

# **Commercial Printing** Curriculum Guide 2021-2022

## **Program Description**

MCTI's Commercial Printing Program is run like a print shop. In this production environment, students develop job competencies, while operating specialized printing equipment.

In Offset and Bindery courses, students produce brochures, booklets, forms, and other commercial printed products. In flexographic courses, students produce labels and multi-colored packaging products. In Screen Printing courses, students print on T-shirts, signs and a variety of other materials and products.

**Program Admissions Requirements** - Students who most closely match the **U.S. Department of Labor occupational profile** for the first exit point of a Bindery/Finishing Worker are selected for enrollment.

**Aptitude/Abilities** - Mechanical, manual dexterity, motor coordination, color and form perception, computer literate, ability to compute basic fractions; numeric, task planning/organizing, attention to detail

**CASAS Scaled Scores** - Reading 216-225, Math 226-235

**Environment** - Loud, hazardous machinery, fumes

**Physical Demands** - Medium

**Temperament** - Performs a variety of tasks; can execute precision work

**Entry-Level Pay** - Starting pay may range from the current minimum wage to a higher amount depending on the location of the job.

## **Certificate of Completion Programs (SOC Code)**

- Bindery/Finishing Worker (51-5113)
- Screen Printer (51-5112)
- Offset Press Assistant (51-5100)
- Flexo Press Assistant (51-5100)

Commercial Printing students are usually in the program for three terms and earn multiple certificates during those three terms. Students take core courses during the first term. Based on skills, abilities, and interests, those students who demonstrate academic progress by maintaining a grade point average of 2.0 or better and good employability skills may advance to the second term.

Students may exit after the second term with a Bindery/Finishing Worker and Screen-Printing certificate. Students who demonstrate academic progress and good employability

skills may be invited to advance to the next term to earn one or more of the following certificates: Screen Printer, Offset Press Assistant, and/or Flexo-Press Assistant certificate.

### **Required Courses for Certification**

*To advance from term to term, students must demonstrate academic progress (satisfactory grade point average of 2.0) and good employability skills.*

#### **Core Courses (first term)**

<b>Course Number</b>	<b>Course Name</b>	<b>Credits</b>
EC-134A	Commercial Printing Trade Math	2
PR-100	Layout and Design	4
PR-105	Screen Printing	4
PR-110	Introduction to Commercial Printing	4

#### **Second term**

<b>Course Number</b>	<b>Course Name</b>	<b>Credits</b>
PR-200A	Bindery and Finishing Operations	3
PR-215A	Screen Printing Lab	3
PR-201A	Offset Press Operation	3
PR-205A	Flexographic Press Operation	3

#### **Third term (option one)**

<b>Course Number</b>	<b>Course Name</b>	<b>Credits</b>
PR-300	Advanced Offset Press Operations	4
PR-305	Advanced Flexographic Press Operations	4
PR-320	Advanced Screen Printing	4

#### **Third term (option two)**

<b>Course Number</b>	<b>Course Name</b>	<b>Credits</b>
PR-310	Production Printing	4

**Must** take two of the following courses:

PR-300	Advanced Offset Press Operations	4
PR-305	Advanced Flexographic Press Operations	4
PR-320	Advanced Screen Printing	4

**Bindery/Finishing Worker Certificate**

Core Courses + PR-200A

**Screen Printer Certificate**

Core Courses + PR-215A

**Offset Press Assistant Certificate**

Core Courses + PR-201A and PR-300

**Flexo Press Assistant Certificate**

Core Courses + PR-205A and PR-305

Instructors, program managers, and/or the referring counselor may recommend employability skills and elective classes based on the student's needs, interest, and abilities. Additional terms or courses are initiated by the instructor and approved by the Manager of Career and Technical Education programs. Job Seeking Skills is required for all students expecting to graduate from MCTI.

**Course Descriptions**

**EC-134A Commercial Printing Trade Math** - This course is a practical math course focused on common problems encountered in the printing field. Initial emphasis is placed on using a measurement tool to accurately measure given lengths. Basic math skills are applied and strengthened using a step-by-step approach. **Topics covered:** measurement of various lengths and the use of whole numbers, common fractions, and decimals.

**PR-100 Layout and Design** - Students with little/no experience in Commercial Printing learn the basic skills required to work in the field. This hands-on course focuses on applying common terminology, measuring and copy preparation. Emphasis is placed on working safely and neatly. **Topics covered:** page lay-out, copy preparation, measuring, typography, common terminology, safety, neatness and accuracy, computers, use of common tools and equipment

**PR-110 Introduction to Commercial Printing** - In this course, students learn the basics of press and copier operations and explore career options. The course is a mix between self-paced instruction using computers, instructor-led classroom activities, demonstrations, and hands-on activities. Students run a press or copier under the supervision of an instructor. **Topics covered:** terminology, screen, flexographic, lithographic, digital, and copier concepts, 5S and 8 Wastes.

