New Jersey Institute of Technology
Department of Engineering Technology
MNET 414 Industrial Cost Analysis

COURSE NUMBER	MNET 414
COURSE DESCRIPTION	Industrial Cost Analysis
COURSE STRUCTURE	3-0-3 (lecture hr/wk - lab hr/wk – course credits)
COURSE COORDINATOR/ INSTRUCTOR	Dr. S. Lieber / C. Zeiner
COURSE DESCRIPTION	An introduction to general costing techniques. Time value of money concepts are introduced to decision-making matters such as equipment justification, design selection and fabrication costs.
PREREQUISITE(S)	None
COREQUISITE(S)	None
REQUIRED MATERIALS	Engineering Economic Analysis, Fouteenth Edition, by Donald G. Newnan et al, Oxford Press, ISBN: 9780190931919and Study Guide
COMPUTER USAGE	Spreadsheets
COURSE OUTCOMES (CO)	By the end of the course students should be able to: 1. Calculate industrial costs and benefits using a variety of techniques 2. Understand the importance of time-value of money in economic analyses and calculate its effects on investments and loans 3. Analyze realistic cost:benefit scenarios in typical industry problems 4. Evaluate economic alternatives considering the effects of depreciation and taxes 5. Parse complex real-world technical cost issues, identify and analyze cost reduction alternatives, and make an oral and written presentation to "management" 6. Demonstrated ability to read-ahead course materials in advance of class lecture, and report both key learnings and issues to instructor before class 7. Understand and practice how to recognize and analyze ethical issues
CLASS TOPICS	Making Economic Decisions, Engineering Costs and Cost Estimating, Interest & Equivalence, Interest Formulae, Present Worth Analysis, Annual Cash Flow Analysis, Rate of Return Analysis, Incremental Analysis, Other Analysis Techniques, Depreciation, Income Taxes, Ethics
STUDENT OUTCOMES	The Course Learning Outcomes support the achievement of the following MET Student Outcomes and TAC of ABET Criterion 9 requirements: **Student Outcome 1 -** an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline; **Related CO – 1-5**

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Student Outcome 5 - an ability to function effectively as a member as well as a leader on technical teams.
Related CO – 6-7

GRADING POLICY	3-Exams	30%	Final Exam	30%
	Course Project	20%	HW/Quizzes	20%

ACADEMIC INTEGRITY NJIT has a zero-tolerance policy regarding cheating of any kind. Student behavior that is disruptive to the learning environment will not be tolerated. Incidents will be reported to the Dean of Students. Honor Code violations may result in failure in the course, disciplinary probation, and/or expulsion from NJIT. Refer to http://www.njit.edu/academics/honorcode.php

STUDENT BEHAVIOR Will be discussed in class

MODIFICATION TO COURSE The Course Outline may be modified at the discretion of the instructor or in the event of extenuating circumstances. Students will be consulted if any changes occur.

PREPARED BY C. Zeiner

COURSE COORDINATED BY Dr. S. Lieber

CLASS HOURS

Thursday 6:00 PM to 8:50 PM KUPF 118

OFFICE HOURS

By Appointment:
Phone 732-691-6371 Email zeiner@njit.edu

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GRADING LEGEND

GRADE	NUMERIC RANGE
A	90 to 100
B+	85 to 89
B	80 to 84
C+	75 to 79
C	70 to 74
D	60 to 69
F	0 to 59

GENERATIVE AI

Student use of artificial intelligence (AI) is permitted in this course for certain assignments and activities. It is not permitted to be used in the assignments noted by the instructor, as doing so would undermine student learning and achievement of course learning outcomes. Additionally, if and when students use AI in this course, the AI must be cited as is shown within the NJIT Library AI citation page for AI. If you have any questions or concerns about AI technology use in this class, please reach out to your instructor prior to submitting any assignments.

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COURSE OUTLINE

Week	Date	Topic	Chapter	Homework
0		Introduction	1, 2	Read /Review
1	1/23	Interest & Equivalence	3	11, 29
2	1/30	More Interest Formulas	4	6, 18
3	2/6	Present Worth Analysis	5	30, 46
4	2/13	Annual Cash Flow **Project Proposal Due**	6	11, 49
5	2/20	Exam Review / **EXAM 1**		
6	2/27	Rate of Return	7	18, 76
7	3/6	Incremental Analysis & Benefit Cost Analysis	8	34 b
8	3/13	Other Analysis Techniques	9	
SPRING BREAK NO CLASS 3/20				
9	3/27	Exam Review / **EXAM 2**		14, 50
NO CLASS 4/3				
10	4/10	Depreciation	11	12, 20
11	4/17	Income Tax	12	
12	4/24	Exam Review / **EXAM 3**		
13	5/1	Project Presentations		
14	5/6	Project Presentations / **PROJECTS DUE**		
TBD		**FINAL EXAM**		