# Scope & Sequence

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| Course Name: Printing and Imaging Technology I **PEIMS Code:** 13009600 | | | **Course Credit:** 1.0  **Course Requirements:** Recommended for Grades 9-12  **Prerequisites:** None.  **Recommended Corequisites:** Printing and Imaging Technology I Lab |
| **Course Description:** Careers in printing span all aspects of the industry, including prepress, press, and finishing and bindery operations. In addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the printing industry with a focus on digital prepress and digital publishing. | | | |
| **NOTE:** This is a suggested scope and sequence for the course content. This content will work with any textbook or instructional materials. If locally adapted, make sure all TEKS are covered. | | | |
| **Total Number of Periods**  **Total Number of Minutes**  **Total Number of Hours** | 175 Periods  7875 Minutes  131.25 Hours\* | \*Schedule calculations based on 175/180 calendar days. For 0.5 credit courses, schedule is calculated out of 88/90 days. Scope and sequence allows additional time for guest speakers, student presentations, field trips, remediation, extended learning activities, etc. | |
| **Unit Number, Title, and Brief Description** | **# of Class Periods\***  (assumes 45-minute periods)  Total minutes per unit | **TEKS Covered**  **130.94. (c) Knowledge and skills.** | |
| **Unit 1: Professional Standards and Employability Skills**  Students will begin the course by discussing professional standards and employability skills, including identifying appropriate training, education, or certification for printing and imaging technology employment, effective critical thinking and problem solving strategies, interpersonal skills, positive work behaviors, and time-management skills. Students will further develop and demonstrate these skills and attributes throughout the course. In small groups and/or in other classroom activities, students will use appropriate technology to evaluate and compare employment opportunities as well as research and discuss career portfolios, entrepreneurship, training, education, or certification opportunities, and technical skills necessary for a successful career in a printing and imaging technology field. As a culminating activity for the unit, students will review exemplary examples of career portfolios and employ time-management strategies to plan task completion for the course portfolio requirements. | 15 periods  675 minutes | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (A) identify appropriate training, education, or certification for printing and imaging technology employment;  (B) recognize positive work behaviors and personal qualities needed to be employable; and  (C) describe skills related to seeking, applying for, and obtaining a desired job.  (4) The student understands and examines problem-solving methods. The student is expected to:  (A) employ critical-thinking skills independently and in groups; and  (B) employ interpersonal skills in groups to solve problems.  (9) The student develops career-building characteristics. The student is expected to:  (A) understand the use and importance of a portfolio in documenting information such as work experiences, licenses, certifications, and work samples;  (B) demonstrate skills in evaluating and comparing employment opportunities; and  (C) examine employment opportunities in entrepreneurship.  (10) The student applies technical skills for efficiency. The student is expected to employ planning and time-management skills to complete work tasks. | |
| **Unit 2: Communication Skills and Safety**  Students will use appropriate technology and/or assigned materials to learn and/or review relevant personal and workplace safety rules and regulations and emergency procedures. Students will also learn and/or review parliamentary procedure, and conduct and participate in a class meeting regarding how to employ teamwork and conflict-management skills, leadership skills, and professional communications strategies as well as how to implement personal and workplace safety rules and regulations and follow emergency procedures. In small groups and/or in other classroom activities, students will then work together to learn, observe, explain, and demonstrate relevant safety and emergency procedures. Students will employ constructive mentoring and leadership skills as/when appropriate. | 15 periods  675 minutes | (3) The student applies professional communications strategies. The student is expected to:  (C) interpret and communicate information, data, and observations;  (E) apply active listening skills; and  (F) listen to and speak with diverse groups of individuals.  (6) The student applies safety regulations. The student is expected to:  (A) implement personal and workplace safety rules and regulations; and  (B) follow emergency procedures.  (7) The student applies leadership characteristics to student leadership and professional development activities. The student is expected to:  (A) employ communication skills;  (B) employ teamwork and conflict-management skills; and  (C) conduct and participate in meetings; and  (D) employ mentoring skills. | |
| **Unit 3: Ethical Conduct and Critical-Thinking Skills**  Students will explore, identify, and explain ethical decision making and laws regarding use of technology in printing, including copyright laws relevant to fair use and acquisition and Creative Commons laws and licensing. Students will employ critical-thinking skills and demonstrate their understanding of business and personal ethics, relevant laws, and ethical responsibilities in classroom activities and/or decision-making scenarios/occupational tasks. | 15 periods  675 minutes | (4) The student understands and examines problem-solving methods. The student is expected to:  (A) employ critical-thinking skills independently and in groups.  (8) The student applies ethical decision making and understands and complies with laws regarding use of technology in printing. The student is expected to:  (A) demonstrate an understanding of ethical conduct;  (B) understand copyright laws in relation to fair use and duplication of materials; and  (C) understand Creative Commons laws, including all licensing. | |
| **Unit 4: Academic and Technical Skills**  Students will explore, discuss, and demonstrate mathematics and language arts knowledge as well as technical skills required for a successful career in a printing and imaging field. Students will be given multiple opportunities to learn, demonstrate and apply relevant technical and academic skills in-context as they demonstrate occupational tasks, participate in course activities, and complete their assignments. In this unit, students will use appropriate technology to research the history of the printing and imaging field. Students will analyze and summarize the evolution of the printing and imaging field and its historical impact on society, and demonstrate/apply appropriate academic and technical skills to present their findings using writing, publishing, and presentation technology applications. | 25 periods  1,125 minutes | (2) The student applies academic knowledge and skills in printing and imaging projects. The student is expected to:  (A) apply English language arts knowledge and skills in accordance with industry standards to a variety of written documents; and  (B) apply mathematics knowledge and skills in accordance with industry standards to solve a problem.  (5) The student applies technology applications. The student is expected to use personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications for printing and imaging projects.  (12) The student researches the history of the printing and imaging field. The student is expected to analyze and summarize the evolution of the printing and imaging field and its historical impact on society. | |
