



INSTRUCTOR

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MEETING INFORMATION

08/15/2014-12/17/2014 Lecture Monday, Wednesday 06:00PM - 07:00PM, Engineering Technology, Room 103
08/15/2014-12/17/2014 Laboratory Monday, Wednesday 07:00PM - 08:50PM, Engineering Technology, Room 103

TEXTS

Engineering Graphics: Tools for the Mind - Graham, Bryan

MATERIALS

Each student needs his/her personal flash drive to store his/her assignments in the lab.

COURSE CONTENTS

This course is an introduction to the use of technical drawing tools, technical lettering and line work, geometric construction, sketching and shape description, orthographic projection, dimensioning, section views, auxiliary views and pictorials. The course also provides an introduction to produce technical drawings using Computer Aided Design (CAD).

COURSE REQUIREMENT

Textbook assignments with sketching are worth 350 points, quizzes are all worth 150 points, and the final lesson and projects are worth a 100 points – all totaling 600 points as shown below.

Textbook and Sketching	350 points
Quizzes	150 points
Final Lessons and Projects	100 points

Total	600 points

GRADING

Your class grade will be determined on the basis of the percentage of the total points obtained out of the above 600 points as shown below.

Grade A	90 to 100%
Grade B	80 to 89 %
Grade C	70 to 79 %
Grade D	60 to 69 %
Grade F	0 to 59 %

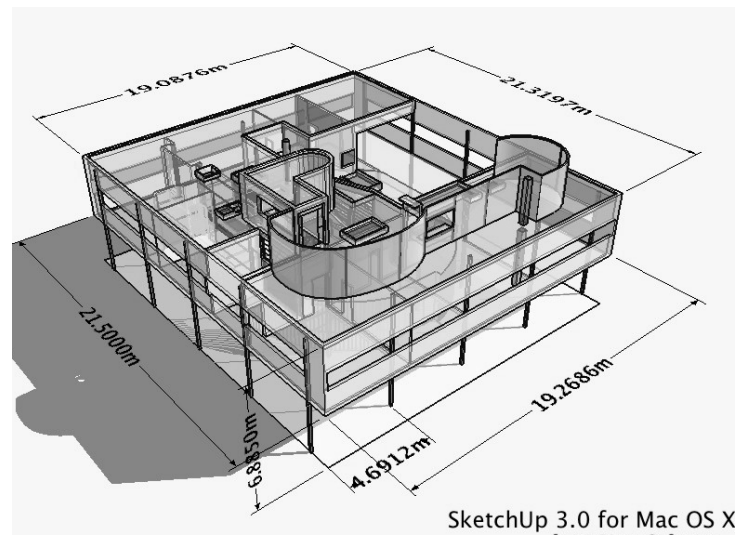
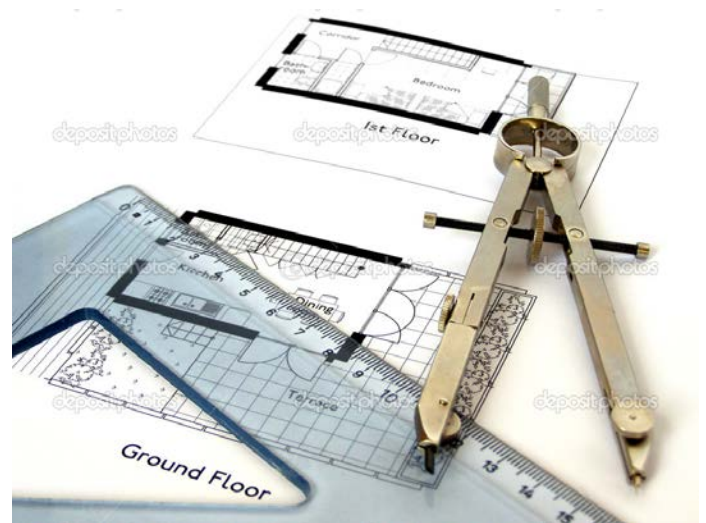
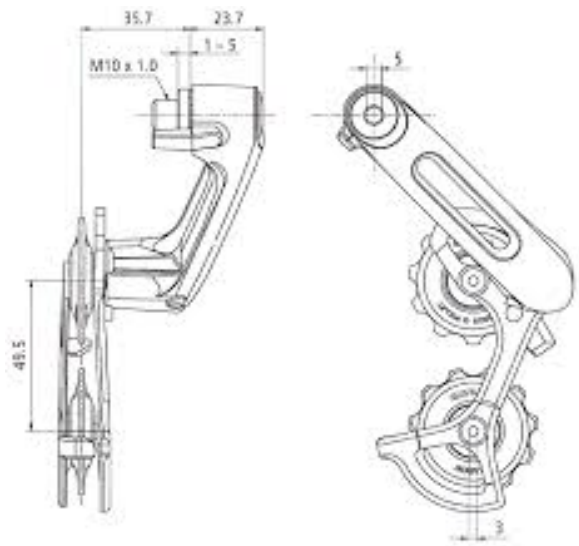
ENGIN-119 / ARCHI-119 (3 Units)
Introduction to Technical Drawing
Dr. Jeffrey Smith / Fall Semester - 2014

