
**COMPLEMENTARY STUDIES EXAMINATIONS
SYLLABUS
(Three Required)**

**COMPLEMENTARY STUDIES
EXAMINATIONS**

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. Understanding methods of Financing and Capital Budgeting. Break-even, sensitivity and risk analyses.

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.

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.

ENGINEERING REPORT

Upon passing the examinations assigned by the constituent Association/Ordre, a candidate may be required to write an Engineering Report. The Report must demonstrate the candidate's ability to present a problem, an observation, or idea, and to analyze it logically and draw conclusions or make recommendations. The work must include acceptable technical content involving engineering analysis, design, development, or research. The report must also demonstrate a satisfactory level of writing and graphical skills, thus the quality of the presentation will be a factor in determining the acceptability of the Report. The Report should be about 5,000 words long, or 25 double-spaced typewritten pages not including tables and graphs, and include a signed statement that it was written by the candidate.

1998 CCPE Suggested Textbooks - Complementary Studies

98-CS-1, Engineering Economics

Szonyi, Fenton, White, Agee and Case, Principles of Engineering Economic Analysis Revised Canadian Edition, 1999. ISBN # 0-921332-49-1.

Wall and Emerson, Inc. 6 O'Connor Drive Toronto ON Tel: 416-467-8685, Fax: 416-696-2460

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

Hammer, Willie, Occupational Safety Management and Engineering, 5th Edition, Publisher – Prentice-Hall, Englewood Cliffs, New Jersey 07632. ISBN 0-13-896515-3, 2001.

Asfahl, C. Ray, Industrial Safety and Health Management - 4th edition, Prentice Hall - ISBN 0-13-895350-3, 1999.

98-CS-3, Management Concepts for Engineers

W. Nickels, J. McHugh, S. McHugh, & P. Berman, Understanding Canadian Business 3rd Edition, McGraw-Hill Ryerson. ISBN #0-075-60767-0.

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