Monroe Career & Technical Institute

Course: Graphic Communications

Unit Name: 100 Industry Overview, Customer Service, and Employment
Number: 100 **Hours:** 180.00
Dates: Spring 2025

Description/Objectives:

Student will know and be able to estimate, plan, coordinate, and monitor all aspects of job production related to graphic communications.

Tasks:

PA101 - Perform customer service duties.

PA102 - Estimate job costs and complete customer invoices.

PA104 - Interpret a job jacket/ticket.

PA108 - Complete a production job from start to finish.

PA110 - Identify the workflow of a printed product.

PA111 - Research roles and responsibilities in graphics related careers.

Standards / Assessment Anchors
Focus Anchor/Standard #1:

- Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5

Supporting Anchor/Standards:

KEY IDEAS/DETAILS GRADES 9-10-11-12
Standard CC.3.5.9-10.A / Standard CC.3.5.11-12A Cite specific textual evidence, etc.
Standard CC.3.5.9-10 B / Standard CC.3.5.11-12 B Determine the central ideas or conclusions of a text; etc.
Standard CC.3.5.9-10.C / Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc.
CRAFT & STRUCTURE GRADES 9-10-11-12
Standard CC.3.5.9-10. D / Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words.
Standard CC.3.5.9-10.E / Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc.
Standard CC.3.5.9-10.F / Standard CC.3.5.11-12.F Analyze the author’s purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts in a text.
INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10
Standard CC.3.5.9-10.G Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).
Standard CC.3.5.9-10. H Assess the reasoning in a text to support the author’s claim for solving a technical problem.
Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc.
INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12
Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.
Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.
Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding.

RANGE OF READING GRADES 9-10-11-12
Standard CC.3.5.9-10.J / Standard CC.3.5.11-12.J By the end of grades 9-10, AND 11- 12, read and comprehend technical texts independently and proficiently.

Focus Anchor/Standard #2:

- Career Education and Work Academic Standards
  13.3: Career Retention and Advancement

  Supporting Anchor/Standards:
  Standard - 13.3.11. B. Evaluate team member roles to describe and illustrate active listening techniques: Clarifying Encouraging Reflecting Restating Summarizing
  Standard - 13.3.11. C. Evaluate conflict resolution skills as they relate to the workplace: Constructive criticism Group dynamics Managing/leadership Mediation Negotiation Problem solving

Instructional Activities:

Knowledge:
Read and interpret information on a job ticket
Compare job tickets for similarities and differences
Draw a floor plan locating production areas in the school print shop
Make an organizational chart of the school print shop
Steps for initiating a printing job
Components of a job ticket
Quality control
Items essential to proper job production control
Production steps of a job using traditional printing methods
Job titles and job responsibilities
Strategies a manager can use to operate a graphic communications business
Major concerns of successful printing plant management
Complete the assigned project
Participate in classroom discussions and lecture
Research trade information and graphic communication on the Internet
Complete assigned worksheets, study guides, and workbook pages
Read assigned textbook pages
Students will complete time cards
Maintain a notebook
Self evaluate using a rubric
Complete mathematics assignments
Printing Technology 5E:
Explain how estimates are determined for the length of time required to complete a task and how to use a unit/time standard form.
Explain how fixed costs are identified and determined in production costs
Explain two methods used in job costing
Outline the basic job estimating process
Discuss how a job work order is used to direct a job through scheduling and production control
Describe the major components of an automated data collection and information management system
Describe three approaches to e-management by the Internet
Printing Technology 5E:
Define quality in terms of customer’s content and requirement
Recall key terms including continuous quality improvement
Recall the purpose of ISO 9000 Standards Registration
Outline the motivation for customer defined quality management
Recognize the cost of failure
Define customer in terms external and internal clients
Outline a typical total quality management implementation process
Recognize four statistical process control tools, including histograms, Pareto charts, cause and effect charts, and control charts

Outline a six step problem solving process
Name several effective team behaviors
Recall three team roles including leader, scribe, and timekeeper

Skill:
Demonstrate ability to: Read and interpret information on a job ticket
Demonstrate ability to:Compare job tickets for similarities and differences
Demonstrate ability to:Draw a floor plan locating production areas in the school print shop
Demonstrate ability to:Make an organizational chart of the school print shop
Demonstrate ability to:Steps for initiating a printing job
Demonstrate ability to:Components of a job ticket
Demonstrate ability to:Quality control
Demonstrate ability to: Produce the items essential to proper job production control
Demonstrate ability to: Follow the production steps of a job using traditional printing methods
Demonstrate ability to: Complete invoices
Demonstrate ability to: Complete the assigned project
Complete Practical Problems in Mathematics for Graphic Arts
Apply the principles of determining the basic size thickness, and weight of a stock to the printing and graphic communications industry
Complete Practical Problems in Mathematics for Graphic Arts
Apply the principles of figuring and cutting paper
Complete Practical Problems in Mathematics for Graphic Arts
Apply the principles of figuring the most economical cut
Complete Practical Problems in Mathematics for Graphic Arts
Apply the principles of determining the number of sheets required for a job
Complete in Practical Problems in Mathematics for Graphic Arts
Apply the principles of charging for cutting and handling stock
Complete in Practical Problems in Mathematics for Graphic Arts
Apply the principles of figuring the cost of paper stock

Remediation:
Review with teacher assistance
Individual tutoring
Peer tutoring
Review checklist
Study guide
Peer Mentoring
Additional time

Enrichment:
Research career
Interview someone in the field
Special Project Assignment
Live Work
Professional Samples Collection
Shop Management Role

Special Adaptations:

- Study Guide
- Use of Calculator
- Graphic Organizer
- Taking Tests in Alternate Setting (or if requested)
- Verbal/Gestural Redirection (prompts to remain on task)
- Drill and Practice (Repetition of Material)
- Directions/Comprehension Check (frequent checks for understanding)
- Preferential Seating
- Chunking of Assignments/Material
- Extended Time (assignments and/or testing)
- Directions and/or Tests Read Aloud
- Adapted Tests and/or Assignments

- Small Group Instruction
- Teacher Modeling
- Use of Daily Planner/Assignment Book (monitor use of)
- Provide Visual Model to Accompany Verbal Directions (Written/Oral Directions)
- Use of Computer (Access to)
- Positive Reinforcement
- Have Student Repeat Directions
- Wait Time
- Access to School Counselor
- Copy of Teacher/Student Notes/Skeleton Notes
- No Penalization for Spelling
- Use of Highlighter/Highlighted Text
- Positive Reinforcement
- Provide Frequent Feedback
- Provide Frequent Breaks
- Variety of Assessment Methods
- Regular Notebook Check
- Use of Assistive Device (i.e. notepad, laptop, ect.)
- Highly Structured Classroom
- Syllabus for Major Projects
- Limited, Short Directions
- Grading Rubric
- Communication Regarding Behavior & Consequences (PBS)
- Clear Language for Directions
- Use of Multisensory Approach
- Provide Opportunities to Retest
- Frequent Review Sessions
- Use a variety of Modalities when Introducing Skills/Concepts
- Provide Editing Assistance
- Copies of Text for Home
- Cue for Oral Response
- De-Escalation Opportunities
- Daily Classwork Check
- Encourage Student to Check Work Before Turning In
- Opportunities for Repeated Practice of MATH Skills
- Provide repetition During Initial Instruction
- Allow Pre-read of Questions Before Reading Written Passage
- Provide Verbal and Written Directions
- Multiplication Chart
- All Vocabulary to be Defined Before Testing
- Testing - Allow Dictation of Lengthy Answers
- Time out
- Monitor Speed/Accuracy in which Student Completes Assignment
- Assistance with Bubble Sheets
- Encouragement to Participate in Positive Leadership Roles
- Student Self-Evaluation for Behavior
- Exempt from reading Aloud in Front of Peers

Safety:

Student must:
Handle material in safe and work like manner
Use protective clothing and equipment
Use hand tools in a safe manner
Know and follow the established safety rules at all times
Use manufactures direction when using equipment

Assessment:

Worksheets
Quizzes

Pre/Post tests
Time cards
Rubrics
Individual Projects
Group projects
Writing activities
Check lists
Oral Presentation
Note books
Study guides
Portfolio
Summaries
Research Results
Journals
Essays
Role-Play

Resources/Equipment:

Internet Resources: www.gammag.co www.americanprinter.com www.printmag.com http://macworld.zdnet.com/ Press Operations, Binding/Finishing MAVCC 2006 Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Orientation to Graphic Communications- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2013).Orientation to Graphic Communications - Teacher Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Student Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Teacher's Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Student Workbook. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Teacher Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Teacher Edition. Stillwater, OK: MAVCC. Olivo, C.T. & Olivo, T.P. (1985). Basic Vocational-Technical Mathematics (5th Ed.)Albany, NY: Delmar Publishing Inc. Dennis, E.A. & Jenkins, J.D. (1983). Comprehensive Graphic Arts (2nd Ed.)Mission Hills, CA: Glencoe Publishing Company. Adams, J.M. & Dolin, P.A. (2002). Printing Technology 5E. Vermeersch, L. & Southwick, C. (1983). practical Problems in Mathematics for Graphic Arts. Albany, NY: Delmar Thompson Learning. Magazines: Graphic Arts Dynamic Graphics Create Magazine Printing News The Big Picture Equipment: ProPrint T-Head Offset/duplicator printers ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Black & White Printer Xante Plate Maker 5 Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 2-Roll, 44" Hot Laminator and Mounting Machine Saddlestitch Machine Multi-Die Book Binding Machine Digital Off-set Press 24" Vinyl Cutter 24" Hydraulic Paper Cutter Hydraulic 3-Hole Punch Machine 4-Color Screen Printing Machine Screen Printing Flash Equipment Screen Printing 30" Dryer Screen Printing backlit Washout Sink Button Maker Imprinter 44" Cold Laminator 20" Poster Maker Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera Computers Scanner Painting Supplies Paper Supplies Drawing Supplies Measuring Supplies Finishing Supplies Printing Supplies Screen Printing Supplies Sign Making Supplies Off-Set Supplies Copier Supplies Printer Supplies Prepping and Washing Supplies Washout Sink Folding machines Hydraulic Paper cutters Padding station Exposing unit 3-hole punch machine Assorted Papers Graphic instruments: pens, scissors, rulers, etc. Computer Light tableHyperlinks: DaFont.com

Monroe Career & Technical Institute

Course: Graphic Communications

Unit Name: 200 RESERVED
Number: 200 **Hours:** 0.00
Dates: Spring 2025

Description/Objectives:

Tasks:

Standards / Assessment Anchors
Focus Anchor/Standard #1:

- Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5

  Supporting Anchor/Standards:

KEY IDEAS/DETAILS GRADES 9-10-11-12
Standard CC.3.5.9-10.A / Standard CC.3.5.11-12A Cite specific textual evidence, etc.
Standard CC.3.5.9-10 B / Standard CC.3.5.11-12 B Determine the central ideas or conclusions of a text; etc.
Standard CC.3.5.9-10.C / Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc.
CRAFT & STRUCTURE GRADES 9-10-11-12
Standard CC.3.5.9-10. D / Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words.
Standard CC.3.5.9-10.E / Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc.
Standard CC.3.5.9-10.F / Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts in a text.
INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10
Standard CC.3.5.9-10.G Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).
Standard CC.3.5.9-10. H Assess the reasoning in a text to support the author's claim for solving a technical problem.
Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc.
INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12
Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.
Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.
Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding.
RANGE OF READING GRADES 9-10-11-12
Standard CC.3.5.9-10.J / Standard CC.3.5.11-12.J By the end of grades 9-10, AND 11- 12, read and comprehend technical texts independently and proficiently.

Focus Anchor/Standard #2:

- Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6

  Supporting Anchor/Standards:

TEXT TYPES AND PURPOSE GRADES 9-10-11-12
Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.
Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.
PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12
Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.
Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E. Use technology, including the internet, to produce, publish, and update individual or shared writing products.
RESEARCH GRADES 9-10-11-12
Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more sustained research to answer a question or solve a problem.
Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.
Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research.
RANGE OF WRITING GRADES 9-10-11-12
Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.

