

TRAINING PROGRAM OF INSTRUCTION (TPI)

FOR

DINFOS-BMRC-USMC

BASIC MULTIMEDIA REPRODUCTION COURSE - USMC



Approved by:

Commandant Defense Information School

Supersedes TPI Dated: 21 November 2006



**BASIC MULTIMEDIA REPRODUCTION COURSE - USMC
TRAINING PROGRAM OF INSTRUCTION**

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TRAINING PROGRAM OF INSTRUCTION

Preface

TRAINING PROGRAM OF INSTRUCTION FILE NUMBER (TPFN): DINFOS-BMRC - USMC

TITLE: Basic Multimedia Reproduction Course – USMC
(Formerly known as Basic Lithographer Course – USMC)

TRAINING LOCATION: Defense Information School, Fort George G. Meade, Maryland

SPECIALTY AWARDED

USMC MOS 4612 Combat Lithographer
CIVILIAN OPM Code: WG 4402 Bindery Worker

PURPOSE: The purpose of this course is to provide students with the required skills to perform and fulfill the duties and responsibilities of a combat camera production specialist, including graphic design, layout and basic lithography.

COURSE DESCRIPTION: The scope of this course will provide military and selected civilian personnel with training that will develop the basic skills and technical knowledge to operate a computer to use graphic design software, including vector, raster based/image editing, as well as page layout, web authoring and animation software, to conceive and create visual products for use in a broad range of areas. All students learn the basics of layout and design fundamentals, typography, graphic design and color theory. Industry-standard software is utilized to help students learn to create everything from logos and posters to page layouts for print production, and Web sites. Students develop a strong foundation in design in order to produce traditional 2-D formats, as well as HTML scripting, designing graphics for the screen, Web site development using current applications, operating systems, network technology, web animation, and desktop editing skills.

Training also includes the basic skills of color management as related to electronic imaging and RIP based printing, digital desktop publishing and the operation and maintenance of bindery equipment and high volume digital reproduction equipment. Students will show proficiency in operating bindery and digital reproduction equipment and associated computer peripherals in production of both soft copy and printed products in accomplishing the aforementioned tasks, emphasizing basic knowledge and use of evaluation and quality control procedures.

TARGET POPULATION / PREREQUISITES:

USMC: Armed Services Vocational Aptitude Battery - GT 100

OPM: As established by the Office of Personnel Management
CIVILIAN OPM Code:
WG 4402 Bindery Worker
WG 4401 Lithographer

International students: International students are not eligible to attend this course.

SECURITY CLEARANCE: None

CLASS SIZE:

MAXIMUM:	15
MINIMUM:	6
ANNUAL COURSE CAP:	45

COURSE LENGTH: 43 Days

ACADEMIC HOURS: 336 Hrs

ADMINISTRATIVE HOURS: 8 Hrs

TOTAL COURSE HOURS: 344 Hrs

INSTRUCTOR CONTACT HOURS: 639 Hrs

TYPE/METHOD OF INSTRUCTION:

Lecture (L)	27 Hrs
Performance Exercise (PE)	216 Hrs
Demonstration (D)	47 Hrs
Computer Assisted Instruction (CAI)	5 Hrs
Examination	41 Hrs
Performance Examination (EP)	37 Hrs
Written Examination (EW)	4 Hrs
Administration (AD)	8 Hrs

TRAINING START DATE: January 2009

ENVIRONMENTAL IMPACT: None - DOD policy was followed to assess the environmental impact.

MANPOWER: The Interservice Training Review Organization (ITRO) formula was used to determine the number of instructors required.

EQUIPMENT AND FACILITIES: The Course Design Resource Estimate (CDRE) contains this information.

