

Printing

Program Number: 31-204-1

One-Year Technical Diploma

Applied Arts Program Cluster

Center for Business and Applied Arts

Program offered at Madison Campuses

For information call: (608) 246-6003 or
(800) 322-6282 Ext. 6003

About the Program

The Technical Diploma Printing program offers the knowledge and skills required for entry level positions in the graphic arts industry. The printing process takes raw material and produces a finished printed product using technology. Students receive training in all steps using the sheet-fed offset lithographic reproduction process.

The printing industry includes Commercial Printing (general printing), Forms Printing, Packaging, and other trade services. Nationwide employment is just under one million people in just over 35,000 establishments located in communities of all sizes throughout the country.

Locally, printing companies range from small shops to those employing hundreds of employees. They manufacture a wide array of products including books, brochures, advertising, magazines, and packaging, to name a few. People in this field must adapt to rapid technological changes, applying their old knowledge to new processes throughout their career.

Positions call for a wide range of skills and aptitudes. The successful employee will be a detail-oriented, problem solving team player with good communication skills. Employment in the printing industry requires the ability to use a wide range of computer softwares, mechanical ability and the need to adapt to new technology as the industry evolves. Graduates can specialize in one or several areas after graduation.

Unique Requirements for Graduation

All courses must be completed with a GPA of 2.0 (C) or above to graduate from this program.

Curriculum

The courses listed below outline the requirements for graduation for students entering this program in the 2011-2012 academic year. Requirements for graduation may vary depending on the semester in which a student is admitted to their program.

Current/continuing students should consult their degree progress report available through their student center (myMadisonCollege) account for specific graduation requirements.

Program requirements are subject to change.

		Hrs/week	
		Credits	Lec-Lab
First Semester			
31-204-310	Softwares for Print Production 1.....	5	4-6
31-204-316	Prepress Production Procedures 1.....	3	2-4
31-204-318	Lithographic Press Systems 1.....	5	4-6
31-204-330	<u>Finishing and Machine Basics.....</u>	<u>3</u>	<u>2-4</u>
Semester Total		16	
Second Semester			
31-204-312	Softwares for Print Production 2.....	5	4-6
31-204-326	Prepress Production Procedures 2.....	2	1-3
31-204-328	Lithographic Press Systems 2.....	5	4-6
31-204-340	Quality Control for Printing.....	1	1-1
31-204-342	Finishing and Fulfillment.....	2	1-3
31-204-394	<u>Printing Seminar.....</u>	<u>1</u>	<u>1-1</u>
Semester Total		16	

Note: Students are placed in English or mathematics courses based on their scores on the COMPASS or ASSET test or on completion of the appropriate prerequisite/s.



Program Courses

31-204-310 Softwares for Print Production 1 3 credits

Provides instruction in the many software programs required to move printing jobs through a digital prepress workflow. Emphasis is on page layout software, including QuarkXPress and InDesign, and on related programs necessary to create documents, such as Illustrator and Photoshop. File management, font management and image management are integrated into lab projects and outside assignments. Other related materials will also be covered through lecture and demonstration along with an overview of how printing processes achieve tonality and color reproduction. Projects started in this course will be completed in Prepress Production Procedures 1. Co-requisite: 31-204-316.

31-204-312 Softwares for Print Production 2 3 credits

Continuation of Software for Print Production 1. The many software programs introduced during the first semester including QuarkXPress, InDesign, Photoshop and Illustrator, will be used to construct more complex multicolored and full color documents for print. Lab project work, along with outside assignments, will be supported by lectures and demonstrations. An overview of preflighting concepts will be introduced. Recognizing the operations necessary to produce a printed piece, then using data to establish pricing are discussed. Other related material will be covered as needed. Students will be expected to complete a competency check list covering skills for all aspects of the coursework completed in the diploma program. Prerequisite: 31-204-310. Co-requisite: 31-204-326.

31-204-316 Prepress Production Procedures 1 3 credits

Introductory course in the computer-to-plate digital workflow necessary to produce offset printing plates for the pressroom. An overview of the prepress workflow will lead into making imposition layouts for basic running configurations in imposition softwares, proofing methods for customer approvals and making metal offset plates for pressrooms. Projects started in Softwares for Print Production 1 will move through this class creating printing plates to be printed in press classes. Co-requisite: 31-204-310.