Connecting Anchor/Standard:

- Pennsylvania Core Standards for Mathematics Standard 2.0

Supporting Anchor/Standards:

NUMBERS AND OPERATIONS
Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.
Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers

Instructional Activities:

Knowledge:
On-line research about design process work flow
Distinguish among the three stages of layout
Determine the physiology between font types and society
Pretest provided by instructor
Complete the assigned project
Participate in classroom discussions and lecture
Research trade information and graphic communication on the Internet
Complete assigned worksheets, study guides, and workbook pages
Read assigned textbook pages
Students will complete time cards
Maintain a note book
Self evaluate using a rubric
Define terms and definitions
Complete mathematics assignments
List functions of design
Arrange in order the steps in a design process
Identify typeface classes in printed material
Measure of type
Identify type alignment
Read and mark proof copy

Classifications of typefaces
Type families
Converting picas, points, and inches
Multiply fractions
Add fractions
Convert fractions and mixed numbers
Flow copy from a word processing program to page layout program according to job specifications
Steps in the design process
Three stages of layout
Reasons for pulling proofs
Types of proofs
Proofreaders’ marks
Legal restrictions and trade standards
Copyright notice
Items that may be copyrighted
Items not eligible for copyright
Copyright issues involving the Internet
Provisions for using photographs of people
for advertising purposes
Read and mark proof copy

Skill:
Demonstrate ability to: Read proofreaders’ marks
Demonstrate ability to: Read and mark proof copy
Demonstrate ability to: Make thumbnail and rough layouts
Demonstrate ability to: Three stages of layout
Demonstrate ability to: Flow copy from a word processing program to page layout program according to job specifications Demonstrate ability to: Convert fractions and mixed numbers
Demonstrate ability to: Add fractions
Demonstrate ability to: Multiply fractions
Demonstrate ability to: Converting picas, points, and inches
Demonstrate ability to: Complete the assigned project
Make thumbnails and rough layouts
Demonstrate ability to: Label magazine ads that utilize principles of design
Demonstrate ability to: Identify types of art in printed materials
Demonstrate ability to: Define terms and definitions
Arrange in order the steps in a design process
Demonstrate ability to: List functions of design
Demonstrate ability to: Distinguish among the three stages of layout
Demonstrate ability to: determine the physiology between font types and society
Demonstrate ability to: Identify typeface classes in printed material
Demonstrate ability to: Measure type
Demonstrate ability to: Identify type alignment
Demonstrate ability to: read and mark proof copy

Remediation:
Review with teacher assistance
Individual tutoring
Peer tutoring
Review checklist
Study guide
Peer Mentoring
Additional time

Enrichment:
Research career
Interview someone in the field
Special Project Assignment
Live Work
Professional Samples Collection
Shop Management Role

Special Adaptations:

- Study Guide
- Use of Calculator
- Graphic Organizer
- Taking Tests in Alternate Setting (or if requested)
- Verbal/Gestural Redirection (prompts to remain on task)
- Drill and Practice (Repetition of Material)
- Directions/Comprehension Check (frequent checks for understanding)
- Preferential Seating
- Chunking of Assignments/Material
- Extended Time (assignments and/or testing)
- Directions and/or Tests Read Aloud
- Adapted Tests and/or Assignments
- Small Group Instruction
- Teacher Modeling
- Use of Daily Planner/Assignment Book (monitor use of)
- Provide Visual Model to Accompany Verbal Directions (Written/Oral Directions)
- Use of Computer (Access to)
- Positive Reinforcement
- Have Student Repeat Directions
- Wait Time
- Access to School Counselor
- Copy of Teacher/Student Notes/Skeleton Notes
- No Penalization for Spelling
- Use of Highlighter/Highlighted Text
- Positive Reinforcement
- Provide Frequent Feedback
- Provide Frequent Breaks
- Variety of Assessment Methods
- Regular Notebook Check
- Use of Assistive Device (i.e. notepad, laptop, ect.)
- Highly Structured Classroom
- Syllabus for Major Projects
- Limited, Short Directions
- Grading Rubric
- Communication Regarding Behavior & Consequences (PBS)
- Clear Language for Directions
- Use of Multisensory Approach
- Provide Opportunities to Retest
- Frequent Review Sessions
- Use a variety of Modalities when Introducing Skills/Concepts
- Provide Editing Assistance
- Copies of Text for Home
- Cue for Oral Response
- De-Escalation Opportunities
- Daily Classwork Check
- Encourage Student to Check Work Before Turning In
- Opportunities for Repeated Practice of MATH Skills
- Provide repetition During Initial Instruction
- Allow Pre-read of Questions Before Reading Written Passage
- Provide Verbal and Written Directions
- Multiplication Chart
- All Vocabulary to be Defined Before Testing
- Testing - Allow Dictation of Lengthy Answers
- Time out
- Monitor Speed/Accuracy in which Student Completes Assignment
- Assistance with Bubble Sheets
- Encouragement to Participate in Positive Leadership Roles
- Student Self-Evaluation for Behavior
- Exempt from reading Aloud in Front of Peers

Safety:

Student must:
Handle material in safe and work like manner
Breaks from screen time
Use protective clothing and equipment
Use hand tools in a safe manner
Follow all rules and policies outlined in class

Assessment:

Worksheets
Quizzes
Pre/Post tests
Time cards
Rubrics
Individual Projects
Group projects
Writing activities
Check lists
Oral Presentation
Note books
Study guides
Portfolio
Summaries
Research Results
Journals
Essays
Role-Play

Resources/Equipment:

Internet Resources: www.gammag.co www.americanprinter.com www.printmag.com http://macworld.zdnet.com/ Press Operations, Binding/Finishing MAVCC 2006 Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Orientation to Graphic Communications- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2013).Orientation to Graphic Communications - Teacher Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Student Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Teacher's Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Student Workbook. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Teacher Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Teacher Edition. Stillwater, OK: MAVCC. Olivo, C.T. & Olivo, T.P. (1985). Basic Vocational-Technical Mathematics (5th Ed.)Albany, NY: Delmar Publishing Inc. Dennis, E.A. & Jenkins, J.D. (1983). Comprehensive Graphic Arts (2nd Ed.)Mission Hills, CA: Glencoe Publishing Company. Adams, J.M. & Dolin, P.A. (2002). Printing Technology 5E. Vermeersch, L. & Southwick, C. (1983). practical Problems in Mathematics for Graphic Arts. Albany, NY: Delmar Thompson Learning. Magazines: Graphic Arts Dynamic Graphics Create Magazine Printing News The Big Picture Equipment: ProPrint T-Head Offset/duplicator printers ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Black & White Printer Xante Plate Maker 5 Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 2-Roll, 44" Hot Laminator and Mounting Machine Saddlestitch Machine Multi-Die Book Binding Machine Digital Off-set Press 24" Vinyl Cutter 24" Hydraulic Paper Cutter Hydraulic 3-Hole Punch Machine 4-Color Screen Printing Machine Screen Printing Flash Equipment Screen Printing 30" Dryer Screen Printing backlit Washout Sink Button Maker Imprinter 44" Cold Laminator 20" Poster Maker Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding

Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera Computers Scanner Painting Supplies Paper Supplies Drawing Supplies Measuring Supplies Finishing Supplies Printing Supplies Screen Printing Supplies Sign Making Supplies Off-Set Supplies Copier Supplies Printer Supplies Prepping and Washing Supplies Washout Sink Folding machines Hydraulic Paper cutters Padding station Exposing unit 3-hole punch machine Assorted Papers Graphic instruments: pens, scissors, rulers, etc. Computer Light tableHyperlinks: Dafont.com

https://uxdesign.cc/art-and-copy-bridging-the-gap-between-design-and-content-4325b0939134

Monroe Career & Technical Institute

Course: Graphic Communications

Unit Name: 300 DESIGN, LAYOUT, AND PREPRESS
Number: 300 **Hours:** 250.00
Dates: Spring 2025

Description/Objectives:

Student will learn and be able to design a finished product incorporating the components of graphic elements and electronic imaging within the current industry software.

Tasks:

PA302 -Identify items that can be designed and produced using current industry software.

PA303 - Apply the principles of color theory.

PA306 - Use a line gauge to measure inches, points, and picas.

PA307 - Identify components of type, e.g., ascenders, descenders, baseline.

PA308 - Identify type styles/classifications and their uses.

PA309 - Identify the components of typography, e.g., kerning, tracking, justification.

PA311 - Proofread, edit, and preflight files, e.g., spell check, proofreading marks.

PA312 - Create a variety of design/publications using current industry software.

PA313 - Create multi-page documents using current industry software

PA314 - Create PDF files to industry specifications.

PA315 - Manipulate vector images using a current industry standard software.

PA316 - Manipulate bitmapped images using a current industry standard software.

PA317 - Identify different file types and uses.

PA322 - Utilize appropriate marks on printed products, e.g., gutters, registration marks, fold lines, bleeds.

PA324 - Prepare a prototype for a die-cut process using current industry software.

PA325 - Create a design using brainstorming, thumbnails, rough drafts, and comprehensives.

PA326 - Identify different types of graphics, e.g., bitmap, vector, line art, and continuous tone.

PA327 - Calculate reduction, enlargement, and proportion of images.

PA328 - Prepare a variable data project using current industry standards.

PA329 - Identify elements and apply principles of design.

PA330 - Prepare files with trap for multi-color print work.

PA331 - Create and implement various color swatches in industry standard software, e.g., RGB, CMYK, pantone, lab.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

- Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5

Supporting Anchor/Standards:

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Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.
Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding.
RANGE OF READING GRADES 9-10-11-12
Standard CC.3.5.9-10.J / Standard CC.3.5.11-12.J By the end of grades 9-10, AND 11- 12, read and comprehend technical texts independently and proficiently.

Focus Anchor/Standard #2:

- Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6

Supporting Anchor/Standards:

TEXT TYPES AND PURPOSE GRADES 9-10-11-12
Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.
Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.
PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12
Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.
Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E. Use technology, including the internet, to produce, publish, and update individual or shared writing products.
RESEARCH GRADES 9-10-11-12
Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more sustained research to answer a question or solve a problem.
Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.

Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research.
RANGE OF WRITING GRADES 9-10-11-12
Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.

Instructional Activities:

Knowledge:
Terms and definitions
Documents commonly produced through desktop publishing
Types of software used in desktop publishing
Major types of hardware used in desktop publishing
Digital camera basics
Scanning in grayscale, line art, and RGB modes
Types of scanners
Raster and vector images
Types of storage devices used in desktop publishing systems
High-end output devices used in desktop publishing
Types of desktop publishing proofs
Types of impositions
Digital trapping
Collect current event material related to digital printing
Compare and contrast the changes in staffing and training needs in a shop adopting CTP technology
Analyze effects of digital printing on the printer’s and customer’s view of cost, service, and competitiveness.
Design a page with appropriate margins, formatting, guides, trims, and folds*
Create a word-processed document*
Flow copy from a word processing program to page layout program according to job specifications
Use a digital camera to capture a digital image
Use a scanner to scan line art
Placed digital and scanned images in an page-layout document
Major types of DPP hardware
Types of computer systems used in DPP
Common operating systems used in DPP
Types of monitors used in DPP systems
Types of input devices used in DPP systems with their uses
Characteristics of types of storage devices used in DPP systems
Types of output devices used in DPP systems
Common features of low-end and high-end output devices used in DPP systems
PostScript and its importance to printing
Networking overview
Examine computer operating manual(s) for basic operating procedures
Complete a DPP system-specifications list
Determine system requirements for a specific software package
Determine basic costs of DPP systems
Start/Boot the computer
Types of software used in DPP systems
Factors to consider before purchasing DPP software
Characteristics of quality word-processing software
Characteristics of quality illustration software
Characteristics of quality image-editing software
Characteristics of quality preflight software
Characteristics of quality page-layout software
Basic page-layout software features
Basic page-layout software text-tool operations
Page-setup features
Paragraph-specification features
Type-specification features

Editing features
Problems encountered when using office software for print production
Evaluate a page-layout software package
Examine page-layout software manual for basic operations
Create word-processed document
Practice using publication-window features
Practice using page-specification features
Practice using paragraph- and type specification features and flow text
Create, edit, and move a headline
Place a file and then edit and move sentences within file paragraphs
Copy/paste, cut/paste, and move a paragraph
Create a letterhead

Skill:
Demonstrate the ability to: Create word-processed document
Demonstrate the ability to: Create, edit, and move a headline
Demonstrate the ability to: Place a file and then edit and move sentences within file paragraphs
Demonstrate the ability to:Copy/paste, cut/paste, and move a paragraph
Demonstrate the ability to:Create a letterhead
Demonstrate the ability to: Use the documents commonly produced through desktop publishing
Demonstrate the ability to: Use different types of software used in desktop publishing
Demonstrate the ability to: Use the major types of hardware used in desktop publishing
Demonstrate the ability to: Use digital camera basics
Demonstrate the ability to: Scan in grayscale, line art, and RGB modes
Demonstrate knowledge: On types of scanners
Demonstrate the ability to: Convert Raster and vector images
Demonstrate the ability to: Use storage devices used in desktop publishing systems
Demonstrate the ability to: Use high-end output devices used in desktop publishing
Demonstrate the ability to: Read types of desktop publishing proofs
Demonstrate the ability to:Acknowledge types of impositions
Demonstrate the ability to: Provide digital trapping
Ability to: Analyze effects of digital printing on the printer’s and customer’s view of cost, service, and competitiveness.
Ability to: Design a page with appropriate margins, formatting, guides, trims, and folds
Ability to: Create a word-processed document
Ability to: Flow copy from a word processing program to page layout program according to job specifications
Ability to: Use a digital camera to capture a digital image
Ability to: Use a scanner to scan line art
Ability to: Place digital and scanned images in an page-layout document
Ability to: Acknowledge major types of DPP hardware
Ability to: Acknowledge types of computer systems used in DPP
Ability to: Acknowledge common operating systems used in DPP
Ability to: Acknowledge types of monitors used in DPP systems
Ability to: Acknowledge types of input devices used in DPP systems with their uses
Demonstrate ability to: Know characteristics of types of storage devices used in DPP systems
Demonstrate ability to: Explain types of output devices used in DPP systems
Ability to: Understand common features of low-end and high-end output devices used in DPP systems
Ability to: Complete a DPP system-specifications list
Ability to: Determine system requirements for a specific software package
Ability to: Determine basic costs of DPP systems
Ability to: Start/Boot the computer
Ability to: Use types of software used in DPP systems
Ability to: Know factors to consider before purchasing DPP software
Demonstrate the ability to: Show characteristics of quality word-processing software
Demonstrate the ability to: Show characteristics of quality illustration software
Ability to: Use basic page-layout software features
Ability to: Use basic page-layout software text-tool operations
Ability to: Use page-setup features
Ability to: Use paragraph-specification features
Ability to: Use type-specification features
Ability to: Use editing features
Ability to: Trouble shoot problems encountered when using office software for print production

