



A POLYTECHNIC INSTITUTION

Course Outline

School of Manufacturing, Electronics, & Industrial Processes
Program: Mechanical Engineering Technology
Options: First Year

MECH 1100 Engineering Graphics 1

Start Date: September 6th, 2006

End Date: December 15th, 2006

Total Hours: 45 **Total Weeks:** 15

Term/Level: 1 **Course Credits:** 3

Hours/Week: 3 **Lecture:** 1 **Lab:** 2 **Shop:** n/a **Seminar:** n/a **Other:** n/a

Prerequisites

Course No.	Course Name
-	none

is a Prerequisite for:

Course No.	Course Name
MECH 2201	Engineering Graphics 2

Course Description

This course introduces the techniques for interpreting and creating engineering drawings in accordance with Canadian Standards Association (CSA) drafting practices. Emphasis is on interpretation and the use of sketching and basic drafting tools.

Course Learning Outcomes

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

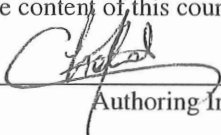
1. Interpret simple engineering drawings.
2. Create isometric and oblique sketches.
3. Use standard scales to draw to scale using Imperial and SI units.
4. Use orthographic projections to create three view drawings.
5. Apply dimensions in accordance with CSA standards.
6. Identify and dimension standard features such as holes, slots, rounds and fillets.
7. Construct and interpret sectional views.
8. Construct and interpret auxiliary views.
9. Create and annotate simplified thread representations (ANSI and ISO) of fasteners

Evaluation

Assignments	50 %	Comments: <ul style="list-style-type: none">• Students must attend at least 90% of the labs in order to write the final exam.• All assignment work is done "in class" and submitted at the end of the lab session.
Midterm Exam(s)	25 %	
Final Exam	25 %	
Total	100 %	

Verification

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

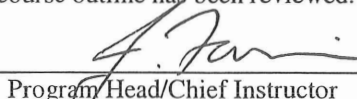


Authoring Instructor

Sept. 01, 2006

Date

I verify that this course outline has been reviewed.



Program Head/Chief Instructor

SEPT. 05, 2006

Date

I verify that this course outline complies with BCIT policy.



Dean/Associate Dean

2006/09/05

Date

Text(s) and Equipment

Required:

- *Interpreting Engineering Drawings*, 4th Canadian ed. Jensen & Hines, Delmar Thompson Canada.
- Mechanical pencils: 2H & HB (or H)
- Set squares: 30-60-90 and 45-45-90
- Eraser and Erasing shield
- Triangular scales: Metric 1:1 1:2 1:5 etc. Staedtler-Mars 987 18-SI
Inch 10 20 30 etc. Staedtler-Mars 987 18-34
- Circle template and compass
- Drafting tape
- Quad ruled engineering pads

Recommended:

- *Engineering Graphics*, McAdam & Winn, Addison Wesley
- *Principles of Engineering Drawing*, Lamit & Kitto, West
- *Freehand Sketching for Engineering Design*, Duff & Ross, PWS Publishing Co.

Instructors	Office Location:	Office Hours	Office Phone:	E-mail Address
Kader Chellabi	SW9-202	As posted/ by appt	434-5734 ext. 5209	Kchellabi@bcit.ca
Alastair Champion	SW9-202	As posted/ by appt	432-8909	Achampion@bcit.ca

Information for Students

Assignments: Late assignments, lab reports or projects will be devalued 10% per day late. Assignments, lab reports or projects must be done on an individual basis unless otherwise specified by the instructor. Completed assignments must follow a standard format, be neat and be well-organized. All assignments must include the date, course number and the student's name and set.

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**.

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.

Attendance: The attendance policy as outlined in the current BCIT Calendar 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: A doctor's note is required for any illness causing you to miss assignments, quizzes, tests, projects, or exam. At the discretion of the instructor, you may complete the work missed or have the work prorated.

Attempts: Students must successfully complete a course within a maximum of three attempts at the course. Students with two attempts in a single course will be allowed to repeat the course only upon special written permission from the Associate Dean. Students who have not successfully completed a course within three attempts will not be eligible to graduate from the appropriate 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.

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.

Schedule:

Week	Topics of Study	C. H. Jensen 4 th ed.	Assignment
1	<ul style="list-style-type: none"> Graphical Communication Standards Pictorial Drawings 	Hand-outs	
2	<ul style="list-style-type: none"> Letters Alphabet of Lines Multi-view Drawings Orthographic Projection, Hidden Lines, Centre Lines, Rules of Precedence 	Units 1,3	Assignment #1
3	<ul style="list-style-type: none"> Circular features, Inclined Surfaces Dimensioning (linear and angular) 	Units 2, 4	Assignment #2
4	<ul style="list-style-type: none"> Dimensioning Circular Features Dimensioning Chamfers, Tapers and Knurls Chain Dimensioning, Base Line Dimensioning 	Units 5, 9, 26	Assignment #3
5	<ul style="list-style-type: none"> Inch Scales and Metric Scales Machining Symbols Surface Textures 	Units 6, 7, 11	Assignment #4
6	<ul style="list-style-type: none"> Sectional Views Full Sections , Half Sections, Offset Sections Hatching 	Unit 8	Assignment #5
7	<ul style="list-style-type: none"> Revolved and Removed Sections Broken-out and partial Sections Review for Midterm Test 	Units 16, 28	Assignment #6
8	<ul style="list-style-type: none"> Theory & Practical Midterm Test (Units 1 –12,16,28) 	--	Midterm Test
9	<ul style="list-style-type: none"> Selection of Views Size and Location Tolerances 	Units 10, 12	Assignment #7
10	<ul style="list-style-type: none"> Auxiliary Views 	Units 18, 19	Assignment #8
11	<ul style="list-style-type: none"> Pictorials : Isometric Views, Oblique Views 	Hand-outs	Assignment #9
12	<ul style="list-style-type: none"> Threaded Fasteners 	Unit 15	Assignment #10
13	<ul style="list-style-type: none"> Mechanical connectors (keys, ...etc) Review for Final Exam. 	Unit 17	
14	<ul style="list-style-type: none"> Theory & Practical Final Exam 	--	