TRAINING DEVELOPMENT PROPONENT: Defense Information School, Directorate of Training, Course Development Division (DINFOS/DOT-CDD): 301 677-3273; DSN 622 – 3273

FUNCTIONAL AREA 1 - FUNDAMENTALS

FA 1: OVERVIEW

TOTAL FA HOURS: 8

Terminal Training Outcome: Functional area one focuses on the fundamentals a student needs to know to work successfully in a print shop. This includes terms, definitions and procedures as they apply to printing regulations, copyright, ethics and security within a graphics/print shop. Students will develop good customer relations, prepare and review job work jackets, and practice using the basic operations and functions of a print shop, including types of platforms, equipment, job planning and the different methods of printing reproduction as well as general information about service bureaus and work center capabilities. Students learn about the intricacies of configuring computers hardware and software and the effects the setup and configuration of a computer system has on the print shop mission. Material in this functional area is measured at the end of functional area two, where students will take a final written examination. Minimum passing grade is 70% on all written examinations.

UNIT 001: Print Shop Fundamentals

- 001 Examine printing regulations and policies (copyright/reproduction)
- 002 Prepare printing job work jacket
- 003 Describe print shop operations and functions
- 004 Identify methods of printing reproduction and discuss general information about service bureaus

UNIT 002: Computer Fundamentals

- 001 Define basic terms about computer hardware and software
- 002 Identify basic troubleshooting procedures
- 003 Perform computer systems and file management

INSTRUCTIONAL TYPE AND HOURS: 5 L; 1 D; 2 PE

FUNCTIONAL AREA 1 FUNDAMENTALS

TPFN: DINFOS-BMRC-USMC-001-001-

UNIT TITLE: Print Shop Fundamentals

INSTRUCTIONAL TYPE AND HOURS: 4 L; 1 PE

TOTAL INSTRUCTIONAL HOURS: 5

PREREQUISITE TPFN: N/A

TASK(S):

- 001 Examine printing regulations and policies (copyright/reproduction)
- 002 Prepare printing job work jacket
- 003 Describe print shop operations and functions
- 004 Identify methods of printing reproduction and discuss general information about service bureaus

SUMMARY OF INSTRUCTION: Using informal lecture and practice exercise, students learn terms, definitions and procedures as they apply to printing regulations, copyright, ethics and security within a graphics/print shop. Students discuss how to develop good customer relations, prepare and review job work jackets, and the basic operations and functions of a print shop, including types of platforms, equipment, job planning and the different methods of printing reproduction. Students discuss general information about service bureaus and work center capabilities. A final written examination will be given at the end of Functional Area 2 (DINFOS-BMRC-USMC- 002-004-004). Students will prepare printing job work jackets throughout the course in the creation and production of products for practice and performance examinations. Minimum passing grade is 70% on all written and performance examinations.

REFERENCES:

- BMRC – USMC Student Guide
- Lithographer's Manual 9th Edition
- Marine Corps Order P5600.31 (USMC Publications and Printing Regulations)
- NAVEDTRA 12720 Illustrator Draftsman Vol. 2
- NAVEDTRA 14056 Navy Customer Service Manual
- SECNAVINST 5870.4A Copyright; Government Printing and Binding Regulations (JCP, No.26)

INSTRUCTOR/STUDENT RATIO: 1:12 (L); 1:8 (PE)

SAFETY FACTORS: Electrical hazard from computer systems connections; trip hazard from cables cords and subdued lighting environment.

FUNCTIONAL AREA 1 FUNDAMENTALS

TPFN: DINFOS-BMRC-USMC-001-002-

UNIT TITLE: Computer Fundamentals

INSTRUCTIONAL TYPE AND HOURS: 1 L; 1 D; 1 PE

TOTAL INSTRUCTIONAL HOURS: 3

PREREQUISITE TPFN: All previous TPFN's

TASK (S):

- 001 Define basic terms about computer hardware and software
- 002 Identify basic troubleshooting procedures
- 003 Perform computer systems and file management

SUMMARY OF INSTRUCTION: Using informal lecture, demonstration and practical exercise, students learn basic terms, definitions and procedures about computer hardware and software, computer setup, system configuration, file management, basic troubleshooting and maintenance procedures. Through demonstration and practice exercise, students gain practical knowledge about computer operating systems, local area networks, and file management. A final written examination will be given at the end of Functional Area 2 (DINFOS-BMRC-USMC- 002-004-004). Students will perform computer systems and file management throughout the course in the creation and production of products for practice and performance examinations. Minimum passing grade is 70% on all written and performance examinations.