Remediation:
Review with teacher assistance
Individual tutoring
Peer Tutoring
Review checklist
Study guide

Enrichment:
Safety review poster
Research career
Interview someone in the field
Research education requirements for post secondary

Special Adaptations:

- Study Guide
- Use of Calculator
- Graphic Organizer
- Taking Tests in Alternate Setting (or if requested)
- Verbal/Gestural Redirection (prompts to remain on task)
- Drill and Practice (Repetition of Material)
- Directions/Comprehension Check (frequent checks for understanding)
- Preferential Seating
- Chunking of Assignments/Material
- Extended Time (assignments and/or testing)
- Directions and/or Tests Read Aloud
- Adapted Tests and/or Assignments
- Small Group Instruction
- Teacher Modeling
- Use of Daily Planner/Assignment Book (monitor use of)
- Provide Visual Model to Accompany Verbal Directions (Written/Oral Directions)
- Use of Computer (Access to)
- Positive Reinforcement
- Have Student Repeat Directions
- Wait Time
- Access to School Counselor
- Copy of Teacher/Student Notes/Skeleton Notes
- No Penalization for Spelling
- Use of Highlighter/Highlighted Text
- Positive Reinforcement
- Provide Frequent Feedback
- Provide Frequent Breaks
- Variety of Assessment Methods
- Regular Notebook Check
- Use of Assistive Device (i.e. notepad, laptop, ect.)
- Highly Structured Classroom
- Syllabus for Major Projects
- Limited, Short Directions
- Grading Rubric
- Communication Regarding Behavior & Consequences (PBS)
- Clear Language for Directions
- Use of Multisensory Approach
- Provide Opportunities to Retest
- Frequent Review Sessions
- Use a variety of Modalities when Introducing Skills/Concepts
- Provide Editing Assistance
- Copies of Text for Home
- Cue for Oral Response
- De-Escalation Opportunities
- Daily Classwork Check

- Encourage Student to Check Work Before Turning In
- Opportunities for Repeated Practice of MATH Skills
- Provide repetition During Initial Instruction
- Allow Pre-read of Questions Before Reading Written Passage
- Provide Verbal and Written Directions
- Multiplication Chart
- All Vocabulary to be Defined Before Testing
- Testing - Allow Dictation of Lengthy Answers
- Time out
- Monitor Speed/Accuracy in which Student Completes Assignment
- Assistance with Bubble Sheets
- Encouragement to Participate in Positive Leadership Roles
- Student Self-Evaluation for Behavior
- Exempt from reading Aloud in Front of Peers

Safety:

Student must:
Take screen breaks
Handle material in safe and work like manner
Use protective clothing and equipment
Use hand tools in a safe manner
Know and follow the established safety rules at all times
Use manufacture’s direction when using equipment

Assessment:

Worksheets
Quizzes
Pre/Post tests
Time cards
Rubrics
Individual Projects
Group projects
Writing activities
Check lists
Oral Presentation
Note books
Study guides
Portfolio
Summaries
Research Results
Journals
Essays
Role-Play

Resources/Equipment:

Internet Resources: www.gammag.co www.americanprinter.com www.printmag.com http://macworld.zdnet.com/ Press Operations, Binding/Finishing MAVCC 2006 Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Orientation to Graphic Communications- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2013).Orientation to Graphic Communications - Teacher Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Student Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Teacher's Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Student Workbook. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Teacher Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic

Arts:Electronic Prepress and Publishing- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing-Teacher Edition. Stillwater, OK: MAVCC. Olivo, C.T. & Olivo, T.P. (1985). Basic Vocational-Technical Mathematics (5th Ed.)Albany, NY: Delmar Publishing Inc. Dennis, E.A. & Jenkins, J.D. (1983). Comprehensive Graphic Arts (2nd Ed.)Mission Hills, CA: Glencoe Publishing Company. Adams, J.M. & Dolin, P.A. (2002). Printing Technology 5E. Vermeersch, L. & Southwick, C. (1983). practical Problems in Mathematics for Graphic Arts. Albany, NY: Delmar Thompson Learning. Magazines: Graphic Arts Dynamic Graphics Create Magazine Printing News The Big Picture Equipment: ProPrint T-Head Offset/duplicator printers ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Black & White Printer Xante Plate Maker 5 Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 2-Roll, 44" Hot Laminator and Mounting Machine Saddlestitch Machine Multi-Die Book Binding Machine Digital Off-set Press 24" Vinyl Cutter 24" Hydraulic Paper Cutter Hydraulic 3-Hole Punch Machine 4-Color Screen Printing Machine Screen Printing Flash Equipment Screen Printing 30" Dryer Screen Printing backlit Washout Sink Button Maker Imprinter 44" Cold Laminator 20" Poster Maker Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera Computers Scanner Painting Supplies Paper Supplies Drawing Supplies Measuring Supplies Finishing Supplies Printing Supplies Screen Printing Supplies Sign Making Supplies Off-Set Supplies Copier Supplies Printer Supplies Prepping and Washing Supplies Washout Sink Folding machines Hydraulic Paper cutters Padding station Exposing unit 3-hole punch machine Assorted Papers Graphic instruments: pens, scissors, rulers, etc. Computer Light tableHyperlinks: Dafont.com

https://cdn.ymaws.com/www.atmae.org/resource/resmgr/JIT/sartorius021800.pdf

Monroe Career & Technical Institute

Course: Graphic Communications

Unit Name: 400 RESERVED
Number: 400 **Hours:** 0.00
Dates: Spring 2025

Description/Objectives:

Student will know and be able to convert colors, evaluate and understand the importance of pixels and how it affects printing, along with acquiring files from various digital devices.

Tasks:

Standards / Assessment Anchors
Focus Anchor/Standard #1:

- Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5

Supporting Anchor/Standards:

KEY IDEAS/DETAILS GRADES 9-10-11-12
Standard CC.3.5.9-10.A / Standard CC.3.5.11-12A Cite specific textual evidence, etc.
Standard CC.3.5.9-10 B / Standard CC.3.5.11-12 B Determine the central ideas or conclusions of a text; etc.
Standard CC.3.5.9-10.C / Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc.
CRAFT & STRUCTURE GRADES 9-10-11-12
Standard CC.3.5.9-10. D / Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words.
Standard CC.3.5.9-10.E / Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc.
Standard CC.3.5.9-10.F / Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts in a text.
INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10
Standard CC.3.5.9-10.G Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).
Standard CC.3.5.9-10. H Assess the reasoning in a text to support the author's claim for solving a technical problem.
Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc.
INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12
Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.
Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.
Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding.
RANGE OF READING GRADES 9-10-11-12
Standard CC.3.5.9-10.J / Standard CC.3.5.11-12.J By the end of grades 9-10, AND 11- 12, read and comprehend technical texts independently and proficiently.

Focus Anchor/Standard #2:

- Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6

Supporting Anchor/Standards:

TEXT TYPES AND PURPOSE GRADES 9-10-11-12

Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.

Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.

PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12

Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.

Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E. Use technology, including the internet, to produce, publish, and update individual or shared writing products.

RESEARCH GRADES 9-10-11-12

Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more sustained research to answer a question or solve a problem.

Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.

Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research.

RANGE OF WRITING GRADES 9-10-11-12

Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.

Instructional Activities:

Knowledge:
Terms and definitions
Types of scanners
Common features of flatbed scanners
Types of software used in scanning
File formats for scanned images
PPI, DPI, and LPI
Factors that determine scanning resolution
Scanning resolutions and scanner settings
When to scan images as grayscale, line art, and RGB
Converting RGB scanned images to CMYK for print
Moiré patterns and how to avoid them
Scanning guidelines
Use of digital photography in digital prepress
Types of digital cameras
Resolution of digital cameras
Common features of image-editing software
Additive and subtractive primary colors
Functions of printing inks
Research copyright law in relation to
scanned materials
Examine scanning hardware and software
available in your classroom
Identify scanner and scan settings
Examine image-editing software manual for basic operations
Scan line art
Scan a continuous tone image
Use image-editing software to touch up and prepare line art scan for print
Use image-editing software to touch up and prepare continuous tone scan for print
Calibrate and assess a desktop scanner
Scan a continuous tone color original
Convert a continuous tone color scan to

grayscale
Perform basic color correction
Use image-editing software to perform basic image cloning
Place scanned graphics/photos in page layout document
Scan text using OCR software
Capture an image with a digital camera and download to the computer
Complete the assigned project
Participate in classroom discussions and lecture
Research trade information and graphic communication on the Internet
Complete assigned worksheets, study guides, and workbook pages
Read assigned textbook pages
Students will complete time cards
Maintain a note book
Self evaluate a using a rubric
Complete mathematics assignments

Skill:
Demonstrate ability to: Use types of scanners
Acknowledge: Common features of flatbed scanners
Ability to: Use types of software used in scanning
Demonstrate ability to: create file formats for scanned images PPI, DPI, and LPI
Demonstrate: Understanding factors that determine scanning resolution
Ability to: Change scanning resolutions and scanner settings
Demonstrate: Knowledge on when to scan images as grayscale, line art, and RGB
Ability to: Convert RGB scanned images to CMYK for print
Ability to: Understand Moiré patterns and how to avoid them
Ability to: Follow scanning guidelines
Ability to: Use digital photography in digital prepress
Use of a color wheel
Demonstrate knowledge of: Differences in types of digital cameras
Demonstrate: How to use resolution on digital cameras
Demonstrate ability to use: Common features of image-editing software
Research copyright law in relation to
scanned materials
Examine scanning hardware and software
available in your classroom
Identify scanner and scan settings
Examine image-editing software manual for basic operations
Scan line art
Scan a continuous tone image
Use image-editing software to touch up and prepare line art scan for print
Use image-editing software to touch up and prepare continuous tone scan for print
Calibrate and assess a desktop scanner
Perform basic color correction
Use image-editing software to perform basic image cloning
Place scanned graphics/photos in page layout document
Scan text using OCR software
Capture an image with a digital camera and download to the computer
Complete the assigned project
Complete invoices
Complete the Assigned project
Complete Unit 18 in Printing Technology 5E
Explain how estimates are determined for the length of time required to complete a task and how to use a unit/time standard form.
Explain how fixed costs are identified and determined in production costs
Outline the basic job estimating process
Discuss how a job work order is used to direct a job through scheduling and production control
Complete Unit 19 Printing Technology 5E
Define quality in terms of customer’s content and requirement
Recall key terms including continuous quality improvement
Outline the motivation for customer defined quality management
Recognize the cost of failure
Define customer in terms external and internal clients

Outline a six step problem solving process
Name several effective team behaviors
Recall three team roles including leader, scribe, and timekeeper
Complete Unit 30 in Practical Problems in Mathematics for Graphic Arts
Apply the principles of determining the basic size thickness, and weight of a stock
Complete Unit 32 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring and cutting paper
Complete Unit 33 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring the most economical cut
Complete Unit 34 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of determining the number of sheets required for a job
Complete Unit 35 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of charging for cutting and handling stock
Complete Unit 37 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring the cost of paper stock

Remediation:
Review with teacher assistance
Individual tutoring
Peer Tutoring
Review checklist
Study guide
Peer Mentoring
Additional time

Enrichment:
Review poster
Research career
Interview someone in the field
Special Project Assignment
Live Work
Professional Samples Collection
Shop Management Role

Special Adaptations:

- Study Guide
- Use of Calculator
- Graphic Organizer
- Taking Tests in Alternate Setting (or if requested)
- Verbal/Gestural Redirection (prompts to remain on task)
- Drill and Practice (Repetition of Material)
- Directions/Comprehension Check (frequent checks for understanding)
- Preferential Seating
- Chunking of Assignments/Material
- Extended Time (assignments and/or testing)
- Directions and/or Tests Read Aloud
- Adapted Tests and/or Assignments
- Small Group Instruction
- Teacher Modeling
- Use of Daily Planner/Assignment Book (monitor use of)
- Provide Visual Model to Accompany Verbal Directions (Written/Oral Directions)
- Use of Computer (Access to)
- Positive Reinforcement
- Have Student Repeat Directions
- Wait Time
- Access to School Counselor
- Copy of Teacher/Student Notes/Skeleton Notes
- No Penalization for Spelling

