TRAINING PROGRAM OF INSTRUCTION (TPI)

FOR

DINFOS BMRC - USMC

BASIC MULTIMEDIA REPRODUCTION COURSE - USMC

Approved by:

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4 JAN 2012

Commandant Defense Information School
Supersedes TPI dated 25 March 2009
# 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

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

SPECIALTY AWARDED: USMC - 4612 Combat Camera Production Specialist

PURPOSE: The purpose of this course is to provide students with the required skills to perform and fulfill the duties and responsibilities of an entry-level combat camera production specialist.

TRAINING METHODOLOGY: BMRC-USMC is a resident program consisting of over 10 weeks of daily instruction. The course is an instructor-led program with strict deadlines and graded activities. Students attend lectures and demonstrations and participate in practical exercises and performance based projects. Each functional area of instruction will incorporate its own series of written and/or performance examinations. The course culminates in a capstone event where the student will apply the skills s/he has learned in a field training environment.

COURSE DESCRIPTION: This course provides military and selected civilian personnel with training that will develop basic skills and practical application of the principals of realistic drawing, perspective, and the fundamentals of layout and design, including color theory and the anatomy and use of typography. Students also develop the technical knowledge and skills to use industry standard computer graphics software, including vector and raster based graphic design software, and desktop publishing software to conceive and create visual products for use in both print and projected media in a broad range of output areas. All students learn the fundamentals and use of presentation, digital audio/video and authoring software to create interactive multimedia products. Training also includes electronic scanning to convert analog products for use in digital graphic and multimedia design, as well as the basics of color management in the digital design and production process. In print production, students develop the basic skills and technical knowledge to manage print workflow, prepare hard copy and digital documents for hard copy output, and to operate bindery and digital production equipment, including color management for RIP-based printing and quality control. The course culminates in a final capstone exercise, where students perform set up, operation and break down of the Tactical Imagery Production System (TIPS), and apply the knowledge, skills and abilities developed throughout the course to produce multimedia and printed products in a field environment.

PREREQUISITES:

USMC: Armed Services Vocational Aptitude Battery – GT 100.

Civilian: Must be a US government employee working in the visual information or digital print production career fields.

International: Not eligible to attend this course.
CLASS SIZE:
   MAXIMUM   15
   MINIMUM   6
   COURSE CAP 45

COURSE LENGTH:  52 days
   ACADEMIC HOURS: 417 hrs
   ADMINISTRATIVE HOURS: 8 hrs
   TOTAL COURSE HOURS: 425 hrs *

* (Includes 36 hours of FTX conducted over 3 training days).

TYPE/METHOD OF INSTRUCTION:

1. Lecture (L) 34 hrs
2. Demonstration (D) 36 hrs
3. Demonstration/Performance Exercise (PE) 49 hrs.
4. Performance Exercise (PE) 205 hrs
5. Computer Aided Instruction (CAI) 8 hrs
6. Examination (E) 85 hrs
   Performance Examination (EP) 6 hrs
   Written Examination (EW) 79 hrs

TRAINING START DATE: January 2012

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

MANPOWER: The Inter-service 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, Fort George G. Meade, MD 20755

REFERENCES: Available in the last section of this TPI.


SAFETY FACTORS: Routine, unless otherwise indicated.
FUNCTIONAL AREA 1
ILLUSTRATION AND DESIGN

TPFN: DINFOS-BMRC-001

TERMINAL TRAINING OUTCOME: The instruction and training throughout this functional area prepares the student to perform successfully in a graphics/print shop environment. Students develop a solid foundation in art concepts, drawing techniques, design principles and color theory. They are challenged to solve basic graphic problems through practical projects using current practices and technology. This functional area provides the student with the basic composition techniques they will apply to digital design and multimedia in later functional areas. Students learn about printing regulations, copyright, ethics and security as they apply to producing products within a graphics/print shop. Students learn and apply good customer relations, review and interpret work requests, and prepare products for accessioning using proper captions. In Realistic Drawing, students develop a solid foundation in art concepts, including principles of typography, drawing techniques using basic drawing tools and equipment to create illustrations applying form, proportion, contour, shading and perspective. Students apply these skills during a field training exercise to produce combat documentation. In Layout and Design, students learn and apply the principles of layout and design, developing their ability to think conceptually within the creative process, creating thumbnail sketches and roughs that bring about visual solutions to formal problems of concept and elemental organization. Students apply the principles of color theory, color harmony, and typography to visual products and begin building a body of work for inclusion in a professional portfolio. A written examination and multiple performance examinations will be administered during this functional area. A minimum passing grade of 70 percent is required on all examinations before progressing to the next functional area.