31-204-318 Lithographic Press Systems 1 3 credits

A basic course in small offset lithographic press operation. Identification, selection and handling techniques for chemicals are emphasized. Instruction includes pressroom procedures, safety issues and OSHA standards, comparisons of different offset press configurations and their applications. Students operate offset presses to produce one and two color work created in Softwares for Print Production 1 and Prepress Production Procedures 1. Emphasis is on press adjustments for high quality offset lithography. Related topics include paper handling, operator press maintenance, and interpreting job specifications. An overview of the printing processes, past and present, most of which we cannot do in the laboratory is also incorporated. Topics covered are flexography, gravure, silkscreen, variable data toner based and inkjet, letterpress and its related operations of die cutting, foil stamping, and embossing. Other effects like thermography, coatings and others will be discussed. Students will also examine various raw materials and elements used for print production and analyze their environmental impact and related governmental regulations. Co-requisites: 31-204-316 and 31-204-330.

31-204-326 Prepress Production Procedures 2 2 credits

An intermediate course in computer-to-plate digital workflow. Instruction includes imposition configurations required to make plates for more complex jobs started in Software for Print Production 2. Upper level workflow issues will be integrated into class discussions, demonstrations and projects. Offset printing plates created in this class will be printed in 2nd semester press classes. Prerequisite: 31-204-316. Co-requisite: 31-204-312.

31-204-328 Lithographic Press Systems 2 3 credits

Continuation of Lithographic Press Systems 1. Includes press and finishing work in small and medium offset press setup and operation. Topics include operator performed press maintenance, pressroom quality control issues, finishing operations, paper issues in the pressroom and basic press impositions. Students operate 2 color presses to print 2 to 4 color printed materials. Projects created in Softwares for Print Production 2 and Prepress Production Procedures 2 will be printed and finished in this class. Prerequisite: 31-204-318. Co-requisite: 31-204-326.

31-204-330 Finishing and Machine Basics 3 credits

Introductory class that covers a variety of subjects supportive to other courses in the program. Topics and projects cover paper basics, various measurement systems and precision measurement, binding processes, operating paper cutters, folders and shrink wrappers and other related equipment to finish printed jobs. Lab time will be available to complete related project work from other printing courses. Co-requisite: 31-204-318.

31-204-340 Quality Control for Printing 1 credit

Familiarizes students with standards used in quality control throughout all production phases in the graphic arts industry. Topics cover developing standards, trade organizations and resources, accepted standards for print, color and color theory and applying standards to the production process. Prerequisites: 31-204-310, 31-204-316, 31-204-318 and 31-204-330.

31-204-342 Finishing and Fulfillment 2 credits

Continuation of Finishing and Machine Basics. Students gain knowledge of production folding, packaging and shipping alternatives, conversion of flat sheets in to finished products, slitting, scoring, perforating, die-cutting and lenticular print and other specialty finishing operations. Postal regulations and concepts of designing for mailed pieces are discussed. Fulfillment topics of warehousing, inventories, drop shipments and specialty finishing are included. Coursework includes an overview of customer service concepts exploring mechanisms and mindsets to listen to customers to fulfill their expectations as well as discussions on Trade Customs and production standards. Industrial orientation concepts guide the students through the process required for success in the skilled trade job market and prepare them for work in an industrial setting. Prerequisite: 31-204-330. Co-requisite: 31-204-328.

31-204-394 Printing Seminar 1 credit

Students will select an instructor approved print related topic of interest and develop it to produce an oral presentation to the class. A written and oral plan will be presented at various points throughout the development process. Students will also prepare a professional portfolio independently using their own work produced during printing classes. An updated resume emphasizing career goals will also be required. An overview of production procedure activities to duplicate a commercial printing plant by printing live jobs as well as project work. Participation requires ability on all equipment within the printing laboratory. Prerequisites: 31-204-310, 31-204-316, 31-204-318 and 31-304-330.

Career Potential:

- **Customer Service/Job Entry**
Works with sales personnel and customers to prepare jobs for production
- **Electronic Prepress Technician**
Moves jobs in a digital workflow, doing color work for layouts, through plates for the pressroom
- **Press Technician**
Sets up and operates sheet-fed presses or works on a press crew
- **Finishing Technician**
Sets up and operates a variety of bindery and finishing equipment
- **Distribution and Value-Added Services**
Sorts, prepares and/or delivers finished products and provides other customer-requested services

More detailed and updated information on this program may be available at: madisoncollege.org. The college reserves the right to make changes in the regulations and courses announced in this publication without notice.

Madison Area Technical College provides equal opportunity in education and employment.

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