REFERENCES:

- Applicable manufacturers' manuals
- BMRC – USMC Student Guide
- *How Computers Work* by Ron White

INSTRUCTOR/STUDENT RATIO: 1:12 (L); 1:8 (D/PE)

SAFETY FACTORS: Electrical hazard from computer systems connections; tripping hazard from cable cords and subdued-lighted environment; Carpal Tunnel Syndrome possibility from keyboard and mouse use.

FUNCTIONAL AREA 2 - DIGITAL GRAPHIC DESIGN

FA 2 OVERVIEW

TOTAL FA HOURS: 111

Terminal Training Outcome: Functional area two builds on the knowledge learned in functional area one using performance exercises to instill the principles taught. Students are introduced to the fundamentals and principles of typography. Students also learn the fundamentals of color theory and page layout; color is introduced as an integral element of design and is emphasized throughout the course of instruction. Students learn basic terms and definitions about vector-based graphic design software and apply these principles in performance exercises. Students create an illustration and design project using vector graphics software and a color printer. A performance examination and a written examination will be given at the end of this functional area. Minimum passing grade is 70 percent on all performance and written examinations.

UNIT 001: Digital Page Layout and Design

- 001 Identify the anatomy and categories of type
- 002 Identify the fundamentals of digital color theory and color harmony
- 003 Identify elements of digital page layout and design

UNIT 002: Vector-based Graphic Design

- 001 Define basic terms about vector-based graphic design
- 002 Use vector-based graphic design software

Unit 003: Image Editing/Raster-based Design

- 001 Define basic terms about raster-based graphic design
- 002 Define basic terms about image ethics and image editing
- 003 Use raster-based image design software
- 004 Use a scanner to import analog images
- 005 Use a digital camera
- 006 Apply image/data compression (lossy/lossless)

Unit 004: Desktop Publishing

- 001 Define basic terms about desktop publishing
- 002 Use elements of digital page layout and design
- 003 Apply vector and raster techniques to create hard copy desktop publishing project
- 004 Measurement and Feedback (Midterm)

INSTRUCTIONAL TYPE AND HOURS: 10 L; 15.5 D; 69.5 PE; 4 CAI; 10 EP; 2 EW

**FUNCTIONAL AREA 2
DIGITAL GRAPHIC DESIGN**

TPFN: DINFOS-BMRC-USMC-002-001-

UNIT TITLE: Digital Page Layout and Design

INSTRUCTIONAL TYPE AND HOURS: 5 L

TOTAL INSTRUCTIONAL HOURS: 5

PREREQUISITE TPFN: All previous TPFN's

TASK(S):

- 001 Identify the anatomy and categories of type
- 002 Identify the fundamentals of digital color theory and color harmony
- 003 Identify elements of digital page layout and design

SUMMARY OF INSTRUCTION: Using informal lecture and performance exercises, students learn basic terms and definitions of the elements and principles of layout and design, including the design process and layout criteria. Students are introduced to the fundamentals and principles of typography, including the anatomy and categories of type and the functions of type layout. Students also learn the fundamentals of color theory and page layout; color is introduced as an integral element of design and is emphasized throughout the course of instruction. A written examination will be given during Functional Area 2. Minimum passing grade is 70 percent on all written examinations.

REFERENCES:

- BMRC Student Guide
- *Color Confidence (2nd Ed)* by Tim Grey
- *Lithographer's Manual (9th Ed)*
- *Looking Good In Print* by Roger C. Parker
- *Print Publishing Guide* by Adobe Press
- *The Non-Designer's Design and Type Book* by Robin Williams
- *The Graphic Designer's Digital Toolkit* by Allan Wood

INSTRUCTOR/STUDENT RATIO: 1:12 (L)

SAFETY FACTORS: Electrical hazard from computer systems connections; tripping hazard from cable cords and subdued-lighted environment; Carpal Tunnel Syndrome possibility from the keyboard and mouse use.