- Use of Highlighter/Highlighted Text
- Positive Reinforcement
- Provide Frequent Feedback
- Provide Frequent Breaks
- Variety of Assessment Methods
- Regular Notebook Check
- Use of Assistive Device (i.e. notepad, laptop, ect.)
- Highly Structured Classroom
- Syllabus for Major Projects
- Limited, Short Directions
- Grading Rubric
- Communication Regarding Behavior & Consequences (PBS)
- Clear Language for Directions
- Use of Multisensory Approach
- Provide Opportunities to Retest
- Frequent Review Sessions
- Use a variety of Modalities when Introducing Skills/Concepts
- Provide Editing Assistance
- Copies of Text for Home
- Cue for Oral Response
- De-Escalation Opportunities
- Daily Classwork Check
- Encourage Student to Check Work Before Turning In
- Opportunities for Repeated Practice of MATH Skills
- Provide repetition During Initial Instruction
- Allow Pre-read of Questions Before Reading Written Passage
- Provide Verbal and Written Directions
- Multiplication Chart
- All Vocabulary to be Defined Before Testing
- Testing - Allow Dictation of Lengthy Answers
- Time out
- Monitor Speed/Accuracy in which Student Completes Assignment
- Assistance with Bubble Sheets
- Encouragement to Participate in Positive Leadership Roles
- Student Self-Evaluation for Behavior
- Exempt from reading Aloud in Front of Peers

Safety:

Student must:
Take screen breaks
Handle material in safe and work like manner
Handle machine in a safe and work like manner
Use protective clothing and equipment
Use hand tools in a safe manner

Assessment:

Worksheets
Quizzes
Pre/Post tests
Time cards
Rubrics
Individual Projects
Group projects
Writing activities
Check lists
Oral Presentation
Note books
Study guides
Portfolio

Summaries
Research Results
Journals
Essays
Role-Play

Resources/Equipment:

Internet Resources: www.gammag.co www.americanprinter.com www.printmag.com http://macworld.zdnet.com/ Press Operations, Binding/Finishing MAVCC 2006 Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Orientation to Graphic Communications- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2013).Orientation to Graphic Communications - Teacher Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Student Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Teacher's Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Student Workbook. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Teacher Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Teacher Edition. Stillwater, OK: MAVCC. Olivo, C.T. & Olivo, T.P. (1985). Basic Vocational-Technical Mathematics (5th Ed.)Albany, NY: Delmar Publishing Inc. Dennis, E.A. & Jenkins, J.D. (1983). Comprehensive Graphic Arts (2nd Ed.)Mission Hills, CA: Glencoe Publishing Company. Adams, J.M. & Dolin, P.A. (2002). Printing Technology 5E. Vermeersch, L. & Southwick, C. (1983). practical Problems in Mathematics for Graphic Arts. Albany, NY: Delmar Thompson Learning. Magazines: Graphic Arts Dynamic Graphics Create Magazine Printing News The Big Picture Equipment: ProPrint T-Head Offset/duplicator printers ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Black & White Printer Xante Plate Maker 5 Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 2-Roll, 44" Hot Laminator and Mounting Machine Saddlestitch Machine Multi-Die Book Binding Machine Digital Off-set Press 24" Vinyl Cutter 24" Hydraulic Paper Cutter Hydraulic 3-Hole Punch Machine 4-Color Screen Printing Machine Screen Printing Flash Equipment Screen Printing 30" Dryer Screen Printing backlit Washout Sink Button Maker Imprinter 44" Cold Laminator 20" Poster Maker Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera Computers Scanner Painting Supplies Paper Supplies Drawing Supplies Measuring Supplies Finishing Supplies Printing Supplies Screen Printing Supplies Sign Making Supplies Off-Set Supplies Copier Supplies Printer Supplies Prepping and Washing Supplies Washout Sink Folding machines Hydraulic Paper cutters Padding station Exposing unit 3-hole punch machine Assorted Papers Graphic instruments: pens, scissors, rulers, etc. Computer Light tableHyperlinks: DaFont.com

https://www.colormatters.com/color-and-design/basic-color-theory

https://xd.adobe.com/ideas/process/ui-design/what-is-color-theory/

Monroe Career & Technical Institute

Course: Graphic Communications

Unit Name: 500 DIGITAL OUTPUT
Number: 500 **Hours:** 230.00
Dates: Spring 2025

Description/Objectives:

Student will be able to identify plates and chemicals used in stripping/mechanical creation. Student will also know and be able to create and manipulate plates that will be used for lithographic printing.

Tasks:

PA501 - Prepare plates for an offset press/duplicator.

PA505 - Input electronic content from various digital devices, e.g., scanner, digital camera, OCR.

PA506 - Process digital images using various color modes, e.g., grayscale, RGB, CMYK, Duotone, spot.

PA507 - Prepare layouts for sheet imposition, work and turn/tumble, step and repeat, and multi-page signatures.

PA508 - Perform the basic operations of a digital RIP system and production queues.

PA509 - Perform the functions of pagination, imposition, and color management on a digital RIP.

Standards / Assessment Anchors
Focus Anchor/Standard #1:

- Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5

  Supporting Anchor/Standards:
  KEY IDEAS/DETAILS GRADES 9-10-11-12
  Standard CC.3.5.9-10.A / Standard CC.3.5.11-12A Cite specific textual evidence, etc.
  Standard CC.3.5.9-10 B / Standard CC.3.5.11-12 B Determine the central ideas or conclusions of a text; etc.
  Standard CC.3.5.9-10.C / Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc.
  CRAFT & STRUCTURE GRADES 9-10-11-12
  Standard CC.3.5.9-10. D / Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words.
  Standard CC.3.5.9-10.E / Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc.
  Standard CC.3.5.9-10.F / Standard CC.3.5.11-12.F Analyze the author’s purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts in a text.
  INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10
  Standard CC.3.5.9-10.G Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).
  Standard CC.3.5.9-10. H Assess the reasoning in a text to support the author’s claim for solving a technical problem.
  Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc.
  INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12
  Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.
  Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.
  Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent

understanding.
RANGE OF READING GRADES 9-10-11-12
Standard CC.3.5.9-10.J / Standard CC.3.5.11-12.J By the end of grades 9-10, AND 11- 12, read and comprehend technical texts independently and proficiently.

Focus Anchor/Standard #2:

- Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6

Supporting Anchor/Standards:

TEXT TYPES AND PURPOSE GRADES 9-10-11-12
Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.
Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.
PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12
Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.
Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E. Use technology, including the internet, to produce, publish, and update individual or shared writing products.
RESEARCH GRADES 9-10-11-12
Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more sustained research to answer a question or solve a problem.
Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.
Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research.
RANGE OF WRITING GRADES 9-10-11-12
Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.

Connecting Anchor/Standard:

- Pennsylvania Core Standards for Mathematics Standard 2.0

Supporting Anchor/Standards:

NUMBERS AND OPERATIONS
Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.
Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers

Instructional Activities:

Knowledge:
Terms and definitions
Identify types of plate ends
Types of offset plates
Plate exposing devices.
Types of pre-sensitized plates
Steps to expose and process plates
Automatic plate processors Complete the assigned project
Items to consider when selecting a plate material

Gumming of plates
Handling and storing plates
Do’s and don’ts for properly handling plates and chemicals
Pin registration systems
Expose and develop a subtractive plate
Determine plate exposure using a step-off test
Expose a plate when using a screen tint
Make plates for a two-color job
Make additions, deletions, and repairs to an offset plate
Prepare a digital plate
Participate in classroom discussions and lecture
Research trade information and graphic communication on the Internet
Complete assigned worksheets, study guides, and workbook pages
Read assigned textbook pages
Students will complete time cards
Maintain a note book
Self evaluate a using a rubric
Complete mathematics assignments

Skill:
Demonstrate ability to: Identify types of plate ends
Demonstrate ability to: Use the right types of offset plates
Demonstrate ability to: Use plate exposing devices
Demonstrate ability to: Expose types of pre-sensitized plates
Demonstrate ability to: expose and process plates
Demonstrate ability to: Use automatic plate processors
Demonstrate ability to: Complete the assigned project
Demonstrate ability to: Recognize Items to consider when selecting a plate material
Demonstrate ability to: Gumm plates
Demonstrate ability to: Handle and store plates
Demonstrate knowledge: Do’s and don’ts for properly handling plates and chemicals
Demonstrate ability to: Use pin registration systems
Expose and develop a subtractive plate
Determine plate exposure using a step-off test
Demonstrate ability to: Expose a plate when using a screen tint
Demonstrate ability to: Make plates for a two-color job
Demonstrate ability to: Make additions, deletions, and repairs to an offset plate
Demonstrate ability to: Prepare a digital plate
Demonstrate ability to: Complete the Assigned project
Complete Unit 18 in Printing Technology 5E
Explain how estimates are determined for the length of time required to complete a task and how to use a unit/time standard form.
Explain how fixed costs are identified and determined in production costs
Outline the basic job estimating process
Discuss how a job work order is used to direct a job through scheduling and production control
Complete Unit 19 Printing Technology 5E
Define quality in terms of customer’s content and requirement
Recall key terms including continuous quality improvement
Outline the motivation for customer defined quality management
Recognize the cost of failure
Define customer in terms external and internal clients
Outline a six step problem solving process
Name several effective team behaviors
Recall three team roles including leader, scribe, and timekeeper
Complete Unit 30 in Practical Problems in Mathematics for Graphic Arts
Apply the principles of determining the basic size thickness, and weight of a stock
Complete Unit 32 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring and cutting paper
Complete Unit 33 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring the most economical cut
Complete Unit 34 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of determining the number of sheets required for a job
Complete Unit 35 in Practical Problems in Mathematics for Graphic Arts.

Apply the principles of charging for cutting and handling stock
Complete Unit 37 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring the cost of paper stock

Remediation:
Review with teacher assistance
Individual tutoring
Peer Tutoring
Review checklist
Study guide
Peer Mentoring
Additional time

Enrichment:
Review poster
Research career
Interview someone in the field
Special Project Assignment
Live Work
Professional Samples Collection
Shop Management Role

Special Adaptations:

- Study Guide
- Use of Calculator
- Graphic Organizer
- Taking Tests in Alternate Setting (or if requested)
- Verbal/Gestural Redirection (prompts to remain on task)
- Drill and Practice (Repetition of Material)
- Directions/Comprehension Check (frequent checks for understanding)
- Preferential Seating
- Chunking of Assignments/Material
- Extended Time (assignments and/or testing)
- Directions and/or Tests Read Aloud
- Adapted Tests and/or Assignments
- Small Group Instruction
- Teacher Modeling
- Use of Daily Planner/Assignment Book (monitor use of)
- Provide Visual Model to Accompany Verbal Directions (Written/Oral Directions)
- Use of Computer (Access to)
- Positive Reinforcement
- Have Student Repeat Directions
- Wait Time
- Access to School Counselor
- Copy of Teacher/Student Notes/Skeleton Notes
- No Penalization for Spelling
- Use of Highlighter/Highlighted Text
- Positive Reinforcement
- Provide Frequent Feedback
- Provide Frequent Breaks
- Variety of Assessment Methods
- Regular Notebook Check
- Use of Assistive Device (i.e. notepad, laptop, ect.)
- Highly Structured Classroom
- Syllabus for Major Projects
- Limited, Short Directions
- Grading Rubric

- Communication Regarding Behavior & Consequences (PBS)
- Clear Language for Directions
- Use of Multisensory Approach
- Provide Opportunities to Retest
- Frequent Review Sessions
- Use a variety of Modalities when Introducing Skills/Concepts
- Provide Editing Assistance
- Copies of Text for Home
- Cue for Oral Response
- De-Escalation Opportunities
- Daily Classwork Check
- Encourage Student to Check Work Before Turning In
- Opportunities for Repeated Practice of MATH Skills
- Provide repetition During Initial Instruction
- Allow Pre-read of Questions Before Reading Written Passage
- Provide Verbal and Written Directions
- Multiplication Chart
- All Vocabulary to be Defined Before Testing
- Testing - Allow Dictation of Lengthy Answers
- Time out
- Monitor Speed/Accuracy in which Student Completes Assignment
- Assistance with Bubble Sheets
- Encouragement to Participate in Positive Leadership Roles
- Student Self-Evaluation for Behavior
- Exempt from reading Aloud in Front of Peers

Safety:

Student must:
Handle material in safe and work like manner
Handle machine in a safe and work like manner
Use protective clothing and equipment
Use hand tools in a safe manner

Assessment:

Worksheets
Quizzes
Pre/Post tests
Time cards
Rubrics
Individual Projects
Group projects
Writing activities
Check lists
Oral Presentation
Note books
Study guides
Portfolio
Summaries
Research Results
Journals
Essays
Role-Play

