

**TRAINING PROGRAM OF INSTRUCTION (TPI)
FOR
DINFOS DMC
DIGITAL MULTIMEDIA COURSE**



Approved by:

Commandant Defense Information School
Supersedes TPI dated 14 July 2009



DIGITAL MULTIMEDIA COURSE
TRAINING PROGRAM OF INSTRUCTION
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TRAINING PROGRAM OF INSTRUCTION

Preface

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

TITLE: DIGITAL MULTIMEDIA COURSE

TRAINING LOCATION: Defense Information School, Fort Meade, MD

PURPOSE: To provide intermediate training in the principles, techniques and skills required to produce digital multimedia products.

TRAINING METHODOLOGY: Residential

COURSE DESCRIPTION: The Digital Multimedia Course (DMC) provides intermediate training in the knowledge and skills needed to create and integrate text, graphics, sound, animation and full-motion video into multimedia and web-based packages. The course includes instruction in the operation of computer systems, input devices and output devices to acquire, edit, design, manage, output, and archive digital imaging, graphic design and multimedia files. Students use software to create, manage and render the following: graphic designs, page layouts, video productions, Web pages and interactive multimedia solutions. The Digital Multimedia Course also includes theoretical and working instruction of computer fundamentals and functions, communications, color theory, and the principles and implementation of color management. DoD policies and instructions relative to ethics and use of computer generated and edited images are emphasized.

COURSE PREREQUISITES: This course is open to military and civilian personnel with a fundamental knowledge of, and currently involved in daily operations in the visual information (VI) or public affairs (PA) career fields. A fundamental knowledge is defined as two years of computer experience within the last five years, including operational skills in the following types of software: raster-based, vector-based and digital page layout. Experience using these fundamental skills is necessary to prepare students for this fast-paced, intermediate level course.

The Registrar and Quota Management Office will verify that students meet prerequisites via a Digital Multimedia Course Prerequisite Verification Letter. This Verification Letter is required to complete the registration process. Prerequisites for the DMC course are non-waiverable and must be verified and approved before a seat in the DMC course can be reserved

SERVICE PREREQUISITES: Mandated by each of the Armed Services. Service-specific documents should always be considered as the most up-to-date source for prerequisites.

Service	Prerequisites:	Notes:
USA		
Enlisted	E-4 through E-7	PA - 46Q, 46Z VI - 25M, 25V, 25Z
Civilian	GS-07 through GS-11	Series 1001, 1020, 1035, 1060, 1071, 1084
USAF		
Enlisted	E-4 through E-7	3N0xx
Civilian	GS-07 through GS-12	Series 10XX
USN		
Enlisted	E4 through E6	MC or HM (8472)
Civilian	GS-5 through GS-11	Series 1082, 1084, 1060, 1001, 1071, 1035, 1020
USMC		
Enlisted	E3 through E6	
Civilian	GS11	PA Series 1035; VI Series 1001, 1081
USCG		
Enlisted	E-4 through E-7	
Civilian		PA Series 1035
International		
<p>International students are strongly encouraged to comply with the course prerequisites as listed above. However, the prerequisite verification process may be waived. International students must also meet the following requirements:</p> <ul style="list-style-type: none"> - Have an English Comprehension Level (ECL) of 80 - Distance visual acuity correctable to 20/20 and normal color vision - Be in a career field/position with pay grade equivalent to Army E-4, Officer O-1, or Civilian GS-05 		
Interagency		
Must be a US Government employee working in the visual information (VI) or public affairs (PA) career fields (Series 1001, 1020, 1060, 1071, 1084, 1035).		

CLASS SIZE:

MAXIMUM 24
MINIMUM 12
COURSE CAP 120

COURSE LENGTH:

35 days

ACADEMIC HOURS: 268 hrs
ADMINISTRATIVE HOURS: 9 hrs
TOTAL COURSE HOURS: 277 hrs

TYPE/METHOD OF INSTRUCTION:

1. Lecture (L)	23 hrs
2. Demonstration (D)	3 hrs
3. Demo/Performance (D/PE)	78 hrs
4. Performance Exercise (PE)	120 hrs
5. Examination Performance (EP)	42 hrs
6. Written Examination (EW)	2 hrs
7. Administrative Hours (AD)	9 hrs

COURSE MEASUREMENT PLAN: Located in the Course Training Standard

TRAINING START DATE: Training for this version of the course will begin with the 010-13 iteration in FY 2013.

ENVIRONMENTAL IMPACT: No 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) for participating courses contains this information.

TRAINING DEVELOPMENT PROPONENT: Defense Information School, Office of the Provost, Fort George G. Meade, MD 20755.

REFERENCES: Located in the last section of this TPI

SAFETY FACTORS: Students are reminded that there may be tripping and electrical hazards within the classroom, as well as the possibility of repetitive stress injuries when using computer systems.

POC: Course Development Department DINFOSDOTCourseDevelopers@dinfos.dma.mil, 301-677-2038

FUNCTIONAL AREA 1

DIGITAL GRAPHIC DESIGN

TRAINING OUTCOMES:

UNIT 001 – DIGITAL INPUT/OUTPUT: Students review safety precautions as they apply to electronic imaging systems. Students will discuss computer hardware and operating systems along with how different types of memory, buses, storage devices; and display monitors are configured for use on typical electronic imaging workstations. Discussion will also include hardware requirements for software support and how graphics software integrates with system components. Students recognize common workstation problems and use troubleshooting techniques to improve performance associated with electronic imaging. Students operate a digital camera including flash controls; perform camera care and maintenance; trouble shoot problems; and manage imagery. Students learn the advantages and limitations of various types of storage media and file formats associated with a digital imagery. Students discuss color theory and color models as they relate to input and output processes for use on monitors, multimedia programs, print output or for use on the web. Students follow procedures for creating CD-ROM's/DVD's to archive their work products at the end of the course.

UNIT 002 – ELECTRONIC IMAGERY MANAGEMENT: Students maintain color integrity from image acquisition to output through the use of color management hardware and software in the digital imaging process, including procedures associated with the calibration and characterization of computer monitors, scanners, digital cameras and other input/output devices. Students apply principles, associated with file management including methods associated with transferring files. Students study the processes of building a catalog and archiving computer based files. Students correctly prepare Visual Information (VI) products for accessioning, using proper captions and Visual Information Record Identification Numbers (VIRINs) in compliance with DoD Visual Information policies and regulations which includes the use of IPTC header data, and the standards for submitting imagery to the Defense Imagery Management Operations Center. Students also study the principles of copyright protection as well as understand the requirements of DoD VI policies and regulations as they relate to image ethics. Students will ethically perform image editing in compliance with DoD Visual Information Policy

UNIT 003 –RASTER-BASED GRAPHIC DESIGN: Students demonstrate familiarity with the functions and operations of image enhancement software and the applications of this type of software, especially in the military imaging environment. Students demonstrate the following Raster-based software applications: various methods for selecting, moving, transforming, and painting pixels; apply text to an image; use various compression formats for saving image files; use layers and their associated constructs to create composite images; use masks to create stored alpha channels; use actions and batch processing to automate image enhancement procedures; and apply basic and advanced color correction methods using various color models, adjustment tools and channels.

UNIT 004 – VECTOR-BASED GRAPHIC DESIGN: Students review vector-based graphic design software and techniques and apply advanced techniques to create illustrations designed to be used independently or as an enhancement to a digital image. Students will discuss and use procedures associated with the following: creating and selecting paths, coloring paths, transforming elements, creating text, using layers, creating groups of elements, applying blends between paths, creating technical drawings, creating three dimensional objects using perspective and the principles of IPT, applying depth to an illustration, and how to use established composition rules to create vector illustrations.

UNIT 005 – DIGITAL PAGE LAYOUT: Students review digital page layout software, techniques, and design principles including the use of various types of page elements, master pages, methods for defining styles, application of composition and color to layout elements, techniques used to create table of contents and indexes, methods for combining multiple documents together, and techniques to create a PDF. Students apply knowledge and skills in creating photo story and multiple page documents using advanced layout and design techniques. Students demonstrate digital page layout skills through multiple page products that combine elements of digital graphic layout and design techniques with the use of vector, raster, and desktop publishing software.

FUNCTIONAL AREA 2

INTERACTIVE MULTIMEDIA

TRAINING OUTCOMES:

UNIT 001 – DIGITAL VIDEO EDITING: Students are presented with an overview of video editing concepts and guidelines and using video editing software. They discuss various terms associated with video editing, differences between linear and non-linear video editing, methods for importing clips into a video editing application, various procedures for editing audio and video clips, procedures for creating titles, and various file formats and software for exporting edited movies. Students apply these techniques in a performance examination at the end of this unit.

UNIT 002 – INTERACTIVE MULTIMEDIA TECHNIQUES: Students are given an overview of multimedia software. Instruction includes authoring terminology, principles of animation, identifying the stages of multimedia authoring, types of authoring software and components of a timeline, procedures for creating animation, understanding the functions of a cast, explaining how to create navigation, and methods for publishing a completed work. Students apply these concepts in the creation of interactive multimedia productions, using software and techniques to create industry standard animations.

UNIT 003 – WEB SITE DESIGN: Students discuss communication terms, protocols, computer communications connectivity and various methods to send and receive computer-based files. Instruction includes security concerns related to the transmission of files over unsecured networks. Students are presented an overview of the policies and regulations governing the Web, including compliance with Section 508 standards. Students use storyboards to illustrate the importance of file management in the creation and management of a web site. Discussion will also include the various file types supported by web browsers; how HTML works and about basic HTML tags. Each student will use software to perform each of the following: design and create a web site and pages containing various types of links, format pages using tables, frames and draw layers, control design of a site using templates and style sheets, enhance and optimize a site using different types of graphic and multimedia files, and create a basic form page.

FUNCTIONAL AREA 3
CAPSTONE PROJECT

TRAINING OUTCOMES:

UNIT 001 – CAPSTONE PROJECT: The students are divided into four teams. Each team will be responsible for creating a multimedia production, which supports command themes and/or messages through the incorporation of techniques learned throughout the course. These productions will involve the use of various types of graphics software including image editing, illustration, digital page layout, video editing, multimedia authoring, and web site design. Products will demonstrate an understanding of the principles of design, effective layout techniques.

FUNCTIONAL AREA 4
ADMINISTRATION

TRAINING OUTCOMES:

UNIT 001 – COURSE ADMINISTRATION: Students are required to complete certain administrative tasks necessary for effective course management. Administrative tasks include in-processing and orientation; gear issue and turn-in; out-processing and providing feedback for course critiques; and participation in graduation activities.

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