UNITS:

001 Realistic Drawing
   001 Identify safety hazards within a graphics/print shop
   002 Prepare COMCAM products for accessioning
   003 Examine printing regulations and policies (copyright/reproduction)
   004 Prepare a combat camera job request
   005 Explain the components of a portfolio
   006 Define basic terms about realistic drawing
   007 Apply the principles of realistic drawing
   008 Performance Exam Realistic Drawing
   009 Apply the principles of perspective
   010 Produce combat documentation
   011 Performance Evaluation Perspective

002 Layout and Design
   001 Identify the anatomy and categories of type
   002 Define basic terms about layout and design
   003 Identify elements of design
   004 Produce a layout and design project
   005 Written Exam Illustration and Design
   006 Performance Exam Layout & Design
TOTAL TPFN TIME: 120 hours

TPFN HOURS/METHOD OF INSTRUCTION/INSTRUCTOR-STUDENT RATIO:
  12 L (1:12)
  12 D (1:8)
  4 D/PE (1:8)
  58 PE (1:8)
  2 EW (1:12)
  32 EP (1:8)
FUNCTIONAL AREA 2
DIGITAL GRAPHIC DESIGN

TPFN: DINFOS-BMRC-002

TERMINAL TRAINING OUTCOME: Students will perform basic computer system operations and file management, including basic operator level maintenance and how to transfer graphical data from server to server, using methods such as File Transfer Protocol (FTP) and Fast File Transfer (FFT). Students build on the basic drawing knowledge, skills and abilities developed in functional area one, learning how to apply these same skills in a digital environment. Students will create digital graphic products that demonstrate their understanding of the elements and principles of digital layout and design, including the design process, principles of typography, fundamentals of digital color theory, and color management of various input and output devices such as monitors, scanners, and printers. Through performance exercises mirroring real-world scenarios, students learn the differences in applied digital art by creating original design products using vector-based and raster-based graphic design software. Students learn to edit images, apply image/data compression and proper file formatting and management, and to use scanners in the creation of multimedia products, demonstrating their knowledge of image ethics in the completion of these tasks. Students also learn and utilize desktop publishing software to combine raster and vector illustrations, text, imagery and design elements to show their ability to create original layouts for print and electronic publishing. A written examination and multiple performance examinations will be administered during this functional area. A minimum passing grade of 70 percent is required on all examinations before progressing to the next functional area.

UNITS:

001 Computer Fundamentals
  001 Define basic terms about computer hardware and software
  002 Identify basic troubleshooting procedures
  003 Perform computer systems and file management
  004 Explain how to transmit data via telecommunications

002 Digital Page Layout and Design
  001 Identify the fundamentals of digital color theory and color harmony
  002 Define characteristics and principles of input and output devices
  003 Perform color management of input and output devices
  004 Identify elements of digital layout and design

003 Vector-based Graphic Design
  001 Define basic terms about vector based graphic design
  002 Use vector based graphic design software
  003 Performance Exam Vector-based graphic design

004 Image Editing/Raster-based Design
  001 Apply image/data compression (lossy/lossless)
  002 Use a scanner to import analog images
  003 Define basic terms about raster-based graphic design
  004 Define basic terms about image ethics and image editing
  005 Use raster-based image design software
  006 Performance Exam Raster-based Design
005 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 Written Exam Digital Graphic Design
005 Performance Exam Desktop Publishing

TOTAL TPFN TIME: 135 hours

TPFN HOURS/METHOD OF INSTRUCTION/INSTRUCTOR-STUDENT RATIO:

16 L (1:12)
11 D (1:8)
17 D/PE (1:8)
70 PE (1:8)
4 CAI (1:8)
2 EW (1:12)
13 EP (1:8)
FUNCTIONAL AREA 3
MULTIMEDIA DESIGN

TPFN: DINFOS-BMRC-003

TERMINAL TRAINING OUTCOME: The instruction and training throughout this functional area builds on the knowledge, skills and abilities developed in earlier functional areas and introduces new concepts of presentation, animation and interactive multimedia. Students learn the skills necessary to utilize presentation software in the creation of electronic multimedia presentations. Students will create multimedia projects incorporating projected media, basic animation, digital audio and video, and hypermedia. Students will gain a foundation and knowledge of the basic terms and principles of multimedia design including, authoring, audio, video and animation. Students will demonstrate proficiency in the use of multimedia and animation software, recordable media, and internal/external archived images to create an interactive multimedia project. Students apply critical and creative thinking to resolve authentic multimedia authoring challenges as they add animation and interaction to interface 2-D graphics in a 3-D environment. Students will assemble a digital portfolio of work representative of the manual, digital, and multimedia graphics skills gained throughout the course. A written examination and multiple performance examinations will be administered during this functional area. A minimum passing grade of 70 percent is required on all examinations before progressing to the next functional area.

