

Arts, Audio/Video Technology and Communications: Printing Technology Career Pathway Plan of Study for ► Learners ► Parents ► Counselors ► Teachers/Faculty

This Career Pathway Plan of Study (based on the Printing Technology Pathway of the Arts, Audio/Video Technology and Communications Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. *This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.

EDUCATION LEVELS	GRADE	English/ Language Arts	Math	Science	Social Studies/ Sciences	Other Required Courses Other Electives Recommended Electives Learner Activities	*Career and Technical Courses and/or Degree Major Courses for Printing Technology Pathway	SAMPLE Occupations Relating to This Pathway
Interest Inventory Administered and Plan of Study Initiated for all Learners								
SECONDARY	9	English/ Language Arts I	Algebra I	Earth or Life or Physical Science	World History	All plans of study should meet local and state high school graduation requirements and college entrance requirements. Certain local student organization activities are also important including public speaking, record keeping and work-based experiences.	• Introduction to Arts, Audio/Video Technology and Communications • Information Technology Applications	▶ Computer Typography and Composition Operator ▶ Desktop Publishing Specialist ▶ Graphics Equipment Operator ▶ Lithographer ▶ Paper Salesperson ▶ Plate Maker ▶ Pre-Production Technician ▶ Printing Equipment Operator ▶ Production Coordinator ▶ Production Manager ▶ Web Page Designer
	10	English/ Language Arts II	Geometry	Biology	U.S. History		• Introduction to Printing Technology	
	11	English/ Language Arts III	Algebra II	Physics	Political Science Economics		• Design and Production Technology	
	College Placement Assessments-Academic/Career Advisement Provided							
	12	English/ Language Arts IV	Trigonometry or other math course		Psychology		• Advanced Applications of Printing Technology	
Articulation/Dual Credit Transcribed-Postsecondary courses may be taken/moved to the secondary level for articulation/dual credit purposes.								
POSTSECONDARY	Year 13	English Composition English Literature	Algebra	Chemistry	American Government Psychology	All plans of study need to meet learners' career goals with regard to required degrees, licenses, certifications or journey worker status. Certain local student organization activities may also be important to include.	• Printing Technology Management • Pre-Press Technology	
	Year 14	Speech/ Oral Communication	Computer Applications	Biological Science Physical Science	American History		• Printing Processes • Finishing and Distribution Operations in Printing	
	Year 15	Continue courses in the area of specialization.					• Continue Courses in the Area of Specialization	
	Year 16						• Complete Printing Technology Major (4-Year Degree Program)	

Creating Your Institution's Own Instructional Plan of Study

With a team of partners (secondary/postsecondary teachers and faculty, counselors, business/industry representatives, instructional leaders, and administrators), use the following steps to develop your own scope and sequence of career and technical courses as well as degree major courses for your institution's plan of study.

- 1** Crosswalk the Cluster Foundation Knowledge and Skills (available at <http://www.careerclusters.org/goto.cfm?id=84>) to the content of your existing secondary and postsecondary programs/courses.
- 2** Crosswalk the Pathway Knowledge and Skills (available at <http://www.careerclusters.org/goto.cfm?id=12>) to the content of your existing secondary/postsecondary programs and courses.
- 3** Based on the crosswalks in steps 1 and 2, determine which existing programs/courses would adequately align to (cover) the knowledge and skills. These programs/courses would be revised to tighten up any alignment weaknesses and would become a part of a sequence of courses to address this pathway.
- 4** Based on the crosswalks in steps 1 and 2, determine what new courses need to be added to address any alignment weaknesses.
- 5** Sequence the **content** and **learner outcomes** of the existing programs/courses identified in step 3 and new courses identified in step 4 into a course sequence leading to preparation for all occupations within this pathway. (See list of occupations on page 1 of this document.)
- 6** The goal of this process would be a series of courses and their descriptions. The names of these courses would be inserted into the *Career and Technical Courses* column on the Plan of Study on page 1 of this document.
- 7** Below is a **sample result** of steps 1-6, and these course titles are inserted into the Plan of Study on page 1 of this document.
- 8** Crosswalk your state academic standards and applicable national standards (e.g., for mathematics, science, history, language arts, etc.) to the sequence of courses formulated in step 6.

