

EGN 1111C - ENGINEERING GRAPHICS  
Common Course Syllabus

Catalog Data: 3 CREDITS. Sketching techniques. Multiview drawings, pictorials, section views, auxiliary views, and engineering problem layout. Descriptive geometry. Three-dimensional modeling and computer graphics.

Goals: This course is designed for students to learn the techniques and standard practices of engineering graphics. Besides learning basic concepts, fundamental principles, graphics conventions, and industrial standards, emphases are on developing hands-on sketching skills as well as on gaining exposure to 3-D solid modeling strategies and their applications in technical design communication.

Topics: (The number of sessions merely provides guidelines, and is subjected to change by individual instructor)

1. Introduction of graphics communication (2 hours)
  2. Engineering geometry (4 hours)
  3. Multiview drawings – by hand (4 hours)
  4. Pictorial drawings – by hand (4 hours)
  5. Auxiliary views – by hand (3 hours)
  6. Section views (2 hours)
  7. Dimensioning and tolerancing practices (2 hours)
  8. Reading and constructing working drawings (1 hour)
  9. 3-D modeling (3 hours)
  10. Use graphics software for drawing and modeling (20 hours)
- (Total 45 hours)

Course Outcomes: (numbers in parentheses indicate correlation of the outcome with the appropriate ABET program outcomes 1-7)

1. Students will understand the concepts of different types of projections, and know how to use them to describe an object. (1,2,6)
2. Students will be able to read and visualize technical drawings. (1,2,6)
3. Students will understand the basic geometry behind technical drawings. (1,2,6)
4. Students will be able to use modern CAD tools to model parts and assemblies, and to make drawings for manufacturing. (1,2,6)

Design Content:

This course has no design content.

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