Resources/Equipment:

Internet Resources: www.gammag.co www.americanprinter.com www.printmag.com http://macworld.zdnet.com/ Press Operations, Binding/Finishing MAVCC 2006 Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Orientation to Graphic Communications- Student

Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2013).Orientation to Graphic Communications - Teacher Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Student Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Teacher's Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Student Workbook. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Teacher Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Teacher Edition. Stillwater, OK: MAVCC. Olivo, C.T. & Olivo, T.P. (1985). Basic Vocational-Technical Mathematics (5th Ed.)Albany, NY: Delmar Publishing Inc. Dennis, E.A. & Jenkins, J.D. (1983). Comprehensive Graphic Arts (2nd Ed.)Mission Hills, CA: Glencoe Publishing Company. Adams, J.M. & Dolin, P.A. (2002). Printing Technology 5E. Vermeersch, L. & Southwick, C. (1983). practical Problems in Mathematics for Graphic Arts. Albany, NY: Delmar Thompson Learning. Magazines: Graphic Arts Dynamic Graphics Create Magazine Printing News The Big Picture Equipment: ProPrint T-Head Offset/duplicator printers ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Black & White Printer Xante Plate Maker 5 Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 2-Roll, 44" Hot Laminator and Mounting Machine Saddlestitch Machine Multi-Die Book Binding Machine Digital Off-set Press 24" Vinyl Cutter 24" Hydraulic Paper Cutter Hydraulic 3-Hole Punch Machine 4-Color Screen Printing Machine Screen Printing Flash Equipment Screen Printing 30" Dryer Screen Printing backlit Washout Sink Button Maker Imprinter 44" Cold Laminator 20" Poster Maker Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera Computers Scanner Painting Supplies Paper Supplies Drawing Supplies Measuring Supplies Finishing Supplies Printing Supplies Screen Printing Supplies Sign Making Supplies Off-Set Supplies Copier Supplies Printer Supplies Prepping and Washing Supplies Washout Sink Folding machines Hydraulic Paper cutters Padding station Exposing unit 3-hole punch machine Assorted Papers Graphic instruments: pens, scissors, rulers, etc. Computer Light tableHyperlinks:
https://www.youtube.com/watch?v=KENIyBWNhyk

https://www.britannica.com/topic/printing-publishing/Offset-plate-making

https://www.agfa.com/printing/paper/printing-plate-production/

Monroe Career & Technical Institute

Course: Graphic Communications

Unit Name: 600 OFFSET PRINTING
Number: 600 **Hours:** 240.00
Dates: Spring 2025

Description/Objectives:

Student will know and be able to set up sheet and image control systems of an offset press and print a number of printing assignments.

Tasks:

PA604 - Mix fountain solutions to acquire proper Ph levels.

PA605 - Makeready paper path of feed-delivery systems.

PA606 - Makeready inking systems.

PA607 - Makeready dampening systems.

PA608 - Print jobs on an offset press/duplicator.

PA610 - Compare and explain different types os feed systems.

PA615 - Perform clean up and basic maintenance.

PA618 - Evaluate print quality, e.g., star targets, color bars, viewing conditions, registration marks.

PA625 - Identify the five press systems and their parts.

PA629 - Identify, troubleshoot and correct print defects.

PA630 - Analyze printed sheet and match to proof.

Standards / Assessment Anchors
Focus Anchor/Standard #1:

- Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5

Supporting Anchor/Standards:

KEY IDEAS/DETAILS GRADES 9-10-11-12
Standard CC.3.5.9-10.A / Standard CC.3.5.11-12A Cite specific textual evidence, etc.
Standard CC.3.5.9-10 B / Standard CC.3.5.11-12 B Determine the central ideas or conclusions of a text; etc.
Standard CC.3.5.9-10.C / Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc.
CRAFT & STRUCTURE GRADES 9-10-11-12
Standard CC.3.5.9-10. D / Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words.
Standard CC.3.5.9-10.E / Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc.
Standard CC.3.5.9-10.F / Standard CC.3.5.11-12.F Analyze the author’s purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts in a text.
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technical problem.
Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc.
INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12
Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.
Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.
Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding.
RANGE OF READING GRADES 9-10-11-12
Standard CC.3.5.9-10.J / Standard CC.3.5.11-12.J By the end of grades 9-10, AND 11- 12, read and comprehend technical texts independently and proficiently.

Focus Anchor/Standard #2:

- Pennsylvania Core Standards for Science - 3.5.6-8.I

  Supporting Anchor/Standards:
  Standard - 3.5.6-8.I
  Students who demonstrate understanding can examine the ways that technology can have both positive and negative effects at the same time.

Connecting Anchor/Standard:

- Pennsylvania Core Standards for Mathematics Standard 2.0

  Supporting Anchor/Standards:
  NUMBERS AND OPERATIONS
  Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
  Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.
  Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
  Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers

Instructional Activities:

Knowledge:
Terms and definitions
Essential safety precautions
Two reasons why efficient press operation is important
Offset press operator control functions
Typical operator control features and the press systems in which they are located
Arrange in order steps in the sequence of paper movement through a typical offset press
Ink key presetting technology
Compare control features of offset and digital presses
Set up the sheet control systems
Set up the image control systems
Operate an offset press from setup of systems through printed sheet delivery
Rule up a sheet
Perform a color wash on an offset press
Print envelopes
Change press from envelopes to letterhead
Print a two-color, two-sided job
Print a two-color hairline registration job using an additional color head
Print a work-and-turn

Print a work-and-tumble
Print halftones and screen tints
Print solids
Print a job using photodirect, electrostatic, and/or computer-to-plate masters on carbonless paper
Print a four-color process job
Perform perforation and scoring
Print a two-color job using tight registration
Print a two-color job using tight registration, 4-up
Match terms and definitions
Advantages of a routine, thorough preventive maintenance program
Three areas of work in a preventive maintenance program
Preventive maintenance schedules
Requirements for a preventive maintenance schedule in chart form
Preventive maintenance procedures for daily cleanup
Preventive maintenance procedures for weekly cleanup
Preventive maintenance procedures for monthly cleanup
Procedures for daily, weekly, and monthly lubrication
Daily and weekly adjustment procedures
Monthly adjustment requirements
Steps in making an ink form roller check
Ink stripe configurations
Troubleshooting techniques
Categories of press troubles
Types of emulsification
Technique for avoiding emulsification
Conditions that create ink drying problems
Common ink problems on the press
Process color ink analysis
Printing industry standards
Guidelines for evaluating good print quality
Print quality problems and their causes
Complete the assigned project
Participate in classroom discussions and lecture
Research trade information and graphic communication on the Internet
Complete assigned worksheets, study guides, and workbook pages
Read assigned textbook pages
Students will complete time cards
Maintain a note book
Self evaluate a using a rubric
Complete mathematics assignments

Skill:
Terms and definitions
Essential safety precautions
Two reasons why efficient press operation is important
Offset press operator control functions
Typical operator control features and the press systems in which they are located
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Perform a color wash on an offset press
Print envelopes
Change press from envelopes to letterhead
Print a two-color, two-sided job
Print a two-color hairline registration job using an additional color head
Print a work-and-turn
Print a work-and-tumble
Print halftones and screen tints

Print solids
Print a job using photodirect, electrostatic, and/or computer-to-plate masters on carbonless paper
Print a four-color process job
Perform perforation and scoring
Print a two-color job using tight registration
Print a two-color job using tight registration, 4-up
Match terms and definitions
Advantages of a routine, thorough preventive maintenance program
Three areas of work in a preventive maintenance program
Preventive maintenance schedules
Requirements for a preventive maintenance schedule in chart form
Preventive maintenance procedures for daily cleanup
Preventive maintenance procedures for weekly cleanup
Preventive maintenance procedures for monthly cleanup
Procedures for daily, weekly, and monthly lubrication
Daily and weekly adjustment procedures
Monthly adjustment requirements
Steps in making an ink form roller check
Ink stripe configurations
Troubleshooting techniques
Categories of press troubles
Types of emulsification
Technique for avoiding emulsification
Conditions that create ink drying problems
Common ink problems on the press
Process color ink analysis
Printing industry standards
Guidelines for evaluating good print quality
Print quality problems and their causes
Complete the Assigned project
Complete Unit 18 in Printing Technology 5E
Explain how estimates are determined for the length of time required to complete a task and how to use a unit/time standard form.
Explain how fixed costs are identified and determined in production costs
Outline the basic job estimating process
Discuss how a job work order is used to direct a job through scheduling and production control
Complete Unit 19 Printing Technology 5E
Define quality in terms of customer’s content and requirement
Recall key terms including continuous quality improvement
Outline the motivation for customer defined quality management
Recognize the cost of failure
Define customer in terms external and internal clients
Outline a six step problem solving process
Name several effective team behaviors
Recall three team roles including leader, scribe, and timekeeper
Complete Unit 30 in Practical Problems in Mathematics for Graphic Arts
Apply the principles of determining the basic size thickness, and weight of a stock
Complete Unit 32 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring and cutting paper
Complete Unit 33 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring the most economical cut
Complete Unit 34 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of determining the number of sheets required for a job
Complete Unit 35 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of charging for cutting and handling stock
Complete Unit 37 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring the cost of paper stock

Remediation:
Review with teacher assistance

Individual tutoring
Peer Tutoring
Review checklist
Study guide
Peer Mentoring
Additional time

Enrichment:
Review poster
Research career
Interview someone in the field
Special Project Assignment
Live Work
Professional Samples Collection
Shop Management Role

Special Adaptations:

- Study Guide
- Use of Calculator
- Graphic Organizer
- Taking Tests in Alternate Setting (or if requested)
- Verbal/Gestural Redirection (prompts to remain on task)
- Drill and Practice (Repetition of Material)
- Directions/Comprehension Check (frequent checks for understanding)
- Preferential Seating
- Chunking of Assignments/Material
- Extended Time (assignments and/or testing)
- Directions and/or Tests Read Aloud
- Adapted Tests and/or Assignments
- Small Group Instruction
- Teacher Modeling
- Use of Daily Planner/Assignment Book (monitor use of)
- Provide Visual Model to Accompany Verbal Directions (Written/Oral Directions)
- Use of Computer (Access to)
- Positive Reinforcement
- Have Student Repeat Directions
- Wait Time
- Access to School Counselor
- Copy of Teacher/Student Notes/Skeleton Notes
- No Penalization for Spelling
- Use of Highlighter/Highlighted Text
- Positive Reinforcement
- Provide Frequent Feedback
- Provide Frequent Breaks
- Variety of Assessment Methods
- Regular Notebook Check
- Use of Assistive Device (i.e. notepad, laptop, ect.)
- Highly Structured Classroom
- Syllabus for Major Projects
- Limited, Short Directions
- Grading Rubric
- Communication Regarding Behavior & Consequences (PBS)
- Clear Language for Directions
- Use of Multisensory Approach
- Provide Opportunities to Retest
- Frequent Review Sessions
- Use a variety of Modalities when Introducing Skills/Concepts
- Provide Editing Assistance
- Copies of Text for Home

- Cue for Oral Response
- De-Escalation Opportunities
- Daily Classwork Check
- Encourage Student to Check Work Before Turning In
- Opportunities for Repeated Practice of MATH Skills
- Provide repetition During Initial Instruction
- Allow Pre-read of Questions Before Reading Written Passage
- Provide Verbal and Written Directions
- Multiplication Chart
- All Vocabulary to be Defined Before Testing
- Testing - Allow Dictation of Lengthy Answers
- Time out
- Monitor Speed/Accuracy in which Student Completes Assignment
- Assistance with Bubble Sheets
- Encouragement to Participate in Positive Leadership Roles
- Student Self-Evaluation for Behavior
- Exempt from reading Aloud in Front of Peers

Safety:

Student must:
Handle material in safe and work like manner
Handle machine in a safe and work like manner
Use protective clothing and equipment
Use hand tools in a safe manner

Assessment:

Worksheets
Quizzes
Pre/Post tests
Time cards
Rubrics
Individual Projects
Group projects
Writing activities
Check lists
Oral Presentation
Note books
Study guides
Portfolio
Summaries
Research Results
Journals
Essays
Role-Play

Resources/Equipment:

Internet Resources: www.gammag.co www.americanprinter.com www.printmag.com http://macworld.zdnet.com/ Press Operations, Binding/Finishing MAVCC 2006 Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Orientation to Graphic Communications- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2013).Orientation to Graphic Communications - Teacher Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Student Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Teacher's Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Student Workbook. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Teacher Guide. Stillwater,

OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing-Teacher Edition. Stillwater, OK: MAVCC. Olivo, C.T. & Olivo, T.P. (1985). Basic Vocational-Technical Mathematics (5th Ed.)Albany, NY: Delmar Publishing Inc. Dennis, E.A. & Jenkins, J.D. (1983). Comprehensive Graphic Arts (2nd Ed.)Mission Hills, CA: Glencoe Publishing Company. Adams, J.M. & Dolin, P.A. (2002). Printing Technology 5E. Vermeersch, L. & Southwick, C. (1983). practical Problems in Mathematics for Graphic Arts. Albany, NY: Delmar Thompson Learning. Magazines: Graphic Arts Dynamic Graphics Create Magazine Printing News The Big Picture Equipment: ProPrint T-Head Offset/duplicator printers ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Black & White Printer Xante Plate Maker 5 Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 2-Roll, 44" Hot Laminator and Mounting Machine Saddlestitch Machine Multi-Die Book Binding Machine Digital Off-set Press 24" Vinyl Cutter 24" Hydraulic Paper Cutter Hydraulic 3-Hole Punch Machine 4-Color Screen Printing Machine Screen Printing Flash Equipment Screen Printing 30" Dryer Screen Printing backlit Washout Sink Button Maker Imprinter 44" Cold Laminator 20" Poster Maker Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera Computers Scanner Painting Supplies Paper Supplies Drawing Supplies Measuring Supplies Finishing Supplies Printing Supplies Screen Printing Supplies Sign Making Supplies Off-Set Supplies Copier Supplies Printer Supplies Prepping and Washing Supplies Washout Sink Folding machines Hydraulic Paper cutters Padding station Exposing unit 3-hole punch machine Assorted Papers Graphic instruments: pens, scissors, rulers, etc. Computer Light tableHyperlinks: DaFont.com

Monroe Career & Technical Institute

Course: Graphic Communications

Unit Name: 700 BINDERY
Number: 700 **Hours:** 240.00
Dates: Spring 2025

Description/Objectives:

Student will know and be able to trouble shoot and complete maintenance on binding and finishing equipment and calculate savings by bindery operators. The students will demonstrate competencies by completing tasks and assignments sheets.