*This is a general overview of what topics will be discussed and each days assignments.
This outline can change at any time so check the CALENDAR in D2L for
the current assignments and due dates.*

Date		Topic	LAB Assignments	Homework Assignments
8/18/2014	Day 1	Syllabus Review, Lab tour, D2L	Welcome, go over syllabi & class, tour of facility	Read/Activity: (for next Day)
8/20/2014	Day 2	Lettering Styles & Techniques	LTR-1, LTR-3	Lettering 1 / LTR-4
8/24/2014	Day 3	Line Types & Sketching Techniques	SKT-1, SKT-2	Sketching 1-3
8/27/2014	Day 4	More Sketching Techniques	SKT-3, SKT-4	
9/1/2014		No class		
9/3/2014	Day 5	Sketching Circles, Arcs & Ovals	SKT-6, SKT-7	SKT-5
9/8/2014	Day 6	Orthographic Sketching	SKT-8, ORT-3	Orthographic Projection 1-4
9/10/2014	Day 7	Orthographic Projection	ORT-2, ORT-4	ORT-1
9/15/2014	Day 8	Solving for Missing Views	ORT-5, ORT-6	
9/17/2014	Day 9	Multi-view Solutions	ORT-7, ORT-9	ORT-8
9/22/2014	Day 10	Pictorial Sketching	ORT-10, ORT-11	
9/24/2014	Day 11	Isometrics Sketching	ISO-1	Isometric Drawing 1-4
9/29/2014	Day 12	Isometrics Sketching	ISO-2, ISO-3	
10/1/2014	Day 13	Isometrics Sketching	ISO-5, ISO-6	ISO-4
10/6/2014	Day 14	Isometrics Sketching	ISO-9, Free Sketching	
10/8/2014	Day 15	Auxiliary Views	AUX-1	Auxillary Views 1-6
10/13/2014	Day 16	Auxiliary Views	AUX-2, AUX-3	
10/15/2014	Day 17	Auxiliary Views	AUX-4, AUX-6	AUX-5
10/20/2014		no class		
10/22/2014	Day 18	Architect's Scale	Handout	
10/27/2014	Day 19	Engineer's Scale	Handout	
10/29/2014	Day 20	Section Views	SEC-1, SEC-2	Sections 1-4
11/3/2014	Day 21	Section Views	SEC-3, SEC-7	
11/5/2014	Day 22	Dimensioning Theory & Application	DIM-11, LTR-5	Dimensioning 1-8
11/10/2014		No class		
11/12/2014	Day 23	Drafting Exam		
11/17/2014	Day 24	Lesson 1 - Parts	Base Model	
11/19/2014	Day 25	Lesson 2 - Assemblies	Adding Extruded Part	
11/24/2014	Day 26	Lesson 3 - Drawings	Drawing Template	
11/26/2014	Day 27	Pattern Features		
12/1/2014	Day 28	Revolves & Sweeps	Candle Stick	
12/3/2014	Day 29	Lofts	Hammerhead	
12/8/2014	Day 30	Project		
12/10/2014	Day 31	Project		
12/15/2014	Day 32	Project		
12/17/2014	Day 33	Project		

STUDENT RESPONSIBILITIES

1. Come to class. If a student misses more than 3 class sessions they may be dropped. However, students are responsible for dropping themselves with the DVC admissions and records office.
2. Arrive on time. Late comers are disruptive to the class. Latecomers may also miss important information presented at the beginning of class; such as assignment and lab changes.
3. Let the instructor know if you require any special considerations such as special seating, an interpreter, or any other aid which helps you to learn. These considerations are considered confidential. DVC offers a large array of services for the disabled so please contact the DSP office at ext. 2684
4. Mute all cell phones. No texting during class.
5. Conduct themselves in a professional manner; refraining from talking in class except as part of a classroom discussion or to ask a question.
6. Be prepared for class by reading or acquiring the information about the scheduled lecture and to be prepared to ask questions during and/or after the lecture.
7. Know and adhere to due dates for all assignments, tests, quizzes and the final project.
8. Check the class web page for any changes to the schedule and/or due dates.
9. Take class notes.
10. Keep records of your own work until you have received your final grade from the DVC admissions and records office.
11. Spend as much time as needed in order to satisfactory complete all assignments. Assignments vary in difficulty and length and some may take more time than others. The standard formula for college course work is that for every hour of class time (lecture) the student will spend between 2 and 3 hours doing homework. Since this class has 2 hours of lecture each week, each student should plan to spend 4 to 6 hours outside of class working on homework.
12. Know and follow all DVC policies and procedures. This includes plagiarism and cheating.
13. Let the instructor know if you are having difficulty with any part of the course. Special time can be arranged for individual assistance.



