



**Program Articulation for the Career and Technology Education
 Graphic Communications (PrintED)
 The Maryland State Department of Education
 Montgomery College**

INTRODUCTION: In the past several years, technological advances have changed the processes and equipment used in a growing number of technical fields. Today's workforce is confronted with diverse and complex technical concepts and equipment and must have a broad understanding of the comprehensive principles that govern the behavior of the systems and subsystems that make up the work environment.

The College Tech Prep Program is a partnership between Maryland State Department of Education and Montgomery College. It is designed to provide a rigorous, relevant curriculum for students who wish to explore or prepare for technical careers in today's evolving work-world.


Administration, curriculum coordinators, and the respective faculty and staff of both institutions have examined the course competencies and content taught and have agreed, for the maximum benefit of students, to articulate the **Maryland Career and Technology Education Graphic and Communications (PrintED) Program of Study** to Montgomery College's Computer Publishing and Printing Management Associate of Applied Science degree program.

CERTIFICATION: Students who wish to enter Montgomery College will present an official high school transcript attached to a completed Articulation Agreement Credit Award Form verifying successful completion of the articulated courses with a grade of B or better to the Montgomery College, College Tech Prep Program, 900 Hungerford Drive, Suite 160, Rockville, MD 20850. To receive credit, students must enroll at Montgomery College within two years of completion of an articulated program with MSDE. Credit will be transferred upon admission into Montgomery College in an applicable program.

High School Courses	Montgomery College Courses
Introduction to Graphic Communications (2 credits) <i>and</i> Digital File Preparation (1 credit)	PR 171 Introduction to Desktop Publishing (4 credits)
And/Or	
Introduction to Graphic Communications (2 credits) <i>and</i> Offset Press Operations (1 credit)	PR 116 Principles of Offset Presses I (3 credits)
And/Or	
Introduction to Graphic Communications (2 credits) <i>and</i> Binding and Finishing (1 credit)	PR 115 Introduction to Bindery and Finishing (3 credits)



Katharine M. Oliver
 Assistant State Superintendent of Schools
 Division of Career Technology and Adult Learning
 Maryland State Department of Education



Dr. Brian K. Johnson
 President
 Montgomery College

The following outlines the responsibilities for ensuring that students earn college credit for the Graphic Communications (PrintED) Career and Technology Education (CTE) Program of Study that meets requirements specified in this articulation agreement between the Maryland State Department of Education (MSDE) on behalf of Maryland Local School Systems (LSS) and Montgomery College (MC). Representatives from the MSDE, MC, local school systems, and PrintED students share responsibilities.

Maryland Local School Systems will:

- Offer the Graphic Communications (PrintED) as stated in the Maryland CTE program of study;
- Communicate details of this agreement to principals, teaching staff, guidance personnel, and students;
- Identify a PrintED contact person at the local school system's central office who will communicate with MC regarding this agreement; and
- Send a letter to MC verifying the student has fulfilled the requirements of this agreement.

Students will:

- Complete and pass the entire program of study with a grade of "B" or better in the foundation course, *Introduction to Graphic Communications*, and at least one of the following advanced courses:
 - Digital File Preparation
 - Offset Press Operations and/or Binding and Finishing
- Take and pass two PrintED certification exams for courses within the program of study. One certification exam must be in Introduction to Graphic Communications and the other will be in one of the advanced courses; and
- Apply for admission to Montgomery College in an applicable degree or certificate program.

Montgomery College will:

- Communicate details of this agreement to admissions staff, chairs of academic departments, and faculty;
- Award the appropriate number of college credits to students who complete the requirements as specified in this agreement; and
- Ensure credits are recorded on the student's transcript.

Maryland State Department of Education will:

- Communicate details of this agreement with local school systems;
- Provide Montgomery College (MC) with a list of approved Graphic Communications (PrintED) programs; and
- Update the approved list biannually

Montgomery College and the Maryland State Department of Education will:

- Jointly develop promotional materials to describe the program to students, staff, faculties, parents, and the community.
- Jointly develop and implement a procedure to monitor, evaluate, and assess the effectiveness of the program; and
- Meet annually to update this agreement.

Graphic Communications (PrintED) Course Descriptions

Program Description

The Graphics Communication Program (PrintED) is designed to give students an overall understanding of the graphics communication industry and its major operations while teaching competencies that lead to national PrintED certification. PrintED is administered by the Graphic Arts Education and Research Foundation (GAERF), and is a national accreditation and certification program based on industry standards for graphic communications courses of study at the secondary and postsecondary levels. In Maryland, PrintED is supported by the Printing and Graphics Association MidAtlantic, (www.pgama.com), an industry organization that assists with professional development, curriculum, work based learning, and the SkillsUSA contest. Students can gain certification in up to seven areas: Digital File Preparation, Digital File Output, Offset Press Operations, Binding and Finishing, Digital Production Printing, and Advanced Graphics and Printing.

The Graphics Communication Program - PrintED consists of three components that students are required to complete: 1) The program of study which consists of the Introduction to Graphic Communications course and two or more PrintED courses; 2) The PrintED competencies for each course (these range from 36 to 103 competencies per course, and students must master 80% of the competencies); 4) PrintED end-of-course certification exams.

Secondary Courses

Introduction to Graphic Communications

This required foundation course provides an overview of the graphic communications industry. Students demonstrate 103 competencies while developing an overall understanding of the industry and its major operations.

Digital File Preparation

In this course, students demonstrate 80 competencies that are procedures required in each step of file preparation. These include basic design elements and principles, file construction, fonts, page layout, image capture, illustration, and PDF creation. Many of the competencies require students to describe, identify, explain, measure and/or distinguish file-related issues. Approximately half the competencies require students to demonstrate various skills in creating and exporting images and laying out a page in appropriate software.

