

COURSE NUMBER: IE 5441, 4 credits	COURSE TITLE: Engineering Cost Accounting, Analysis and Control
TERMS OFFERED: Fall, Spring	PREREQUISITES: IT Upper Division
TEXTBOOKS/REQUIRED MATERIAL: Accounting the Basis for Business Decisions by Meigs, Williams, Haka, Bettner	PREPARED BY: Professor Sant Arora
COURSE LEADER(S): Professor Sant Arora	DATE OF PREPARATION: February 15,2007
	CLASS/LABORATORY SCHEDULE: Four 50 minute sessions per week.
	CONTRIBUTION OF COURSE TO MEETING PROFESSIONAL OBJECTIVES: 100% engineering topics
CATALOG DESCRIPTION: Financial Accounting, managerial accounting, engineering economics, preparing financial statements, handling accounts payable, receivables, inventories, depreciating, financing sources, capital cost and structure. Concepts of time, value of money and risk used in managerial decision making. Design of cost accounting system and activity based costing.	COURSE TOPICS: <ol style="list-style-type: none"> 1. The role of financial accounting information for outsiders in resource allocational function and of managerial accounting for insiders in planning, decision making and control functions. 2. Designing a common data base system to meet the needs of both systems. 3. Preparing of financial statements. 4. Journalizing of various transactions. 5. Handling of merchandizing functions, inventory management, inventory accounting, purchasing, accounts receivables, accounts payable. 6. Time value of money. 7. Financing, cost of debt, cost of equity, return on assets, return on equity, debt/equity rates, risk. 8. Fixed and variable costs, direct and indirect costs, period and product costs. 9. Activity based costing (ABC). 10. Activity based management (ABM). 11. Job costing, product costing, process costing. 12. Performance measurement, responsibility accounting, variance accounting. 13. Relationship between Planning and control. 14. Identifying, collecting and reporting quality costs. 15. Providing data for re-engineering projects, value chains. 16. Improving co-ordination and integration within the company and with external business functions. 17. Ethics in reporting cost information. 18. Preparing operational and capital budgets. 19. Global competition and opportunities 20. Risk, exchange risk.

COURSE OBJECTIVES	<ol style="list-style-type: none"> 1. Improving problem solving capabilities, generating alternatives, using factual input output data, rank ordering of alternatives and choosing the best. 2. Using quality costs for identifying weaker components and directions of improvement. 3. Developing appreciation for the importance of factual data. 4. Improving costing procedures for products and processes for improving pricing and bidding systems. 5. Improving quality of value chains through activity based management and through improving integration and communication within the company and with extended partners. 6. Improving performance measurements. 7. Improving budgeting and control operations. 8. Improving capability to perform profitability analysis, re-engineering decisions of products, processes. 9. Developing appreciation of relationship between planning and control, variance accounts, comparison of actual amounts with budgeted amounts. 10. Improving the importance of information in generating cost information.
COURSE OUTCOMES	<p>(numbers shown in brackets are linked to ABET outcomes a-k)</p> <ol style="list-style-type: none"> 1. The students start appreciating that management accounting systems are tailor-designed for each individual company. Collecting quality cost information on an on-going basis is an equally challenging problem. [h, j] 2. They start appreciating that significant improvements in operations are realizable if improvements in more composite chains are sought than improvements in just isolated activities [h, j k]. 3. They start appreciating the role of responsibility accounting in performance measurement and in the basics behind the preparation of responsibility operational budgets [c, d, e]. 4. They start appreciating the role of ethics, team work, accurate factual data [f]. 5. They get exposed to some basic techniques of how to get rid of time and risk dimensions while comparing various alternatives. [j, k]
ASSESSMENT TOOLS:	<ol style="list-style-type: none"> 1. Homework 2. Exams.

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Nature of Changes

This syllabus was reviewed by Dr. Arora and no changes were made.