

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: **GRPH-131**

Department: **GRAPHIC ARTS
TECHNOLOGY**

Course Title: **Graphic Communications**

Semester: Fall Year: 2008

Objectives/Competencies

Course Objectives	Competencies
<p>1. The student will have understanding of the development and history of the printing industry.</p>	<p>A. Understand the complex factor that led to invention of the printing Process.</p> <ol style="list-style-type: none">1. Moveable Type Process.2. Early Chinese Printing.3. Johannas Gutenberg. <p>B. Understand the history of the development of the printing press.</p> <ol style="list-style-type: none">1. The Web Press.2. The rotary Press.3. The Letter Press. <p>C. Understand the history and development of the lithographic process.</p> <ol style="list-style-type: none">1. Offset Lithography.2. "Stone" Printing3. Metal Lithographic Image Carriers.

2. The student will know about the major printing technologies used today.

A. Understand the essential differences between the 5 major type of printing processes.

- 1. Non-Impact.**
- 2. Relief.**
- 3. Planographic.**
- 4. Intaglio.**

B. Understand the Non-Impact printing process that are in use today: the Inkjet; Laser; and various Thermal processes.

- 1. Types of printing jobs printed with processes.**
- 2. Specific printing devices.**
- 3. Image quality.**
- 4. Technical descriptions of the specific processes.**

C. Understand the four conventional printing process employed today: Offset Lithography; Rotogravure; Screen Printing; and Flexography.

- 1. Printing Devices.**
- 2. Types of Products.**
- 3. Image Quality.**
- 4. Image Carrier Preparation.**

3. The student will understand the various processes involved in producing a successful printing job.

A. Understand the unique characteristics and requirements of the printed image.

- 1. Spot Color**
- 2. Duotone, Tri-tones, and Quad-tones**
- 3. Trapping**
- 4. Halftones and Screen Tints.**

B. Understand the various stages of a conventional printing job:

- 1. Planning the job.**
- 2. Designing the job.**
- 3. Prepress Preparation**
- 4. Printing the job.**
- 5. Finishing Processes.**

4. The student will understand the basic nature of light and color in relation to 4 color process printing.

- A. Understand the basic of 4-color process printing.**
- B. Understand the visible band of electromagnetic spectrum.**
- C. Understanding the additive (RBG) and subtractive(CMY) primary color and the relationship they have to one another.**

5. The student will be aware of the influence electronics will have on the on the printing industry.

- A. Understand the basic direction of various printing technologies:**
 - 1. Electronic File Transfer.**
 - 2. On Demand Printing.**
 - 3. Direct Image Press.**
 - 4. Computer to Plate.**
- B. Understand the influence that the Internet will have on printing.**

6. The student will know about quality evaluation requirements and methods used in the printing:

- A. Understand the specific devices used in quality evaluation for printed material:**
 - 1. Densitometers.**
 - 2. pH Meters.**
 - 3. Colorimeters and Spectrophotometers.**
 - 4. Micrometers.**
- B. Understand the basic characteristics and requirements of image quality used in printing.**
 - 1. Density.**
 - 2. Resolution.**
 - 3. Color Balance.**