![Douglas College logo]

EFFECTIVE: SEPTEMBER 2004
CURRICULUM GUIDELINES

A.	Division:	**Education**		Effective Date:		**September 2004**

B.	Department / Program Area:	**Science and Technology**	Revision	**X**	New Course	

If Revision, Section(s) Revised: **C**

Date of Previous Revision: **June 1, 2000**

Date of Current Revision: **September 2004**

C:	**APSC 1110**	**D**:	**Computer-Aided Engineering Graphics**	**E:**	**3**
	Subject & Course No.		Descriptive Title		Semester Credits

F: Calendar Description:

This course is intended for students proceeding to studies in Applied Science/Engineering. It is divided into two parts. The first half is an introduction to the study of orthographic projections, technical sketching, engineering drawing, the language of graphics. The second half provides an introduction to AutoCAD. This course will help the student to develop the ability to visualize in three dimensions.

G: Allocation of Contact Hours to Type of Instruction / Learning Settings

Primary Methods of Instructional Delivery and/or Learning Settings:

Lecture / Laboratory

Number of Contact Hours: (per week / semester for each descriptor)

5 hours per week

Number of Weeks per Semester:

15

H: Course Prerequisites:

BC Principles of Math 12 (C or higher)

I: Course Corequisites:

J: Course for which this Course is a Prerequisite

K: Maximum Class Size:

35

L: PLEASE INDICATE**:**

☐	Non-Credit
☐	College Credit Non-Transfer
X	College Credit Transfer:

SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)

M: Course Objectives / Learning Outcomes

The student will be able to:

1. Demonstrate an ability to translate from one to another of:
   1.1. The solid
   1.2. Pictorial representation
   1.3. Orthographic representation
   1.4. Verbal description
   1.5. Mental picture

2. Demonstrate an ability to prepare pictorial and orthographic sketches and drawings.

3. Analyze and solve 3-dimensional problems by graphical means.

4. Read drawings.

5. Plan and produce proper 2-D engineering drawings with AutoCAD.

N: Course Content:

1. Introduction to Projection

2. Geometric Construction

3. Orthographic Sketching from Pictorial

4. Orthographic Sketching from Object

5. Missing Views (isometric and orthographic)

6. Sectioning

7. Dimensioning

8. Engineering Geometry

9. Introduction to AutoCAD

10. AutoCAD Drawing Functions

11. AutoCAD Object Selection & Editing

12. AutoCAD Layers and Blocks

13. AutoCAD Dimensions

14. Creating & Printing Basic Engineering Drawing in AutoCAD.

O: Methods of Instruction

The course consists of one – one hour lecture per week and two – two hour laboratory sessions per week. Assignments are to be handed in at the end of each lab session. Late assignments will not be marked. Reading assignments will be given in advance and it is assumed that the student will do the required reading before entering class.

P: Textbooks and Materials to be Purchased by Students

Earle, J. H., <u>Engineering Design Graphics</u>, 10th Edition, Addison Wesley, 2000.

Set of drawing equipment.

Q: Means of Assessment

The final grade assigned for the course will be based upon the following components:

1.   Assignments (maximum of 20) – 40%
2.   Two tests administered during the semester – 30%
3.   Final examination – 30%

R: Prior Learning Assessment and Recognition: specify whether course is open for PLAR

Course Designer(s)

Education Council / Curriculum Committee Representative

Dean / Director

Registrar