A POLYTECHNIC INSTITUTION

School of Manufacturing and Industrial Mechanical
Program: Mechanical Engineering
Option:

Course Outline

MECH 3460
Engineering Economics

Start Date:	March 20th, 2006				**End Date:**	May 26th, 2006		
Total Hours:	30	**Total Weeks:**	10		**Term/Level:**	4B	**Course Credits:**	2
Hours/Week:	3	**Lecture:**	2	**Tutorial:** 1	**Shop:**		**Seminar:**	**Other:**

There are no prerequisites for MECH 3460.

Course No.	Course Name

MECH 3460 is not a prerequisite for any other course:

Course No.	Course Name

v Course Description

Emphasizes the importance of making sound economic decisions when faced with alternative methods of solving technical problems. The course material provides the basic skills and concepts required to analyze comparative costs and to understand the time value of money (interest), inflation, depreciation, running costs, salvage value and tax considerations.

v Detailed Course Description

v Evaluation

Labs	10%
Quiz	10%
Mid-term test	30%
Final Exam	50%
TOTAL	100%

Comments:

- Grading is based on five labs, one quiz, one mid-term test and one final exam.
- Relative weighting is subject to adjustment to suit specific purposes. Notices will be given should any change occur.
- To pass the course a mark of 50% must be achieved.
- Cheating and plagiarism penalties will be as per BCIT Student Regulation Policy 5002.

v Course Learning Outcomes/Competencies

On completion of this course, the student will be able to provide the basic skills and concepts required to analyze comparative costs. The effect of interest rates, inflation, depreciation, running costs, salvage value and tax considerations are all factors which should be considered when making economical decisions.

v Verification

I verify that the content of this course outline is current.

	MARCH 17, 2006
Authoring Instructor	Date

I verify that this course outline has been reviewed.

	MARCH 17, 2006
Program Head/Chief Instructor	Date

I verify that this course outline complies with BCIT policy.

	2006/03/20
Dean/Associate Dean	Date

Note: Should changes be required to the content of this course outline, students will be given reasonable notice.

v Instructor(s)

Johan Fourie	Office Location:	SW9 – 202	Office Phone:	604.453.4013
	Office Hrs.:	Mon. 2:30-5:30 Wed. 2:30-5:30	E-mail Address:	jfourie@my.bcit.ca
Kamal Tatlay	Office Location:	SW9 – 202	Office Phone:	604.432.8906

v Learning Resources

Required: Engineering Economics MECH 3460 Notes (available from Bookstore)

Equipment: Scientific calculator

Recommended:

v Information for Students

Note: Please refer to BCIT policy number 5002, Student Regulations Policy, for additional information. Policies are available at http://www.bcit.ca/about/administration/policies.shtml.

Ethics: BCIT assumes that all students attending the institute will follow a high standard of ethics. Incidents of cheating or plagiarism may, therefore, result in a grade of zero for the assignment, quiz, test, exam or project for all parties involved and/or expulsion from the course.

Assignments: Assignments, lab reports or projects must be done on an individual basis unless otherwise specified by the instructor. Late assignments, lab reports or projects will be devalued 10% per day late to a maximum of 3 days late.

Makeup Tests, Exams or Quizzes: There will be **no** makeup tests, exams or quizzes. If you miss a test, exam or quiz, you will receive zero marks. Exceptions may be made for **documented** medical reasons or extenuating circumstances. In such a case, it is the responsibility of the student to inform the instructor **immediately**.

Attendance: The attendance policy as outlined in BCIT Policy 5002 will be enforced. Attendance will be taken at the beginning of each session. Students not present at that time will be recorded as absent.

Illness: If you miss an evaluation such as an assignment, quiz, exam, or project, or you miss 3 or more consecutive days of class, you must provide the department with a BCIT Student Medical Certificate (available at http://www.bcit.ca/admission/downloads.shtml). You may be asked to complete the work that you missed or the course evaluation may be adjusted to reflect the missed component(s).

Attempts: Students must successfully complete a course within a maximum of three attempts. Students with two attempts in a single course must get written permission from the Associate Dean to attempt the course for the third time. Students who have not successfully completed a course within three attempts will not be eligible to graduate from the program.

Advancement: Students who fail three or more courses in a term cannot advance to the next term and may be asked to discontinue from the program.

Course Outline Changes: The material or schedule specified in this course outline may be changed by the instructor. If changes are required, they will be announced in class.

Schedule

Week Number	Starting date	Outcome/Material Covered	Reference/ Reading
1	Mar 20	Introduction: course outline, cash flow diagrams, simple interest calculations.	Module 1
	Mar 23		
2	Mar 27	Interest formulas, annual growth, sinking funds, and future worth. Equivalence.	Module 2
	Mar 30		
3	Apr 3	Comparisons of alternatives: rate-of-return, present work, annual work comparisons.	Module 3
	Apr 6		
4	Apr 10	30 Minute quiz. Further economic comparisons: unequal life comparisons, perpetual life situations.	Module 3
	Apr 13		
5	Apr 17	EASTER MONDAY	
	Apr 20	Escalating costs, gradient series, inflation, inflation formula.	Module 4
6	Apr 24	Escalating costs, gradient series, inflation, inflation formula.	Module 4
	Apr 27	Midterm test.	
7	May 1	Payback period, benefit/cost analysis.	Module 5
	May 4		
8	May 8	Inflation discussion, sensitivity analysis, risk analysis.	Module 6
	May 11		
9	May 15	Break even analysis, challenger-defender situations.	Module 7
	May 18		
10	May 22-26	Final Exam - 2 hours	