

Career Technical Education Model Curriculum Standards



Arts, Entertainment & Design Career Cluster

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Overview

The Career Technical Education (CTE) Model Curriculum Standards (MCS) are organized according to the Advance CTE National Career Clusters Framework^{®1}. The National Career Clusters Framework[®] supports alignment of state CTE systems with workforce systems while allowing for flexibility and adaptability. Under this framework, the standards establish curricular guidance for high-quality CTE programs.

The CTE MCS outline the essential knowledge, skills, and competencies that contribute to career and college readiness. They are designed to guide and support program development, offering flexible options rather than a fixed checklist, so educators can adapt them to best fit their context.

By incorporating the *Career Ready Standards*, the MCS support students in developing applied literacy, technical skills, and key employability competencies such as communication, collaboration, problem-solving, and leadership. Career Ready Standards prepare students to navigate workplace expectations, adapt to changing career demands, and succeed in both postsecondary education and the workforce.

Additionally, the MCS establish *Cross-Pathway Standards*, which promote interdisciplinary learning and reinforce relevant core concepts across multiple career pathways. This interdisciplinary approach encourages students to make connections between different fields, supports a holistic and cohesive approach to CTE program design, and helps facilitate the development of courses aligned with multiple pathways within a Career Cluster.

The MCS establish Pathway Standards that provide structured guidance for instruction within each career pathway. Organized around job-alike skills, these standards define the essential technical knowledge, competencies, and proficiencies students need, ensuring alignment with current workforce demands, promoting applied CTE learning, and preparing students for successful, occupation-specific careers.

¹. Advance CTE National Career Clusters Framework:
<https://careertech.org/career-clusters/about-the-national-career-clusters-framework/>

Description

Alignment to the National Career Clusters Framework®

“The Arts, Entertainment & Design Career Cluster combines creative roles in visual and performing arts, film, journalism, fashion, interior design, and creative technology. This Cluster focuses on creating, producing, and sharing artistic and design work across multiple platforms, aiming to entertain, inform, beautify, and inspire.”²

Cluster Grouping: *Creating and Experiencing*

Career Cluster: *Arts, Entertainment and Design*

Pathways: *Design, Visual, and Media Arts³; Performance, Music, and Live Entertainment⁴; Media Production⁵; Fashion & Interior Design*

Definitions and Document Components

Model Curriculum Standards: The MCS provide a focused set of high-level industry standards intended to guide curriculum development. These standards are designed to be unpacked and differentiated according to the learner’s skill level, rather than tied to a specific grade level or sequenced course. Because CTE pathways can vary from two to five courses in a sequence, the standards are adaptable to any program structure, emphasizing the goal of preparing students for postsecondary and industry readiness.

Career Ready Standards: (1.0–12.0) Career Ready Standards align with the National Career Clusters Framework® Career Ready Practices. The Career Ready Standards emphasize the importance of essential workplace skills such as critical thinking, digital literacy, problem-solving, ethical decision-making, and collaboration. They are at the core of CTE instruction and are embedded in every level of a CTE pathway.

Cross-Pathway Standards: (13.0–16.0) Cross-Pathway Standards are interdisciplinary and address skills, knowledge, and competencies that apply to all pathways within a Career Cluster. These standards serve as prerequisite and corequisite learning for CTE pathway students.

². Advance CTE Arts, Entertainment, & Design Career Cluster:
<https://careertech.org/career-clusters/arts-entertainment-design/>.

³. