

Career & Technical Education | Arts & Communication

Advanced Theatre Design & Technology

Subject Code: 340254

Outcome & Competency Descriptions

Course Description:

This course is for students interested in pursuing technical theater and/or theater design as a career. The course is designed to further the concepts, skills, and techniques used in the performing arts fields of lighting, sound, and scenic design and construction introduced in previous CTE technical theatre courses. Structured to mirror current industry practices and standards for technical theatre, students will learn to move beyond the fundamentals of what is required to build and tech a show. Students will get hands-on experience in one or more areas of technical theater while working productions and other performances.

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.
- 1.1.7. 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.
- 1.1.12. 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

- 1.2.4. Use negotiation and conflict-resolution skills to reach solutions.
- 1.2.7. Use problem-solving and consensus-building techniques to draw conclusions and determine next steps.

- 1.2.10. Use interpersonal skills to provide group leadership, promote collaboration, and work in a team.

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.
- 1.3.7. 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]).

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: 1.6. Business Literacy

Develop foundational skills and knowledge in entrepreneurship, financial literacy, and business operations.

Competencies

- 1.6.5. Describe organizational structure, chain of command, the roles and responsibilities of the organizational departments, and interdepartmental interactions.
- 1.6.9. Explain how the performance of an employee, a department, and an organization is assessed.
- 1.6.11. Describe how all business activities of an organization work within the parameters of a budget.
- 1.6.12. Describe classifications of employee benefits, rights, deductions, and compensations.

Outcome: 1.7. Entrepreneurship/Entrepreneurs

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

Competencies

- 1.7.4. Assess the roles of nonprofit and for-profit businesses.
- 1.7.10. Describe techniques for obtaining experience (e.g., apprenticeship, co-operative [co-op] education, work placement, internship, job shadowing) related to an entrepreneurial objective.
- 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).
- 1.8.3. 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).
- 1.8.7. 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.

Outcome: 1.11. Principles of Business Economics

Examine and employ economic principles, concepts, and policies to accomplish organizational goals and objectives.

Competencies

- 1.11.2. Identify the difference between monetary and nonmonetary incentives and explain how changes in incentives cause changes in behavior.

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

- 2.1.1. Describe art elements of line, value, color, shape, space, form, and texture in various media that are used individually or in combination.
- 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).
- 2.1.6. 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

- 2.2.8. 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

- 2.3.2. 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).
- 2.3.6. Select the material based on its characteristics (e.g., design, construction, maintenance, care of product) for the intended use.
- 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.
- 2.4.7 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.
- 2.4.9 Create visual continuity among a variety of products.
- 2.4.12 Evaluate the product in terms of the message or meaning for the targeted audience.

Strand 3. Written Content Creation

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

Outcome 3.2. Entertainment-based Writing

Produce copies for products designed for amusement and enjoyment.

Competencies

- 3.2.10. Determine how the script dictates various elements including setting, music, and blocking.
- 3.2.11. identify different features of scripts (e.g., setting, dialogue, plot, characters)

Outcome: 3.3. Fact-Based Writing

Write concise and focused copy for journalism.

Competencies

- 3.3.5. Seek, consider, and synthesize primary, secondary, quantitative, and qualitative research.
- 3.3.14. Illustrate the value of a project through a media pitch.
- 3.3.15. Identify the time-sensitive elements of content.

Outcome: 3.4. Market-Based Writing

Write concise, creative, memorable, sellable copy for advertising, public relations, and proposals.

Competencies

- 3.4.1. Research and analyze trends and local markets for opportunities.
- 3.4.2. Determine the wants and needs of the target audience.

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

- 4.1.5. Analyze room acoustics and their impact on sound, such as diffraction, diffusion, phase, and harmonics.
- 4.1.6. Apply the principles of direct sound, early reflection, and reverberation.

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

- 4.2.1. Compare and contrast microphone properties (e.g., polar patterns, type of transducer) with their intended use (e.g., handheld, lav, boom).
- 4.2.2. Determine microphone and monitor placement according to directional characteristics.

Outcome: 4.3. Audio Operations

Manipulate recordings for professional purposes.

Competencies

- 4.3.1. Produce recordings in a variety of settings (e.g., studio, live, post-production).
- 4.3.5. Design and set a stage plot for live performance.

- 4.3.6. Mix live sound for a variety of events (e.g., concert, speech, panel discussion, performance, etc.).

