

2020/2021 Student Competency Record
Graphic Imaging Technology II
8661 - 36 weeks, 280 hours

Student	School Year
School	Teacher Signature

Traditional letter or numerical grades do not provide adequate documentation of student achievement in competency-based education; therefore, the Virginia Standards for CBE require a recording system to provide information about competencies achieved to employer, student-employee, and teacher. The Student Competency Record provides a means for keeping track of student progress. Ratings are assigned by the teacher for classroom competency achievement and by the teacher-coordinator in conjunction with the training sponsor when competence is evaluated on the job.

Tasks/competencies designated "Required" are considered essential statewide and are required of all students. In some courses, all tasks/competencies have been identified as required. Tasks/competencies marked "Optional" are considered optional; they and/or additional tasks/competencies may be taught at the discretion of the school division. Tasks/competencies marked with an asterisk (*) are considered sensitive, and teachers should obtain approval by the school division before teaching them. Student competency records should be kept as long as the student is enrolled in the school and for five years after the student graduates/leaves the school.

Note: Students with an Individualized Education Program (IEP) or an Individualized Student Alternative Education Plan (ISAEP) will be rated, using the following scale, only on the competencies identified in their IEP or ISAEP.

Students will be expected to achieve a **satisfactory rating** (one of the three highest marks) on the Student Competency Record (SCR) rating scale on at least 80% of the required (essential) competencies in a CTE course.

...RATING SCALE...

- 1 - Can teach others**
- 2 - Can perform without supervision**
- 3 - Can perform with limited supervision**
- 4 - Can perform with supervision**
- 5 - Cannot perform**

8661 36 weeks, 280 hours	Graphic Imaging Technology II TASKS/COMPETENCIES		Date	Rating
Demonstrating Personal Qualities and Abilities				
Required	1	Demonstrate creativity and innovation.		
Required	2	Demonstrate critical thinking and problem solving.		
Required	3	Demonstrate initiative and self-direction.		
Required	4	Demonstrate integrity.		
Required	5	Demonstrate work ethic.		
Demonstrating Interpersonal Skills				
Required	6	Demonstrate conflict-resolution skills.		
Required	7	Demonstrate listening and speaking skills.		
Required	8	Demonstrate respect for diversity.		
Required	9	Demonstrate customer service skills.		
Required	10	Collaborate with team members.		
Demonstrating Professional Competencies				
Required	11	Demonstrate big-picture thinking.		
Required	12	Demonstrate career- and life-management skills.		
Required	13	Demonstrate continuous learning and adaptability.		
Required	14	Manage time and resources.		
Required	15	Demonstrate information-literacy skills.		
Required	16	Demonstrate an understanding of information security.		
Required	17	Maintain working knowledge of current information-technology (IT) systems.		
Required	18	Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.		
Required	19	Apply mathematical skills to job-specific tasks.		
Required	20	Demonstrate professionalism.		
Required	21	Demonstrate reading and writing skills.		
Required	22	Demonstrate workplace safety.		
Examining All Aspects of an Industry				
Required	23	Examine aspects of planning within an industry/organization.		
Required	24	Examine aspects of management within an industry/organization.		

Required	25	Examine aspects of financial responsibility within an industry/organization.		
Required	26	Examine technical and production skills required of workers within an industry/organization.		
Required	27	Examine principles of technology that underlie an industry/organization.		
Required	28	Examine labor issues related to an industry/organization.		
Required	29	Examine community issues related to an industry/organization.		
Required	30	Examine health, safety, and environmental issues related to an industry/organization.		
Addressing Elements of Student Life				
Required	31	Identify the purposes and goals of the student organization.		
Required	32	Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.		
Required	33	Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.		
Required	34	Identify Internet safety issues and procedures for complying with acceptable use standards.		
Exploring Work-Based Learning				
Required	35	Identify the types of work-based learning (WBL) opportunities.		
Optional	36	Reflect on lessons learned during the WBL experience.		
Required	37	Explore career opportunities related to the WBL experience.		
Optional	38	Participate in a WBL experience, when appropriate.		
Practicing Safety and First Aid				
Required	39	Identify the location(s) and proper use of emergency alarms, fire extinguishers, and other fire safety equipment in the facility.		
Required	40	List the safety rules involving flammable liquids.		
Required	41	List the steps to be taken in case of an injury in the lab.		
Required	42	Identify the location(s) of first-aid kit(s) and eye-wash station(s).		
Required	43	Interpret a safety data sheet (SDS).		
Required	44	Describe personal protective equipment (PPE) where needed.		