**PR-201A Offset Press Operation** - This course is for students who know the basics and are ready to prepare for a job as a press assistant. This course is a mix of computer simulation and hands-on activities related to press operation, maintenance, and troubleshooting. Students gain confidence in working around presses with indirect

supervision. **Topics covered:** safety, press equipment (e.g., cleaning, maintenance, set up, operation, and troubleshooting), 5S and 8 Wastes.

**PR-105 Intro to Screen Printing** - This hands-on course focuses on producing screen prints on a variety of materials and products. Students work on and complete screen-printing jobs in a production environment. **Topics covered:** safety, quality, screen preparation, substrates, inks, and additives, use and maintenance of screen printers, keeping the shop clean, teamwork, 5S and 8 Wastes.

**PR-200A Bindery and Finishing Operations** - In the hands-on course, students develop skills using a wide range of finishing and bindery equipment typically found in small and midsize Commercial Printing companies. Students who complete the course should be able to work independently as a Bindery/Finishing Worker. **Topics covered:** safety, quality control, organization, paper, cutters, figuring best cut, folders, binding, delivery of finished product, 5S and 8 Wastes.

**PR-215A Screen Printing Lab** - This hands-on course is for students experienced in screen printing. Students work independently (without supervision) to produce screen prints on a variety of materials and products. Work is completed on actual jobs in a production environment. **Topics covered:** safety, quality, production speed, screen preparation, substrates, inks, and additives, use and maintenance of screen-printing presses, keeping the shop clean, teamwork, 5S and 8 Wastes.

**PR-305 Advanced Flexographic Press Operations** - This course is for students who have demonstrated competency in flexographic press operations. The course is a mix of self-paced text instruction, computer simulation, and hands-on activities related to press operation, maintenance, and troubleshooting. Students gain confidence working around presses with minimum supervision. **Topics covered:** safety, flexographic presses, dies, ink handling, press operation, maintenance, and troubleshooting, keeping the work environment clean and organized, 5S and 8 Wastes.

**PR-205A Flexographic Press Operation** - Students, who know the basics, learn flexographic press operation to prepare for a job as a press assistant. The course is a mix of self-paced text instruction, computer simulation, and hands-on activities related to press operation, maintenance, and troubleshooting. Students gain confidence working around presses with indirect supervision. **Topics covered:** safety, flexographic presses; plate making; press operation, maintenance, and troubleshooting; keeping the work environment clean and organized, 5S and 8 Wastes.

**PR-300 Advanced Offset Press Operations** - This course is for students who have demonstrated competency in offset press operation and who plan to pursue a job as a press operator. The course is a mix of computer simulation and hands-on activities related to press operation, maintenance, and troubleshooting. Students gain confidence

working around presses with minimum supervision. **Topics covered:** safety, press equipment (e.g., cleaning, maintenance, set up, operation, troubleshooting), production scheduling, 5S and 8 Wastes.

**PR-401 Special Press Projects** - This course is for students who have demonstrated competency as a press assistant, bindery/ finishing worker and/or screen printer. This hands-on course focuses on producing complex print jobs using a variety of equipment. **Topics covered:** preparation, press operation, troubleshooting, finishing operations, and shipping.

**PR-680 Independent Study** - Independent study for students enrolled in the Commercial Printing program who need additional instruction/practice to build skills. Specific course content and work-related projects are individualized based on the student's ability, interest and need. **Topics covered** or skills used may include press operation, pre-press operations, screen printing, bindery and finishing operations.

**PR-310 Production Printing** - This course is for students who have demonstrated competency in press and bindery operations. This course is a mix of hands-on activities that build skill in production and job planning. Students gain confidence in working around MCTI press equipment with minimum supervision. **Topics covered:** safety, troubleshooting, production planning, delivery, quality control, 5S and 8 Wastes.

**PR-320 Advanced Screen Printing** - This course is for students who have demonstrated competency in screen printing. The course is a mix of hands-on activities related to press operation, maintenance, and troubleshooting. Students gain confidence working around screen presses and related equipment with minimum supervision. **Topics covered:** safety, screen press equipment and attachments (e.g., cleaning, maintenance, set up, operation, troubleshooting, production scheduling).

**PR- 690 Work Internship** - Independent This course is designed for students enrolled in Commercial Printing and who want to apply skills learned in a business setting. Students have a chance to build proficiency while working in an actual shop environment. The internship is individualized based on the student's ability and interest and the business need. **Topics covered** or skills used may include Employability skills and reinforcement of skills sets required for successful competitive employment in the Commercial Printing industry.