



A POLYTECHNIC INSTITUTION

School of Manufacturing, Electronics, & Industrial
Processes

Program: Mechanical Engineering Technology

Option: First Year Core

MECH 1105**CAD Graphics**

Start Date:	2006-09-06	End Date:	2006-12-15
Total Hours:	60	Total Weeks:	15
Hours/Week:	4.0	Lecture:	1.0
		Lab:	3.0
		Shop:	
		Seminar:	
		Other:	
Prerequisites	MECH 1105 is a prerequisite for:		
Course No.	Course Name	Course No.	Course Name
		MECH 2201	Engineering Graphics 2

Course Description

This course introduces the use of Computer Aided Design (CAD) application software for mechanical drawing. Topics include CAD concepts, drawing standards, drawing with precision, editing, view control, measurement, text and annotations, dimensioning, drawing layout and plotting. Emphasis is on the application of standards to graphical communications and the development of hands-on skills.

Evaluation

Final Exam	25%
Midterm Exam	25%
Timed Assignments	10%
Assignments	40%
TOTAL	100%

Comments:

- Completion of assignments is required.
- Copied assignments receive a grade of 0 for all parties.
- Students are expected to independently submit their assignments by the established due dates.
- Assignments that are late will have penalties applied. Exceptionally late assignments may not be accepted.

Course Learning Outcomes/Competencies

Upon successful completion, the student will be able to:

1. Describe the importance of establishing and adhering to company CAD standards.
2. Describe drawing integrity and its importance with respect to data sharing.
3. Create and edit 2D CAD geometric constructions.
4. Use and create template files.
5. Create 2D orthographic drawings using CAD techniques.
6. Use measurement tools to determine distances and areas.
7. Apply CSA drawing standards and CAD standards to create engineering drawings.
8. Create a scaled plot of a 2D working drawing.

Verification

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



Authoring Instructor

2006/08/31

Date

I verify that this course outline has been reviewed.

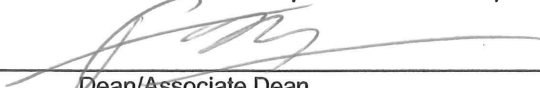


Program Head/Chief Instructor

AUG 31/06

Date

I verify that this course outline complies with BCIT policy.



Dean/Associate Dean

2006/09/12

Date

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

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.

Instructor(s)

Paul Morrison	Office Location: Office Hrs.:	SW9 201 By Appointment Only – See Reception	Office Phone: 604 432-8488 E-mail Address: paul_morrison@bcit.ca
Brian Ennis	Office Location: Office Hrs.:	SW9 202 As Posted /By Appointment	Office Phone: 604 451-6830 E-mail Address: brian_ennis@bcit.ca
Alastair Champion	Office Location: Office Hrs.:	SW9 202 As Posted /By Appointment	Office Phone: 604 432-8906 E-mail Address: alastair_champion@bcit.ca

Learning Resources

Required:

- 128MB (or larger) USB Drive
- AutoCAD 2007 Level 1 Student Guide – Ascent

Recommended:

- Interpreting Engineering Drawings: Jensen & Hines – Nelson Canada
- Illustrated AutoCAD 200x Quick Reference: Grabowski – Autodesk Press

Assignment Details

Most assignments will be submitted in electronic format to a shared network drive, accessible in the lab or through a FTP site. All assignments must use the correct naming convention specified in the handout, and be sent to the appropriate directory and folder. A mark penalty will be assessed for failing to follow these instructions. Assignment files and individual drawing objects will be checked for authenticity by student ID (to identify shared or copied files).

Schedule

Week of/ Number	Outcome/Material Covered
1	Familiarization with the AutoCAD User Interface
2	Simple Constructions, Editing and Viewing
3	Drawing Setup and Drawing Properties
4	Drawing with Precision
5	Selecting and Modifying objects
6	Complex Constructions and Inquiry Commands
7	Multiview Drawings
8	Drawing Layouts and Plotting
9	Mid-term Exam – October 31, 2006 (tentative date)
10	Sectioning and Text
11	Annotations and Text Styles
12	Dimensioning
13	Dimension Placement
14	Blocks
15	Final Exam