Tasks:

PA701 - Use folding equipment to produce various folds, e.g., French, accordion, gate.

PA702 - Identify and perform various stitching processes.

PA703 - Perform packaging and/or shrink wrapping.

PA704 - Handle printed substrates, e.g., jogging, fanning, squaring.

PA707 - Collate and gather printed materials.

PA710 - Identify and perform creasing, scoring, slittling and perfing.

PA714 - Set up and use programmable cutters.

PA720 - Perform padding techniques.

PA721 - Identify and perform various types of book binding.

PA722 - Differentiate between finishing processes, e.g., die cutting, embossing, debossing.

PA723 - Cut and/or trim project to finished size.

PA724 - Calculate paper cuts from a parent sheet.

L723 - Perform set up procedures for foil stampng and embossing.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

- Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5

Supporting Anchor/Standards:

KEY IDEAS/DETAILS GRADES 9-10-11-12
Standard CC.3.5.9-10.A / Standard CC.3.5.11-12A Cite specific textual evidence, etc.
Standard CC.3.5.9-10 B / Standard CC.3.5.11-12 B Determine the central ideas or conclusions of a text; etc.
Standard CC.3.5.9-10.C / Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc.
CRAFT & STRUCTURE GRADES 9-10-11-12
Standard CC.3.5.9-10. D / Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words.
Standard CC.3.5.9-10.E / Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc.
Standard CC.3.5.9-10.F / Standard CC.3.5.11-12.F Analyze the author’s purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts

in a text.
INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10
Standard CC.3.5.9-10.G Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).
Standard CC.3.5.9-10. H Assess the reasoning in a text to support the author's claim for solving a technical problem.
Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc.
INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12
Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.
Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.
Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding.
RANGE OF READING GRADES 9-10-11-12
Standard CC.3.5.9-10.J / Standard CC.3.5.11-12.J By the end of grades 9-10, AND 11- 12, read and comprehend technical texts independently and proficiently.

Focus Anchor/Standard #2:

- Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6

  Supporting Anchor/Standards:

  TEXT TYPES AND PURPOSE GRADES 9-10-11-12
  Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.
  Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.
  PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12
  Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.
  Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
  Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E. Use technology, including the internet, to produce, publish, and update individual or shared writing products.
  RESEARCH GRADES 9-10-11-12
  Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more sustained research to answer a question or solve a problem.
  Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.
  Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research.
  RANGE OF WRITING GRADES 9-10-11-12
  Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.

Connecting Anchor/Standard:

- Pennsylvania Core Standards for Mathematics Standard 2.0

  Supporting Anchor/Standards:

  NUMBERS AND OPERATIONS
  Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
  Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.

Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers

Instructional Activities:

Knowledge:
Terms and definitions
Binding techniques
Major paper folding styles
Processes associated with finishing activities
Operational and safety parts of a paper cutter
Count paper using various techniques
Pad 20-pound stock
Pad carbonless paper
Drill paper stock for a 3-ring binder
Fold paper using a folding machine
Hand fold, collate, and staple a booklet
Collate multi-page printing job using a collating machine
Score a job Complete the assigned project
Participate in classroom discussions and lecture
Research trade information and graphic communication on the Internet
Complete assigned worksheets, study guides, and workbook pages
Read assigned textbook pages
Students will complete time cards
Maintain a note book
Self evaluate a using a rubric
Complete mathematics assignments

Skill:
Demonstrate: Binding techniques
Demonstrate: Major paper folding styles
Demonstrate: The processes associated with finishing activities
Demonstrate: The operational and safety parts of a paper cutter
Ability to: Count paper using various techniques
Ability to: Pad 20-pound stock
Ability to: Pad carbonless paper
Ability to: Drill paper stock for a 3-ring binder
Ability to: Fold paper using a folding machine
Ability to: Hand fold, collate, and staple a booklet
Ability to: Collate multi-page printing job using a collating machine
Ability to: Score a job Complete the assigned project

Complete invoices
Complete the Assigned project
Complete Unit 18 in Printing Technology 5E
Explain how estimates are determined for the length of time required to complete a task and how to use a unit/time standard form.
Explain how fixed costs are identified and determined in production costs
Outline the basic job estimating process
Discuss how a job work order is used to direct a job through scheduling and production control
Complete Unit 19 Printing Technology 5E
Define quality in terms of customer’s content and requirement
Recall key terms including continuous quality improvement
Outline the motivation for customer defined quality management
Recognize the cost of failure
Define customer in terms external and internal clients
Outline a six step problem solving process
Name several effective team behaviors
Recall three team roles including leader, scribe, and timekeeper
Complete Unit 30 in Practical Problems in Mathematics for Graphic Arts

Apply the principles of determining the basic size thickness, and weight of a stock
Complete Unit 32 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring and cutting paper
Complete Unit 33 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring the most economical cut
Complete Unit 34 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of determining the number of sheets required for a job
Complete Unit 35 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of charging for cutting and handling stock
Complete Unit 37 in Practical Problems in Mathematics for Graphic Arts.
Apply the principles of figuring the cost of paper stock

Remediation:
Review with teacher assistance
Individual tutoring
Peer Tutoring
Review checklist
Study guide
Peer Mentoring
Additional time

Enrichment:
Review poster
Research career
Interview someone in the field
Special Project Assignment
Live Work
Professional Samples Collection
Shop Management Role

Special Adaptations:

- Study Guide
- Use of Calculator
- Graphic Organizer
- Taking Tests in Alternate Setting (or if requested)
- Verbal/Gestural Redirection (prompts to remain on task)
- Drill and Practice (Repetition of Material)
- Directions/Comprehension Check (frequent checks for understanding)
- Preferential Seating
- Chunking of Assignments/Material
- Extended Time (assignments and/or testing)
- Directions and/or Tests Read Aloud
- Adapted Tests and/or Assignments
- Small Group Instruction
- Teacher Modeling
- Use of Daily Planner/Assignment Book (monitor use of)
- Provide Visual Model to Accompany Verbal Directions (Written/Oral Directions)
- Use of Computer (Access to)
- Positive Reinforcement
- Have Student Repeat Directions
- Wait Time
- Access to School Counselor
- Copy of Teacher/Student Notes/Skeleton Notes
- No Penalization for Spelling
- Use of Highlighter/Highlighted Text
- Positive Reinforcement
- Provide Frequent Feedback

- Provide Frequent Breaks
- Variety of Assessment Methods
- Regular Notebook Check
- Use of Assistive Device (i.e. notepad, laptop, ect.)
- Highly Structured Classroom
- Syllabus for Major Projects
- Limited, Short Directions
- Grading Rubric
- Communication Regarding Behavior & Consequences (PBS)
- Clear Language for Directions
- Use of Multisensory Approach
- Provide Opportunities to Retest
- Frequent Review Sessions
- Use a variety of Modalities when Introducing Skills/Concepts
- Provide Editing Assistance
- Copies of Text for Home
- Cue for Oral Response
- De-Escalation Opportunities
- Daily Classwork Check
- Encourage Student to Check Work Before Turning In
- Opportunities for Repeated Practice of MATH Skills
- Provide repetition During Initial Instruction
- Allow Pre-read of Questions Before Reading Written Passage
- Provide Verbal and Written Directions
- Multiplication Chart
- All Vocabulary to be Defined Before Testing
- Testing - Allow Dictation of Lengthy Answers
- Time out
- Monitor Speed/Accuracy in which Student Completes Assignment
- Assistance with Bubble Sheets
- Encouragement to Participate in Positive Leadership Roles
- Student Self-Evaluation for Behavior
- Exempt from reading Aloud in Front of Peers

Safety:

Student must:
Handle material in safe and work like manner
Handle machine in a safe and work like manner
Use protective clothing and equipment
Use hand tools in a safe manner

Assessment:

Worksheets
Quizzes
Pre/Post tests
Time cards
Rubrics
Individual Projects
Group projects
Writing activities
Check lists
Oral Presentation
Note books
Study guides
Portfolio
Summaries
Research Results
Journals

Essays
Role-Play

Resources/Equipment:

Internet Resources: www.gammag.co www.americanprinter.com www.printmag.com http://macworld.zdnet.com/ Press Operations, Binding/Finishing MAVCC 2006 Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Orientation to Graphic Communications- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2013).Orientation to Graphic Communications - Teacher Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Student Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Teacher's Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Student Workbook. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Teacher Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Teacher Edition. Stillwater, OK: MAVCC. Olivo, C.T. & Olivo, T.P. (1985). Basic Vocational-Technical Mathematics (5th Ed.)Albany, NY: Delmar Publishing Inc. Dennis, E.A. & Jenkins, J.D. (1983). Comprehensive Graphic Arts (2nd Ed.)Mission Hills, CA: Glencoe Publishing Company. Adams, J.M. & Dolin, P.A. (2002). Printing Technology 5E. Vermeersch, L. & Southwick, C. (1983). practical Problems in Mathematics for Graphic Arts. Albany, NY: Delmar Thompson Learning. Magazines: Graphic Arts Dynamic Graphics Create Magazine Printing News The Big Picture Equipment: ProPrint T-Head Offset/duplicator printers ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Black & White Printer Xante Plate Maker 5 Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 2-Roll, 44" Hot Laminator and Mounting Machine Saddlestitch Machine Multi-Die Book Binding Machine Digital Off-set Press 24" Vinyl Cutter 24" Hydraulic Paper Cutter Hydraulic 3-Hole Punch Machine 4-Color Screen Printing Machine Screen Printing Flash Equipment Screen Printing 30" Dryer Screen Printing backlit Washout Sink Button Maker Imprinter 44" Cold Laminator 20" Poster Maker Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera Computers Scanner Painting Supplies Paper Supplies Drawing Supplies Measuring Supplies Finishing Supplies Printing Supplies Screen Printing Supplies Sign Making Supplies Off-Set Supplies Copier Supplies Printer Supplies Prepping and Washing Supplies Washout Sink Folding machines Hydraulic Paper cutters Padding station Exposing unit 3-hole punch machine Assorted Papers Graphic instruments: pens, scissors, rulers, etc. Computer Light tableHyperlinks: DaFont.com

Monroe Career & Technical Institute

Course: Graphic Communications

Unit Name: 800 SUBSTRATES AND CONSUMABLES
Number: 800 **Hours:** 170.00
Dates: Spring 2025

Description/Objectives:

Student will know and be able to identify safety procedures and areas of concern regarding printing and finishing equipment.

Tasks:

PA801 - Identify substrate types based on basic weights, standard sizes, grain direction, finishes.

PA802 - Handle substrates, e.g., vinyl, rolled stock, garments, reams, cartons, cases.

PA803 - Mix and test ink for printing using the Pantone Matching System.

PA804 - Identify different inks/toners, additives, and finishes.

PA805 - Explain handling and disposal of waste materials.

