

## **GRC 54 Math for Graphic Communications**

(Formerly Printing Technology 54)

3 units, 3 lecture 0 lab

**Prerequisite:** Eligibility for Math 1.

Essential math topics for the graphics person. Image resolution and compression, file size determination, compression routines, cropping to aspect ratio, proportional scaling of art work, measuring systems, paper planning and ordering, estimating, type specification, and other issues.

Expanded Description of Content and Methods:

Content:

- I. Introduction, Policies, Procedures
- II. Measuring Systems
  - A. Linear Measure
    1. Inches
    2. Point System
    3. Metric
  - B. Weight/Liquid Measure
  - C. Computer Data
- III. Proportions in Graphic Communications
  - A. Aspect Ratio
  - B. Proportional Scaling of art work
  - C. Cropping art work
  - D. File Compression
  - E. File Transmission/ Downloading
  - F. Chemical mixing
  - G. Other Topics
- IV. Typographic Considerations
  - A. Type Specification for Copyfitting
    1. Point Size, attributes of a font
    2. Letter Spacing
    3. Kerning
    4. Word Spacing
    5. Leading
    6. Depth
    7. Character count of fonts
  - B. Pagination
    1. Imposition
    2. Paper bulk
    3. Calculating final size
    4. Calculating weight for shipping
- V. Paper Ordering
  - A. Size/ Categories of Stock
  - B. Determining cuts and trims
  - C. Ordering Materials
- VI. Print Estimating
  - A. Paper Stock
  - B. Ink Coverage
  - C. Expendables
  - D. Milage/Run length
  - E. Profit Margin/spoilage/waste factor

F. Time allocations

VII. Determining Cost and Profit

VIII. Additional Topics