



**COMPLEMENTARY STUDIES
SYLLABUS OF EXAMINATIONS
1998 EDITION**

98-CS-1 Engineering Economics

Basic concepts of engineering economics through understanding of the theoretical and conceptual financial project analysis. Types and applications of Engineering Economic Decisions. Capital, cash flow, and the time value of money concepts. Nominal and Effective Interest rates when considering loans, mortgages, and bonds. The application of Present Worth Analysis, Annual Equivalent Analysis and Rate of Return Analysis in evaluating independent projects, comparing mutually exclusive projects, analyzing lease vs. buy alternatives and making decisions. After - Tax Financial Analysis requiring an understanding of Capital Cost Allowance (Depreciation) and Corporate Income Tax. Measurement of inflation, incorporation of inflationary effects. Understanding methods of Financing and Capital Budgeting. Break-even, sensitivity and risk analyses.

Prime Text

Contemporary Engineering Economics: A Canadian Perspective. (2nd edition) Park, Chan S., Pelot, R., Porteous, Kenneth C., and Zuo, Ming J. M.J. Addison Wesley Longman (2001). Hardcover ISBN 0201613905.

Supplementary Text

Engineering Economics in Canada (2nd Edition) Fraser, Niall M., Berhhardt, Irwin, Jewkes, Elizabeth M. Prentic Hall (2000). Hardcover, ISBN 0130138444.

Engineering Economics Second Canadian Edition, Riggs, James L., Bedworth, David D., Randhawa, Sabah U., Khan, Ata M. McGraw-Hill Ryerson (1997). Hardcover, ISBN 0075526662

98-CS-2 Engineering in Society - Health, Safety, and the Environment

Concepts and consideration of health, safety, and the environment, both current and future. Awareness of the work place environment with consideration to light, temperature, humidity, air flow, noise, and dust control. Rules and regulations relating to the work place environment. Emergency procedures due to fire, toxic gas, or chemical contamination. An examination of various systems to prevent environmental damage to air, water, and ground systems outside of the work place environment. Overall awareness of environmental considerations. The role and responsibilities of an engineer from a professional ethics viewpoint.



Prime Text

Canadian Professional Engineering Practice and Ethics. Andrews, Gordon C. and Kemper, John D. Saunders College, Canada, a Division of Holt, Rinehart and Winston of Canada, Ltd., Toronto, 1992. ISBN 0-03-922875-4.

Canada's Energy Outlook, 1992-2002. Energy and Fiscal Analysis Division, Economic and Financial Analysis Branch, Energy Sector, Natural Resources Canada, September 1997. ISBN-0-662-20929-X.

Trashing the Planet. Ray, Dixie Lee, Harper Perennial, Harper Collins Publishers Inc., 10 East 53 Street, New York, NY, 10022, 1992. ISBN 0-06-0097490-7.

98-CS-3 Management Concepts for Engineers

Introduction to Management Concepts and their impact upon social and economic aspects of society. Historical look at management since the industrial revolution and its impact upon society. Topics should include: Labour Relations, Human Resource Development, Marketing, Production Concepts, Financial Management, and Quality Management.

Prime Text Part A – Management Relationships

Canadian Human Resources Management. Schwind, Wether (7th edition), ISBN 0075515741.

Supplementary Text Part A – Management Relationships

The Practice of Labour Relations. Peach, D.A. (3rd edition), McGraw Hill ISBN 0075499363.

Prime Text Part B – Business

Business. Griffin, Ebert, Stark (6th edition - American **OR** 4th edition - Canadian) Prentice Hall.

Supplementary Text Part B – Business

An Introduction to Canadian Business. Archer, M. (5th edition), McGraw Hill.

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