

H-Form ISE 305

Course Information:	
Code and Title:	ISE 305 Engineering Economy
Prerequisites:	-
Co requisite (if any)	-
Credit Hours: 3	Lecture Hrs. (45), Tutorial Hrs. (0), Lab (0), Total Credits (45)
College/ Department:	College of Engineering/Industrial and Systems Engineering

Course Description:
The course Introduces the concepts of economic decision-making from a cash flow viewpoint. It includes present worth analysis, cash flow equivalence, rates of return, replacement analysis, benefit-cost analysis, depreciation and taxes, and projects break-even point.

Course Objectives:
This course equips students with valuable insights into essential concepts related to engineering economics. Firstly, it focuses on developing students' awareness of fundamental principles such as the cash flow approach, time value of money, and product/project costing, providing a solid foundation for financial understanding within an engineering context. Secondly, the course introduces students to the intricate process of integrating engineering proposals with economic analysis, emphasizing the importance of this integration in selecting the most viable alternative projects. Finally, students will gain an understanding and appreciation for the various models and measures employed in decision-making within the realm of engineering economics. By addressing these key components, the course aims to empower students with the knowledge and analytical skills necessary to make informed decisions and navigate the economic aspects of engineering projects effectively.

Course Learning Outcomes		
		PLO
Knowledge Understanding		
1.1	Define the knowledge of engineering economy	K1
1.2	Recognize the impact of decision-making strategies in economical context	K3
Skills		
2.1	Evaluate the economic feasibility of investments related to engineering projects.	S1
2.2	Select financially prudent decisions (car/home loans or investments).	S1
2.3	Assess the impact of depreciation, taxation and other economic factors on projects' feasibility.	S1
2.4	Generate sensitivity analysis on key compounding parameters.	S4

Textbook:			
Title:	Fundamentals of Engineering Economics		
Author(s):	Chan S. Park		
Publisher:	Pearson	Year and Edition:	4 th Edition, 2020
Other Useful Resources:	Engineering Economy and the Decision-making Process, Joseph C. Hartman, Pearson/Prentice Hall, 2007 Engineering Economy, 8th Ed, Leland Blank and Anthony Tarquin, McGraw-Hill, 2018.		