



## COURSE OUTLINE

*Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.*

### 1. Instructor Information

Instructor	Bao-Qin Bai
Office hours	As Posted
Location	Tech 114
Phone	250-370-4442 <b>Alternative:</b> _____
E-mail	<a href="mailto:bai@camosun.bc.ca">bai@camosun.bc.ca</a>
Website	<a href="http://civil.camosun.bc.ca/student/">http://civil.camosun.bc.ca/student/</a>

### 2. Prerequisites and Corequisites

Pre-requisites: C in Principles of Math 11, C in MATH 137

### 3. Short Description

Students learn to communicate clearly in the form of hand sketches, spreadsheets and computer-aided drafting (CAD) software in order to accurately present technical information to both technical and non-technical audiences. CAD skills include: drawing simple geometric shapes; using layers; applying annotation; creating and inserting blocks; and preparing layouts.

### 4. Intended Learning Outcomes

*(If any changes are made to this part, then the Approved Course Description must also be changed and sent through the approval process.)*

- Use spreadsheet software to perform calculations and analyse technical information.
- Prepare consistently-formatted tables and graphs that can be easily read both digitally and in print.
- Represent 3D objects using various methods of projection.
- Create clear and neat hand sketches of simple geometric objects.
- Create, edit and apply basic CAD objects such as: layers, simple blocks, text, dimensions, hatching, layouts to accurately draw and edit simple geometric shapes.
- Create drawings that conform to prescribed drafting standards and practices.

### 5. Required Materials and Tools

Pencils or Mechanical pencils one each for the different lead hardness	0.5 mm (0.7 ) H lead 0.5 mm (0.7) HB (F) lead
Metric scale or Engineering tri-scale	300 mm scale (mm divisions) (Staedtler Mars Clear Plastic Ruler)

White eraser and Erasing shield	
Set Squares	One set of 30-60° and 45-90° set squares (6" to 8")

## 6. Course Content and Schedule

(Can include: Class hours, Lab hours, Out of Class Requirements and/or Dates for quizzes, exams, lecture, labs, seminars, practicums, etc.)

Week	Topic
1	<b>Introduction and File Management; MS Excel</b>
2	MS Excel
3	MS Excel
4	<b>Introduction to Engineering Graphics:</b> Drafting basics; Hand sketching; orthographic & isometric drawings;
5	* <b>Quiz 1:</b> Covers Weeks 1 to 4; Introduction to Term Project (TP) <b>AutoCAD Fundamentals:</b> 1 - Introduction; 2-Basic Commands and Drawing Setup;
6	3 - Osnap (running & override); Polar Tracking; OSnap Tracking; 4 – Move; copy; rotate; scale; and mirror; 5 – Templates and Layers;
7	6 – Arcs; Polylines; Polygons; 7-Trim, Extend, Stretch, Fillet, Chamfer, Offset, Array;
8	8–Insert blocks; 9 – Paper Space, Layout, and Viewport; 10 – Hatching;
9	* <b>Quiz 2:</b> Covers Weeks 5 to 8; 11 – Text and Leader; 12 – Dimensioning;
10	13 - Text and Dim Styles; 14 - Making Blocks; Attributed Title Blocks;
11	15 - Advanced Layouts 16 – Additional Layer Tools
12	17 - AutoCAD Coord Systems; TT and From options of OSnap. 18 - Creating Templates;
13	* <b>Quiz 3:</b> Covers Weeks 9 to 12; 19 - Object properties; 20 - Introduce XRef
14	Review
15	Exam Week

### Hours and Credits:

#### Course Activity

- Lecture (Direct Instruction)
- Seminar (Direct Instruction)
- Lab /Collaborative Learning
- Supervised Field Practice
- Workplace Integrated Learning (Coop, Internship, etc.)
- Other\*(please note):

Hours / Week	Instruction – No of Weeks (Q=11; S=14; "P or S" = 7)
5	14

**Credits = 3**

## 7. Basis of Student Assessment

(Should be directly linked to learning outcomes.)

Component	Weighting %	Comments
Assignments	20%	
Term Project	10%	
Quizzes	15%	Open book (C, flash, cloud, & home drives and internet are not allowed to use.)
Instructor's Assessment	5%	Based on your attendance and cooperation
Final Examination	50%	Open book (C, flash, cloud, & home drives and internet are not allowed to use.)
TOTAL	100%	

## 8. Grading System

(If any changes are made to this part, then the Approved Course description must also be changed and sent through the approval process.)

(Mark with "X" in box below to show appropriate approved grading system – see last page of this template.)

Standard Grading System (GPA)

Competency Based Grading System

## 9. Recommended Materials to Assist Students to Succeed Throughout the Course

- (a) **References:** ASCENT, *AutoCAD®/AutoCAD LT® – Fundamentals Part 1 and 2*, ASCENT Center for Technical Knowledge  
 Giesecke, F.E. et. al, *Modern Graphics Communication*, 2<sup>nd</sup> Ed., Prentice Hall, 2001.  
 Lamit, L.G., *Technical Drawing and Design*, West Publishing Company, 1994.

## 10. College Supports, Services and Policies



### Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <http://camosun.ca/about/mental-health/emergency.html> or <http://camosun.ca/services/sexual-violence/get-support.html#urgent>

### College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

### College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

## A. GRADING SYSTEMS <http://camosun.ca/about/policies/index.html>

The following two grading systems are used at Camosun College:

### 1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

### 2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

## B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://camosun.ca/about/policies/index.html> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete</i> : A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress</i> : A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal</i> : A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.