FUNCTIONAL AREA 2 DIGITAL GRAPHIC DESIGN

TPFN: DINFOS-BMRC-USMC-002-002-

UNIT TITLE: Vector-based Graphic Design

INSTRUCTIONAL TYPE AND HOURS: 1 L; 7 D; 4 CAI; 23 PE; 4 EP

TOTAL INSTRUCTIONAL HOURS: 39

PREREQUISITE TPFN: All previous TPFN's

TASK (S):

- 001 Define basic terms about vector-based graphic design
- 002 Use vector-based graphic design software

SUMMARY OF INSTRUCTION: Using informal lecture and performance exercises, students learn basic terms and definitions about vector-based graphic design software. Through demonstration and performance exercise, students learn how to use vector-based graphic design software. Students create an illustration and design project using vector graphics software and a color printer. Application of basic layout, design fundamentals and color theory are emphasized in all tasks. A performance examination covering the above tasks will be given at the end of this block of instruction. A written examination will be given at the end of this functional area. Minimum passing grade is 70 percent on all performance and written examinations.

REFERENCES:

- *Adobe Illustrator Classroom in a Book* by Adobe Press
- BMRC Student Guide
- *Digital Media Tools* by Nigel Chapman and Jenny Chapman
- *Lithographer's Manual (9th Ed)*

INSTRUCTOR/STUDENT RATIO: 1:12 (L); 1:8 (CAI, D, PE, EP)

SAFETY FACTORS: Electrical hazard from computer systems connections; tripping hazard from cable cords and subdued-lighted environment; Carpal Tunnel Syndrome possibility from the keyboard and mouse use.

FUNCTIONAL AREA 2 DIGITAL GRAPHIC DESIGN

TPFN: DINFOS-BMRC-USMC-002-003-

UNIT TITLE: Image Editing/Raster-based Design

INSTRUCTIONAL TYPE AND HOURS: 3 L; 4.5 D; 32.5PE; 4 EP

TOTAL INSTRUCTIONAL HOURS: 44

PREREQUISITE TPFN: All previous TPFN's

TASK (S):

- 001 Define basic terms about raster-based graphic design
- 002 Define basic terms about image ethics and image editing
- 003 Use raster-based image design software
- 004 Use a scanner to import analog images
- 005 Use a digital camera
- 006 Apply image/data compression (lossy/lossless)

SUMMARY OF INSTRUCTION: Using informal lecture and performance exercises, students learn basic terms and definitions of image ethics, image editing, scanners, raster-based software, and digital cameras. Through demonstration and performance exercise, students learn proper use of digital scanners to import analog images, a digital camera, and use of raster-based software to create multimedia products, applying image/data compression in creation of these products. Application of basic layout, design fundamentals and color theory are emphasized in all tasks. A performance examination covering the above tasks will be given at the end of this block of instruction. A written examination will be given at the end of this functional area. Minimum passing grade is 70 percent on all performance and written examinations.

REFERENCES:

- *Adobe Photoshop Classroom in a Book* by Adobe Press
- Alteration of Official DoD Imagery; *The Associated Press Stylebook 2008*
- AP (Associated Press)
- Applicable manufacturer's manuals
- BMRC Student Guide
- *Digital Media Tools* by Nigel Chapman and Jenny Chapman
- DoD Instruction 5040.5
- HP Scanjet User Manual, *Start with a Scan* by Janet Ashford
- Lithographer's Manual (9th Ed)

INSTRUCTOR/STUDENT RATIO: 1:12 (L): 1:8 (D/PE, PE, EP)

SAFETY FACTORS: Electrical hazard from computer systems connections; tripping hazard from cable cords and subdued-lighted environment; Carpal Tunnel Syndrome possibility from the keyboard and mouse use.

FUNCTIONAL AREA 2 DIGITAL GRAPHIC DESIGN

TPFN: DINFOS-BMRC-USMC-002-004-

UNIT TITLE: Desktop Publishing

INSTRUCTIONAL TYPE AND HOURS: 1 L, 14 PE, 4 D, 2 EP, 2 EW

TOTAL INSTRUCTIONAL HOURS: 23

PREREQUISITE TPFN: All previous TPFN's

TASK (S):

- 001 Define basic terms about desktop publishing
- 002 Use elements of digital page layout and design
- 003 Apply vector and raster techniques to create hard copy desktop publishing project
- 004 Measurement and Feedback (Midterm)

SUMMARY OF INSTRUCTION: Using informal lecture and performance exercises, students learn basic terms and definitions about desktop publishing. Through demonstration and performance exercise, students use desktop publishing software. Students create a graded project combining text and graphic images, elements of page layout, design fundamentals and color theory. The raster and vector illustrations created by the student are used in this project for traditional and electronic publishing. A performance examination covering the above tasks will be given at the end of this block of instruction. A written examination will be given at the end of this functional area. Minimum passing grade is 70 percent on all performance and written examinations.

