

GRAPHIC COMMUNICATIONS 2

Course Code: 6201

COURSE DESCRIPTION: The Graphic Communications 2 course builds upon the knowledge and skills from Graphic Communications 1. Students will become more proficient in the use of the Adobe Creative suite to create and print products to be used in print production. In the level two course, emphasis moves from the overview to more in-depth knowledge and skills in digital prepress and production, typography, design and layout, image capturing, offset print production, finishing and binding, for examples. Students will also have hands-on opportunities integrating technology following industry practices. Health and safety and equipment maintenance techniques are embedded in instruction and practices. A balance of classroom study and practical application assures the development of a solid theoretical background, good production skills and appropriate work attitudes.

RECOMMENDED GRADE LEVEL:	10-12
RECOMMENDED PREREQUISITE	Graphic Communications 1
CREDIT:	1 unit (120 hours), 2 units (240 hours)
COMPUTER REQUIRED:	One computer per student

A. HEALTH AND SAFETY

Proficient professionals know the academic subject matter, including safety as required for proficiency within their area. They will use this knowledge as needed in their positions. The following accountability criteria are considered essential for students in the Graphic Communications program of study.

1. Describe the purpose of a safety and health program. (e.g., OSHA).
2. Explain the importance of machine guards and personal protection. (e.g., PPE, lockout, tagout).
3. Apply the safe handling of materials, tools and equipment as well as proper techniques for lifting.
4. Identify the correct handling, storage and disposal of chemicals and other materials. (e.g., HMIS, SDS).
5. Explain plans for fire prevention.
6. Explain proper noise control.
7. Summarize an ergonomically correct computer workstation. (e.g., posture).
8. Explain ways to reduce and eliminate waste for environmental compliance.

B. STUDENT ORGANIZATIONS

Proficient professionals know the academic subject matter, including professional development, required for proficiency within their area. They will use this knowledge as needed in their positions. The following accountability criteria are considered essential for students in any program of study.

1. Identify the purpose and goals of a Career and Technology Student Organization (CTSO).

2. Explain how CTSOs are integral parts of specific clusters, majors, and/or courses.
3. Explain the benefits and responsibilities of being a member of a CTSO.
4. List leadership opportunities that are available to students through participation in CTSO conferences, competitions, community service, philanthropy, and other activities.
5. Explain how participation in CTSOs can promote lifelong benefits in other professional and civic organizations.

C. TECHNOLOGY KNOWLEDGE

Proficient professionals know the academic subject matter, including the ethical use of technology as needed in their positions. The following accountability criteria are considered essential for students in any program of study.

1. Demonstrate proficiency and skills associated with the use of technologies that are common to a specific occupation.
2. Identify proper netiquette when using e-mail, social media, and other technologies for communication purposes.
3. Identify potential abuse and unethical uses of laptops, tablets, computers, and/or networks.
4. Explain the consequences of social, illegal, and unethical uses of technology (e.g., piracy; illegal downloading; cyberbullying; licensing infringement; inappropriate uses of software, hardware, and mobile devices in the work environment).
5. Discuss legal issues and the terms of use related to copyright laws, Creative Commons, fair use laws, and ethics pertaining to downloading of images, photographs, Creative Commons, documents, video, sounds, music, trademarks, and other elements for personal use.
6. Describe ethical and legal practices of safeguarding the confidentiality of business-related information.
7. Describe possible threats to a laptop, tablet, computer, and/or network and methods of avoiding attacks.

D. PERSONAL QUALITIES AND INTERPERSONAL SKILLS

Proficient professionals know the academic subject matter, including positive work practices and interpersonal skills, as needed in their positions. The following accountability criteria are considered essential for students in any program of study.

1. Demonstrate creativity and innovation.
2. Demonstrate critical thinking and problem-solving skills.
3. Demonstrate initiative and self-direction.
4. Demonstrate integrity.
5. Demonstrate work ethic.
6. Demonstrate conflict resolution skills.
7. Demonstrate listening and speaking skills.
8. Demonstrate respect for diversity.
9. Demonstrate customer service orientation.
10. Demonstrate teamwork.

E. PROFESSIONAL KNOWLEDGE

Proficient professionals know the academic subject matter, including positive work practices and interpersonal skills, as needed in their positions. The following accountability criteria are considered essential for students in any program of study.

1. Demonstrate global or “big picture” thinking.
2. Demonstrate career and life management skills and goal-making.
3. Demonstrate continuous learning and adaptability skills to changing job requirements.
4. Demonstrate time and resource management skills.
5. Demonstrates information literacy skills.
6. Demonstrates information security skills.
7. Demonstrates information technology skills.
8. Demonstrates knowledge and use of job-specific tools and technologies.
9. Demonstrate job-specific mathematics skills.
10. Demonstrates professionalism in the workplace.
11. Demonstrates reading and writing skills.
12. Demonstrates workplace safety.