| **Unit 5: Printing Systems and Processes**  Students will use appropriate technology and/or assigned materials to research printing systems and their uses, the processes required for the production of various printed products, the impact of the printing industry on the U.S. economy, and the impact of emerging technologies in hardware and software applications. After their research is completed, students will apply English language arts knowledge and skills to write and complete a research project presentation which describes and explains printing system uses, processes, and impacts. Students will also discuss the current and future impact of emerging technologies in hardware and software applications and on printing-related fields. | 40 periods  1,800 minutes | (2) The student applies academic knowledge and skills in printing and imaging projects. The student is expected to:  (A) apply English language arts knowledge and skills in accordance with industry standards to a variety of written documents.  (3) The student applies professional communications strategies. The student is expected to:  (B) organize oral and written information;  (C) interpret and communicate information, data, and observations; and  (D) deliver formal and informal presentations.  (11) The student develops a basic understanding of printing and imaging. The student is expected to:  (A) understand printing systems and their uses;  (B) describe the processes required for the production of various printed products;  (C) explain the impact of the printing industry on the U.S. economy; and  (D) understand the impact of emerging technologies in hardware and software applications. | |
| **Unit 6: Understanding Printing and Imaging**  Students will use appropriate technology, examples, and/or assigned materials to learn and discuss how to manage the printing process, including customer service and sales, scheduling, and quality control, to describe materials used in various printing projects, how to acquire information in a variety of formats, and how to evaluate information for accuracy, validity, and usability. Students will also compare the features of graphics programs used in digital printing and explain how design elements such as text, graphics, headlines, use of color, and white space affect usability. In small groups and/or in other classroom activities, students will work together to compare the features of graphics programs used in digital printing, explain how design elements such as text, graphics, headlines, use of color, and white space affect usability, and practice, identify, and use the principles of design to discuss, analyze, critique, and write about visual aspects in print design, including their own designs. Students will apply active listening skills as they listen to and appropriately speak with diverse individuals and model and demonstrate an understanding of color theory and its use in the design process, the principles of typography and design in print design images, including composition, color, design, shape, shadow, negative space, and background. | 40 periods  1,800 minutes | (3) The student applies professional communications strategies. The student is expected to:  (E) apply active listening skills; and  (F) listen to and speak with diverse groups of individuals.  (11) The student develops a basic understanding of printing and imaging. The student is expected to:  (E) understand how to manage the printing process, including customer service and sales, scheduling, and quality control;  (F) describe materials used in various printing projects;  (G) understand how to acquire information in a variety of formats;  (H) evaluate information for accuracy, validity, and usability;  (I) compare the features of graphics programs used in digital printing;  (J) explain how design elements such as text, graphics, headlines, use of color, and white space affect usability;  (K) explain the principles of typography, including font size and style;  (L) explain color theory and its use in the design process;  (M) identify graphic design concepts such as contrast, alignment, repetition, and proximity;  (N) reference technical documentation;  (O) understand file and cross-platform compatibility;  (P) identify and use the principles of design to discuss, analyze, critique, and write about visual aspects in print design, including the student's own designs; and  (Q) demonstrate knowledge of the principles of design in print design images, with a focus on composition, color, design, shape, shadow, negative space, and background. | |
| **Unit 7: Presentations and Course Culminating Activities**  Students will use organized and professional communications strategies to present completed career portfolios in formal and informal presentations. Students will exhibit public relations skills as participate in mock interviews both as job applicants and as potential employers, as well as create and/or participate in various scenarios and activities that demonstrate skills related to seeking and applying for employment, entrepreneurship opportunities, appropriate workplace conduct, and personal application of workplace ethics. As part of these mock interviews and potential workplace scenarios, students will evaluate and compare employment opportunities as well as demonstrate an ability to communicate with diverse individuals as well as active listening and effective communication skills. | 25 periods  1,125 minutes | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (A) identify appropriate training, education, or certification for printing and imaging technology employment;  (B) recognize positive work behaviors and personal qualities needed to be employable; and  (C) describe skills related to seeking, applying for, and obtaining a desired job.  (3) The student applies professional communications strategies. The student is expected to:  (A) adapt language for audience, purpose, situation, and intent;  (B) organize oral and written information;  (C) interpret and communicate information, data, and observations;  (D) deliver formal and informal presentations;  (E) apply active listening skills;  (F) listen to and speak with diverse groups of individuals; and  (G) exhibit public relations skills.  (9) The student develops career-building characteristics. The student is expected to:  (A) understand the use and importance of a portfolio in documenting information such as work experiences, licenses, certifications, and work samples;  (B) demonstrate skills in evaluating and comparing employment opportunities; and  (C) examine employment opportunities in entrepreneurship. | |