

Career & Technical Education | Arts & Communication

Motion Graphics

Subject Code: 340125

Outcome & Competency Descriptions

Course Description:

From script to storyboard and special effects, students develop products focused on a central theme and purpose. Using commercial and open-source digital animation software, they create an illusion of motion that extends beyond traditional frame-by-frame footage. They learn skills and techniques involving music, animation, text, voice, photos, and videos. Products are adjusted for access through computers, mobile devices, game consoles, projectors, radio, and TV.

Strand 1. Business Operations / 21st Century Skills

Learners apply principles of economics, business management, marketing, and employability in an entrepreneur, manager, and employee role to the leadership, planning, developing, and analyzing of business enterprises related to the career field.

Outcome: 1.1. Employability Skills

Develop career awareness and employability skills (e.g., face-to-face, online) needed for gaining and maintaining employment in diverse business settings.

Competencies

- 1.1.1. Identify the knowledge, skills, and abilities necessary to succeed in careers.
- 1.1.2. Identify the scope of career opportunities and the requirements for education, training, certification, licensure, and experience.
- 1.1.3. Develop a career plan that reflects career interests, pathways, and secondary and postsecondary options.
- 1.1.4. Describe the role and function of professional organizations, industry associations, and organized labor and use networking techniques to develop and maintain professional relationships.
- 1.1.5. Develop strategies for self-promotion in the hiring process (e.g., filling out job applications, résumé writing, interviewing skills, portfolio development).
- 1.1.7. Apply problem-solving and critical-thinking skills to work-related issues when making decisions and formulating solutions.
- 1.1.8. Identify the correlation between emotions, behavior, and appearance and manage those to establish and maintain professionalism.
- 1.1.9. Give and receive constructive feedback to improve work habits.
- 1.1.10. Adapt personal coping skills to adjust to taxing workplace demands.
- 1.1.11. Recognize different cultural beliefs and practices in the workplace and demonstrate respect for them.

- 1.1.12. Identify healthy lifestyles that reduce the risk of chronic disease, unsafe habits, and abusive behavior.

Outcome: 1.2. Leadership and Communications

Process, maintain, evaluate, and disseminate information in a business.
Develop leadership and team building to promote collaboration.

Competencies

- 1.2.1. Extract relevant, valid information from materials and cite sources of information.
- 1.2.2. Deliver formal and informal presentations.
- 1.2.4. Use negotiation and conflict-resolution skills to reach solutions.
- 1.2.5. Communicate information (e.g., directions, ideas, vision, workplace expectations) for an intended audience and purpose.
- 1.2.7. Use problem-solving and consensus-building techniques to draw conclusions and determine next steps.
- 1.2.8. Identify the strengths, weaknesses, and characteristics of leadership styles that influence internal and external workplace relationships.
- 1.2.10. Use interpersonal skills to provide group leadership, promote collaboration, and work in a team.
- 1.2.11. Write professional correspondence, documents, job applications, and resumés.
- 1.2.12. Use technical writing skills to complete forms and create reports.
- 1.2.13. Identify stakeholders and solicit their opinions.
- 1.2.14. Use motivational strategies to accomplish goals.

Outcome: 1.3. Business Ethics and Law

Analyze how professional, ethical, and legal behavior contributes to continuous improvement in organizational performance and regulatory compliance.

Competencies

- 1.3.1. Analyze how regulatory compliance affects business operations and organizational performance.
- 1.3.2. Follow protocols and practices necessary to maintain a clean, safe, and healthy work environment.
- 1.3.5. Access and implement safety compliance measures (e.g., quality assurance information, safety data sheets [SDSs], product safety data sheets [PSDSs], United States Environmental Protection Agency [EPA], United States Occupational Safety and Health Administration [OSHA]) that contribute to the continuous improvement of the organization.
- 1.3.6. Identify deceptive practices (e.g., bait and switch, identity theft, unlawful door-to-door sales, deceptive service estimates, fraudulent misrepresentations) and their overall impact on organizational performance.
- 1.3.7. Identify the labor laws that affect employment and the consequences of noncompliance for both employee and employer (e.g., harassment, labor, employment, employment interview, testing, minor labor laws, Americans with Disabilities Act, Fair Labor Standards Acts, Equal Employment Opportunity Commission [EEOC]).

- 1.3.8. Verify compliance with computer and intellectual property laws and regulations.

Outcome: 1.4. Knowledge Management and Information Technology

Demonstrate current and emerging strategies and technologies used to collect, analyze, record, and share information in business operations.