Arts, Audio/Video Technology and Communications: Printing Technology

SAMPLE Sequence of Courses for ► Instructional Leaders ► Administrators ► Counselors ► Teachers/Faculty

SAMPLE

Below are suggested courses that could result from steps 1-6 above. However, as an educational institution, course titles, descriptions and the sequence will be your own. This is a good model of courses for you to use as an example and to help you jump-start your process. Course content may be taught as concepts within other courses, or as modules or units of instruction.

The following courses are based on the Cluster Foundation Knowledge and Skills found at <http://www.careerclusters.org/goto.cfm?id=84>. These skills are reinforced through participation in student organization activities.

#1

Introduction to Arts, Audio/Video Technology and Communications: This course provides a basic exploration of the elements of design. Students will utilize a variety of media to explore individual expression and will learn to critically analyze their own and others' work to further their artistic growth. Students will analyze the history and evolution of the arts, audio-video technology and communications in relation to their current place in society and the economy. Learners will be exposed to a variety of careers and cluster foundations knowledge and skills. This may be taught as a career exploration course in conjunction with other foundation Career Cluster courses.

#2

Information Technology Applications: This course is designed for those students who have not mastered knowledge and skills related to information technology applications prior to entry into high school. Students will use technology tools to manage personal schedules and contact information, create memos and notes, prepare simple reports and other business communications, manage computer operations and file storage, and use electronic mail, Internet applications and GIS to communicate, search for and access information. Students will develop skills related to word processing, database management and spreadsheet applications.

The following course is based on the Cluster Foundation Knowledge and Skills as well as the Pathway Knowledge and Skills found at <http://www.careerclusters.org/goto.cfm?id=12>. These skills are reinforced through participation in student organization activities.

#3

Introduction to Printing Technology: Students will develop a working knowledge of the basic techniques of printing and related areas. They will be introduced to the nature of employment and employment opportunities in the field of graphics and industrial communications.

The following courses expose students to Pathway Knowledge and Skills found at <http://www.careerclusters.org/goto.cfm?id=12> and should include appropriate student activities.

#4

Design and Production Technology: Students will learn about the design and makeup of materials and machines used to make the products we use in our everyday lives. Students will use artistic elements to design and produce actual hands-on projects through individual and mass production techniques including layout and design of items to be printed. Emphasis will be placed on developing and maintaining a safe and healthy work environment related to the arts, audio-video technology and communications.

#5

Advanced Applications of Printing Technology: Students will develop knowledge of the processes required for the production of various printed products including paper, non-paper substrates and specialty products. Students will study the impact of the printing industry on the U.S. economy as well as the impact of emerging technologies in hardware and software applications. Students will study concepts of copy layouts, composition, desktop publishing, photography, platemaking, bindery work, job planning and reproduction.

#6

Printing Technology Management: Students will learn to manage the printing process through customer service and sales, scheduling and quality control. This will include applying knowledge of customer needs and expectations with printing services; applying knowledge of services, equipment, capabilities, work flow processes, data acquisition, and technology to customer service; and handling scheduling processes to ensure timely completion of projects. Students will learn to identify and communicate quality control measures including standards and expectations for a job.

#7

Pre-Press Technology: Students will demonstrate preparation of customer materials for imaging including previewing materials, applying knowledge of camera and scanner operations, using scanning equipment to convert from analog to digital forms, and moving manuscripts into a form that is camera-ready copy. Course content will also include image retrieval through refinement, page assembly processes and type set, and trapping.

#8

Printing Processes: Students will study output processes including digital, film, directive platemaking and cylinders. Students will apply their knowledge of basic printing processes including parts and operation, printing a single color job, and basic cleanup and maintenance.

#9

Finishing and Distribution Operations in Printing: Students will examine the finishing and distribution operations related to printing. Course content includes binding processes used to finish printed materials as well as specialty operations related to finishing and packaging the product according to customer specifications.

