COURSE OVERVIEW
Introduce students to fundamental concepts in Engineering Economics, Project Management and the Construction Industry. The course also covers topics and techniques for estimating, planning, scheduling, and control of engineering, procurement and construction projects. Students will also be introduced to basics of Engineering Economics and project financing.

LEARNING OUTCOMES
• Economics:
  ✓ Ability to apply economic principles in decision making through understanding and analyzing the time value of money and cash flows as well as economic comparison methods for different decision alternatives (CEAB Indicator 11.1).
• Tools:
  ✓ Ability to create, adapt, modify and extend tools and techniques to manage and solve problems in particular in project and construction management. The students will learn tools and techniques for planning, scheduling, estimating, and project control and will develop the ability to adopt or enhance them to manage project more efficiently (CEAB Indicator 5.3).
• Communications:
  ✓ Ability to understand, analyze and respond to technical and non-technical instructions and questions (CEAB Indicator 7.1).
OTHER REFERENCES


COURSE OUTLINE

1. Introduction to the Course
2. Engineering Decision Making
3. Time Value of Money
4. Cash Flow Analysis
5. Comparison Methods
6. Project and Project Management Overview
7. Construction Industry and Project
8. Project Participants
9. Construction Processes
10. Construction Contracts and Delivery Methods
12. Mid-Term
13. Construction Scheduling Fundamentals
14. Network Calculation, CPM and PDM
15. Overlapping Network Models
17. Construction Estimating II
18. Project Control Fundamentals
19. Earned Value Method
20. Course Review
21. Final exam

COURSE EVALUATION

Grade components will be weighted as follows in computation of the final course grade:

- In-class assignments/quizzes and course participation: 20%
- Midterm exam: 20%
- Term Project: 25%
- Final exam: 35%
POLICIES

Course-Specific Policies
Students are expected to attend and actively participate in class sessions offering insight, comment, reinforcement, contrary views, and underscoring examples. Quizzes/assignments will be given randomly.

Announcements made in class or placed on Avenue are considered to have been communicated to all students including those individuals that are not in class.

Late assignments will not be accepted. Assignments that have not been submitted by the due date/time will not be graded and will receive a mark of ZERO.

Discriminations
The Faculty of Engineering is concerned with ensuring an environment that is free from all adverse discrimination. If there is a problem that cannot be resolved by discussion among the persons concerned, individuals are reminded that they should contact their department chair, the sexual harassment office, or the human right consultant as soon as possible.

Academic Dishonesty
You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at www.mcmaster.ca/academicintegrity.

The following illustrates only three forms of academic dishonesty:
- Plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
- Improper collaboration in group work.
- Copying or using unauthorized aids in tests and examinations.

Academic Accommodation of Students with Disabilities
Students with disabilities who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca. For further information, consult McMaster University’s Academic Accommodation of Students with Disabilities policy.

Requests for Relief for Missed Academic Term Work
The McMaster Student Absence Form is a self-reporting tool for Undergraduate Students to report absences that last up to 5 days and provides the ability to request accommodation for any missed academic worth less than 30% of the final grade. Please note this tool cannot be used during any final examination period. You may submit a maximum of 1 Academic Work Missed requests per term. It is YOUR responsibility to follow up with your Instructor immediately regarding the nature of the accommodation. If you are absent more than 5 days or exceed 1 request per term you MUST visit your Associate Dean's Office (Faculty Office). You may be required to provide supporting documentation.
Academic Accommodation for Religious, Indigenous or Spiritual Observance (RISO)
Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students requiring a RISO accommodation should submit their request to their Faculty Office normally within 10 working days of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

Extreme Circumstances
The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, A2L and/or McMaster email.

Note: This structure represents a plan and is subject to adjustment. The instructor and the university reserve the right to modify elements of the course during the term.