Competencies

- 1.4.3. Verify compliance with security rules, regulations, and codes (e.g., property, privacy, access, accuracy issues, client, and patient record confidentiality) pertaining to technology specific to the industry pathway.

Outcome: 1.7. Entrepreneurship/Entrepreneurs

Analyze the environment in which a business operates, and the economic factors and opportunities associated with self-employment.

Competencies

- 1.7.13. Protect intellectual property and knowledge (e.g., copyright, patent, trademark, trade secrets, processes).

Outcome: 1.8. Operations Management

Plan, organize, and monitor an organization or department to maximize contribution to organizational goals and objectives.

Competencies

- 1.8.4. Identify alternative actions to take when goals are not met (e.g., changing goals, changing strategies, efficiencies).
- 1.8.8. Identify routine activities for maintaining business facilities and equipment.

Strand 2.

Design

Learners apply the elements and principles of design and compositional techniques to create works of art and visual layouts for both tactile and digital art forms.

Outcome: 2.1. Arts Elements and Design Principles

Analyze works of art for the art elements and the design principles needed to create professional products.

Competencies

- 2.1.2. Identify specific characteristics (i.e., positive and negative, organic, geometric, quality, weight, direction, variety, unity, balance, symmetry) of art elements that communicate and express ideas.
- 2.1.3. Determine how and when to apply the principles of design, including unity, variety, balance, movement, emphasis, visual hierarchy, and proportion/scale to communicate ideas.
- 2.1.4. Identify, compare, and contrast unity and variety within a design (e.g., formal/symmetrical, informal/asymmetrical, and radial balance).
- 2.1.5. Observe movement shown through repetition, pattern, and rhythm.
- 2.1.6. Interpret emphasis through contrast, isolation, size, and placement.
- 2.1.7. Identify visual hierarchy used to establish dominance.
- 2.1.8. Recognize the use of proportion/scale.

Outcome: 2.2. Color Theory

Assess the use of color for commercial design.

Competencies

- 2.2.2. Choose color pairings with regard to ADA compliance, color visibility, readability, and accessibility.
- 2.2.8. Compare and contrast choices using the psychology of color.
- 2.2.9. Critique the use of color schemes (e.g., primary, secondary, tertiary, analogous, complementary, triads, monochromatic) in various media.

Outcome: 2.3. Art Forms

Apply art elements and design principles to create two-dimensional (2D) and three-dimensional (3D) commercial products using various media to communicate the message and evoke the desired audience response.

Competencies

- 2.3.1. Render a proportionately correct portrait and figure drawing.

- 2.3.2. Render in one-point, two-point, multi-point, and aerial perspectives.
- 2.3.3. Apply color using pencil, marker, dry media, wet media, and digital media.
- 2.3.4. Demonstrate shape, volume, depth, and dimension.
- 2.3.5. Employ techniques that produce actual and implied texture (e.g., filters, embroidery, embossing, clay, wax, wood, metal).
- 2.3.7. Create a 3D design according to specific measurements using drawing, cutting, scoring, and bonding techniques.

Outcome: 2.4. Visual Layouts

Create layouts for pre-production and analyze the communicative effects on the commercial product.

Competencies

- 2.4.1. Create thumbnail and rough sketches.
- 2.4.6. Apply the components of a comprehensive layout (e.g., color scheme, font, white space, text graphics, frames, headings) according to an overall theme for the product.
- 2.4.7. Determine composition, formal qualities, scale, and use of space.
- 2.4.8. Apply compositional techniques, including rule of thirds, use of a grid system, 180-degree rule, framing, fill frame, pyramid, strong center of interest, and aspect ratio.
- 2.4.12. Evaluate the product in terms of the message or meaning for the targeted audience.

Outcome: 2.6. UX/UI Design

Develop basic skills and knowledge related to the UX/UI (User Experience/User Interface) Design Process.

Competencies

- 2.6.1. Understand the UX/UI design process (e.g. vision, journey mapping, wireframing, prototyping, strategizing) for the targeted platform (e.g. graphics, applications, programming).
- 2.6.11. Understand various design methodologies (Bottom-Up, Top-Down, Agile) and evaluate their strengths and weaknesses.
- 2.6.12. Describe how attention, memory, perception, conditioning, and learning define the user experience and affects their actions.

Strand 3. Written Content Creation

Learners apply content creation knowledge and skills to use the intended message for entertainment, journalism, or marketing purposes.

Outcome 3.1. Career-Based Writing

Develop basic skills and knowledge related to fact-, entertainment-, and marketing-based copy.

