SUNY Orange SYLLABUS

53101 Engineering I

2 lect., 2 lab., 3 cr. (Fall)

Catalog Description:

An introduction to Engineering as a career with emphasis on communication skills. Topics to be presented include engineering graphics, technical report writing, computer graphics, 3D graphics modeling, 2D physical modeling and introduction to spreadsheets.
Prerequisite: Concurrent enrollment in 38107 or 38109 or higher.

TEXT AND MATERIALS:

Text: Fundamentals of Graphics Communications, 2nd Edition
Author: Gary Bertoline, Eric N. Wiebe, and Craig Miller
Publisher: McGraw Hill

Materials: 3- ring notebook (2" diameter minimum)

- Zip all pencil case (3 hole) 10" or 11" tall
- 2 3 ½" floppy disks DS-DD
- Scientific Calculator
- Bow Compass, Alvin Staedtler
- Engineering Scale, Alvin or Helix
- Architect Scale
- Drafting Pencil 2H
- Drafting Pencil F
- Student Pocket Metric Rule 6" with 15cm metric, clear or metal
- Triangle 6" 30^0 - 60^0
- Protractor $.5^0$ division
- Eraser for Drafting

*Optional

- Flow Charting Template w. Metric Rule (optional or share) or Helix #7701 Flow Chart Template
- Erasing Shield (Magic Rub)
- Drafting Tape/Dots/Masking Tape
- Small Scissors

RELATIONSHIP TO PROGRAMS:

This is a specialty course for engineering students. Students who are not majoring in engineering may sign up for this course as an elective. Refer to OCC catalog for complete, authoritative information.
Also recommend engineering student, after completing Engineering I, to take Into CAD, 52110, with AUTO Cad.

COURSE OBJECTIVES:

An introduction to Engineering Graphics through engineering proposal writing, graphics and projects. Laboratory will concentrate on both pencil and computer graphics design. Proposal and project writing will see computer applications such as word processing, spreadsheet, charting, circuits, project planner, and 2 and 3-d modeling.

Grading System:

- 6 - 12 tests/quizzes - all tests/quizzes count no tests are dropped - grade on final will count as one test for test average if a test is missed

INSTRUCTOR OFFICE HOURS: -- TBA

ATTENDANCE AND WITHDRAWAL:

Perfect attendance is simply assumed in this course. Without such attendance and dedication to the homework one will not be successful. The student's grade will reflect any lack of attendance, simply because of the difficulty of the material. It is the student's responsibility to speak with the instructor and withdraw from the course if things are not going well. The instructor will **not** initiate the withdrawal. An early consult with the instructor can save a great deal of later confusion.

SUPPORT SERVICES:
Open Computer Lab. The computer room, Harriman Hall 309, is open for students at anytime. Open 40 hours a week plus Monday thru Thursday nights. This is a open computer lab with no lectures given in the lab. So any unused computer is for student use.
There are services available for students with disabilities. Any such conditions should be communicated privately to the instructor on the first day of class so that any necessary special arrangements or accommodations can be made.

SYLLABUS

53-101

Week	Chapter	Topic
1	1	Introduction to Graphics
2	2	3-D Modeling
3	2	3-D Modeling
4	3	Sketching
5	3	Sketching
6	4	Construction & Geometry
7	5	Multi-view (Orthographics)
8	5	Multi-view (Orthographics)
9	6	Pictorials
10	7	Auxiliary Views
11	8	Sections
12	9	Dimensions
13	9	Tolerancing
14	10	Work Drawing
15	10	Work Drawing
16	Final Week	