F. DIGITAL PREPRESS AND PRODUCTION (APPLICATION)

Graphic professionals apply digital prepress and production skills. The following accountability criteria are considered essential for students in the Graphic Communications program.

1. Identify and follow procedures for backing up and archiving files.
2. Demonstrate the use of folders and hierarchical organizational structures in file management.
3. Identify and correct common file errors (for input and output).
4. Describe the uses of PDF documents and their settings.
5. Identify and describe file types and their uses (jpeg, tiff, eps, ps).
6. Identify file sizes and describe how they relate to output.
7. Perform pre-flight operations and save to storage media for file output.
8. Collect and package digital files for output and portability.
9. Identify basic proofreading marks and soft proof a job.
10. Demonstrate gang up, step and repeat, and imposition for a job using proper layout.
11. Utilize output devices to produce print to pre-defined client specifications.
12. Describe major imaging operations and workflow through the design and layout process (e.g., CTP computer to plate, computer to film).
13. Identify and correct common output errors.
14. Expose, process, and store film and/or plates.
15. List considerations and identify the correct plate materials (paper, polyester, metal) for a given job.
16. Demonstrate maintenance routines and techniques used to maintain and prolong film processor and/or plate-making equipment life.
17. Describe and demonstrate the use of input and output devices (e.g., digital camera, laser printer).
18. Describe the importance of image control marks to identify centers, bleeds, trims, register, arks,

side guides, and signature collation.

19. Describe and demonstrate industry standard practices for trapping, knockouts, and overprints.
20. Determine appropriate size, resolution, and format, and place a graphic into a document.
21. Develop multiple page documents using master pages and style sheets.
22. Demonstrate knowledge of saving procedures for a given job utilizing industry standard formats. (native, PDF, EPS).
23. Utilize best practices for file organization, selection and labeling of artwork for identification of links.
24. Perform pre-press in preparation for separations and output.
25. Convert or repurpose print files for multiple media (web, mobile media, and presentation).
26. Manage the flow of information from a wide variety of sources for variable data output.
27. Describe the impact of prepress (imaging) and finishing processes on press operations.
28. Describe gripper margin requirements as they relate to an intended output device.

G. APPLIED MATH

Graphic professionals demonstrate basic math skills. The following accountability criteria are considered essential for students in the Graphic Communications program.

1. Differentiate between the US Conventional and SI Metric systems of measurement, and make conversions from one system to the other.
2. Explain the point system of type measurement.
3. Explain how visual images are produced and measured in a desktop publishing system.
4. Understand the use of proportional scales, screens and tint measurement in the reproduction of images.
5. Explain distortion compensation. (optional)

H. TYPOGRAPHY

Graphic professionals demonstrate typography practices and skills. The following accountability criteria are considered essential for students in the Graphic Communications program.

1. Identify and describe the use of body type and display type, point sizes and type styles.
2. Identify and compare the physical characteristics of basic type classification, type styles and families.
3. Identify the anatomy of typographic characters.
4. Identify the differences between font formats (e.g., postscript, true type, open type).
5. Explain the proper procedures for loading and utilizing font management systems.
6. Demonstrate keyboard skills, including shortcuts and function keys.
7. Utilize the pica and point system (to include the conversions from point to pica to inch).
8. Follow best practices as they apply to fonts (kerning, tracking, leading, and alignments, scaling, etc.)
9. Follow best practices for type readability and legibility.

10. Discuss the role of type as a design element in graphic communications.

I. DESIGN & LAYOUT

Graphic professionals demonstrate knowledge of design and layout practices. The following accountability criteria are considered essential for students in the Graphic Communications program.

1. Define principles of design (balance, contrast, unity, rhythm, and hierarchy).
2. Define elements of design (line, shapes, size, texture, color, space).
3. Define elements of layout (text, graphic, page itself).
4. Demonstrate a working understanding of basic color theory as they apply to the imaging process.

J. IMAGE CAPTURE

Graphic professionals demonstrate knowledge and skills for capturing images using various methods. The following accountability criteria are considered essential for students in the Graphic Communications program.

1. Scan materials into appropriate file formats and resolutions.
2. Describe and apply basic digital photographic principles as used in printing.
3. Perform color and tonal balance corrections on an image for reproduction purposes with consideration to end use.
4. Utilizing industry standard software, retouch, modify, and correct images using various image-editing techniques.
5. Manipulate raster image using photo-editing software.
6. Demonstrate knowledge and use of Optical Character Recognition (OCR) Software.

K. INTRODUCTION TO FLEXOGRAPHIC PRINTING PRACTICES

Graphic professionals demonstrate introductory knowledge of flexographic principles. The following accountability criteria are considered essential for students in the Graphic Communications program.

