

ENGR 105-1, 105-3
Engineering Drawing and Computer Aided Drafting
Three Semester Hours
Knoblauch 105 – CAD Drafting Classroom and Lab
Western Illinois University
Department of Engineering Technology
Spring Semester 2009

Instructor: Dr. Ralph Dirksen, Associate Professor
Department of Engineering Technology

Class Times: Section 1 - 1:00-2:50 p.m. (Mon. & Wed.) KH105
Section 3 – 10:00-11:50 a.m (Mon. & Wed.) KH 105

Office: Knoblauch Hall 335 **Office Hours:** 4-5 p.m. Tuesday
8:30 – 10 a.m. Mon, Wed, additional hours by appointment.

Office Phone: 298-2388 **Home Phone:** 837-3493

Catalog Description: ENGR 105 – Engineering Graphics/Computer-Aided Drafting (CAD)

An introduction to drafting including shape description, geometric construction, orthographic and isometric drawing, sectioning, dimensioning, applied descriptive geometry. Basic dimensioning, tolerancing and pictorial drawings will be covered. An introduction to the use of computers for design of industrial prints of intermediate complexity. Not open to students who have received credit for Engr. 101; 2 hrs. lecture 2 hrs. lab

Purpose of the Course:

This course is designed to provide pre-engineering students and the manufacturing engineering technology student with an understanding of the field of engineering drawing and descriptive geometry, the graphical languages of industrial technology. The instructional units include both cognitive (knowledge) content and psychomotor (skill) development blended through theory and practice in a laboratory/classroom environment. The course is primarily designed for students going into one of the engineering fields. The student will create drawings both manually and on the computer. Some out of class lab time is required.

Prerequisite: None.

Textbook: Bestoline, Gray. Fundamentals of Graphic Communications. New York: McGraw Hill Book Company, 2007

Equipment:

Pencil, eraser, scale, straight edge. Equipment will be discussed in class during the first two sessions.

Objectives of the course:

By completion of the course, the student will be able to: Draw, sketch and computer generate typical industrial manufacturing mechanisms and to read blueprints there of.

Materials Cost Reimbursement:

Each student is responsible for either furnishing all the consumable materials used in class or allowing the department to furnish the needed materials, then just reimbursing the department for the cost of materials used. The amount, which is intended to help recover the cost of student used materials furnished for class and for lab assignments, has been estimated to be \$5.00 for the semester.

Attendance:

Attendance at each class session is important in this subject matter area where the student must demonstrate skill by performance. Complete records on attendance are maintained and grades are accumulated. Any Three unexcused absences will lower one's course grade one letter.

Evaluation of Student Progress

Evaluation, or grading, will be based upon: correct solutions to problems, assignments, industrious work habits and manipulative skills, performance on tests and exams, regular attendance, and completion of assigned homework (sketching, oral reports research or reaction papers.)

Final Exam: Section 1 – May 13, 2009 1:00 p.m. – Wednesday
 Section 3 – May 11, 2009 10:00 a.m. - Monday

Student Evaluation:

Course grades will be based on a percentage of total possible points. The grading scale will approximate the normal break-off points closest to a category.

- 100-90 A
- 89-80 B
- 79-70 C
- 69-60 D
- 59-below F

Late Drawing Policy:

- A. Any assignment that is turned in one class late will be further penalized by the loss of ten (10) percent, plus any drawing errors or mistakes.
- B. Drawings two classes late will lose twenty (20) percent. Any drawing errors will lower the grade still further.
- C. Students who are absent because of a verifiable illness can usually make up missed work, not including tests. It is the students' responsibility to check in with the campus medical center, then make arrangements for make-up work as soon as they come back to class.

Test Policy:

Tests and test times as follows are announced in advance.

- Quiz 1 - Wednesday, January 28, 2009
- Quiz 2 - Monday, February 16, 2009
- Quiz 3 - Monday, March 9, 2009
- Quiz 4 - Monday, April 20, 2009

Course Grading Information:

- A. Approximately ten percent (10) of the final course grade will be determined by the final exam; testing both practical skill and comprehensive knowledge.
- B. Approximately thirty percent (30) of the final course grade will be determined by test, practical test, technical reports and mid-term test.
- C. About sixty percent (60) of the final course grade will be determined by the average of all daily assignments and drawings.

Student Conduct

Students who disrupt class, deface equipment or property, or cheat on tests, drawings, or other assignments will receive a course grade of "0."

Students with Disabilities

If there are any students in this class who have need for test-taking or note-taking accommodations due to a disability, they are encouraged to discuss this with the instructor.