SketchUp 3.0 for Mac OS X

STUDENT LEARNING OBJECTIVES (SLO'S)

STUDENTS WILL BE ABLE TO:

A. Lines

1. Identify line types used in technical drawing.
2. Properly apply line types to a technical drawing.

B. Lettering and Sketching

1. Use proper technique for sketching letters and numbers.
2. Use proper techniques for sketching objects such as: lines, circles, arcs, ellipses, irregular curves, holes, etc.

C. Multi-line drawings

1. Use Orthographic projection methods to construct the 6 main views of an object.
2. Properly position and label each view.

D. Auxiliary views

1. Use Orthographic projection methods to construct a first level auxiliary view of an inclined surface.

E. Section views

1. Develop a section view of an existing view of an object with interior features.
2. Use proper section lines to represent the interior surface.

F. Isometrics

1. Develop isometric drawings from given multi-view drawings.
2. Develop isometric drawings from solid objects.

G. Dimensions

1. Use appropriate dimensioning styles to label an existing drawing.

H. Technical drawing tools

1. Properly use drawing tools such as: rulers, triangles, compass, shape templates, etc.

I. Computer Aided Design

1. Use CAD software, such as Autocad or Solidworks or Sketchup, to build an object.
2. Use CAD software to develop the technical working drawing of an object.

CONTENT:

A. Lettering and line types

B. Sketching methods

C. Orthographic projection

Straight edges, Slant surfaces, and Curved surfaces

D. Isometric development

E. Measuring

F. Scales

Engineering scale, Architectural scale, and Metric scale

G. Drafting instruments and tools

H. Geometric construction

Bisectors, Tangencies, Arc tangencies, and Curves

I. Completing missing views

Object lines and Hidden lines

J. Constructing sectional views

K. Constructing auxiliary views

L. Dimensioning

M. Working drawings

N. Computer assisted drafting and design

O. Drawing entities, Modifying entities, Text, Dimensions, Details, and Printing

LATE ASSIGNMENTS

Each assignment is due at the end of each class date. An assignment must be turned at the end of each class meeting. Normally, an assignment turned in after the “due date” will not be accepted.

MAKE-UP PROJECTS

Generally, there will be no make-up projects. Under exceptional circumstances, a make-up project may be given if a student presents a valid excuse for missing the project. Valid excuses include official school activities or illness severe enough to require a visit to the doctor.

ATTENDANCE

Students are expected to attend all lab sessions. If a student is absent from a lab session, he/she is still responsible for all announcements made during the lecture.

WITHDRAWAL

I may drop a student if he/she misses more than two weeks of the course; however, this is not automatic. I am not responsible for withdrawing a student. The student is responsible for withdrawing from the course. To drop a class, the student must go to the registrar and submit a drop card before the drop deadline.

Last Date to Add:	08/28/14
First Date to Drop:	08/15/14
Last Date to Drop with no 'W':	09/07/14
Last Date to Drop with 'W':	11/21/14

ACADEMIC INTEGRITY

Students may legitimately receive help from other students, lab assistants, and others. However, the completed assignment must be the result of a student’s own effort. It is improper to provide or receive drawings or computer files of an assignment in any form. If this should happen, all the parties willingly involved will receive an “F” letter grade on the project and will also be considered for class expulsion.

DISABILITIES

Students with disabilities may receive assistance through the Disabled Students Services Center. You may also setup an appointment in the Counseling Center to be tested if you suspect you have a learning disability.

TUTORING

If you required additional tutoring in other subjects, free tutoring services are offered. You may drop in for immediate tutoring at most labs, but some require that you make an appointment. Check the schedules posted on the DVC website or outside the tutoring labs. What can you expect from tutoring? The tutors will not do your homework for you, but they will help you build your critical thinking and study skills, prepare for tests, develop problem-solving skills, and organize essays. Who benefits from tutoring? Many students think that “good” students will not benefit from tutoring. However getting help to keep up with your work can strengthen your understanding of the course material. To get the most out of your experience at DVC, take advantage of the free tutoring available to you.