

Digital Media I

Level:	10-12
Units of Credit:	1.00
CIP Code:	11.0210
Core Code:	35020000010
Prerequisite:	Keyboarding Proficiency, Computer Technology (Computer Literacy)
Skill Test:	Semester 1 -- #810 Digital Media 1A Semester 2 -- #811 Digital Media 1B

COURSE DESCRIPTION

Digital Media is the process of planning, instructional design, and development. Digital Media I is the first-year digital media course where students will create and learn using elements of text, graphics, animation, sound, video, and digital imaging to create digital computer applications to be delivered on CD-ROM, Internet or other media. These skills will prepare students for entry-level multimedia positions and will provide fundamental digital media understandings and skills beneficial for other occupational/educational endeavors.

COURSE STANDARDS, OBJECTIVES AND INDICATORS

Semester 1 -- #810 Digital Media 1A

STANDARD 1

Career Opportunities: Students will develop an awareness of digital media career opportunities.

Objective 1: Develop career awareness related to working in the digital media industry.

- a. Identify occupations related to digital media careers (graphic/commercial artist, project manager, technical writer, application programmer, video and sound specialist, and subject matter expert, instructional designers, art director, copy-writer, etc.)
- b. Develop a realistic Student Education Occupation Plan (SEOP) using Career Pathways as a guide
- c. Develop employability competencies/characteristics: responsibility, dependability, ethics, respect, and cooperation
- d. Exhibit high standards of personal performance with a positive work ethic and attitude

STANDARD 2

Digital Media Computer Functions: Students will demonstrate the ability to perform common computer functions on a standard platform (PC, Mac, Linux) as they apply to digital media.

Objective 1: Perform basic computer functions.

- a. Utilize the *Clipboard*
- b. Utilize shortcut keys and quick-stroke commands where applicable in software applications and OS to improve performance
- c. Convert and compress files using appropriate codec
- d. Create back-up files
- e. Monitor file size and disk space
- f. Utilize asset management using folders, naming conventions, etc.

Objective 2: Implement problem solving skills

- a. Consult with Teammates
- b. Search software help menus
- c. Utilize Internet searches
- d. Utilize other appropriate sources

Objective 3: Understand and discuss the components of a basic digital media computer system and peripherals.

- a. Identify, describe and use various input devices
- b. Identify, describe and use various output devices

Objective 4: Follow and adhere to the school's acceptable use policy (AUP).

- a. Read and discuss the school's acceptable use policy
- b. Follow and adhere to the school's acceptable use policy.

Objective 5: Fair Use Guidelines and Copyright Law

- a. Understand Fair Use Guidelines as it applies to classroom use
- b. Explain and justify appropriate application of Fair Use Guidelines
- c. Understand ideas taken to create a tangible product have a copyright linked to the creator, or company, and the property
- d. Understand the process of registering a copyright on intellectual property
- e. Create a project using all original content, public domain, or licensed media, thereby adhering to all copyright laws and not involving Fair Use Guidelines

STANDARD 3

Visual Design Concepts: Students will recognize and apply effective visual design concepts

Objective 1: Visual Design Elements -- recognize and apply the following elements and principles:

- a. Recognize and apply Shape (Shape is 2D) as it applies to: (line, value (contrast), texture, sizes, pace (positive and negative), color, emphasis, balance/alignment, unity, rhythm)
- b. Recognize and apply Form (Form is 3D) as it applies to: (line, value (contrast), texture, sizes, pace (positive and negative), color, emphasis, balance/alignment, unity, rhythm)

Objective 2: Color Theory -- recognize and apply the following concepts:

- a. Recognize and apply Color Properties (Hue, saturation, value)
- b. Recognize and apply Color Schemes (complimentary, analogous, triadic, monochromatic)
- c. Recognize and apply Symbolism/Emotion (warm, cool colors. What do different colors mean in different cultures?)
- d. Recognize and apply Color depth/palettes (dithering)
- e. Recognize and apply Color modes (RGB, CMYK, Grayscale)

Objective 3: Image Composition -- recognize and use the following concepts:

- a. Recognize and use mergers, simplicity, leading lines, rule-of-thirds, point-of-view, field-of-view, and framing in image composition
- b. Understand and apply resolution, anti-aliasing, lighting in image composition

STANDARD 4

Text: Students will effectively use text in digital media.