1. Identify and define key terms: anilox roll, doctor blade, flexography, matrix, photopolymer plates, plate elongation, repeat length viscosity and Zahn cup.
2. Identify press configurations.
3. Identify main components of each station.
4. Identify and determine repeat length.
5. Define pitch.
6. Identify key characteristics and terms related to anilox rolls: engraved cells, screen angles used, line screens/ruling, anilox materials.

L. OFFSET PRINT PRODUCTION PRACTICES

Graphic professionals demonstrate appropriate knowledge in offset printing production. The following accountability criteria are considered essential for students in the Graphic Communications program.

- 1. Demonstrate an understanding of feeder and registration systems.**
 - a. Describe the various types of feeder systems and their components.
 - b. Describe procedures for jogging and loading paper stock into the feeder.
 - c. Describe the various types of registration systems and their components.
 - d. Describe techniques used to maintain registration
 - e. Perform the set-up of the feeder and registration systems accurately.
- 2. Demonstrate an understanding of inking and dampening systems.**
 - a. Describe the components of the inking system.
 - b. Explain the characteristics of different inks.
 - c. Describe procedures for preparing and maintaining the inking system.
 - d. Explain the characteristics of various chemicals used in the printing process.
 - e. Describe the components of the dampening system.
 - f. Describe the function of fountain solution.
 - g. Describe procedures for preparing and maintaining the dampening system.
 - h. Set up the inking and dampening systems accurately.
- 3. Demonstrate an understanding of cylinder systems.**
 - a. Describe the components of the various types of cylinder systems.
 - b. Determine methods of packing plates and blankets following the manufacturer's specifications.
 - c. Identify basic cylinder configurations.
 - d. Describe and compare plate characteristics and materials.
 - e. Identify the causes of and list solutions for image transfer problems.
 - f. Describe methods of mounting plates.
 - g. Perform the setup of the cylinder system accurately.
- 4. Demonstrate an understanding of delivery systems.**
 - a. Describe the components of the various types of delivery systems.
 - b. Perform the set up of the delivery system accurately.
 - c. Identify various drying systems (IR, spray, thermography).
- 5. Demonstrate the correct make-ready and set-up on an offset press.**
 - a. Perform the set up of the feeder and registration systems.
 - b. Perform the basic preparations for ink and inking system.
 - c. Perform the basic preparations for the dampening system.
 - d. Perform the basic preparations for the cylinder system (mount plates, set impression).
 - e. Perform the set up of the delivery and drying systems.
- 6. Demonstrate an understanding of printing operations on an offset press.**
 - a. Demonstrate the use of common printing hand tools and measuring instruments.
 - b. Identify common printing problems and their resolutions.

- c. Perform printing operations.
- d. Demonstrate the use of quality control standards and techniques: image and color quality, fit and registration, ink and water balance.
- e. Monitor and adjust feeder, registration inking, dampening, cylinder, delivery, and drying systems.
- f. Demonstrate effective maintenance schedules by adhering to manufacturer's press maintenance schedule.

M. SCREEN PRINTING PRACTICES

Graphic professionals demonstrate procedures used for screen printing. The following accountability criteria are considered essential for students in the Graphic Communications program.

- 1. Compare the difference between manual process and automatic process.
- 2. Compare the difference between mesh counts and uses for each.
- 3. Prepare positives for production.
- 4. Demonstrate correct application of emulsion (or capillary film) to a screen.
- 5. Demonstrate exposure of a screen using an exposure unit and exposure calculator.
- 6. Prepare a screen for production (blockout, masking and taping).
- 7. Describe the ink curing process for a variety of inks.
- 8. Perform alignment of print heads and off contact distance.
- 9. Perform registration of multiple screens for multicolor print.
- 10. Demonstrate printing technique of an image using a squeegee.
- 11. Explain the need for incorporating a flash unit.
- 12. Demonstrate curing/drying techniques using infrared thermometer, flash unit & tunnel dryer
- 13. Demonstrate reclaiming and degreasing of screens.

N. FINISHING AND BINDING

Graphic professionals demonstrate an understanding of the principles of finishing and binding. The following accountability criteria are considered essential for students in the Graphic Communications program.

- 1. Explain terms related to binding and finishing.
- 2. Explain different types of finishing operations.
- 3. Identify the types of folding processes and equipment.
- 4. Summarize the processes needed for different binding techniques.
- 5. Identify different types of packaging used in the graphic communications industry.
- 6. Explain operational and safety features of a paper cutter.
- 7. Identify grain direction of paper and explain its importance.
- 8. Calculate basic paper cuts from a parent sheet.
- 9. Create an accurate master cutting diagram for making cuts.
- 10. Identify padding equipment materials and hand tools.
- 11. Identify stapling and stitching equipment materials and supplies.
- 12. Identify punching/drilling equipment and tools.

