



POLYTECHNIC INSTITUTION

School of: Manufacturing, Electronics and Industrial Processes
Program: Operations Management Technology
Option:

MECH 1915
Manufacturing Processes for
Operations Management

Start Date:	September 2006	End Date:	December 2006
Total Hours:	30	Total Weeks:	15
Hours/Week:	2	Term/Level:	3
Lecture:	1	Course Credits:	2.0
Lab:	1	Shop:	
		Seminar:	
		Other:	

Prerequisites:**MECH 1915 is a prerequisite for:**

Course No.	Course Name
	None.

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	None.

■ Course Description

Introduces a variety of industrial manufacturing processes. Topics may include the casting, forging, machining, and joining of metals as well as the manufacturing of electronics, plastics, pulp, paper, petrochemical, primary and secondary wood products. Automation and computer-integrated manufacturing are also covered.

■ Evaluation

Seminar Presentation	30 %	Comments: Students are required to attend the course visits and the seminars to complete the course. Students missing a course visit or a seminar session (for a valid reason – medical, etc.) must contact the instructor to arrange an alternate assignment.
Seminar Report	30 %	
Course Visit Attendance	5 %	
Course Visit Reports	20 %	
Final Quiz	15 %	
TOTAL	100 %	

■ Course Learning Outcomes/Competencies

Upon successful completion, the student will be able to:

- Describe the basic manufacturing processes.
- Demonstrate knowledge of basic cutting operations, equipment, and tooling.
- Describe common forming operations, including casting, forging and stamping.
- Recognize common materials and finishes used in manufacturing.
- Analyze various material joining techniques.
- Analyze common assembly methods.
- Demonstrate knowledge of CIM (Computer Integrated Manufacture).
- Describe the common manufacturing processes applied to plastics.
- Investigate techniques used in electronics manufacturing.
- Describe primary and secondary wood manufacturing operations.
- Recognize the role of automation and robotics in modern manufacturing.
- Identify organizational skills required in a manufacturing plant.

■ Verification

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



Authoring Instructor

Aug 26 / 06

Date

I verify that this course outline has been reviewed.



Program Head/Chief Instructor

Aug 29 / 06

Date

I verify that this course outline complies with BCIT policy.



Dean/Associate Dean

2006/08/30

Date

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

Instructor:

Taco Niet	Office Location:	SW9-205	Office Phone:	604-456-8032
	Office Hours:	As posted.	e-Mail Address:	tniet@my.bcit.ca

■ **Learning Resources**

Required:

BCIT Library Resources

Recommended:

■ **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 15% per day late to a maximum of 3 days late.

Assignment Drop Box: The instructors drop box for assignments and labs is located under the stairs in the lobby of building SW9. Students are responsible for ensuring labs and assignments are submitted to the correct box and on time.

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.

■ **Assignment Details**

The seminar portion of the course requires students, in pairs, to put together a 25-30 minutes presentation and be prepared to answer questions for 5-10 minutes after the presentation. A 4 page report on the topic presented must also be submitted. This report will be collected and a booklet with all the topic papers will be compiled and handed out at the end of the term.

Details of the course visits, presentation and report expectations will be supplied in class.

Schedule

Week #	Outcome/Material Covered	Items Due
1 Sept 4, 5	No Classes – Labour Day	
2 Sept 11, 12	Course Introduction, Introduction to Manufacturing Processes	
3 Sept 18, 19	Industry Tour #1	
4 Sept 25, 26	Tour Discussion and Seminar Preparation	
5 Oct 2, 3	Industry Tour #2	
6 Oct 9, 10	No Classes – Thanksgiving (Tuesday class cancelled)	
7 Oct 16, 17	Seminar Presentations	Industry Tour Report
8 Oct 23, 24	Seminar Presentations	
9 Oct 30, 31	Seminar Presentations	
10 Nov 6, 7	Seminar Presentations	
11 Nov 13, 14	No Classes – Remembrance Day	
12 Nov 20, 21	Seminar Presentations	
13 Nov 27, 28	Course Wrap-up	Seminar Report
14 Dec 4, 5	Welding/Machine Shop Time	
15 Dec 11, 12	No Classes – Final Exam Week	