Objective 1: Typography -- recognize and apply the following concepts:

- a. Apply Font decisions (typeface/families, style/attributes, size)
- b. Apply Typeface Design (serif, sans-serif, decorative, script)
- c. Apply Text Layout Techniques (leading, kerning, tracking, alignment symmetric and asymmetric)

Objective 2: Communication - demonstrate and use skills

- a. Demonstrate oral communication skills
- b. Demonstrate written communication skills

Objective 3: Readability -- Use text format to effectively communicate content

- a. Utilize correct spelling and grammar
- b. Utilize proper organization (Headings, indents, bullets, interface, navigation, etc.)

STANDARD 5

2D Graphics: Students will produce bitmap and vector 2D graphics.

Objective 1: Raster Graphics -- Students will create, manipulate and appropriately use *bitmap (raster)* graphics

- a. Identify graphic formats and their appropriate use (e.g., JPG, GIF, TIF, BMP, PSD, PNG, PDF, EPS, etc.)
- b. Acquire image assets (scanning, digital camera, internet search, stock sources, etc)
- c. Create images using a digital camera using appropriate settings
- d. Utilize appropriate visual design and image composition techniques
- e. Export/import images for project requirements (compression, resolution)
- f. Crop, Resize, Straighten Image, Transform an image
- g. Utilize techniques to effectively edit an image
- h. Use Layers, Mask, and Selections
- i. Apply Filters and Effects
- j. Adjust color, contrast
- k. Create Gradient
- l. Apply Transparency
- m. Restore Images
- n. Utilize Color selection techniques
- o. Use Painting and drawing tools
- p. Use others – editing tools and techniques

Objective 2: Vector Graphics -- create, manipulate and appropriately use *vector* graphics

- a. Identify graphic formats and their appropriate use (e.g., PDF, AI, SWF, PNG, EPS, etc.)
- b. Convert images from bitmap to vector and vice versa
- c. Export/import images for project requirements (compression, resolution)
- d. Utilize drawing tools to create and manipulate Paths (lines and Bezier Curves) using Anchor points, direction handles
- e. Apply Stroke and Fill (solid and gradient)
- f. Utilize appropriate selection tools
- g. Perform grouping and ungrouping of objects
- h. Apply Styles and Effects
- i. Transform objects
- j. Create Layers
- k. Apply transparency
- l. Utilize Text Tools
- m. Others – This is not a comprehensive list

Semester 2 -- #811 Digital Media 1B

STANDARD 6

Planning, Design, & Development: Students will demonstrate proper planning and design by utilizing an instructional design model such as ADDIE, Adobe Professional Design, Rapid Deployment Model, and so forth in the development of *digital media projects*.

Objective 1: Understand and use the ADDIE Model.

- a. *Analyze* -- gather and process contextual information affecting the goals, structure, purpose, content, audience, and design of a project.
- b. *Design*-- plan the general look and scope of the application and the media it will use, along with the budget, tools, objectives, outline content, storyboard, and schedule.
- c. *Develop* -- collect & create digital media content and testing of the application
- d. *Implement* -- publish the finished project and make it available to its audience.
- e. *Evaluate* -- assess the effectiveness of the project with the target audience and make adjustments in future revisions.

Objective 2: Understand and use the Adobe professional design and development process

- a. *Define* -- Goals, target audience, content, and delivery requirements
- b. *Structure* -- Flowchart to portray the overall structure and screen views of the project
- c. *Design* -- design of comps, review with client, redesign from client feedback, and production storyboard
- d. *Build and test* -- project production based on storyboards, technical and usability testing, revision, and final project presentation
- e. *Launch* -- launch and publish project

STANDARD 7

Team Activities: Students will participate in individual and team (group) activities.

Objective 1: Demonstrate the ability to work individually in the completion of digital media projects.

- a. Demonstrate oral, written, and/or technological communication skill
- b. Apply management skills in finding solutions to project problems
- c. Demonstrate personal initiative in problem solutions
- d. Complete projects according to specified deadlines

Objective 2: Demonstrate the ability to work as a team member in the completion of digital media projects.

- a. Demonstrate oral, written, and/or technological communication skills
- b. Apply management skills in finding solutions to project problems
- c. Utilize organizational skills
- d. Demonstrate leadership ability
- e. Demonstrate willingness to compromise to meet team objectives
- f. Function as a responsible team member
- g. Describe the roles and responsibilities of members of a digital media team (i.e., project manager, programmer, graphic artist, audio/video specialist, subject matter expert (*SME*), animator, etc.)

STANDARD 8

2D Animation -- Students will produce and utilize 2D animation.

Objective 1: Animations -- Create, manipulate and appropriately use animations.

