CALIFORNIA STATE UNIVERSITY, SACRAMENTO
College of Engineering and Computer Science
Spring 2008

CE-4 Engineering Graphics

Instructor: Pete Ouchida

Email: ouchidap@ecs.csus.edu

Office/Office Hours:

Course Description

• Graphic analysis and solution of typical three-dimensional space problems by applying the principles of orthogonal projection
• Interpretation of construction documents
• Introduction to computer aided design and drafting

Prerequisites

None. This course is oriented for students majoring in Civil Engineering or Construction Management. Students in Mechanical Engineering or other majors should check with their department prior to enrolling.

Course Objectives

After completing this course, students should be able to:

• Describe the role of the design professional in the project development process
• Describe the various roles that the engineer and constructor play in projects
• Translate construction graphics to words, and vice versa
• Produce multi-view and isometric drawings and understand their application
• Use architectural, engineering, and international scales
• Produce accurate free-hand sketches of simple construction components
• Properly dimension the components that make up a simple structure

Textbooks (Required)

Chiavaroli, AEC Drafting Fundamentals.

Dix, Discovering AutoCAD 2004

Materials and equipment (Required)

The following equipment is required, unless noted otherwise:

• 11" X 14" pad of drawing paper
• Quad Ruled graph paper
• Architectural and engineering scales (those with triangular sections)
• Mechanical (0.05mm and 0.09mm) or wood pencils (minimally, a 3H or 4H pencil for outline work, B or No. 2 for most sketching, and 2B, 3B, or 4B for bold dark lines.)
• A portable pencil or lead sharpener, if mechanical pencils are not used
• Eraser
• Compass
• Protractor
• One medium-sized 30°/60°/90° triangle and a medium-sized 45° triangle (4-6 inches on a side)

Drawing materials and equipment are required no later than the first day of class in the second week.

Laboratory Sessions

Laboratory sessions are two hours and forty-five minutes in length will be held once a week. This time will be devoted to discussion, instruction and work on selected exercises and drawings. Work will be evaluated on correctness and technical skill.

Quizzes and Tests

Quizzes will announced in class prior to the quiz and will be held during lab. Quizzes may not be made up.

Late Submissions of Assignments

Most drawings and assignments can be finished during the laboratory class in which they are assigned and will be due at the beginning of the following class. Assignments submitted after the class in which they are due will be graded 50%. Assignments one week late will not be accepted.

Grading

Grades will be assigned in accordance with the university grading policy outlined in the section entitled "Grading System." Any substance of academic dishonesty will result in a grade of "F" for the course and all other sanctions applicable by the current university policy. Academic dishonesty includes, but is not limited to, copying another student's work (such as an electronic drawing file with minor modifications and submitting it as your own work.)

Assignment of final grades will be based on a distribution of student's scores weighted as noted below.

Evaluation of Student's Performance

Grades will be weighted as follows:

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<thead>
<tr>
<th>Evaluation Category</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Laboratory Participation and Assignments</td>
<td>50%</td>
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<tr>
<td>Quizzes</td>
<td>10%</td>
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<tr>
<td>Mid Term</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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