Course Description

GRA0452 | Halftone Processes for Graphic Arts | 4.00 credits

A halftone is a reproduction of a continuous tone photograph that has been converted into dots of various sizes so it can be reproduced by any of the major printing processes. The various size dots are so small and numerous that they fool the eye into seeing shades of gray similar to a continuous tone photo. Numerous hands-on projects will cover the use of halftone screens and the manipulation of tones by controlled exposures and development procedures. Prerequisite: GRA 0451.

Course Competencies

Competency 1: The student will demonstrate understanding of halftone fundamentals by:
1. Analyzing the principles of continuous tone to halftone conversion
2. Explaining the optical illusion that creates the perception of shades of gray
3. Evaluating the impact of dot size and frequency on image quality
4. Comparing different halftone screen types and their applications

Competency 2: The student will develop proficiency in halftone production techniques by:
1. Implementing various halftone screening methods
2. Manipulating exposure times to control dot size and tonal range
3. Applying development procedures to optimize halftone quality
4. Troubleshooting common halftone reproduction issues
5. Creating halftones suitable for different printing processes

Competency 3: The student will apply halftone skills through hands-on projects by:
1. Producing a series of halftone reproductions from continuous tone photographs
2. Experimenting with different screen angles and frequencies
3. Developing techniques for preserving detail in highlight and shadow areas
4. Implementing color separations using halftone techniques
5. Adapting halftone methods for various image types and printing requirements

Competency 4: The student will synthesize halftone knowledge in practical applications by:
1. Analyzing the quality of professional halftone reproductions
2. Critiquing peer work based on technical execution and visual fidelity
3. Developing a portfolio showcasing a range of halftone projects
4. Presenting and defending halftone production choices in a professional setting
5. Creating comprehensive guidelines for optimal halftone reproduction in various scenarios

Learning Outcomes:
- Communicate effectively using listening, speaking, reading, and writing skills
- Solve problems using critical and creative thinking and scientific reasoning
- Formulate strategies to locate, evaluate, and apply information
- Demonstrate an appreciation for aesthetics and creative activities