Course Syllabus
ENGI 105 C01  Engineering Graphics
2 Credit Hours

Semester/year: Spring 2008  Office Location: Shields 206C
Instructor: Bill Eberlein  Office Hours: M-F  10 AM Shields 206C
E-Mail Address: eberlein@csi.edu  TR 11 AM Canyon 114
Office Phone: 208-732-6829  R 2 PM Math Lab
                    By Appointment

Course Description: Visualization of points and solids in space: sketching, orthographic
projection, pictorial representation, charts, graphs, and lettering;
techniques of drafting.

Text: Fundamentals of Graphics Communication by Bertomine &

Supplies: Engineering computation paper (0.2" grid)
USB flash drive. 128 mB will do.
H, HB, or #2 lead pencil

Course Objective: Develop skills in basic graphical communication using freehand
sketches and a computer-aided drafting program.

Outcomes Assessment: Students will be assessed through homework, quizzes & a project.

"As part of departmental analysis of outcomes in this course and
its place in the Engineering program, student completion of the
pre-requisite, success in the current course, success in subsequent
courses and student satisfaction will be reviewed by the instructor.
A review of this information will be made by department faculty
to determine what, if any, changes can be made to improve the
course in terms of content, focus, and instruction."

Expected Outcomes: Students will understand the importance of engineering graphical
communications. Students will be able to produce multi-view
and pictorial engineering drawings using sketching and CAD
techniques. Students will demonstrate their ability to produce
section and auxiliary views. Students will properly dimension basic
drawings.

Policies and Procedures: Attendance will be recorded. A class missed due to required
participation in a verified school activity will not be considered an
absence. You are responsible for everything presented in
class whether you are there or not. The instructor will drop
no-shows after the first two weeks of class. Students still
enrolled after April 4th will receive a letter grade for the
class.

This class meets Tuesday and Thursdays at noon in Canyon 115.

A computer lab for CAD assignments outside the classroom is in
Canyon 114. The instructor will provide the access code.
Homework assignments are listed later in the syllabus. Please note the due and dead dates for each assignment. Late work will be penalized 20 percent and no work will be accepted after the dead date.

Each group of weekly assignments must include a hand-lettered cover page stating the student’s name, problem numbers attached, date and course number. This applies to sketch and CAD assignments. (See attached example)

Each problem is to be submitted on a separate sheet of paper. Each CAD drawing will have a border and title block matching the attached example. Each sketched assignment will have a border and title block per the attached example.

Quizzes will be given during the semester starting in Week 2. Each quiz is worth 10 points. Quizzes will be given on Thursdays. A 100 point vocabulary quiz will be given during the last week of class. There will not be a final exam.

A CAD project will be assigned on 4/3/07. The project is worth 100 points and is due on 5/3/07.

Grading:

Each homework problem and each quiz is worth 10 points. The vocabulary quiz and the CAD project are worth 100 points each. All scores will be added together and grades awarded based on the following percentages:

90-100 A, 80-89 B, 70-79 C, 60-69 D, <60 F

It will be beneficial for students in this class to work together to learn CAD techniques and help each other visualize two-dimensional representation of three-dimensional objects. However, each student is expected to create his/her own drawings and not hand in copies of someone else’s work. This temptation seems to be particularly hard to resist on CAD assignments. Any indication of copying will result in no credit on the assignment for all people involved. Repeat offenders will receive a NO CREDIT for the course and a notice of probation will be placed on the student’s permanent transcript.
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On-line course evaluation statement:
Students are strongly encouraged to complete evaluations at the end of the course. Evaluations are very important to assist the teaching staff to continually improve the course. Evaluations are available online at http://evaluation.csi.edu. Evaluations open two weeks prior to the end of the course. The last day to complete an evaluation is the last day of the course. During the time the evaluations are open, students can complete the course evaluations at their convenience from any computer with Internet access, including in the open lab in the library and in the SUB. When students log in they should see evaluations for the courses in which they are enrolled. Evaluations are anonymous. Filling out the evaluation should only take a few minutes. Your honest feedback is greatly appreciated!

Student e-mail Accounts
E-mail is the primary source of written communication with all CSI students. Students automatically get a CSI e-mail account when they register for courses. Messages from instructors and various offices such as Admissions and Records, Advising, Financial Aid, Scholarships, etc. will be sent to students’ CSI accounts (NOT their personal e-mail accounts). It is the student's responsibility to check their CSI e-mail accounts regularly. Failing to do so will result in missing important messages and deadlines. Students can check their CSI e-mail online at http://students.csi.edu. Student e-mail addresses have the following format: username@students.csi.edu. At the beginning of each semester free training sessions will be offered to students who need help using their CSI e-mail accounts.

Disabilities:
Any student with a documented disability may be eligible for related accommodations. To determine eligibility and secure services, students should contact the coordinator of Disability Services at their first opportunity after registration for a class. Student Disability Services is located on the second floor of the Taylor Building on the Twin Falls Campus. 208.732.6260 (voice) or 208.734.9929 (TDD), or e-mail cmumford@csi.edu.

