

Career & Technical Education | Information Technology

Video and Sound

Subject Code: 145110

Outcome & Competency Descriptions

Course Description:

Students will create professional video and audio productions for distribution in traditional and new media channels. Students will plan, produce, edit, and launch media products. Students will develop scripts and storyboards, compose shots and operate cameras, capture sounds using microphone hardware, apply special effect techniques, and edit to achieve the final product. Students will be able to use animation and graphic design for video.

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

- 1.1.4. 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, resumé writing, interviewing skills, portfolio development).
- 1.1.6. Explain the importance of work ethic, accountability and, responsibility and demonstrate associated behaviors in fulfilling personal, community, and workplace roles.
- 1.1.7. Apply problem-solving and critical-thinking skills to work-related issues when making decisions and formulating solutions.
- 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.
- 1.2.9. Identify advantages and disadvantages involving digital and/or electronic communications (e.g., common content for large audience, control of tone, speed, cost, lack of non-verbal cues, potential for forwarding information, longevity).

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

- 1.3.2. 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.
- 1.3.7. 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: 1.7. 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

- 1.8.1. Forecast future resources and budgetary needs using financial documents (e.g., balance sheet demand forecasting, financial ratios).
- 1.8.2. Select and organize resources to develop a product or a service.
- 1.8.3. Analyze the performance of organizational activities and reallocate resources to achieve established goals.
- 1.8.4. Identify alternative actions to take when goals are not met (e.g., changing goals, changing strategies, efficiencies).
- 1.8.5. Use inventory and control systems to purchase materials, supplies and equipment (e.g., Last In, First Out [LIFO]; First In, First Out [FIFO]; Just in Time [JIT]; LEAN).
- 1.8.6. Identify the advantages and disadvantages of carrying cost and Just-in-Time (JIT) production systems and the effects of maintaining inventory (e.g., perishable, shrinkage, insurance) on profitability.
- 1.8.7. Collect information and feedback to help assess the organization's strategic planning and policymaking processes.
- 1.8.8. Identify routine activities for maintaining business facilities and equipment.
- 1.8.9. Develop a budget that reflects the strategies and goals of the organization.
- 1.8.10. Analyze how business management and environmental management systems (e.g., health, safety) contribute to continuous improvement and sustainability.

Strand 2. IT Fundamentals

Learners apply fundamental principles of IT, including the history of IT and its impact on society, common industry terms, systems theory, information storage and retrieval, database management, and computer hardware, software, and peripheral device configuration and installation. This base of knowledge and skills may be applied across the career field.

Outcome 2.4. Emerging Technologies

Identify trending technologies, their fundamental architecture, and their value in the marketplace.

Competencies

- 2.4.1. Identify emerging technologies that are applicable to the marketplace.
- 2.4.2. Describe the fundamental architectures of emerging technologies and how they are integrating into the existing systems of information technology.
- 2.4.3. Research the value of emerging technologies on the marketplace.
- 2.4.4. Describe emerging technologies (e.g., Bring your Own Device [BYOD], Services Virtualization, Mixed Reality [MR], SMART Devices, Additive Manufacturing [3D Printing], Internet of Things, Large Language Models, Machine Learning, and Artificial Intelligence).

Outcome: 2.9. Project Concept Proposal

Develop a project concept proposal.

Competencies

- 2.9.1. Identify the scope and purpose of branding.
- 2.9.2. Determine the scope and purpose of the project.
- 2.9.3. Determine the target audience, client needs, expected outcomes, objectives, and budget.
- 2.9.4. Develop a conceptual model and design brief for the project.
- 2.9.5. Develop a timeline, a communication plan, a task breakdown, costs (e.g., equipment, labor), deliverables, and responsibilities for completion.
- 2.9.6. Develop and present a comprehensive proposal to stakeholders.

Outcome: 2.10. Equipment

Select, prepare, operate, and maintain equipment.

Competencies

- 2.10.2. Identify processor, memory, storage, power, and environmental requirements.
- 2.10.4. Identify software application requirements.
- 2.10.5. Prepare and operate equipment per project design specifications.

