


College of Engineering			
Department of Civil Engineering			
GE 403 Engineering Economy			
Credit and Contact hours	2 / 2 (Lectures), 1 (Tutorials), 0 (Laboratory)		
Required, or Elective	Required for a BSCE degree		
Course Description	This course is being offered to the students who enroll in the College of Engineering to give them fundamental knowledge and understandings on Cost concepts, Time value of money operations, Measuring the worth of investments, Comparison of alternatives, Depreciation, and Economic analysis of public projects.		
Prerequisites or Co-requisites	None		
Course Learning Outcomes	Students completing this course successfully will be able to		
	Course Learning Outcomes		<i>Related Student Outcomes (SO)</i>
	CLO1. Recognize the time value of money and its operations.		PC1
	CLO2. Compare projects alternatives by different techniques.		SO4
	CLO3. Measure and determine depreciation		SO4
	CLO4. Compare the economics of different projects in public and regulator sectors.		SO4
	CLO5. Recognize the cost concepts and the cost terminology.		PC1
Student Outcomes related to this Course	<p>PC1. An ability to explain basic concepts in project management, business, public policy, and explain the importance of professional licensure</p> <p>SO 4: .an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.(ABET4)</p>		

Topics Covered	List of Topics		Related CLOs
	1. Time value of money Operations		CLO1
	2. Reality issues and practical applications.		CLO1
	3. Measuring the worth of investments and Comparison of alternatives		CLO2
	4. Depreciation.		CLO3
	5. Replacement analyses.		CLO2
	6. Economic analyses of projects in the public and regulated sectors		CLO4
	7. Cost concepts.		CLO5
Textbook(s) and Other Required Material	John A. White, Kenneth E. Case and David B. Pratt, “Principles of engineering economic analyses”, 5 th edition.		
Grading System	Two Mid-term exams	50 %	
	Quizzes and Assignments	10%	
	Final Exam:	40%	
Instructors	Prof. Abdulrahman Al-Suhaibani (2A43/2), Email: asuhaib@ksu.edu.sa, Dr. Saif A. Alarifi (2A46), email; saalarifi@ksu.edu.sa, Dr. Seongkwan Mark Lee (2A55), email: slee@ksu.edu.sa Dr. Mohammed Almannaa (2A70), email: malmannaa@ksu.edu.sa, Dr. Ali Alsahli (2A26), email: adalsahli@ksu.edu.sa		
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Course Learning Outcomes CLOs

	SO1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics, and using modern engineering tools	SO 2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare , as well as global, cultural, social, environmental, and economic factors .	SO 3. an ability to communicate effectively with a range of audiences . [ABET 3]	SO 4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments , which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts .	SO 5. an ability to function effectively on a team whose members together provide leadership , create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	SO 6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	SO 7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies	PC1. An ability to explain basic concepts in project management, business, public policy , and explain the importance of professional licensure	K1. An ability to gain knowledge of facts, concepts and theories of mathematics Science, Engineering, Islamic values and Arabic literature .
CLO1. Recognize the time value of money and its operations.								100%	
CLO2. Compare projects alternatives by different techniques.				100%					
CLO3. Measure and determine depreciation				100%					
CLO4. Compare the economics of different projects in public and regulator sectors.				100%					
CLO5. Recognize the cost concepts and the cost terminology.								100%	
Summation				300%				200%	
Distribution of Credit hours (2hours)				1.2 60%				0.8 40%	