REFERENCES:

- *Adobe InDesign Classroom in a Book* by Adobe Press
- BMRC Student Guide
- Lithographer's Manual (9th Ed)
- *Looking Good in Print* by Roger Parker
- *Print Publishing Guide* by Adobe Press
- *The Non-Designer's Design and Type Books* by Robin Williams

INSTRUCTOR/STUDENT RATIO: 1:12 (L); 1:8 (D, PE, EP, EW)

SAFETY FACTORS: Electrical hazard from computer systems connections; tripping hazard from cable cords and subdued-lighted environment; Carpal Tunnel Syndrome possibility from the keyboard and mouse use.

FUNCTIONAL AREA 3 - MULTIMEDIA DESIGN

FA 3 OVERVIEW

TOTAL FA HOURS: 116

Terminal Training Outcome: Functional area three builds on the knowledge and experience the students have learned in the first two functional areas. They will learn about the different types of presentation media to include video and audio. Students will use different mediums to produce an electronic presentation that incorporates multimedia and hypermedia. Students will learn the use of digital audio and video software to enhance and complete specialized performance exercises. Students will move into web development and understanding the internet. They will use the knowledge and skills built at this point and incorporate them into designing and building web sites. Students will learn how to create multimedia animations, recording media and how to internally and externally archive images and create an interactive multimedia project. A written and performance examination will be administered during this functional area. Minimum passing grade is 70 percent on all performance and written examinations.

UNIT 001: Presentation Software

- 001 Define basic terms and design principles of projected media
- 002 Define basic terms and characteristics of electronic presentation software
- 003 Define charts and graphs and their purpose
- 004 Use presentation software to create an electronic presentation that incorporates multimedia and hypermedia

UNIT 002: Digital Audio and Digital Video

- 001 Define basic terms for digital audio and digital video files
- 002 Use digital audio and digital video software

Unit 003: Web Page and the Internet

- 001 Define basic terms about web page design
- 002 Define policies and regulations governing web sites
- 003 Create a Web site with web page design software

Unit 004: Multimedia-Authoring Software

- 001 Define basic terms, concepts, and procedures for multimedia authoring and animation
- 002 Use multimedia-authoring software to produce a multimedia project
- 003 Measurement and feedback (Final)

INSTRUCTIONAL TYPE AND HOURS: 7 L; 22 D; 65 PE; 1 CAI; 19 EP; 2 EW

FUNCTIONAL AREA 3 MULTIMEDIA DESIGN

TPFN: DINFOS-BMRC-USMC-003-001-

UNIT TITLE: Presentation Software

TPFN HOURS AND TYPE: 2 L; 2 D; 2 PE; 1 CAI; 10 PE; 4 EP

TPFN TOTAL HOURS: 21

PREREQUISITE TPFN: All previous TPFN's

TASK(S):

- 001 Define basic terms and design principles of projected media
- 002 Define basic terms and characteristics of electronic presentation software
- 003 Define charts and graphs and their purpose
- 004 Use presentation software to create an electronic presentation that incorporates multimedia and hypermedia

SUMMARY OF INSTRUCTION: During informal lecture, students learn basic terms, characteristics, and definitions of presentation software, to include projected media, overhead viewgraphs, 35mm slides, electronic presentations, charts and graphs, basic animation and digital audio-video. Through demonstration and performance exercise, students use presentation software to create electronic presentations incorporating multimedia and hypermedia. A performance examination covering the above tasks will be given at the end of this block of instruction. A written examination will be administered during this functional area. Minimum passing grade is 70 percent on all performance and written examinations.