Outcome: 4.4. Lighting

Measure and manipulate lighting based on the characteristics and properties of light.

Competencies

- 4.4.2. Determine the color temperature that is appropriate for the environment.
- 4.4.3. Manipulate and direct light using ratios, gels, filters, diffusion, and gobos.
- 4.4.4. Implement lighting techniques (e.g., four-point, bounce, high-key, low-key, cross-key, mixed) to produce specific effects.

Strand 7. Performance

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

Outcome: 7.1. Interrelationships

Examine and explore how music, dance, and theatre disciplines connect to create a production.

Competencies

- 7.1.2. Evaluate the importance of the audience and its relationship to the performance.
- 7.1.3. Explain the differences between practice, rehearsal, tech week, and performance.
- 7.1.4. Explain the level of skill and training to reach a professional production level of a performance.
- 7.1.5. Describe and critique the elements of a performance from an audience member's perspective.
- 7.1.6. Determine the relationship among production elements including costume, scenic, lighting, video, sound, and property design.
- 7.1.7. Describe the role of the stage manager.

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.

- 7.2.4. Explain the influence of social context, historical periods, and culture in the development of a performance.

Outcome: 7.4. Space, Time, and Energy

Exhibit the use of space, time, and energy through performance.

Competencies

- 7.4.1. Understand the differences among and work within theatrical and non-theatrical spaces, conventional and non-conventional spaces, and structured and unstructured spaces.

Outcome: 7.11. Production Management

Assign roles, functions, and procedures based on a script or production plan.

Competencies

- 7.11.1. Identify the stages in the production process.
- 7.11.2. Describe the function and responsibilities of individuals involved in creating, planning, scheduling, and producing a production.
- 7.11.3. Develop script formats, interpretations, subjects, production choices, and ideas.
- 7.11.5. Manage personnel and workflow.

Outcome: 7.12. Production Design

Adapt the elements of stagecraft to a script or production plan.

Competencies

- 7.12.1. Create a design that captures the director's vision and concept.
- 7.12.2. Create a design using standard production elements.
- 7.12.3. Integrate all design elements (e.g., costuming, scenery, lighting, audio, projections, videos, and properties) to reflect the mood, setting, and socioeconomic statuses indicated in the production plan.
- 7.12.4. Determine stage rigging based on stage configuration.
- 7.12.5. Create appropriate visual design documentation (e.g. renderings, light plots, ground plans, models, thumbnails sketches) for the various technical theatre fields.
- 7.12.6. Identify properties and set dressing and their functions and placements in a production.

- 7.12.7. Identify how highlights and shadows, scenic elements, makeup, costuming, lighting, video, projection, etc. are perceived by a live audience.
- 7.12.8. Interpret the elements of a simple light plot.
- 7.12.9. Execute a lighting design.
- 7.12.10. Identify and describe the various positions of a running crew (e.g. deck electrician, scenic running crew, rail operator, props master, wardrobe manager, costuming crew, etc.).
- 7.12.11. Identify and describe the tools used in the scene shop and classify them by purpose (e.g. marking, cutting, boring, drilling, shaping, securing, clapping, etc.).
- 7.12.12. Build basic theatrical scenic items (flats, platforms, stairs, molding, etc.).
- 7.12.13. Organize and track materials and props through the course of a production.
- 7.12.14. Identify types of rigging systems used in theatrical spaces.
- 7.12.15. Identify theatrical lighting fixtures and equipment.

Outcome: 7.13. Costuming

Create and apply wardrobe, hair style, and makeup for a performance.

Competencies

- 7.13.2. Create renderings to illustrate design choices based on a script analysis or production plan.
- 7.13.6. Compare and contrast the various methods of acquiring costuming within the confines of a budget.
- 7.13.8. Create well-crafted, functional garments using basic and advanced machine and hand sewing techniques.
- 7.13.10. Describe the relationship among costume, scenic, lighting, video, and sound designers.

Outcome: 7.14. Performance Demands

Meet the physical, vocal, and psychological demands of performance.

Competencies

- 7.14.2. Recognize the levels of physical and mental stress as potential risk factors to the body's various movements.
- 7.14.4. Develop a nutrition plan and lifestyle choices that support optimal performance and reduce stress and injury.
- 7.14.5. Anticipate the physical requirements of a performance.
- 7.14.6. Overcome psychological stresses to minimize their impacts on a performance.

7.14.7. Demonstrate strategies to manage and relieve anxieties.