- a. Identify animation file formats and their appropriate use (e.g., MOV, SWF, FLV, GIF, FLA, WMV, m4v, etc.)
- b. Perform changes to position, scale, color, and properties of an animated object
- c. Utilize Timeline animation (Frame-by-frame, Tween)
- d. Create Keyframe animation
- e. Create Tween Animation (motion, shape, path)

- f. Utilize Symbol/Instances
- g. Utilize internal and external libraries
- h. Import/Export assets
- i. Publish/Packaging appropriately for delivery medium

Objective 2: Animation Techniques -- Effectively use animation techniques

- a. Recognize and apply major principles of animation (squash and stretch, anticipation, timing, etc.)
[see 12 principles of animation]
- b. Effectively use storytelling techniques
- c. Include appropriate audio

STANDARD 9

Digital Video: Students will plan, create, edit, and publish digital video.

Objective 1: Plan Pre-Production of creating digital video

- a. Utilize a script
- b. Create a Budget
- c. Create a storyboard
- d. Build a shot plan
- e. Create an asset list
- f. Define necessary cast
- g. Adhere to Fair Use for classroom projects and copyright for all student published work
- h. Define team member roles
- i. Organize "field shoot" and assign "field shoot" roles (Gaffer, Grip, Cameraman, Director, Anchor etc.)

Objective 2: Production stage of creating digital video

- a. Produce a Setup/cleanup list
- b. Utilize appropriate video equipment (tripod, mic, lights, etc.)
- c. Demonstrate proper shooting techniques (camera settings, composition, lighting, pov, fov, etc.)
- d. Use a shot plan

Objective 3: Post-Production stage of creating digital video

- a. Capture video (Downloading to computer)
- b. Use appropriate codec and resolution settings
- c. Define asset management processes (naming conventions, cataloging, storage, compression)
- d. Edit video (transitions, audio/video effects, titling (safe area), aspect ratio, credits, clips, etc.)
- e. Export for appropriate use CD-ROM, DVD, mobile device or Internet (compression settings, codecs, menus, etc.)
- f. Recognize and use appropriate video settings i.e.: resolution, Regional standards such as ATSC, NTSC, PAL (e.g., frame rates, frame size, compression, etc.)
- g. Identify video formats (e.g., HD, AVI, MOV, SWF, WMV, MP4, m4v, FLV, VOB, etc.) and broadcast formats
- h. Publish a digital video project

STANDARD 10

Digital Audio: Students will plan, produce, edit, and publish digital audio.

Objective 1: Plan and create digital audio

- a. Prepare a script and record digital audio
- b. Capture sound from an original or existing source
- c. Recognize and use appropriate types of sound (voice over/narration, music, sound effects)

Objective 2: Edit digital audio

- a. Edit sound
- b. Apply special effects to audio files
- c. Create audio envelopes
- d. Manipulate pitch, sampling rate, amplitude

Objective 3: Export and publish digital audio

- a. Identify audio formats (e.g., WAV, MID, AU, MP3, AIF, RA, AAC, MP4, M4A, M4B, etc.)
- b. Add appropriate metadata
- c. Import, Export, and convert audio in different formats (Radio, CD quality)
- d. Publish an audio project

STANDARD 11

Web Technologies: Students will create basic Web pages or documents.

Objective 1: Plan, create, edit, and publish a basic Web site.

- a. Plan a basic Web site of multiple pages that includes digital media or links to digital media objects
- b. Apply principles of good design in the Web site
- c. Create the Web site with interactive links

STANDARD 12

Digital Technologies: Students will explore new and digital technologies

Objective 1: Develop an awareness of digital and collaborative technologies

- a. Explore emerging technologies
- b. Share Bookmarking: save and share your best web content.(del.icio.us)
- c. Utilize document sharing and collaborating
- d. Discuss social networking, blogs, and Wikis in a digital media context
- e. Explain various digital storage tools
- f. Describe video conferencing, webinars, etc.
- g. Describe podcasting, vodcasting and their relationship to RSS feeds

STANDARD 13

Digital Portfolio: Students will design and develop various projects to add to an digital digital portfolio.

Objective 1: Select their best work to create an digital archive that adheres to copyright and fair use guidelines and justify their choices.

- a. Include 2D raster and vector digital graphics
- b. Include Animation sequences
- c. Include Digital video
- d. Include Digital audio

Objective 2: Output projects to an appropriate delivery medium

- a. Determine if appropriate for Computer Based delivery (CB)
- b. Determine if appropriate for Web Based delivery (WB)
- c. Determine if appropriate for deliver using DVD, Blue-Ray, MP3 Players, CD Players, portable digital devices, cell phones, etc.