# Syllabus

## ESC 105 Engineering Graphics

## General Information

**Date**

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**Author**

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**Department**

Science and Technology

**Course Prefix**

ESC

**Course Number**

105

**Course Title**

Engineering Graphics

## Course Information

**Credit Hours**

3

**Lecture Contact Hours**

1

**Lab Contact Hours**

5

**Catalog Description**

This course includes technical sketching, visualization, design, and the use of computer aided design (CAD). Topics include geometric construction and modeling, lettering, freehand sketching, orthographic projection, isometric projection, oblique projection, sectional views, dimensioning, working drawings, and the use of CAD software. Emphasis is on developing both manual sketching and CAD skills to convey engineering designs in accordance with industry standards.

**Key Assessment**

This course does not contain a Key Assessment for any programs

**Prerequisites**

None

**Co-requisites**

None

**Grading Scheme**

Letter

# First Year Experience/Capstone Designation

**This course DOES NOT satisfy the outcomes applicable for status as a FYE or Capstone.**

# SUNY General Education

**This course is designated as satisfying a requirement in the following SUNY Gen Ed category**

None

# FLCC Values

**Institutional Learning Outcomes Addressed by the Course**

Inquiry
Perseverance
Interconnectedness

# Course Learning Outcomes

**Course Learning Outcomes**

1. Demonstrate proper set up of multi-view orthographic drawings.
2. Demonstrate proper use of standard drawing tools and techniques.
3. Use CAD software to create solid models and engineering drawings.

# Outline of Topics Covered

I. Design and Graphic Communication

II. Freehand Sketching

III. Scales

IV. Lettering

V. Geometric Construction

VI. Multiview Sketching and Projection

VII. Pictorial Sketching

VIII. Sectional Views

IX. Dimensioning

X. Working Drawings

XI. Parametric Solid Modeling (CAD)

XII. Design Project