Digital File Output

The 40 competencies in this accreditation area require that students have an understanding of the steps needed to prepare a client file for printing, from preflighting through platemaking. Most of the competencies require students to define specific activities and identify various procedures and equipment components. Students are also expected to prove their ability to perform the following functions: repair a native digital file, repair a PDF, make a folding dummy, make a digital hard and soft proof, and output a digital file to a platesetter.

Offset Press Operations

This course covers 42 competencies that ensure a sound knowledge of platemaking, ink, paper, and fountain solution used for offset lithography. Some competencies require students to identify press parts and basic operations procedures, while 20 of the competencies require student to demonstrate their ability to perform makeready steps, print different types of one- and two-color jobs, evaluate and adjust print quality, color measurement, and perform clean-up functions.

Digital Production Printing

Students master 36 competencies in digital production printing that are designed to teach concepts and competencies that ensure that the student is able to operate any vendor's digital press. Students will understand and apply the digital workflow concepts to print production. The competencies range from introductory skills such as describing the types of jobs that use a digital press to more advanced skills such as printing two- and four-color jobs, printing and finishing a perfect-bound booklet and printing a variable data print job.

Binding and Finishing

Students master 57 competencies to learn about the equipment, materials and procedures for folding, cutting, stitching, adhesive binding, case binding, foil stamping coating and laminating, and spiral and wire binding. Students demonstrate the use of folding equipment to make different folds and perform preventative maintenance on folders and cutters. They demonstrate knowledge of paper types as well as the tools and procedures for quality control. Students identify and solve common bindery and finishing problems.

Graphic Communications (PrintED) Articulated Credit Map

High School Program of Study				
Requirements	Grade 9	Grade 10	Grade 11	Grade 12
English - 4	English 9	English 10	English 11	English 12
Social Studies - 3	US Government	World History	US History	Economics
Mathematics - 4	Algebra 1	Geometry	Algebra II	Trigonometry or Pre-Calculus or Calculus or Physics
Science - 3	Earth or Physical Science	Biology or	Chemistry	
Physical Education - .5	Physical Education	Health		
Fine Arts - 1	Fine Arts			
Technology Education - 1	Foundations of Technology			
CTE Completer Program - 4			Two Credits: Introduction to Graphic Communications	One Credit: Digital File Prep Offset Press Binding and Finishing
Foreign Language - 2 and/or Advanced Tech Ed - 2	Foreign Language I	Foreign Language II	Advanced Technology Education	Advanced Technology Education

MC Computer Publishing and Printing Management (A.A.S. Degree)
<p>First Semester: PR 171 Introduction to Desktop Publishing EN 101 Techniques of Reading and Writing I PR 131 Photoshop Digital Production for Printing and Publishing I Mathematics Foundation Health Foundation</p> <p>Second Semester: PR 130 Introduction to QuarkXPress MG 101 Principles of Management PR 116 Principles of Offset Presses I English Foundation Arts or Humanities Distribution</p> <p>Third Semester: MG 102 Principles of Supervision PR 212 Planning and Estimating PR 232 Photoshop Digital Production for Printing and Publishing II PR 115 Introduction to Bindery and Finishing Elective</p> <p>Fourth Semester: PR 281 Printing Internship or PR 216 Principles of Offset Presses II or PR Elective PR 221 Production Management Natural Science Lab Distribution Speech Foundation Behavioral and Social Sciences Distribution</p>



Articulation Agreement Credit Award Form
College Tech Prep Program



Maryland State Department of Education Program: **Graphic Communications (PrintED)**
Montgomery College Program: **Computer Publishing and Printing Management, A.A.S.**

Maryland State Department of Education and Montgomery College have an articulation agreement for the Graphic Communications (PrintED) program. Students may earn up to nine college credits toward their college degree through the Computer Publishing/Printing Management College Tech Prep Program if they maintain a B average or better in the high school portion of these. Students will receive advanced standing credit upon their full admission to the College in an applicable degree programs listed below.

Student Name: _____

Student Email: _____

Address: _____

Home Phone: _____

City, State, Zip: _____

Work Phone: _____

High School Attended: _____

Date of High School Graduation: _____

High School Official Signature and Title _____

Date: _____

Certification:

1. Students should obtain a copy of the appropriate Articulation Agreement Credit Award form from their Tech Prep teacher.
2. Students must complete the form and mark the letter grade obtained for each articulated course.
3. Students must return the completed Articulation Agreement Credit Award form to their Graphic Communications teacher.
4. The Graphic Communications teacher will check grades for accuracy, sign the form (High School Official Signature), and forward it to the registrar at the student's home school.
5. The registrar will attach a copy of the student's official transcript to the Articulation Agreement Credit Award form and mail it to Montgomery College, College Tech Prep Program, 900 Hungerford Drive, Suite 160, Rockville, MD 20850.

Programs, courses, and grades are listed on the back.

Applicable Montgomery College Program: Computer Publishing and Print Management, A.A.S.			
School:	High School Courses	Grade	Montgomery College Courses
	Foundation Course: Introduction to Graphic Communications		See below:
	AND OPTION I and/or OPTION II and/or Option III (Students may complete multiple options).		
	OPTION I:		
	Digital File Preparation	Grade	PR 171 Introduction to Desktop Publishing (4 credits)
	and/or		
	OPTION II:		
	Offset Press Operations	Grade	PR 116 Principles of Offset Presses I (3 credits)
	and/or		
	OPTION III:		
	Binding and Finishing	Grade	PR 115 Introduction to Bindery and Finishing (3 credits)