Standards / Assessment Anchors
Focus Anchor/Standard #1:

- Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5

Supporting Anchor/Standards:

KEY IDEAS/DETAILS GRADES 9-10-11-12
Standard CC.3.5.9-10.A / Standard CC.3.5.11-12A Cite specific textual evidence, etc.
Standard CC.3.5.9-10 B / Standard CC.3.5.11-12 B Determine the central ideas or conclusions of a text; etc.
Standard CC.3.5.9-10.C / Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc.
CRAFT & STRUCTURE GRADES 9-10-11-12
Standard CC.3.5.9-10. D / Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words.
Standard CC.3.5.9-10.E / Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc.
Standard CC.3.5.9-10.F / Standard CC.3.5.11-12.F Analyze the author’s purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts in a text.
INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10
Standard CC.3.5.9-10.G Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).
Standard CC.3.5.9-10. H Assess the reasoning in a text to support the author’s claim for solving a technical problem.
Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc.
INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12
Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.
Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.
Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding.
RANGE OF READING GRADES 9-10-11-12
Standard CC.3.5.9-10.J / Standard CC.3.5.11-12.J By the end of grades 9-10, AND 11- 12, read and

comprehend technical texts independently and proficiently.

Focus Anchor/Standard #2:

- Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6

  Supporting Anchor/Standards:

  TEXT TYPES AND PURPOSE GRADES 9-10-11-12
  Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.
  Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.
  PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12
  Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.
  Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
  Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E. Use technology, including the internet, to produce, publish, and update individual or shared writing products.
  RESEARCH GRADES 9-10-11-12
  Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more sustained research to answer a question or solve a problem.
  Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.
  Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research.
  RANGE OF WRITING GRADES 9-10-11-12
  Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.

Connecting Anchor/Standard:

- Science, Technology & Engineering, and Environmental Literacy & Sustainability Standards
  3.5.6-8.1 Strand: Nature and Characteristics of Technology and Engineering

  Supporting Anchor/Standards:

  3.5.6-8.KK Explain how technology and engineering are closely linked to creativity, which can result in both intended and unintended innovations.

  3.5.6-8.LL Compare how different technologies involve different sets of processes.

  3.5.6-8.II Predict outcomes of a future product or system at the beginning of the design process.

Instructional Activities:

Knowledge:
Steps in maintaining a safe and orderly shop
Identify Hazardous Materials Identification System (HMIS) labels
Purposes of a material safety data sheet
Kinds of safety hazards
Things OSHA expects of an employer

Things OSHA expects of an employee
Colors of the safety color code
Characteristics of lockout/tagout
Components of the fire triangle
Classes of fires
Types of fire extinguishers and the classes of fire they are designed to extinguish
Fire extinguisher symbols
General guidelines for first aid emergencies
Bloodborne pathogens and special first aid precautions
Lifting and carrying items safely
Complete a student safety pledge form
Survey the shop and identify correct safety practices
Interpret a material safety data sheet
Draw a floor plan and locate safety equipment in your shop
Operate a fire extinguisher
Lift a heavy object properly
Approved methods of disposing of graphic communications waste materials
Toxic chemical safety rules
Personal protective equipment which might be required in a print shop
Terms and definitions
Proper safety rules to be practiced in the shop
Steps in maintaining a safe and orderly shop
Complete the assigned project
Participate in classroom discussions and lecture
Research trade information and graphic communication on the Internet
Complete assigned worksheets, study guides, and workbook pages
Read assigned textbook pages
Students will complete time cards
Maintain a note book
Self evaluate a using a rubric

Skill:
Demonstrate ability to: Explain the components of the fire triangle
Demonstrate ability to: Explain classes of fires
Demonstrate ability to: Use fire extinguishers and know the classes of fire they are designed to extinguish
Demonstrate ability to: Understand fire extinguisher symbols
Demonstrate ability to: General guidelines for first aid emergencies
Demonstrate ability to: Distinguish bloodborne pathogens and special first aid precautions
Demonstrate ability to: Lift and carry items safely
Demonstrate ability to: Survey the shop and identify correct safety practices
Demonstrate ability to: Interpret a material safety data sheet
Demonstrate ability to: Draw a floor plan and locate safety equipment in your shop
Demonstrate ability to: Operate a fire extinguisher
Demonstrate ability to: Lift a heavy object properly
Demonstrate ability to: Identify Hazardous Materials Identification System (HMIS) labels
Demonstrate ability to: Determine kinds of safety hazards
Colors of the safety color code
Demonstrate ability to: Understand the steps in maintaining a safe and orderly shop
Complete the assigned project
Assign textbook reading
Lecture to demonstrate the process that students will be learning
Assign worksheets to be completed
Present and review grading rubrics for projects
Offer one-on-one instruction to students in need of specific help
Observe student work as the student is learning
Coordinate student learning and work activities.
Lecture to explain the important content that the student will be learning.

Remediation:
Review with teacher assistance
Individual tutoring
Peer Tutoring

Review checklist
Study guide

Enrichment:
Safety review poster
Research career
Interview someone in the field
Research education requirements for post secondary

Special Adaptations:

- Study Guide
- Use of Calculator
- Graphic Organizer
- Taking Tests in Alternate Setting (or if requested)
- Verbal/Gestural Redirection (prompts to remain on task)
- Drill and Practice (Repetition of Material)
- Directions/Comprehension Check (frequent checks for understanding)
- Preferential Seating
- Chunking of Assignments/Material
- Extended Time (assignments and/or testing)
- Directions and/or Tests Read Aloud
- Adapted Tests and/or Assignments
- Small Group Instruction
- Teacher Modeling
- Use of Daily Planner/Assignment Book (monitor use of)
- Provide Visual Model to Accompany Verbal Directions (Written/Oral Directions)
- Use of Computer (Access to)
- Positive Reinforcement
- Have Student Repeat Directions
- Wait Time
- Access to School Counselor
- Copy of Teacher/Student Notes/Skeleton Notes
- No Penalization for Spelling
- Use of Highlighter/Highlighted Text
- Positive Reinforcement
- Provide Frequent Feedback
- Provide Frequent Breaks
- Variety of Assessment Methods
- Regular Notebook Check
- Use of Assistive Device (i.e. notepad, laptop, ect.)
- Highly Structured Classroom
- Syllabus for Major Projects
- Limited, Short Directions
- Grading Rubric
- Communication Regarding Behavior & Consequences (PBS)
- Clear Language for Directions
- Use of Multisensory Approach
- Provide Opportunities to Retest
- Frequent Review Sessions
- Use a variety of Modalities when Introducing Skills/Concepts
- Provide Editing Assistance
- Copies of Text for Home
- Cue for Oral Response
- De-Escalation Opportunities
- Daily Classwork Check
- Encourage Student to Check Work Before Turning In
- Opportunities for Repeated Practice of MATH Skills
- Provide repetition During Initial Instruction
- Allow Pre-read of Questions Before Reading Written Passage
- Provide Verbal and Written Directions

- Multiplication Chart
- All Vocabulary to be Defined Before Testing
- Testing - Allow Dictation of Lengthy Answers
- Time out
- Monitor Speed/Accuracy in which Student Completes Assignment
- Assistance with Bubble Sheets
- Encouragement to Participate in Positive Leadership Roles
- Student Self-Evaluation for Behavior
- Exempt from reading Aloud in Front of Peers

Safety:

Student must:
Handle material in safe and work like manner
Use protective clothing and equipment
Use hand tools in a safe manner
Pass safety test with 100%

Assessment:

Worksheets
Quizzes
Pre/Post tests
Time cards
Rubrics
Individual Projects
Group projects
Writing activities
Check lists
Oral Presentation
Note books
Study guides
Portfolio

Resources/Equipment:

Internet Resources: www.gammag.co www.americanprinter.com www.printmag.com http://macworld.zdnet.com/ Press Operations, Binding/Finishing MAVCC 2006 Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Orientation to Graphic Communications- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2013).Orientation to Graphic Communications - Teacher Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Student Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Teacher's Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Student Workbook. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Teacher Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Teacher Edition. Stillwater, OK: MAVCC. Olivo, C.T. & Olivo, T.P. (1985). Basic Vocational-Technical Mathematics (5th Ed.)Albany, NY: Delmar Publishing Inc. Dennis, E.A. & Jenkins, J.D. (1983). Comprehensive Graphic Arts (2nd Ed.)Mission Hills, CA: Glencoe Publishing Company. Adams, J.M. & Dolin, P.A. (2002). Printing Technology 5E. Vermeersch, L. & Southwick, C. (1983). practical Problems in Mathematics for Graphic Arts. Albany, NY: Delmar Thompson Learning. Magazines: Graphic Arts Dynamic Graphics Create Magazine Printing News The Big Picture Equipment: ProPrint T-Head Offset/duplicator printers ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Black & White Printer Xante Plate Maker 5 Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 2-Roll, 44" Hot Laminator and Mounting Machine Saddlestitch Machine Multi-Die Book Binding Machine Digital Off-set Press 24" Vinyl Cutter 24" Hydraulic Paper Cutter Hydraulic 3-Hole

Punch Machine 4-Color Screen Printing Machine Screen Printing Flash Equipment Screen Printing 30" Dryer Screen Printing backlit Washout Sink Button Maker Imprinter 44" Cold Laminator 20" Poster Maker Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera Computers Scanner Painting Supplies Paper Supplies Drawing Supplies Measuring Supplies Finishing Supplies Printing Supplies Screen Printing Supplies Sign Making Supplies Off-Set Supplies Copier Supplies Printer Supplies Prepping and Washing Supplies Washout Sink Folding machines Hydraulic Paper cutters Padding station Exposing unit 3-hole punch machine Assorted Papers Graphic instruments: pens, scissors, rulers, etc. Computer Light tableHyperlinks: DaFont.com

Monroe Career & Technical Institute

Course: Graphic Communications

Unit Name: 900 SAFETY
Number: 900 **Hours:** 62.00
Dates: Spring 2025

Description/Objectives:

Student will know and be able to create, fabricate, and price different types of signage using a variety of materials.

Tasks:

PA901 - Explain lock out/tag out procedures.

PA902 - Identify and follow safety practices in the industry and lab, e.g., equipment, tools.

PA904 - Identify and follow the procedures for handling chemicals and disposing of waste.

PA905 - Identify and understand all components of Safety Data Sheets (SDS).

Standards / Assessment Anchors

Focus Anchor/Standard #1:

- Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5

Supporting Anchor/Standards:

KEY IDEAS/DETAILS GRADES 9-10-11-12
Standard CC.3.5.9-10.A / Standard CC.3.5.11-12A Cite specific textual evidence, etc.
Standard CC.3.5.9-10 B / Standard CC.3.5.11-12 B Determine the central ideas or conclusions of a text; etc.
Standard CC.3.5.9-10.C / Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc.
CRAFT & STRUCTURE GRADES 9-10-11-12
Standard CC.3.5.9-10. D / Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words.
Standard CC.3.5.9-10.E / Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc.
Standard CC.3.5.9-10.F / Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts in a text.
INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10
Standard CC.3.5.9-10.G Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).
Standard CC.3.5.9-10. H Assess the reasoning in a text to support the author's claim for solving a technical problem.
Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc.
INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12
Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.
Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.
Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding.
RANGE OF READING GRADES 9-10-11-12
Standard CC.3.5.9-10.J / Standard CC.3.5.11-12.J By the end of grades 9-10, AND 11- 12, read and comprehend technical texts independently and proficiently.

Focus Anchor/Standard #2:

- Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6

  Supporting Anchor/Standards:

  TEXT TYPES AND PURPOSE GRADES 9-10-11-12
  Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.
  Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.
  PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12
  Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.
  Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
  Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E. Use technology, including the internet, to produce, publish, and update individual or shared writing products.
  RESEARCH GRADES 9-10-11-12
  Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more sustained research to answer a question or solve a problem.
  Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.
  Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research.
  RANGE OF WRITING GRADES 9-10-11-12
  Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.

