



CET 150-401 Civil Engineering Graphics

3 Hours

COURSE SYLLABUS Spring 2005

INSTRUCTOR: Mike Cooper

OFFICE: Room 320C Oswald Building; phone 257-4872 ext. 4329

OFFICE HOURS: One half hour before class, or as scheduled. Email 24 hours at michael.cooper@kctcs.edu

DIVISION OFFICE: Room 114 Maloney Building; phone ext. 4004

AREA COORDINATOR: Mike Binzer, 125 MB, 257-4872 ext. 4109

DIVISION CHAIR: Cindy Barber, 118 MB, 257-4872 ext. 4112

TEXT: Civil Drafting Technology, Fifth Edition, by David A. Madsen and Terence M. Shumaker; Prentice-Hall, Inc 2001. Available from LCC Bookstore and www.amazon.com.

Will classes be canceled because of the weather? Check the local TV and radio stations.

GUIDELINES AND POLICIES In order to utilize class time most efficiently, it is recommended that the student study references, plan drawings and execute sketches outside of class and allow maximum time for drawing during the class period. Reading assignments are expected to be completed outside of the laboratory period. Be prepared for short quizzes.

It is highly recommended that the student maintain good class notes, along with sketches, drawings, etc. to form a notebook for future reference.

Lab time is provided for students to work on class assignments. In addition to regular class time, the designated computer lab will be available as posted.

The students' text, notebook/documentation, and storage disk must be available at each and every class meeting. Students are warned to exercise diligence in protecting their disks by labeling them for identification purposes including a phone number where you can be contacted and/or this course number and section. Disks should be transported in a protective container and care taken to keep them away from harmful sources such as heat and magnetic fields. You are solely responsible for the data stored on your computer disks. Loss of computer data, regardless of cause, will be viewed as failure to submit. It is highly advisable to backup all assignments on a second disk.

It is expected that the student will execute optimum care in the use of the classroom facilities and especially in the environment of their, particular work area.

ETHICS/VALUES All students are expected to comply with the rules outlined in the *Student Code of Conduct* booklet for the policy on excused absences.
<http://www.kctcs.edu/student/code.htm>.

ATTENDANCE Students are expected to attend **all** class meetings. Because success in this course is dependent upon continuous practice and constant direction from the instructor, regular attendance is essential.

SPECIAL SERVICES Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course **must** contact a staff member in LCC's Disability Support Services (DSS) office, 103 Oswald Building. The DSS telephone number is (859) 257-4872 x 4194. Please do not request accommodations directly from the instructor but do inform them of the situation no later than the end of the second class meeting.

The Lexington Community College is an Equal Opportunity Institution. Respect for all people, verbally and physically is the foundation for a positive learning environment.

GRADING PROCEDURES:

GRADING SCALE: A = 100 - 94
B = 93 - 85
C = 84 - 75
D = 74 - 65
E = below 65 (failure)

There will be atleast three (3) major exams plus multiple graded classroom assignments and possible "pop quizzes". Home work, Quiz and Laboratory scores will be averaged for the semester. Homework and Quiz averages will be equivalent to one exam. Laboratory grades will be equivalent to another exam. Exams, homework average and lab average will be averaged to determine the semester grade. Daily work will be evaluated and returned for you to maintain in a notebook or electronic file.

WRITTEN WORK Quizzes, homework, and exams may include some questions that require a written response. Proper use of mathematical notation and symbolism as well as the proper use of grammar rules will be required on all assignments.

MAKEUP WORK IN THE CASE OF AN EXCUSED ABSENCE In the case of a documented excused absence, makeup work will be handled as follows: Homework should be submitted within a week of the absence with the excuse attached. For quizzes, the student should contact the instructor within a week of the absence and make an appointment to take the quiz as soon as possible. For exams, the student should contact the instructor immediately and a make-up exam will be given before the next class period or during the last week of classes.

LATE WORK Late homework and take-home assignments are subject to a 20% per day penalty except in the case of an excused absence.

EQUIPMENT AND SUPPLIES Access to the Internet and portable storage device (disk), or access to Internet storage services such as <http://locker.uky.edu> or other online services, Engineer's scale, and 0.25" grid graph paper.

WITHDRAWAL POLICY Students may withdraw from the class at any time before the last regularly scheduled day of class with the permission of the instructor.

ANGEL The course syllabus, homework and reading assignments, grades and other topics of interest will be available on the Angel facility provided by the college. Students can access this via the Internet using <http://www.kcvu.org/home.htm>. To login, your User ID will be the first letter of your first name and your whole last name plus the last four digits of your Social Security Number (SSN). Your Password will be the last four digits of your SSN. Once you get in to your account you may change your profile. You should enroll before the next class period.

Angel has email capability. It will be important to have your email address when you establish your account. If possible use your UKy email address since some of the other providers limit the size of documents that can be sent through their facilities

Angel also will allow for the submission of electronic files directly to the Instructor for grading. If you chose to use this capability the submissions should have the Homework or lab number and your initials in the title.

COURSE DESCRIPTION:

This course provides the opportunity for the student to learn the basic theory necessary to generate and understand typical civil engineering working drawings. The student will develop graphic and other communication skills using current industry standard software. Lecture, 2 hours; laboratory, 3 hours. Prereq: CAD 100 or ACH 185.

COURSE OBJECTIVES:

Upon successful completion of this course, the student should be able to:

1. Utilize principles, problem solving techniques, and conventions of civil engineering graphic communication.
2. Visualize spacial relationships in CET applications.
3. Understand typical computer graphics software packages used to generate engineering drawings.

COURSE OUTLINE:

- I. Introduction
 - A. Civil Engineering Graphics
 - B. Computer Aided Design Environment
 - C. Ethical Computing Issues
- II. Computer Interface
 - A. Hardware
 - B. Network
 - C. Introduction to Current Civil Engineering Graphics Software
 - D. File Creation and Management
- III. Basic Geometric Civil Engineering Construction
 - A. Orthographic Projection
 - B. 2 – D Sketching

- C. Typical 3-View Layout
- D. Isometric Sketching and Construction
- E. Auxiliary Views
- F. Section Views
- G. Editing and Modifying
- H. Layers
- IV. Civil Engineering Applications
 - A. Basic Traverse
 - B. Interpolation of Contour Lines
 - C. Horizontal and Vertical Alignments
 - D. Template and Superelevation
 - E. Cross Stations
 - F. Cut and Fill
 - G. Bearing, Slope and Grade
 - H. Station Points