SYLLABUS

DIVISION: Business and Engineering Technology   **REVISED:** Spring 2014

CURRICULA IN WHICH COURSE IS TAUGHT: Graphic Imaging Technology

COURSE NUMBER AND TITLE: PNT 130, Applied Math for the Graphics Industry

CREDIT HOURS: 3 **HOURS/WK LEC:** 2 **HOURS/WK LAB:** 2 **LEC/LAB COMB:** 4

I.   **CATALOG DESCRIPTION:**
     PNT 130 - This course is designed to introduce the student to practical problems in mathematics as it relates to the graphics industry. Specific topics will include whole numbers, common fractions, decimal fractions, percent, and measurement. In addition, students will develop the skills necessary to prepare illustrations and photographs, computer page layouts, calculate paper stock and ink needs.

II.   **RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES:**

     1.   Demonstrate technical skill competencies in the area of mathematical problem solving relating to the graphic communications industry.

     2.   Prepare students for entry into PNT 245 with the skills necessary to succeed.

III.   **REQUIRED BACKGROUND/PREREQUISTIES:**
      Co-requisite, PNT 131 or department approval

IV.   **COURSE CONTENT:**
     1.   Whole numbers   7. Computer Page Layout
     2.   Common Fractions   8. Paper stock needs
     3.   Decimal Fractions   9. Ink needs
     4.   Percent   10. Costing Materials and Services
     5.   Measurement   11. Resolutions
     6.   Illustrations and Photographs

V.   **THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE   (Place X by all that apply)**

___X___	Communications	_____	Personal Development
___X___	Critical Thinking	___X___	Quantitative Reasoning
_____	Cultural & Social Understanding	_____	Scientific Reasoning
___X___	Information Literacy		

VI.   LEARNER OUTCOMES

VII.   EVALUATION

Learner Outcomes	Evaluation

1. Understand Whole numbers
    a. Addition
    b. Subtraction
    c. Multiplication
    d. Division
    e. Roman Numerals
	General assignments
	Written test

2. Understand Common Fractions:
    a. Addition
    b. Subtraction
    c. Multiplication
    d. Division
	General assignments
	Written test

3. Understand Decimal Fractions:
    a. Addition
    b. Subtraction
    c. Multiplication
    d. Division
    e. Combining decimal & fractions
    f. Converting
	General assignments
	Written test

4. Understand Percent:
    a. Percent equivalents
    b. Simple percent
    c. Calculating interest
    d. Calculating discounts
	General assignments
	Written test

5. Understand Measurement by:
    a. Using a rule
    b. Standard system
    c. Point measurement system
    d. Metric measurement system
    e. Calculating ratio and proportion
    f. Using the Micrometer
    g. Using the Densitometer
	General assignments
	Written test

6. Understand Illustrations and Photographs by:
    a. Creating graphs and charts
    b. Hand-Mechanical sizing methods
    c. Computer sizing methods (copy fitting)
	General assignments
	Written test

7. Perform a computer page layout by:
    a. Spacing in type composition
    b. Calculating margins
    c. Creating tabs, columns, and tables
	General assignments
	Written test

8. Understanding Paper
    a. Basic size, thickness, and weight of paper stock
    b. Determining press sheets from stock sheets
    c. Determining paper needs for imaged products
	General assignments
	Written test

9. Determining ink needs by:
    a. Calculating ink coverage
    b. Determining ink needs and cost
	General assignments
	Written test

10. Determining cost of materials and services
    a. cutting and handling paper stock
    b. Determining cost of paper stock used
	General assignments
	Written test

11. Understand Resolutions
    a. Scanning resolution for halftones
    b. Scanning resolution for continuous-tone printer
    c. Scanning resolution for video/Multimedia
    d. Scanning resolution for Line Art
    e. File size
    f. Gray levels
	General assignments
	Written test