REFERENCES:

- applicable manufacturer's manuals
- BMRC Student Guide
- *Creating Dynamic Multimedia Presentations* by Carol M. Lehman
- *Digital Media Tools* by Nigel Chapman and Jenny Chapman
- *The Non-Designer's Design and Type Books* by Robin Williams
- *The Graphic Designer's Digital Toolkit* by Allan Wood

INSTRUCTOR/STUDENT RATIO: 1:12 (L, CAI); 1:8 (D/PE, PE, EP)

SAFETY FACTORS: Electrical hazard from computer systems connections; tripping hazard from cable cords and subdued-lighted environment; Carpal Tunnel Syndrome possibility from the keyboard and mouse use.

FUNCTIONAL AREA 3 MULTIMEDIA DESIGN

TPFN: DINFOS-BMRC-USMC-003-002-

UNIT TITLE: Digital Audio and Digital Video

TPFN HOURS AND TYPE: 1 L; 4 D; 12 PE

TPFN TOTAL HOURS: 17

PREREQUISITE TPFN: All previous TPFN's

TASK(S):

- 001 Define basic terms for digital audio and digital video files
- 002 Use digital audio and digital video software

SUMMARY OF INSTRUCTION: During informal lecture, students learn basic terms and definitions about digital audio, digital video, imagery captions, and product distribution. During a guided demonstration, students will use digital audio and digital video software to complete a performance exercise. A written examination will be administered during this functional area. Minimum passing grade is 70 percent on all performance and written examinations.

REFERENCES:

- *Adobe Premiere Classroom in a Book* by Adobe Press
- BMRC Student Guide
- *Digital Media Tools* by Nigel Chapman and Jenny Chapman

INSTRUCTOR/STUDENT RATIO: 1:12 (L); 1:8 (D, PE)

SAFETY FACTORS: Electrical hazard from computer systems connections; tripping hazard from cables, cords and a subdued lighted environment; Carpal Tunnel Syndrome possibility from the keyboard and mouse use.

FUNCTIONAL AREA 3 MULTIMEDIA DESIGN

TPFN: DINFOS-BMRC-USMC-003-003-

UNIT TITLE: Web Page and the Internet

TPFN HOURS AND TYPE: 2 L; 8 D; 19 PE; 8 EP

TPFN TOTAL HOURS: 37

PREREQUISITE TPFN: All previous TPFN's

TASK(S):

- 001 Define basic terms about web page design
- 002 Define policies and regulations governing web sites
- 003 Create a Web site with web page design software

SUMMARY OF INSTRUCTION: During informal lecture, students learn basic terms and definitions of image/data transmission such as transferring graphical data from server to server, protocols, web page design, and policies and regulations governing web sites. Through demonstration and performance exercises, students use the Internet, Web browser, and Web page design software to create a web site. A performance examination covering the above tasks will be administered at the end of this block of instruction. A written examination will be administered during this functional area. Minimum passing grade is 70 percent on all performance and written examinations.

REFERENCES:

- *Adobe Dreamweaver Classroom in a Book* by Adobe Press
- BMRC Student Guide
- *Digital Media Tools* by Nigel Chapman and Jenny Chapman
- *Research-Based Web Design & Usability Guidelines*, GSA
- SECNAVINST 5720.44B Policies and Regulations

INSTRUCTOR/STUDENT RATIO: 1:12 (L); 1:8 (D, PE, EP)

SAFETY FACTORS: Electrical hazard from computer systems connections; tripping hazard from cables, cords, and a subdued lighted environment; Carpal Tunnel Syndrome possibility from the keyboard and mouse use.

FUNCTIONAL AREA 3 MULTIMEDIA DESIGN

TPFN: DINFOS-BMRC-USMC-003-004-

UNIT TITLE: Multimedia-Authoring Software

TPFN HOURS AND TYPE: 2 L; 8 D; 22 PE; 7 EP; 2 EW

TPFN TOTAL HOURS: 41

PREREQUISITE TPFN: All previous TPFN's

TASK(S):

- 001 Define basic terms, concepts, and procedures for multimedia authoring and animation
- 002 Use multimedia-authoring software to produce a multimedia project
- 003 Measurement and feedback (Final)

SUMMARY OF INSTRUCTION: During informal lecture, students learn basic terms and definitions about multimedia authoring and animation. Through demonstration and performance exercises, students use multimedia and animation software, recordable media and internal/external archived images to create an interactive multimedia project. A performance examination covering the above tasks will be administered at the end of this block of instruction. A written examination will be administered during this functional area. Minimum passing grade is 70 percent on all performance and written examinations.