- 2.10.6. Monitor equipment operation and troubleshoot issues and problems.
- 2.10.7. Backup, restore, test, archive, and manage data.
- 2.10.8. Prepare equipment for storage or decommissioning.
- 2.10.9. Perform routine maintenance per manufacturer specifications.

Strand 7. Digital Media

Learners apply principles of digital media to produce interactive media; develop and produce multimedia applications; integrate typography into media; create 3D models and 2D and 3D animation; and create digital video, audio, and photographs.

Outcome: 7.1. Interactive Media

Describe and explain interactive media and interactive media production.

Competencies

- 7.1.1. Identify the types and uses of interactive media environments (e.g., web-based, kiosks, games, mobile devices, video, print).
- 7.1.2. Describe the components of interactive media.
- 7.1.3. Identify the major characteristics of interactive media presentations.
- 7.1.4. Identify important historical developments and future trends in interactive media.
- 7.1.5. Identify the major interactive media genres.
- 7.1.6. Perform critical review of interactive media products in different genres.
- 7.1.7. Identify the intellectual property rights, responsibilities, and controls related to interactive media.
- 7.1.8. Analyze the social and cultural implications of interactive media.
- 7.1.9. Identify major applications for interactive media (e.g., sales and marketing, interactive advertising, education, online learning, corporate training, corporate communications, news, entertainment).
- 7.1.10. Identify specific uses for interactive media in potential markets.

Outcome: 7.2. Multimedia Tools

Develop navigational structures, scripts, storyboards, and flowcharts for multimedia applications.

Competencies

- 7.2.4. Determine uses and needs for site maps, multimedia scripts, storyboards, and flowcharts.
- 7.2.5. Make preliminary sketches showing placement of images and text on screen.
- 7.2.7. Select colors based on color theory and psychology.
- 7.2.8. Describe music, video, and special effects to be used.
- 7.2.9. Provide a sample layout to stakeholders for review.
- 7.2.10. Select and create visual design elements appropriate for the intended audience and use.
- 7.2.11. Develop client personas and narratives for intended project outcomes.

Outcome: 7.3. Production

Produce interactive media.

Competencies

- 7.3.1. Select the media elements to be used (e.g., sound, video, graphics, text, animation).
- 7.3.2. Generate text for multi-image presentations (e.g., title graphics, charts, graphs).
- 7.3.3. Incorporate graphics (e.g., digital, hand-drawn, photographic).
- 7.3.4. Incorporate computer animation.
- 7.3.5. Prepare and integrate photographic images and special effects with graphic images.
- 7.3.6. Incorporate video footage.
- 7.3.7. Edit video footage.
- 7.3.8. Record and/or acquire soundtracks (e.g., narrative, voiceover, sound effects, music).
- 7.3.9. Integrate sound with visuals.
- 7.3.10. Produce, test, debug, and archive a final product.
- 7.3.11. Apply accessibility guidelines to the selection and production of interactive media.

Outcome: 7.7. Video

Create a video production.

Competencies

- 7.7.1. Identify equipment and other production needs (e.g. drone, stop action, Digital Single Lens Reflex (DSLR), mirrorless, compact, and 360 cameras).
- 7.7.2. Analyze the script and storyboard to develop a production schedule.
- 7.7.3. Set up audio, lighting, and scenery for the shoot.
- 7.7.4. Select a video recording format and shoot the video.
- 7.7.5. Select a linear or nonlinear editing system and edit the video.
- 7.7.6. Add transitions (e.g., dissolves, wipes, cuts), titles, special effects, and digital effects.
- 7.7.7. Add a soundtrack, narration, and/or voiceover.
- 7.7.8. Export video to the desired medium.

Outcome: 7.8. Audio

Create an audio production.

Competencies

- 7.8.1. Evaluate performance needs and technical resources.
- 7.8.2. Identify sound requirements based on script analysis.
- 7.8.3. Design score appropriate to production and post-production needs.
- 7.8.4. Determine microphone and speaker placement.
- 7.8.5. Select and incorporate Foley mechanical and electrical sound effects.
- 7.8.6. Set up and operate audio-for-video recording devices.
- 7.8.7. Set up and operate a time code system for audio-video synchronization.
- 7.8.8. Perform audio mixing.
- 7.8.9. Operate a sound mixing board during production.