Competencies

- 3.1.2. Compare and contrast fiction and nonfiction.
- 3.1.10. Select visual imagery to support or enhance copy.
- 3.1.11. Review, re-write, and edit to prepare the final copy for client and artistic approval.
- 3.1.12. Critique the impact of your writing and incorporate editor feedback in a revision.

Outcome 3.2. Entertainment-based Writing

Produce copies for products designed for amusement and enjoyment.

Competencies

- 3.2.3. Brainstorm the theme and plot through outlining or storyboarding.
- 3.2.5. Create copy with appropriate tone, content, emotion, and psychology for the speaker or performer.
- 3.2.6. Annotate copy with phonetic spelling for the speaker or performer.
- 3.2.8. Create fiction and non-fiction scripts for various media.
- 3.2.11. Identify different features of scripts (e.g., setting, dialogue, plot, characters)

Strand 4. Audio, Video, and Photo Imaging

Learners apply knowledge and skills of photography and videography to capture, engineer, and manipulate audio, images, and video for media production.

Outcome: 4.1. Science of Sound

Apply the characteristics and properties of sound to a professional production.

Competencies

- 4.1.1. Identify the properties of sound.
- 4.1.7. Apply the principles of digital audio theory (e.g., sampling rate, bit depth, Nyquist Theorem, and various compression algorithms for lossy and lossless audio).

Outcome: 4.2. Audio Capturing

Apply the principles and properties of how sound is measured, converted, and perceived to capture an audio recording for professional purposes.

Competencies

- 4.2.4. Distinguish among digital media formats (e.g., .mp3, .mp4, .wav, .aiff).

Outcome: 4.3. Audio Operations

Manipulate recordings for professional purposes.

Competencies

- 4.3.3. Synchronize media from different sources.

Outcome: 4.7. Audio/Video Editing

Edit post-production audio or video for commercial purposes.

Competencies

- 4.7.1. Compare and contrast linear and nonlinear digital editing systems for audio/video.
- 4.7.2. Import and log media for editing.
- 4.7.3. Manage files of digital clips.
- 4.7.4. Use storyboard techniques to place media on a timeline.
- 4.7.6. Edit audio or video online and offline with transitions, cutting points, order of shots, and continuity.
- 4.7.10. Export and upload media for desired specifications and for appropriate platforms.

Strand 6. Digital Design

Learners apply knowledge and skills of digital design to manipulate and animate new and existing audio, video, or photo images to create graphics for internet, broadcast, mobile, and other multimedia applications.

Outcome: 6.1. Content Management

Import, store, export, and manage digital assets.

Competencies

- 6.1.3. Select an application according to its capabilities in meeting the purpose and budget.
- 6.1.4. Import media into the selected application.
- 6.1.5. Identify the hardware capabilities of various devices and how processor speed, Random Access Memory (RAM), monitor resolution, and media storage affect the development and use of digital projects.
- 6.1.6. Convert file formats for use in editing software and other applications.
- 6.1.7. Export media in the appropriate format for delivery.
- 6.1.8. Manage and archive digital assets through organizational techniques (e.g., metadata, keywords, file/folder structure, name conventions).

Outcome: 6.3. Graphics

Create and manipulate two-dimensional (2D) and three-dimensional (3D) digital graphics.

Competencies

- 6.3.1. Create digital graphics.
- 6.3.2. Manipulate the attributes of graphics (e.g., color, shape, size, texture, typography).
- 6.3.3. Arrange and manage graphics using layers.
- 6.3.4. Select a graphic file format based on compression, resolution, and file size.
- 6.3.5. Organize and export graphic files for intended use and platform.

Outcome: 6.4. Animation

Create digital animation.

Competencies

- 6.4.1. Develop a plan and storyboard for an animation.
- 6.4.2. Create and import two-dimensional (2D) assets and environments.
- 6.4.3. Create key frames and apply tweens and paths.
- 6.4.4. Create special effects and virtual navigation.
- 6.4.5. Create and import three-dimensional (3D) assets and environments.
- 6.4.6. Create 3D shapes through box modeling.
- 6.4.7. Create 3D shapes through NURBS.
- 6.4.8. Describe voxels and its various uses.
- 6.4.9. Render and export animations for multiple platforms.

Strand 7.**Performance**

Learners apply knowledge and skills for performance, including roles, processes, procedures, and production design.

Outcome: 7.2.**Genres**

Analyze and critique the stylistic differences among genres.

Competencies

- 7.2.1. Describe, compare, and contrast various styles and traditions.
- 7.2.2. Identify and compare the lives, works, and influence of significant individuals in various cultures, traditions, and historical periods.
- 7.2.3. Compare and contrast characteristics (e.g., technique, form, content) of genres from a particular time period or area of influence.