This syllabus is tentative and subject to change.
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<td>Isometric Pictorials</td>
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Spring Break!

10   | 3/25    | CAD Isometric Pictorials      |               |
|     | 3/27    | CAD Isometric Pictorials      |               |
| 11   | 4/1     | Project Assignment            |               |
|     | 4/3     | Oblique Pictorials            | 7.12 – 7.13   |
| 12   | 4/8     | Perspective Pictorials        | 7.14 – 7.19   |
|     | 4/10    | Perspective Pictorials        |               |
| 13   | 4/15    | Section Views                 | 8.1 – 8.7     |
|     | 4/17    | Section Views                 |               |
| 14   | 4/22    | Dimensioning                  | 9.1 – 9.2     |
|     | 4/24    | Dimensioning                  | 9.3 – 9.6     |
| 15   | 4/29    | Dimensioning                  |               |
|     | 5/1     | Project Due, Vocabulary Quiz  |               |
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Assignment 1
Due 1/24/08  Dead 1/31/08

P1.1 Page 30 Answer questions for review 1, 2, 3, 4, 6, 7, 8, 10, 11, & 12. You do not need to copy the questions. 2 extra credit points for well executed block lettered responses.

P1.2 Page 33 Workbook Problem number 1.1. Copy or use drawing 1.1 from the worksheets in the back of the book.

P1.3 Page 66 Answer questions for review 1 thru 10. You do not need to copy the questions. 2 extra credit points for well executed block lettered responses.

P1.4 Page 28 Use single-stroke vertical gothic sans-serif block lettering to reproduce the six terms and definitions in Section 1.11. Use all capital letters 0.2 inches high. Double space. Use the letter shapes on page 59. Strive for consistent letter shape, height, slant, proper spacing between letters and words, and use correct spelling.

Assignment 2
Due 1/31/08  Dead 2/7/08

P2.1 Page 121 Answer the odd numbered questions for review. You do not need to copy the questions. 2 extra credit points for well executed block lettered responses.

P2.2 Page 122 Sketch. Problem 3.2 and 3.5 on the same coordinate axes. Let one unit equal 0.4 inches.

P2.3 Page 122 Sketch. Problem 3.17a only. Use profile B. Let one unit equal 0.4 inches.

Assignment 3
Due 2/7/08  Dead 2/13/08

P3.1 Page 269 Answer questions for review 1 thru 10. You do not need to copy the questions. 2 extra credit points for well executed block lettered responses.

P3.2 Page 276 Sketch. Draw front, top, and right-side views of Figure 5.122 #9. Let 1 book grid equal 0.4 inches.

P3.3 Page 279 Sketch. Draw front, top, and right-side views of Figure 5.122 #40. Let 1 book grid equal 0.4 inches.

P3.4 Page 270 Sketch. Problem 5.1. Let one book grid equal 0.2 inches.

Assignment 4
Due 2/14/08  Dead 2/21/08

P4.1 Page 269 Answer questions for review 11 thru 18. You do not need to copy the questions. 2 extra credit points for well executed block lettered responses.

P4.2 Page 270 Workbook problem 5.1. Number 1 – 14 on the drawing sheet and state p or q. Note that the vertical sides of the letters are tapered.

P4.3 Page 283 Sketch. Figure 5.122 # 89. Draw the front, top, and r-side views in the correct positions and orientation. Grid in book is 0.4" squares.
Assignment 5
Due 2/21/08 Dead 2/28/08

P4.4 Page 272 Sketch. Figure 5.120 #7. Draw the two views shown and add the missing top view. Let 1 book grid equal 0.4 inches.

P5.1 Handout CAD. Generate a CAD border and title block per the handout and example attached to the syllabus.

P5.2 N/A CAD. Draw a 3 inch diameter circle. Inscribe an equilateral triangle in the circle and circumscribe an square on the circle. Label the square, circle, and triangle.

Assignment 6
Due 2/28/08 Dead 3/6/08

P6.1 Page 278 CAD. Draw top, front, and right-side views of Figure 5.122 #35. Let 1 book grid equal 0.4 inches.

P6.2 Page 279 CAD. Draw top, front, and right-side views of Figure 5.122 #44. Let 1 book grid equal 0.4 inches.

P6.3 Page 280 CAD. Draw the front, top, and right-side views of Figure 5.122 #55. Let 1 book grid equal 0.4 inches.

P6.4 Page 273 CAD. Figure 5.120 #20. Draw the two views shown and add the missing top view. Let 1 book grid equal 0.4 inches.

Assignment 7
Due 3/6/08 Dead 3/13/08

P7.1 Page 328 Answer questions for review 1 thru 7. You do not need to copy the questions. 2 extra credit points for well executed block lettered responses.

P7.2 Page 329 Sketch. Figure 6.19 #6. Draw the front and side views shown and a partial auxiliary view of each inclined surface. Let 1 book grid equal 0.4 inches.

P7.3 Page 281 Sketch. Figure 5.122 #66. Draw the front and side views and a partial secondary auxiliary view of the oblique surface. Let 1 book grid equal 0.4 inches.