UNITS:

001 Digital Audio and Digital Video
001 Define basic terms for digital audio and digital video files
002 Use digital audio and digital video software

002 Presentation Software
001 Define basic terms and characteristics of electronic presentation software
002 Use presentation software to create an electronic presentation that incorporates multimedia and hypermedia
003 Performance Exam Presentation Software & AV

003 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 Assemble a portfolio
004 Written Exam Multimedia Design
005 Performance Examination Multimedia Authoring Software

TOTAL TPFN TIME: 65 hours

TPFN HOURS/METHOD OF INSTRUCTION/INSTRUCTOR-STUDENT RATIO:

4 L (1:12)
28 D/PE (1:8)
17 PE (1:8)
4 CAI (1:8)
2 EW (1:12)
10 EP (1:8)
FUNCTIONAL AREA 4
DIGITAL PRODUCTION OPERATION

TPFN: DINFOS-BMRC-004

TERMINAL TRAINING OUTCOME: In this functional area, students develop the basic skills and technical knowledge to operate digital production equipment and to perform post-production finishing operations using in-line and traditional bindery equipment, as well as color management principles and procedures for RIP-based printing. Students learn basic print shop operations, including workflow, preparation and review of combat camera job requests, equipment operation and maintenance, job planning, and different print production methods. Students apply their understanding of the characteristics and principles of color management through the calibration of input and output devices, the use of color management hardware and software, and the application of color profiles and color working spaces to images across all color devices, both input and output. Students will learn and apply proper procedures for evaluation and quality control throughout the production process. Students learn the technical fundamentals of producing professional quality print publications, and using various performance exercises, apply their knowledge of all aspects of digital print and post-production equipment to produce high quality printed products using both black and white and digital color presses. Students learn each phase of the digital production process, including choosing paper, color matching, managing production workflow, digital scanning, and corrections to existing documents. Multiple performance examinations will be administered during this functional area. A minimum passing grade of 70 percent is required on all examinations before progressing to the next functional area.

UNITS:

001 Digital Production Equipment Operations
    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 Perform quality control
    005 Produce printed product using digital production equipment

002 Post Production Operations
    001 Identify safety procedures associated with bindery equipment
    002 Set up bindery equipment
    003 Identify basic troubleshooting techniques for bindery equipment
    004 Replace bindery equipment consumables
    005 Operate bindery equipment
    006 Performance Exam Digital Production Operations

TOTAL TPFN TIME: 61 hours

TPFN HOURS/METHOD OF INSTRUCTION/INSTRUCTOR-STUDENT RATIO:
    1 L (1:12)
    9 D (1:8)
    43 PE (1:8)
    8 EP (1:8)
FUNCTIONAL AREA 5
TACTICAL IMAGERY PRODUCTION SYSTEM

TPFN: DINFOS-BMRC-005

TERMINAL TRAINING OUTCOME: This functional area encompasses a final capstone exercise, where students perform set up, operation and break down of the Tactical Imagery Production System (TIPS), and apply the knowledge, skills and abilities developed throughout the course to produce multimedia and printed products in a field environment. The instruction and training provides the student with the fundamental skills necessary to successfully operate in a Tactical Imagery Production System (TIPS) in full compliance with pertinent and applicable OSHA, Federal, State and Local codes, standards, and regulations. Students will practice the deployment requirements and operation capabilities of the TIPS within a field environment and will safely set up, power up, operate and break down both the Reproduction and Multimedia Containers. Students will use the production workstations, post-production equipment, associated software and peripherals to meet Combat Camera customer requirements in a field environment. A pass/fail performance examination covering the above tasks will be administered as part of this block of instruction.

UNITS:

001 TIPS Basic Operation
   001 Identify TIPS components and capabilities
   002 Set up TIPS
   003 Initiate power up procedures
   004 Perform operation check
   005 Perform TIPS breakdown

002 TIPS Production
   001 Operate production equipment
   002 Perform color management
   003 Produce reprographic products
   004 Produce a COMCAM product
   005 Conduct print production
   006 Conduct post production
   007 Performance Exam TIPS Production System

TOTAL TPFN TIME: 36 hours

TPFN HOURS/METHOD OF INSTRUCTION/INSTRUCTOR-STUDENT RATIO:
   1 L (1:12)
   4 D (1:8)
   17 PE (1:8)
   14 EP (1:8)
FUNCTIONAL AREA 6
ADMINISTRATION

TPFN: DINfos-BMRC-006

UNITS:

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<td>001</td>
<td>In-Processing / Orientation</td>
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<td>Course Critique</td>
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TOTAL TPFN TIME: 8 hours

TPFN HOURS/METHOD OF INSTRUCTION/INSTRUCTOR-STUDENT RATIO:
8 AD (1:12)
References

REGULATIONS


(1988) SECNAVINST 5870.5: Permission to Copy Materials Subject to Copyright.


References


**MANUALS**


HP Scanjet User Manual.


Tactical Imagery Production System Basic Knowledge, USCM, Combat Service Support Schools.


**WEB**


References

I.D.E.A.S, Computer Typography Basics by David Creamer,  


BOOKS & MISC.


References