O. ADOBE ILLUSTRATOR KNOWLEDGE AND SKILLS

Graphic professionals demonstrate understanding of Adobe Illustrator. The following accountability criteria are considered essential for students in the Graphic Communications program.

1. Continue professional illustration software applications: ACA Adobe Certification Objectives (Certiport).
2. Demonstrate the use of image trace.
3. Demonstrate a proper use of blend modes.
4. Archive, export, and publish graphics using Adobe Illustrator.
5. Demonstrate knowledge of preparing graphics for multimedia and print applications.

P. ADOBE PHOTOSHOP KNOWLEDGE AND SKILLS

Graphic professionals demonstrate Adobe Photoshop knowledge and skills. The following accountability criteria are considered essential for students in the Graphic Communications program.

1. Continue professional Image Editing software applications: ACA Adobe Certification Objectives (Certiport)
2. Demonstrate an understanding of and select the appropriate features and options required to implement a color management workflow.
3. Additive color model, subtractive color model, and Spot color model (Pantone).

Q. ADOBE INDESIGN KNOWLEDGE AND SKILLS

Graphic professionals demonstrate Adobe InDesign knowledge and skills. The following accountability criteria are considered essential for students in the Graphic Communications program.

1. Review professional page layout software applications: ACA Adobe Certification Objectives (Certiport).
2. Demonstrate knowledge of key terminology related to publications.
3. Demonstrate knowledge of publication terminology.
4. Understand and use key terms related to multi-page layouts.
5. Create a document with the appropriate settings for web, print, and mobile.
 - a. Set appropriate document settings for printed and onscreen publications.
 - b. Create a document preset to reuse for specific project needs.
6. Identify and manipulate elements of the InDesign interface.
 - a. Organize and customize the workspace.
 - b. Configure application preferences.
 - c. Use non-printing design tools in the interface to aid in design or workflow.
7. Navigate a document, use rulers, use guides and grids and use views and modes to work efficiently.
8. Import assets into a project.

9. Open and use templates.
10. Place assets in an InDesign document.
11. Manage colors, swatches, and gradients.
 - a. Set the active fill and stroke color.
 - b. Create and customize gradients.
 - c. Set the active fill and stroke color.
 - d. Create, manage, and edit swatches and swatch libraries.
12. Manage paragraph, character, and object styles.
 - a. Load and modify styles.
13. Use layers to manage design elements.
 - a. Use the Layers panel to modify layers.
 - b. Employ best practices to effectively manage layers in a complex project.
 - c. Work with multiple layers.
 - d. Modify layer visibility and printability.
14. Manage and modify pages.
 - a. Create pages in a document.
 - b. Edit and customize pages.
15. Use core tools and features to lay out visual elements.
 - a. Create frames using a variety of tools.
 - b. Place images in documents.
16. Add and manipulate text using appropriate typographic settings.
 - a. Use a variety of type tools to add typography to a design.
 - b. Use appropriate character settings in a design.
 - c. Use appropriate paragraph settings in a design.
 - d. Convert text to graphics.
 - e. Manage text flow across multiple text areas.
 - f. Use tools to add special characters or content.
17. Make, manage, and edit selections.
 - a. Make selections using a variety of tools.
 - b. Modify and refine selections using various methods.
18. Transform digital graphics and media within a publication.
 - a. Modify frames and frame content.
 - b. Rotate, flip, and transform individual frames or content.
19. Use basic reconstructing and editing techniques to manipulate document content.
 - a. Apply basic auto-correction methods and tools.
 - b. Use various tools to repair and reconstruct project content.
 - c. Evaluate or adjust the appearance of objects, frames, or layers using various tools.
 - d. Use the Story Editor to edit text within a project.
20. Modify the appearance of design elements by using effects and styles.
 - a. Use effects to modify images or frames.
 - b. Create, edit, and save object styles.
21. Add interactive or dynamic content or media to a project.
 - a. Add interactive elements and behaviors.
 - b. Demonstrate knowledge of how to embed rich-media objects.
 - c. Identify and assign triggers for multimedia assets.
 - d. Key Concepts: rollover, click, automatic load, etc.
22. Create and edit tables.
 - a. Create a table to display data.

- b. Edit tables and cells.
- 23. Prepare documents for publishing to web, print, and other digital devices.
 - a. Check documents for errors and project specifications.
- 24. Export or save documents to various file formats.
 - a. Save in the native file format for InDesign (.indd).
 - b. Save images in appropriate formats for print or screen.
 - c. Print proof copies before publishing.
 - d. Package an InDesign project.
- 25. Develop a document utilizing an industry standard page layout program.
- 26. Demonstrate industry standard practices in importing copy from a word processing program into a page layout program.

[Course Materials and Resources](#)

[Academic Standards and Indicators](#)