Assignment 8
Due 3/13/08 Dead 3/27/08

P8.1 Page 329 CAD. Figure 6.19 #7. Draw the two views shown and a partial auxiliary view of the inclined surface. Let 1 book grid equal 0.4 inches.

P8.2 Page 331 CAD. Figure 6.20 #23. Draw the front and side views shown and a partial auxiliary view of the oblique surface that is sown on edge in the front view. Let 1 book grid equal 0.4 inches.

P8.3 Page 282 CAD. Figure 5.112 #77. Draw front and side views and a partial secondary auxiliary view of the of the oblique surface. Let 1 book grid equal 0.4 inches.
Assignment 9  
Due 3/27/08  
Dead 4/3/08

P9.1  Page 281 CAD. Figure 5.112 #66. Draw a one-piece development, cut out, fold up, and tape/glue together. Hand in both a flat version with a CAD border and title block and the folded version. Your name should be on the outside of the folded version. Let 1 book grid equal 0.4 inches.

P9.2  Page 374 Questions for review 3, 4, 5, 7, & 10. You do not have to copy the questions. 2 extra credit points for well executed block lettered responses.

P9.3  Page 376 Sketch. Draw an isometric pictorial of the object in Figure 7.60 #20. Use white copy paper over the provided isometric grid to make the drawing. Sketch in a sketch-format border and title block. Let 1 book grid equal 0.4 inches.

P9.4  Page 378 Sketch. Draw an isometric pictorial of the object in Figure 7.60 #29. Use white paper over the provided isometric grid to make the drawing. Sketch in a sketch-format border and title block. Let one book grid equal 0.4 inches.

Assignment 10  
Due 4/3/08  
Dead 4/10/08

P10.1  Page 377 CAD Draw an isometric pictorial of the object shown in Figure 7.60 #21. Let 1 book grid equal 0.4 inches.

P10.2  Page 379 CAD. Draw an isometric pictorial of the object shown in Figure 7.60 #48. Let 1 book grid equal 0.4 inches.

Assignment 11  
Due 4/10/08  
Dead 4/17/08

P11.1  Page 374 Questions for review 1, 2, & 8. You do not need to copy the questions. 2 extra credit point for well executed block lettered responses.

P11.2  Page 377 Sketch. Figure 7.60 #21. Draw a cabinet oblique pictorial. Let 1 book grid equal 0.4 inches.

P11.3  Page 379 Sketch. Figure 7.60 #39. Draw a cavalier oblique pictorial. Let 1 book grid equal 0.4 inches.

P11.4  Page 378 CAD. Figure 7.60 #31. Draw a cabinet oblique pictorial. Let 1 book grid equal 0.4 inches.

P11.5  Page 379 CAD. Figure 7.60 #40. Draw a cavalier oblique pictorial. Let 1 book grid equal 0.4 inches.

Assignment 12  
Due 4/17/08  
Dead 4/24/08

P12.1  Page 374 Questions for review 11, 12, & 13. @ extra credit points for well executed block lettered responses.

P12.2  Page 381 CAD. Figure 7.64. Create a human-eye view using the dimensions shown.
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<tr>
<td>P13.1 Page 415</td>
<td>Answer questions for review 1, 3, 5, 7, 9, 12, &amp;13. You do not need to copy the questions. 2 extra credit points for well executed block lettered responses.</td>
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<tr>
<td>P13.2 Page 418</td>
<td>Sketch, Figure 8.53A. Draw front view with the top view as a full section. Full size.</td>
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<tr>
<td>P13.3 Page 421</td>
<td>Sketch, Figure 8.54D. Draw top view with the front as an offset section. Draw full size.</td>
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<tr>
<td>P13.4 Page 419</td>
<td>CAD, Figure 8.53C. Draw the top view with the front view as a full section. Draw full size.</td>
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<tr>
<td>P13.5 Page 422</td>
<td>CAD, Figure 8.55B. Draw the top view with the front as a half section. Draw full size.</td>
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<td>Questions for review 1 thru 10. 2 extra credit points for well executed block letter responses.</td>
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<tr>
<td>P14.2 N/A</td>
<td>Sketch, Workbook sheet 9.1. Dimension drawing A or B using two-place inch dimensions. Measure features to determine dimension values. Choose one drawing only.</td>
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<tr>
<td>P14.3 N/A</td>
<td>Sketch, Workbook sheet 9.1. Dimension drawing C or D using two-place inch dimension. Measure features to determine dimension values. Choose one drawing only.</td>
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<tr>
<td>P14.4 N/A</td>
<td>CAD, Workbook sheet 9.2. Draw and dimension drawing A or B using two-place inch dimensions. Measure the drawing to determine size. Draw full scale. Choose one drawing only.</td>
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<tr>
<td>P14.5 N/A</td>
<td>CAD, Workbook sheet 9.2. Draw and dimension drawing C or D using two-place inch dimensions. Measure the drawing to determine size. Draw full scale. Choose one drawing only.</td>
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