EGR 110
Engineering Graphics
File: N110O1

Test #1 Overview

Related Material:

- Chapters A, B, C, D, L, and M in the ***Engineering Graphics Workbook***
- Sketching Assignments 1 - 6

Format:

- Time limit: 1 hour, 50 minutes (unless otherwise specified by the instructor)
- No books or notes are allowed during the test.
- All sketches will use either rectangular or isometric graph paper (provided). No rulers or scales will be needed.
- Most problems will be sketching exercises that are similar to workbook problems.
- Some multiple-choice, True/False, or fill-in-the-blank problems to test terminology, minor issues, etc.
- No questions related to Inventor will be on this test.

Major Topics: (This list is not intended to exclude any topics. Anything covered in class may be on the test.)

1. Sketching
   - "enclosing box" method for circles
   - "enclosing parallelogram" method for ellipses
   - use good line work
2. Orthographic Projection (Multi-view Drawings)
   - Standard arrangements of views (6-view, 3-view, 2-view, etc)
   - Common dimensions between views
   - Alignment of points and shapes between views
   - Line types
   - Line precedence
   - Missing line problems (good visualization practice)
   - Missing view problems (create a 3rd view when given 2 views)
3. Isometric Sketching
   - Isometric graph paper
   - Angles of principal axes
   - Sketching isometrics from given orthographic views
4. Dimensioning
   - Use good style in dimension lines, extension lines, gaps, arrows, etc
   - Linear dimensions
   - Dimensioning arcs, circles, and angles
   - Baseline and continued dimensions
   - Check: Size and location specified for each feature?
   - Placement of dimensions – which view is best?
   - Symbols for diameter, countersink, counterbore, depth
   - Fillets and rounds
   - Direction of dimension figures – use unidirectional dimensions
   - Systems of units (decimal-inch and metric only on the test)
     - Add SI or similar note to metric drawings
   - Numerous style issues for dimensioning
   - Avoiding redundant dimensions
   - Providing overall dimensions
   - Leaders
   - Notes

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5. Tolerance

- General tolerance notes
- Tolerance styles
    - Symmetrical tolerances
    - Limit dimensions)
- Use tolerance information to find max and min dimensions
- Mating shafts and cylinders (maximum clearance and allowance)
- Interference and clearance fits