ARTH 3360 DIGITAL PRINTING (4 credit hours)

Elmira College

SPRING 2025

Required Text:
Handbook of Print Media by Helmut Kipphan, Springler.

Pre-requisites: ARTH 2120 Graphic Communications.

Course Description

The advancements in digital technology have revolutionized the printing industry, leading to multi-technology integration. This course aims to enhance students' knowledge and skills in various digital printing technologies, enabling them to select the most appropriate technology based on the nature of the work. Through theoretical study and practical application, including computer labs, students will gain the knowledge and skills needed to excel in the modern digital printing landscape.

Course Objectives and Goals

- Identify and describe various digital printing technologies and their optimal applications.
- Analyze the role of digital printing in the context of the printing industry and broader communication workflows.
- Perform data scrubbing and cleansing to enhance data accuracy and quality in printing operations.
- Design and optimize digital printing workflows for diverse industry applications.
- Assess emerging trends and innovations in digital printing technologies.

Evaluation of Performance

Your grade will be based upon your performance on exams, assignments, and participation.

4 Assignments	20%
4 Computer Labs	40%
Midterm Exam	15%
Final Exam	25%
Total	100%

Grades will be assigned as follows:

A	93% and above	B-	80 - 82%	D+	67 - 69%
A-	90 - 92%	C+	77 - 79%	D	63 - 66%
B+	87 - 89%	C	73 - 76%	D-	60 - 62%
B	83 - 86%	C-	70 - 72%	F	59% or below

Withdrawal Policy: Please see Elmira College Bulletin for information on this policy.

Academic Honesty: Please read the section on Academic Honesty in the **Code of Conduct**. Briefly, academic dishonesty includes: cheating, fabrication, facilitating academic dishonesty, and plagiarism. Ask if you have any questions on whether something constitutes as academic dishonesty. All work must be original and new. Past assignments from current or other courses will not be accepted. Academic dishonesty will not be tolerated. It will result in zero on the assignment, and a report will be filed with the school. Continued practice will result in failure of the class. Institutional penalties may also apply with repeated acts of academic honesty.

Student Responsibility:

- It is your responsibility to keep track of assignments and due dates.
- You should ask questions concerning assignments and lectures, if you need any clarifications.
- If you are struggling in class, have concerns, and/or unsure about expectations, please stop by during office hours or make an appointment for another time.

Tentative Schedule of Topics

Topic	Lectures	Tasks & Evaluations
Introduction to Digital Printing Technology	Lecture 1	
Printing Technologies without a Printing Plate (NIP Technologies)	Lecture 2	
Principle of Electrophotography	Lecture 3	Computer Lab 1
Imaging System and the Principle of Ionography	Lecture 4	Assignment 1
Principle of Magnetography	Lecture 5	
Imaging System for Magnetography	Lecture 6	Computer Lab 2
Overview of Ink Jet Technologies and Processes	Lecture 7	Assignment 2
Overview of Thermography Technologies	Lecture 8	
Thermal Transfer Printing Systems	Lecture 9	Midterm Exam
Electrography	Lecture 10	
Photography	Lecture 11	Assignment 3
Computer to Film	Lecture 12	
Computer to Plate/to Cylinder/to Screen	Lecture 13	Computer Lab 3
Computer to Press/Direct Imaging	Lecture 14	
Computer to Print	Lecture 15	Computer Lab 4
Hybrid Printing Systems	Lecture 16	
Material Logistics	Lecture 17	Assignment 4
Networking and Data Flow	Lecture 18	
Production Strategies for Print Media	Lecture 19	Final Project
Future of Digital Printing Technologies	Lecture 20	Final Exam