REFERENCES:

- *Adobe Flash Classroom in a Book* by Adobe Press
- BMRC Student Guide
- *Digital Media Tools* by Nigel Chapman and Jenny Chapman

INSTRUCTOR/STUDENT RATIO: 1:12 (L); 1:8 (D, PE, EP, EW)

SAFETY FACTORS: Electrical hazard from computer systems connections; tripping hazard from cables, cords and a subdued lighted environment; Carpal Tunnel Syndrome possibility from the keyboard and mouse use.

FUNCTIONAL AREA 4 - PRINT SHOP OPERATIONS

FA 4 OVERVIEW

TOTAL FA HOURS: 101

Terminal Training Outcome: In Functional area four the student learns the basic skills to prepare, operate and maintain a power paper cutter, power paper stitcher, power paper drill, and power paper folder and to replace bindery equipment consumables, calibrate and characterization of computer monitors, scanners, digital cameras and output devices. They will understand the procedures to apply color management profiles and color working spaces to images in order to maintain color integrity from image acquisition through to output. Students will then apply the knowledge and skills they have mastered in performance exercises. A performance examination will be given at the end of this functional area. The minimum passing grade is 70 percent on all performance examinations.

UNIT 001: Bindery Equipment Operations

- 001 Identify safety hazards within a graphics/print shop
- 002 Identify safety procedures associated with bindery equipment
- 003 Set up bindery equipment
- 004 Operate bindery equipment
- 005 Replace bindery equipment consumables
- 006 Identify basic troubleshooting techniques for bindery equipment

UNIT 002: Digital Image Input / Output

- 001 Define characteristics and principles of input and output devices
- 002 Perform color calibration, characterization and conversion of input and output devices

Unit 003: Digital Production Equipment

- 001 Identify basic printing and production terms and procedures
- 002 Describe basic operating procedures for B&W and color production equipment
- 003 Demonstrate document editing procedures using digital production peripherals
- 004 Produce printed product using digital production equipment
- 005 Perform quality control

INSTRUCTIONAL TYPE AND HOURS: 5 L; 8.5 D; 79.5 PE; 8 EP

FUNCTIONAL AREA 4 PRINT SHOP OPERATIONS

TPFN: DINFOS-BMRC-USMC-004-001-

UNIT TITLE: Bindery Equipment Operations

INSTRUCTIONAL TYPE AND HOURS: 1 L; 3 D; 7 PE

TOTAL INSTRUCTIONAL HOURS: 11

PREREQUISITE TPFN: All previous TPFN's

TASK (S):

- 001 Identify safety hazards within a graphics/print shop
- 002 Identify safety procedures associated with bindery equipment
- 003 Set up bindery equipment
- 004 Operate bindery equipment
- 005 Replace bindery equipment consumables
- 006 Identify basic troubleshooting techniques for bindery equipment

SUMMARY OF INSTRUCTION: Using informal lecture and performance exercises, students learn the basic skills required to prepare, operate and maintain a power paper cutter, power paper stitcher, power paper drill, and power paper folder. Given the equipment, necessary tools and materials, student practical exercise sheets, and appropriate references, through demonstration and practical exercise, students learn to replace bindery equipment consumables. Appropriate safety measures will be practiced. Students will apply knowledge and skills during practical and performance exercises throughout this functional area. Minimum passing grade is 70 percent on all performance examinations.

REFERENCES:

- Applicable manufacturer's manuals
- BMRC Student Study Guide
- *Lithographer's Manual (9th Ed)*; Marine Corps Order 5100.29A
- Occupational Safety and Health Regulations (Standards - 29 CFR)

INSTRUCTOR/STUDENT RATIO: 1:12 (L); 1:4 (D, PE)

SAFETY FACTORS: Electrical hazards such as frayed power cords and cracked or missing outlet covers; electrocution hazard—ensure there is no standing water around electrical equipment and area is clean and clear of obstructions; tripping hazard from cables, cords, equipment operating hazards—students will receive safety brief on each piece of equipment.