Required	45	Identify safety considerations when using a computer-to-plate (CTP), digital production printer, digital press, or other type of equipment.		
Required	46	Describe safety procedures appropriate when operating various equipment.		
Required	47	Describe the approved lab dress code for safe operation, including personal protective equipment (PPE).		
Required	48	Pass a general lab safety test with a score of 100 percent.		
Required	49	Demonstrate compliance with approved methods for the collection and disposal or recycling of waste materials.		
Required	50	Follow instructions on warning labels.		
Required	51	Identify the safety color code.		
Required	52	Comply with school graphics lab rules and regulations.		
	Gaining an Overview of Digital File Preparation			
Required	53	Interpret production information on a job docket/ticket.		
Required	54	Differentiate among line art, continuous-tone images, and halftone images.		
Required	55	Identify basic process-color principles and kinds of four-color printing.		
Required	56	Explain four-color printing vs. four-color process.		
Required	57	Define <i>PostScript</i> .		
Required	58	Describe word-processing, illustration, image-editing, and page-layout software.		
Required	59	Produce a single-color document, using desired fonts, styles, margins, indents, and tabs.		
Required	60	Select appropriate software for illustration, image editing, and page layout.		
Required	61	Prepare a series of hand-drawn sketches or computer-generated layouts, incorporating appropriate notes and printer marks.		
Required	62	Define <i>removable storage media</i> .		
Optional	63	Define <i>file transfer protocol (FTP)</i> .		
Required	64	Describe computer networking within a work environment.		
Required	65	Demonstrate the transfer of files within a network.		
Required	66	Describe disaster recovery file backup options.		
Required	67	Demonstrate a file backup.		
Required	68	Demonstrate the use of a file compression utility for file storage or transfer.		

Required	69	Describe metadata.		
Required	70	Explain the importance of metadata in managing media files.		
Required	71	Use metadata for digital asset management.		
Required	72	Define <i>preflighting</i> and <i>packaging</i> .		
Required	73	Demonstrate preflighting and packaging a native file, using application software and/or a manual checklist.		
Required	74	Demonstrate preflighting a portable document format (PDF) file, using application software and/or a manual checklist.		
Required	75	Describe a raster image processor (RIP).		
Required	76	Define <i>computer-to-plate (CTP)</i> .		
Required	77	Identify common quality issues found during the preflight process.		
Required	78	Create a manual checklist of possible quality issues.		
Required	79	Describe the use of trapping an image for print.		
Required	80	Describe a folding dummy for print.		
	Understanding Type			
Required	81	Explain the role of type as a design element in graphic communications.		
Required	82	Measure copy/text in points, using a line gauge.		
Required	83	Explain measuring and designing with type.		
Required	84	Identify the physical characteristics of typographic characters.		
Required	85	Describe dingbats, bullets, rules, and symbols and their uses in publications.		
Required	86	Distinguish between display (headline) type and body (text) type by their point sizes and styles.		
Required	87	Identify the basic type classifications and uses.		
Required	88	Distinguish between serif and sans serif type styles.		
Required	89	Explain tracking and kerning of type characteristics.		
Required	90	Explain word spacing and the relation of em and en in paragraph spacing.		
Required	91	Explain line spacing and the measurement principles for the leading of text.		
Required	92	Describe type arrangements.		
Required	93	Explain the differences among types of fonts.		
Optional	94	Demonstrate the loading, displaying, and organizing of fonts, using a font-management software application.		
Required	95	Describe font substitution when outputting a printed page.		

Required	96	Assess the effectiveness of a communication piece using different applications of type.		
Performing Page-Layout Functions				
Required	97	Describe office/home-based software applications.		
Required	98	Select appropriate page-layout software for a given job.		
Required	99	Demonstrate the use of a digital dictionary, spell checker, and automatic hyphenation.		
Required	100	Demonstrate a functional knowledge of computer menus and palettes within industry-standard software.		
Required	101	Demonstrate text alignment, element positioning, and rules of page design for printed matter.		
Optional	102	Proofread manuscript copy and make necessary corrections using basic proofreading marks.		
Optional	103	Set up/select appropriate pagination for a given job.		
Required	104	Set text with appropriate margins, formatting, gutters, and leading.		
Required	105	Import copy from a word-processing program to a page-layout program.		
Required	106	Produce a document using desired fonts, styles, margins, indents, tabs, and colors.		
Required	107	Describe a page break.		
Required	108	Describe widow and orphan formatting.		
Required	109	Demonstrate line-break formatting, including hyphenation, widow, and orphan control.		
Required	110	Assess proper line and page breaks, including hyphenation, widows, and orphans in an instructor-specified page.		
Required	111	Describe master pages.		
Required	112	Demonstrate automatic folio numbering.		
Required	113	Explain the purpose of style sheets.		
Required	114	Identify the masthead (i.e., header and footer).		
Required	115	Create a multiple page document using master pages, automatic folios, styles (e.g., character, paragraph, and object), masthead, and graphics.		
Required	116	Describe the use of a table in page layout software.		
Required	117	Create a document that includes tables.		
Required	118	Explain the use of a graphic box in page layout software.		
Required	119	Proofread, edit, and adjust copy on screen.		
Required	120	Import an image into a page-layout program.		

