Jordan University of Science and Technology

Faculty of Engineering

Industrial Engineering Department

IE351 Economics & Engineering Management - JNQF Level: 7
First Semester 2023-2024

Course Catalog
2 Credit Hours. This course introduces the concepts of time value of money, interest formulas, judging attractiveness of proposed investments using different methods, depreciation, inflation, increment cost and sunk cost. also includes introduction to engineering management.

Text Book	
Title	Engineering Economy
Author(s)	W. G. Sullivan, E. M. Wicks, and C. Patrick Koelling
Edition	16th Edition
Short Name	Text book
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Text book	Engineering Economy	L. T. Blank and A. Tarquin	5th Edition	
Ref #3	Project Management for Business and Engineering: Principles and Practice	John M. Nicholas	2nd Edition	

Instructor	
Name	**Mrs. Maysa Alshraideh**
Office Location	M6L0
Office Hours	
Email	mashraideh@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Mon : 13:00 - 14:00 Room: قاعة الفعاليات Section 2: Lecture Time: Wed : 13:00 - 14:00 Room: قاعة الفعاليات Section 3: Lecture Time: Mon : 11:30 - 12:30 Room: قاعة الفعاليات

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
902010	MATH201 Intermediate Analysis	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Weeks 1, 2	Introduction	From **Text book**
Weeks 2, 3, 4, 5, 6	Time Value of Money (Interest Formulas)	From **Text book**, From **Text book**
Weeks 7, 8, 9	Evaluating of a single project	From **Text book**, From **Text book**, From **Ref #3**
Weeks 10, 11, 12	evaluating of multiple alternatives	From **Text book**, From **Text book**, From **Ref #3**
Weeks 13, 14	cost concept	From **Text book**, From **Text book**, From **Ref #3**
Weeks 15, 16	depreciation and income taxes	From **Text book**, From **Text book**, From **Ref #3**

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Develop cash flow diagrams for investments and evaluate their worth [1SO1] [1L7K1, 1L7C1, 1L7C2]	30%	first exam, final exam
Determine the economic feasibility of engineering projects and investments [1SO1, 1SO2] [1L7K1, 1L7C1, 1L7C2]	15%	first exam, final exam

Apply principles of accounting and evaluate the depreciation charges using different methods [1SO2, 1SO4] [1L7K1, 1L7C1, 1L7C2]	12%	first exam, final exam
Apply break-even analysis to make decisions in production operations [1SO1, 1SO2, 1SO4] [1L7K1, 1L7C1, 1L7C2]	16%	second exam, final exam
Demonstrate knowledge of the concepts and principles of project management, and use project management skills [1SO1, 1SO2, 1SO4] [1L7K1, 1L7C1, 1L7C2]	12%	second exam, final exam
Making decisions by comparing between Mutually Exclusive Alternatives and then identify the best alternative. [1SO4] [1L7K1, 1L7C1, 1L7C2]	15%	second exam, final exam

Relationship to Program Student Outcomes (Out of 100%)						
SO1	SO2	SO3	SO4	SO5	SO6	SO7
46.83	22.83		30.33			

Relationship to NQF Outcomes (Out of 100%)		
L7K1	L7C1	L7C2
33.33	33.33	33.33

Evaluation	
Assessment Tool	**Weight**
first exam	30%
second exam	30%
final exam	40%

Policy	
Attendance	Attendance will be checked at the beginning of each class. University regulations will be strictly followed for students exceeding the maximum number of absences. No make-up test will be given without an official university-approved excuse.
Student Conduct	It is the responsibility of each student to adhere to the principles of academic integrity. Academic integrity means that a student is honest with him/herself, fellow students, instructors, and the University in matters concerning his or her educational endeavors. Cheating will not be tolerated in this course. University regulations will be pursued and enforced on any cheating student.

Date Printed: 2023-11-27