BlendedLearning(2 Face-to-Face + 1Asynchronous)*** ☐ ***Online Learning (2 Synchronous+1 Asynchronous)***	

Second: Instructor's Information

***Name:* Dr. Ayman Amer**			***Academic Rank:* Assistant Professor**		
Office Number:344 l			***Ext. Number:2051***	***E-mail:*** **aamer@zu.edu.jo**	
Office Hours:	***Sunday***	***Monday***	***Tuesday***	***Wednesday***	***Thursday***
	10-11	***1-2***	***10-11***	***1-2***	***10-11***

Third: Course Description

Energy management principles; energy conservation; energy auditing; analysis; formulation of energy management options; economic evaluation, implementation & control; energy conservation techniques – conservation in energy intensive industries; steam generation, distribution systems, and electrical systems; integrated resource planning; demand-side management; cogeneration; total energy schemes; thermal insulation; energy storage; economic evaluation of conservation technologies; analysis of typical applications. Application of the principles and practices of energy management to improve energy efficiency, sustainability, and renewable resource usage.

Fourth: Learning Source

Main Reference:	***Engineering* Economy**	
Author: by Blank and Targuin	***Issue No.:6th,ed***	***Publication Year:* (2017)**
Additional Sources&Websites:	• •	
Teaching Type:	☒ ***Classroom*** ☐ ***Laboratory*** ☐ ***Workshop*** ☐ ***MS Teams*** ☐ ***Moodle***	

Fifth: Learning Outcomes

Course Code	***Course IntendedLearning Outcomes (CILOs)***	***Connection To Program ILOs Code***
Knowledge		
**K1	Presenting general concepts of energy economics and theories of the origin of oil	*PK1
K2	The Energy Economics branch uses economic analysis tools to understand the problems of current and future energy supply and demand	PK2
K3	Adjusting the methodology of energy economics and expanding its analyzes to accommodate changes in the field of energy	PK3
Skills		
***S1	Developing the base of conventional and unconventional energy reserves globally	PS1
S2	Energy efficiency and energy efficiency indicators	PS2
S3	The extent of the close link between energy and development on the one hand, and how energy contributes to advancing economic development	PS3
S4	Learn to understand, analyze and manage the money aspect of any project for its success	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

Lecture Date	Intended Teaching Outcomes(ILOs)	Topics	Teaching Procedures*	TeachingMethods***	References***
5/3/2023	0	Introduction to Economy	General discussions	Discussion and problem Solving	Energy Engineering
7/3/2023	1	Introduction to Economy	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
9/3/2023	1	Introduction to Economy	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
12/3/2023	1	Factors for TMV	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
14/3/2023	2	Factors for TMV	At least one exam will be held suddenly during the semester	Discussion and problem Solving	Energy Engineering
16/3/2023	1 & 2	Factors for TMV	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
19/3/2023	3	Combining Economy Facturs	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
21/3/2023	3	Combining Economy Facturs	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
23/3/2023	3	Combining Economy Facturs	General discussions	Discussion and problem Solving	Energy Engineering
26/3/2023	3	Nominal and Effective Rates	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
28/3/2023	3	Nominal and Effective Rates	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
30/3/2023	4	Nominal and Effective Rates	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
2/4/2023	3 & 4	Present Worth (PW) Analysis	At least one exam will be held suddenly during the semester	Discussion and problem Solving	Energy Engineering
4/4/2023	3 & 4	Present Worth (PW) Analysis	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
6/4/2023	4	Present Worth (PW) Analysis	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
9/4/2023	5	Future Worth (FW) Analysis	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
11/4/2023	5	Future Worth (FW) Analysis	General discussions	Discussion and problem Solving	Energy Engineering
13/4/2023	5	Future Worth (FW) Analysis	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
16/4/2023	5	Annual Worth (AW) Analysis	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
18/4/2023	5	Annual Worth (AW) Analysis	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
20/4/2023	4	Annual Worth (AW) Analysis	At least one exam will be held suddenly during the semester	Discussion and problem Solving	Energy Engineering
27/4/2023	3 & 4	Rate of Return Analysis: one projects	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering

30/4/2023	6	Rate of Return Analysis: one projects	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
2/5/2023	4	Rate of Return Analysis: one projects	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
4/5/2023	3 & 4	Rate of Return Analysis: multiple projects	General discussions	Discussion and problem Solving	Energy Engineering
7/5/2023	3 & 4	Rate of Return Analysis: multiple projects	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
9/5/2023	4	Rate of Return Analysis: multiple projects	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
11/5/2023	6	Introduction to Engineering Management	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
14/5/2023	4	Introduction to Engineering Management	At least one exam will be held suddenly during the semester	Discussion and problem Solving	Energy Engineering
16/5/2023	6	Management Processes and Elements	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
18/5/2023	4	Management Processes and Elements	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
21/5/2023	7	Schools of Management	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
23/5/2023	8 , 9 , 10	Schools of Management	General discussions	Discussion and problem Solving	Energy Engineering
28/5/2023	8 , 9 , 10	Schools of Management	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
30/5/2023	8 , 9 , 10	Energy Management	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
1/6/2023	8 , 9 , 10	Energy Management	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering
4/6/2023	10	Energy Management	At least one exam will be held suddenly during the semester	Discussion and problem Solving	Energy Engineering
6/6/2023	10	Energy Management	Review the previous lecture, then explain the current lecture	Discussion and problem Solving	Energy Engineering

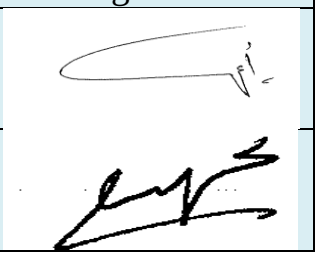
* Learning procedures: (Face-to-Face, synchronous, asynchronous). * * Teaching methods: (Lecture, video…..). ** * Reference: (Pages of the book, recorded lecture, video….).

Seventh: Assessment methods

Methods	Grade	Date	Platform	CLO'S
First Exam	20	Fixed by the Department	Classroom	
Second Exam	20	Fixed by the Department	Classroom	
Assign, Quizzes &Participation	10	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. Ayman Amer	5/3/2023	
Faculty Dean	Prof .Taiseer Alghanim	5/3/2023	