Connecting Anchor/Standard:

- Pennsylvania Core Standards for Mathematics Standard 2.0

  Supporting Anchor/Standards:

  NUMBERS AND OPERATIONS
  Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
  Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.
  Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
  Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers

Instructional Activities:

Knowledge:

Skill:

Remediation:
Review with teacher assistance
Individual tutoring
Peer tutoring
Review checklist
Study guide
Peer Mentoring

Additional time

Enrichment:
Research career
Interview someone in the field
Special Project Assignment
Live Work
Professional Samples Collection
Shop Management Role

Special Adaptations:

- Study Guide
- Use of Calculator
- Graphic Organizer
- Taking Tests in Alternate Setting (or if requested)
- Verbal/Gestural Redirection (prompts to remain on task)
- Drill and Practice (Repetition of Material)
- Directions/Comprehension Check (frequent checks for understanding)
- Preferential Seating
- Chunking of Assignments/Material
- Extended Time (assignments and/or testing)
- Directions and/or Tests Read Aloud
- Adapted Tests and/or Assignments
- Small Group Instruction
- Teacher Modeling
- Use of Daily Planner/Assignment Book (monitor use of)
- Provide Visual Model to Accompany Verbal Directions (Written/Oral Directions)
- Use of Computer (Access to)
- Positive Reinforcement
- Have Student Repeat Directions
- Wait Time
- Access to School Counselor
- Copy of Teacher/Student Notes/Skeleton Notes
- No Penalization for Spelling
- Use of Highlighter/Highlighted Text
- Positive Reinforcement
- Provide Frequent Feedback
- Provide Frequent Breaks
- Variety of Assessment Methods
- Regular Notebook Check
- Use of Assistive Device (i.e. notepad, laptop, ect.)
- Highly Structured Classroom
- Syllabus for Major Projects
- Limited, Short Directions
- Grading Rubric
- Communication Regarding Behavior & Consequences (PBS)
- Clear Language for Directions
- Use of Multisensory Approach
- Provide Opportunities to Retest
- Frequent Review Sessions
- Use a variety of Modalities when Introducing Skills/Concepts
- Provide Editing Assistance
- Copies of Text for Home
- Cue for Oral Response
- De-Escalation Opportunities
- Daily Classwork Check
- Encourage Student to Check Work Before Turning In
- Opportunities for Repeated Practice of MATH Skills
- Provide repetition During Initial Instruction
- Allow Pre-read of Questions Before Reading Written Passage

- Provide Verbal and Written Directions
- Multiplication Chart
- All Vocabulary to be Defined Before Testing
- Testing - Allow Dictation of Lengthy Answers
- Time out
- Monitor Speed/Accuracy in which Student Completes Assignment
- Assistance with Bubble Sheets
- Encouragement to Participate in Positive Leadership Roles
- Student Self-Evaluation for Behavior
- Exempt from reading Aloud in Front of Peers

Safety:

Student must:
Handle material in safe and work like manner
Use protective clothing and equipment
Use hand tools in a safe manner
Follow all rules and policies outlined in class

Assessment:

Worksheets
Quizzes
Pre/Post tests
Time cards
Rubrics
Individual Projects
Group projects
Writing activities
Check lists
Oral Presentation
Note books
Study guides
Portfolio
Summaries
Research Results
Journals
Essays
Role-Play

Resources/Equipment:

Internet Resources: www.gammag.co www.americanprinter.com www.printmag.com http://macworld.zdnet.com/ Press Operations, Binding/Finishing MAVCC 2006 Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Orientation to Graphic Communications- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2013).Orientation to Graphic Communications - Teacher Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Student Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Teacher's Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Student Workbook. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Teacher Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing-Teacher Edition. Stillwater, OK: MAVCC. Olivo, C.T. & Olivo, T.P. (1985). Basic Vocational-Technical Mathematics (5th Ed.)Albany, NY: Delmar Publishing Inc. Dennis, E.A. & Jenkins, J.D. (1983). Comprehensive Graphic Arts (2nd Ed.)Mission Hills, CA: Glencoe Publishing Company. Adams, J.M. & Dolin, P.A. (2002). Printing Technology 5E. Vermeersch, L. & Southwick, C. (1983). practical Problems in

Mathematics for Graphic Arts. Albany, NY: Delmar Thompson Learning. Magazines: Graphic Arts Dynamic Graphics Create Magazine Printing News The Big Picture Equipment: ProPrint T-Head Offset/duplicator printers ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Black & White Printer Xante Plate Maker 5 Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 2-Roll, 44" Hot Laminator and Mounting Machine Saddlestitch Machine Multi-Die Book Binding Machine Digital Off-set Press 24" Vinyl Cutter 24" Hydraulic Paper Cutter Hydraulic 3-Hole Punch Machine 4-Color Screen Printing Machine Screen Printing Flash Equipment Screen Printing 30" Dryer Screen Printing backlit Washout Sink Button Maker Imprinter 44" Cold Laminator 20" Poster Maker Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera Computers Scanner Painting Supplies Paper Supplies Drawing Supplies Measuring Supplies Finishing Supplies Printing Supplies Screen Printing Supplies Sign Making Supplies Off-Set Supplies Copier Supplies Printer Supplies Prepping and Washing Supplies Washout Sink Folding machines Hydraulic Paper cutters Padding station Exposing unit 3-hole punch machine Assorted Papers Graphic instruments: pens, scissors, rulers, etc. Computer Light tableHyperlinks: DaFont.com

Monroe Career & Technical Institute

Course: Graphic Communications

Unit Name: 1000 SPECIALTY PRINTING TECHNOLOGIES
Number: 1000 **Hours:** 90.00
Dates: Spring 2025

Description/Objectives:

Student will know and be able to prepare, clean, and print using screens, use embroidery softward and machine, and set-up, clean and use an airbrush.

Tasks:

PA1001 - Identify and/or perform imaging technology processes, e.g., serigraphy, flexography, letterpress, gravure, indirect.

PA1002 - Replenish consumables for digital printing equipment.

PA1003 - Output files on digital/specialty imaging equipment, e.g., digital press, large format, dye sublimation, engraver.

PA1004 - Troubleshoot errors on digital/specialty imaging equipment.

PA1005 - Output color separations and composites for various printing processes.

PA1006 - Create graphic reproduction for textiles, e.g., screen printing, direct to garment, embroidery, heat press, direct to film, dye sublimation.

Standards / Assessment Anchors
Focus Anchor/Standard #1:

- Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5

Supporting Anchor/Standards:

KEY IDEAS/DETAILS GRADES 9-10-11-12
Standard CC.3.5.9-10.A / Standard CC.3.5.11-12A Cite specific textual evidence, etc.
Standard CC.3.5.9-10 B / Standard CC.3.5.11-12 B Determine the central ideas or conclusions of a text; etc.
Standard CC.3.5.9-10.C / Standard CC.3.5.11-12.C Follow precisely a complex multistep procedure, etc.
CRAFT & STRUCTURE GRADES 9-10-11-12
Standard CC.3.5.9-10. D / Standard CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain specific words.
Standard CC.3.5.9-10.E / Standard CC.3.5.11-12.E Analyze the structure of the relationships among concepts in a text, etc.
Standard CC.3.5.9-10.F / Standard CC.3.5.11-12.F Analyze the author’s purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts in a text.
INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10
Standard CC.3.5.9-10.G Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).
Standard CC.3.5.9-10. H Assess the reasoning in a text to support the author’s claim for solving a technical problem.
Standard CC.3.5.9-10. I Compare and contrast findings presented in a text to those from other sources, etc.
INTEGRATE KNOWLEDGE & IDEAS GRADES 11-12
Standard CC.3.5.11-12. G Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem.
Standard CC.3.5.11-12. H Evaluate the hypotheses, data, analysis, and conclusions in a technical

text, verifying the data when possible.
Standard CC.3.5.11-12. I Synthesize information from a range of sources into a coherent understanding.
RANGE OF READING GRADES 9-10-11-12
Standard CC.3.5.9-10.J / Standard CC.3.5.11-12.J By the end of grades 9-10, AND 11- 12, read and comprehend technical texts independently and proficiently.

Focus Anchor/Standard #2:

- Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6

Supporting Anchor/Standards:

TEXT TYPES AND PURPOSE GRADES 9-10-11-12
Standard CC.3.6.9-10.A Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.
Standard CC.3.6.9-10.B Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.
PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12
Standard CC.3.6.9-10.C Standard CC.3.6.11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.
Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
Standard CC.3.6.9-10.E Standard CC.3.6.11-12.E. Use technology, including the internet, to produce, publish, and update individual or shared writing products.
RESEARCH GRADES 9-10-11-12
Standard CC.3.6.9-10.F Standard CC.3.6.11-12.F Conduct short and more sustained research to answer a question or solve a problem.
Standard CC.3.6.9-10.G. Standard CC.3.6.11-12.G Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.
Standard CC.3.6.9-10.H. Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research.
RANGE OF WRITING GRADES 9-10-11-12
Standard CC.3.5.9-10.I & Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.

Connecting Anchor/Standard:

- Connecting StandardPennsylvania Core Standards for Mathematics Standard 2.0

Supporting Anchor/Standards:

NUMBERS AND OPERATIONS
Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.
Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers

Instructional Activities:

Knowledge:

Skill:
Remediation:
Review with teacher assistance
Individual tutoring
Peer tutoring
Review checklist
Study guide
Peer Mentoring
Additional time

Enrichment:
Research career
Interview someone in the field
Special Project Assignment
Live Work
Professional Samples Collection
Shop Management Role

Special Adaptations:

- Study Guide
- Use of Calculator
- Graphic Organizer
- Taking Tests in Alternate Setting (or if requested)
- Verbal/Gestural Redirection (prompts to remain on task)
- Drill and Practice (Repetition of Material)
- Directions/Comprehension Check (frequent checks for understanding)
- Preferential Seating
- Chunking of Assignments/Material
- Extended Time (assignments and/or testing)
- Directions and/or Tests Read Aloud
- Adapted Tests and/or Assignments
- Small Group Instruction
- Teacher Modeling
- Use of Daily Planner/Assignment Book (monitor use of)
- Provide Visual Model to Accompany Verbal Directions (Written/Oral Directions)
- Use of Computer (Access to)
- Positive Reinforcement
- Have Student Repeat Directions
- Wait Time
- Access to School Counselor
- Copy of Teacher/Student Notes/Skeleton Notes
- No Penalization for Spelling
- Use of Highlighter/Highlighted Text
- Positive Reinforcement
- Provide Frequent Feedback
- Provide Frequent Breaks
- Variety of Assessment Methods
- Regular Notebook Check
- Use of Assistive Device (i.e. notepad, laptop, ect.)
- Highly Structured Classroom
- Syllabus for Major Projects
- Limited, Short Directions
- Grading Rubric
- Communication Regarding Behavior & Consequences (PBS)
- Clear Language for Directions
- Use of Multisensory Approach
- Provide Opportunities to Retest

- Frequent Review Sessions
- Use a variety of Modalities when Introducing Skills/Concepts
- Provide Editing Assistance
- Copies of Text for Home
- Cue for Oral Response
- De-Escalation Opportunities
- Daily Classwork Check
- Encourage Student to Check Work Before Turning In
- Opportunities for Repeated Practice of MATH Skills
- Provide repetition During Initial Instruction
- Allow Pre-read of Questions Before Reading Written Passage
- Provide Verbal and Written Directions
- Multiplication Chart
- All Vocabulary to be Defined Before Testing
- Testing - Allow Dictation of Lengthy Answers
- Time out
- Monitor Speed/Accuracy in which Student Completes Assignment
- Assistance with Bubble Sheets
- Encouragement to Participate in Positive Leadership Roles
- Student Self-Evaluation for Behavior
- Exempt from reading Aloud in Front of Peers

Safety:

Student must:
Handle material in safe and work like manner
Use protective clothing and equipment
Use hand tools in a safe manner
Follow all rules and policies outlined in class

Assessment:

Worksheets
Quizzes
Pre/Post tests
Time cards
Rubrics
Individual Projects
Group projects
Writing activities
Check lists
Oral Presentation
Note books
Study guides
Portfolio
Summaries
Research Results
Journals
Essays
Role-Play

Resources/Equipment:

Internet Resources: www.gammag.co www.americanprinter.com www.printmag.com http://macworld.zdnet.com/ Press Operations, Binding/Finishing MAVCC 2006 Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Orientation to Graphic Communications- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2013).Orientation to Graphic Communications - Teacher Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Student Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum

Consortium Inc (MAVCC). (2006).Press Operations, Binding & Finishing - Teacher's Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Student Workbook. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2008). Digital File Preparation & Output - Teacher Guide. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Student Edition. Stillwater, OK: MAVCC. Multistate Academic and Vocational Curriculum Consortium Inc (MAVCC). (2000). Graphic Arts:Electronic Prepress and Publishing- Teacher Edition. Stillwater, OK: MAVCC. Olivo, C.T. & Olivo, T.P. (1985). Basic Vocational-Technical Mathematics (5th Ed.)Albany, NY: Delmar Publishing Inc. Dennis, E.A. & Jenkins, J.D. (1983). Comprehensive Graphic Arts (2nd Ed.)Mission Hills, CA: Glencoe Publishing Company. Adams, J.M. & Dolin, P.A. (2002). Printing Technology 5E. Vermeersch, L. & Southwick, C. (1983). practical Problems in Mathematics for Graphic Arts. Albany, NY: Delmar Thompson Learning. Magazines: Graphic Arts Dynamic Graphics Create Magazine Printing News The Big Picture Equipment: ProPrint T-Head Offset/duplicator printers ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Black & White Printer Xante Plate Maker 5 Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 2-Roll, 44" Hot Laminator and Mounting Machine Saddlestitch Machine Multi-Die Book Binding Machine Digital Off-set Press 24" Vinyl Cutter 24" Hydraulic Paper Cutter Hydraulic 3-Hole Punch Machine 4-Color Screen Printing Machine Screen Printing Flash Equipment Screen Printing 30" Dryer Screen Printing backlit Washout Sink Button Maker Imprinter 44" Cold Laminator 20" Poster Maker Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera Computers Scanner Painting Supplies Paper Supplies Drawing Supplies Measuring Supplies Finishing Supplies Printing Supplies Screen Printing Supplies Sign Making Supplies Off-Set Supplies Copier Supplies Printer Supplies Prepping and Washing Supplies Washout Sink Folding machines Hydraulic Paper cutters Padding station Exposing unit 3-hole punch machine Assorted Papers Graphic instruments: pens, scissors, rulers, etc. Computer Light tableHyperlinks: DaFont.com