



A POLYTECHNIC INSTITUTION

School of Manufacturing, Electronics and Industrial Processes

Program: Mechanical Engineering Technologies

Option: Mechanical Systems

MSYS 4470
Project Management**Start Date:** January, 2006**End Date:** May, 2006**Total Hours:** 60 **Total Weeks:** 20**Term/Level:** 4 **Course Credits:** 4.0**Hours/Week:** 3 **Lecture:** 2 **Lab:** 1**Shop:** **Seminar:** **Other:****Prerequisites****Course No. Course Name**

MSYS 3386 Heating Systems

MSYS 2380 Building Construction

MSYS 4470 is a Prerequisite for:**Course No. Course Name**

None

■ Course Description

Covers building and construction industry infrastructure, project initiation, team organization, construction contracts, bidding processes, material takeoff and pricing, includes cost accounting, scheduling, labour and labour relations and environmental health and safety. Applications are applied to examples of work using sources for cost and labour.

■ Detailed Course Description

The goals of the course are to acquaint persons who plan to enter the building design/construction industry with the relationships and duties of its participants and how projects are initiated. Covers construction documents, contracts and techniques for organizing measurement and pricing for labour and materials. Reviews bidding and construction management procedures.

■ Evaluation

(Course marks weighting is subject to adjustment.)

Industry Reports	2%
Assignments	15%
Midterm Examination No. 1	27%
Midterm Examination No. 2	28%
Final Examination	28%
TOTAL	100%

Comments: Students must demonstrate overall competency in the Course Learning Outcomes/Competencies section of this outline for credit to be earned for this course. To pass this course a mark of 50% must be achieved.

v Course Learning Outcomes/Competencies

Upon successful completion of this course, the student will be able to:

- prepare a productive wage rate for a team of workers based on an evaluation of site and labour conditions.
- prepare a materials takeoff of all mechanical systems from a set of working drawings.
- price systems components and determine labour costs.
- describe the components of construction contract documents.
- describe bidding procedures for obtaining a contract.
- describe the organizing structure that should be established for project coordination and site supervision.
- prepare project schedule using GANTT and CRITICAL PATH strategies.
- identify criteria for employing workers.
- explain applicable health, safety and environmental requirements for workers.
- describe procedures required in preparation for construction.
- describe use of progress reports for construction management and cost accounting.

v Verification

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

Earl LaBounty
Authoring Instructor

Dec 22nd/05
Date

I verify that this course outline has been reviewed.

E.L.B.
Program Head/Chief Instructor

Dec 22nd/05
Date

I verify that this course outline complies with BCIT policy.

[Signature]
Dean/Associate Dean

2008/12/22
Date

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

v Instructor(s)

Earl LaBounty

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Office Hrs.:

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v Learning Resources

Required:

Available at BCIT Bookstore:

- Highlighting Marker
- Engineering Pad
- 3-ring Binder
- *Project Management* manual by E.H. LaBounty
- Clear Cover Duo-Tang Folder
- *Construction Project Management*, Gould-Joyce, Prentice-Hall. ISBN 0-13-695859-1

Recommended:

v Information for Students

See Policy Information for Mechanical Technology Students and the current issue of the British Columbia Institute of Technology Full-Time Calendar — General Information.

v Assignment Details

See Policy Information for Mechanical Technology Students.

Schedule

Week	Lecture or Lab	Material Covered	Date
1	LECTURE 1	A. COURSE OUTLINE B. THE MAIN PLAYERS	
	LECTURE 2 & 3 LAB	A. THE CONSTRUCTION DIAGRAM B. THE PROJECT TEAM	
2	LAB LECTURE 4	A. INTRODUCTION TO TERM ASSIGNMENT B. PROJECT EVALUATION	
	LECTURE 5	A. SHEET METAL ESTIMATING	
3	LECTURE 6	A. INFORMATION EXCHANGE	
	LAB	A. ESTIMATE NO. 1	
4	LECTURE 7	A. PIPING SYSTEMS ESTIMATING	
	LECTURE 8	A. WORKING DRAWINGS	
5	MIDTERM EXAMINATION NO. 1		
	LAB	A. ESTIMATE NO. 2	
6	LECTURE 9	A. COST ESTIMATING	
	LAB	A. ESTIMATE NO. 2 (Continuation)	
7	LECTURE 10	A. CONSTRUCTION CONTRACTS	
	LAB	A. ESTIMATE NO. 3	
8	LECTURE 11	A. THE TENDER PACKAGE	
	LAB	A. ESTIMATE NO. 3 (Continuation)	
9	LECTURE 12	A. COMPANY FINANCES	
	LECTURE 13	A. OBTAINING A CONSTRUCTION CONTRACT	
10	LECTURE 14	A. PREPARING TO BUILD	
	LAB	A. ESTIMATE NO. 4	
11	MIDTERM EXAMINATION NO. 2		
	LAB	A. ESTIMATE NO. 4 (Continuation)	
12	LECTURE 15	A. CONSTRUCTION COSTS	
	LECTURE 16	A. LABOUR	

Week	Lecture or Lab	Material Covered	Date
13	LECTURE 17	A. LABOUR RELATIONS	
	LAB	A. ESTIMATE NO. 5	
14	LECTURE 18	A. EMPLOYING WORKERS	
	LAB	A. ESTIMATE NO. 5 (Continuation)	
15	LECTURE 19	A. WORKPLACE SAFETY AND HEALTH	
	LAB	A. ESTIMATE NO. 6	
16	LECTURE 20	A. COST ACCOUNTING	
	LECTURE 21 LAB	A. OVERTIME, REPORTING PROCEDURES B. ESTIMATE NO. 6 (Continuation)	
17	LECTURE 22	A. CLOSING THE CONTRACT	
		A. VISIT TO VANCOUVER REGIONAL CONSTRUCTION ASSOCIATION	
18		A. VISIT TO INDUSTRY	
19		A. REPORT ON VISIT TO INDUSTRY	
20	LECTURE 23	A. REFLECTIONS FOR SUCCESS	
EXAM WEEK	FINAL EXAMINATION		