Required	121	Demonstrate a procedure for cropping digital images.		
Required	122	Create a two-sided, three-panel brochure, using graphics and text.		
Optional	123	Create a four-page newsletter, using windows, blocks, text, graphics, frames, headings, and imported graphics or logos.		
Required	124	Define <i>variable data printing</i> .		
Required	125	Explain the use of variable data in a printing project.		
Optional	126	Create a flat database with three categories in a spreadsheet application for use in a variable data project.		
Optional	127	Design a document that has variable data fields for text and pictures using page layout software with variable data capabilities.		
Optional	128	Produce a variable data printing job on a digital press or production printer.		
Optional	129	Create a two-page newsletter, using drop caps for paragraph openings, wrap-arounds (runarounds), and graphics.		
Required	130	Create a printed piece, using tints, reverses, and manipulated type for effect.		
Required	131	Produce and output a multicolored flyer that includes at least two spot colors.		
Required	132	Demonstrate the procedures for printing a proof to a monochrome and/or color laser printer or inkjet printer, using page-layout software.		
Required	133	Export a press-ready PDF, using page-layout software.		
Required	134	Describe <i>soft proofing</i> and its advantages and disadvantages.		
Performing Image Capture				
Required	135	Identify the types of images used in the graphics industry.		
Required	136	List professional image editing software applications.		
Required	137	Identify types of graphics.		
Required	138	Compare examples of graphic file formats and their extensions.		
Required	139	Explain pixels per inch (PPI) resolution (i.e., display).		
Required	140	Explain dots per inch (DPI).		
Required	141	Identify potential quality issues of improper relationships among PPI, DPI, and LPI on final output quality.		
Required	142	Describe color bit depth.		
Required	143	Create correct depth and resolution files of line art and continuous-tone images using a scanner.		

Optional	144	Describe various camera components and settings used while capturing images.		
Required	145	Explain the use of optical character recognition (OCR).		
Required	146	Use OCR software to capture printed text.		
Required	147	Capture a digital image using a scanner and another image-capture device.		
Optional	148	Describe International Color Consortium (ICC) profiles and their use.		
Optional	149	Demonstrate the ability to color-convert RGB images into CMYK using ICC profiles.		
Required	150	Demonstrate the importing of scanned digital images into page-layout software.		
Exploring Photo Imaging Software				
Required	151	Download a digital image from a free stock photography website; resize and resample according to specifications.		
Required	152	Describe the use of layers, selections, and channels in an image editing software program.		
Required	153	Use layers, selections, and channels to edit a color photograph in an image editing software program.		
Required	154	Describe image cloning.		
Required	155	Use an image editing software program to perform image cloning.		
Required	156	Describe unsharp masking.		
Required	157	Use an image editing software program to perform varying degrees of unsharp masking.		
Required	158	Explain capabilities of adjusting contrast (i.e., tone reproduction) in an image editing software program.		
Required	159	Use an image editing software program to perform contrast adjustments (tone reproduction) on a color image.		
Required	160	Describe capabilities of adjusting color balance (gray balance) in an image editing software program.		
Required	161	Use an image editing software program to perform color balance (gray balance) adjustments on a color image.		
Understanding Color Management				
Required	162	Describe the role of color management in a print workflow.		
Required	163	Describe color management techniques used in different steps of a print workflow.		
Required	164	Compare color gamut capabilities of devices used in a print workflow.		

Required	165	Explain the use of an ICC profile in a print workflow.		
Required	166	Describe conversion limitations of the RGB color model to the CMYK color model.		
Required	167	Describe under color removal (UCR).		
Required	168	Describe gray component replacement (GCR).		
Required	169	Demonstrate calibration of a color monitor to manufacturer's specifications.		
Required	170	Demonstrate calibration of a color proofer to manufacturer's specifications.		
Working with Illustration Software				
Required	171	List the capabilities of professional illustration software applications.		
Required	172	Convert a bitmap image to a vector.		
Required	173	Demonstrate the use of keyboard shortcuts/menus.		
Required	174	Create a design appropriate for a given job, using an illustration program.		
Required	175	Create a design using tints and fills for a given job, using an illustration program.		
Required	176	Create a design using manipulated type (e.g., rotated, circled, extended) for a publication.		
Required	177	Trace a drawing/photograph, using an illustration program.		
Optional	178	Edit an existing piece of electronic clip art.		
Working with the Portable Document Format (PDF)				
Required	179	Describe the PDF.		
Required	180	Explain why PDF has become an integral part of the printing industry.		
Required	181	List the advantages and disadvantages of PDF.		
Required	182	Demonstrate how to make changes to an existing PDF file.		
Required	183	Explain the various methods in which PDFs are created.		
Required	184	Demonstrate how to import a PDF of an InDesign file.		
Optional	185	Distinguish among a PDF, PDF/X-1a, and PDF/X-3 file.		
Required	186	Describe the differences among a press-quality PDF, a print-quality PDF, and the smallest-file size PDF.		
Digital File Output				
Optional	187	Output to Fiery Digital Print Solutions–EFI.		
Optional	188	Output to a wide-format printer.		