FUNCTIONAL AREA 4 PRINT SHOP OPERATIONS

TPFN: DINFOS-BMRC-USMC-004-002-

UNIT TITLE: Digital Image Input / Output

TPFN HOURS AND TYPE: 2L, 1.5D 1.5 PE

TPFN TOTAL HOURS: 5

PREREQUISITE TPFN: All previous TPFN's

TASK(S):

- 001 Define characteristics and principles of input and output devices
- 002 Perform color calibration, characterization and conversion of input and output devices

SUMMARY OF INSTRUCTION: Students are given an overview of procedures associated with the calibration and characterization of computer monitors, scanners, digital cameras and output devices. During a guided demonstration, students will apply these procedures using color management hardware and software to complete a performance exercise. Students will also apply color management profiles and color working spaces to images in order to maintain color integrity from image acquisition through to output. Students will apply knowledge and skills during practical and performance exercises throughout this functional area.

REFERENCES:

- Applicable manufacturer's manuals
- BMRC Study guide
- *Digital Media Tools* by Nigel Chapman and Jenny Chapman
- *Digital Color Management* by Giorgianni Madden

INSTRUCTOR/STUDENT RATIO: 1:12 (L); 1:8 (D/PE)

SAFETY FACTORS: Electrical hazard from computer systems connections; tripping hazard from cables, cords and a subdued lighted environment; Carpal Tunnel Syndrome possibility from the keyboard and mouse use.

FUNCTIONAL AREA 4 PRINT SHOP OPERATIONS

TPFN: DINFOS-BMRC-USMC-004-003-

UNIT TITLE: Digital Production Equipment

INSTRUCTIONAL TYPE AND HOURS: 2 L, 4 D, 71 PE, 8 EP

TOTAL INSTRUCTIONAL HOURS: 85

PREREQUISITE TPFN: All previous TPFN's

TASK (S):

- 001 Identify basic printing and production terms and procedures
- 002 Describe basic operating procedures for B&W and color production equipment
- 003 Demonstrate document editing procedures using digital production peripherals
- 004 Produce printed product using digital production equipment
- 005 Perform quality control

SUMMARY OF INSTRUCTION: Using informal lecture and performance exercises, students learn basic transferable skills and essential knowledge required for production of printed materials with digital production equipment. Students are given the appropriate digital production equipment, all the necessary tools and materials, work orders, student practical exercise sheets, and appropriate references. Students learn the components, proper safety and basic operating procedures of digital production equipment; load stock, change toner cartridges, operate controls, perform editing functions, clear jams, error messages, and learn the basic care and maintenance of digital production equipment, while producing printed materials. Students also learn proper procedures for evaluation and quality control. A performance examination will be given at the end of this functional area. The minimum passing grade is 70 percent on all performance examinations.

REFERENCES:

- Applicable manufacturers' manuals
- BMRC Student Study Guide

INSTRUCTOR/STUDENT RATIO: 1:12 (L); 1:8 (D, PE, EP)

SAFETY FACTORS: Electrical hazards such as frayed power cords and cracked or missing outlet covers; electrocution hazard - ensure there is no standing water around electrical equipment and area is clean and clear of obstructions; tripping hazard from cables, cords, equipment operating hazards - students will receive brief on equipment specific safety issues.

**FUNCTIONAL AREA 5
ADMINISTRATION**

TPFN: DINFOS-BMRC 005-001-

UNIT TITLE: Course Administration

TPFN HOURS AND TYPE: 8 AD

TPFN TOTAL HOURS: 8

PREREQUISITE TPFN: None

TASK (S):

- 001 In-processing/Orientation
- 002 Course Evaluation
- 003 Out processing
- 004 Graduation

SUMMARY OF ACTIVITIES: Self-explanatory

REFERENCES: DINFOS Policy and Procedures Manual

INSTRUCTOR/STUDENT RATIO: 1:15 (AD)

SAFETY FACTORS: N/A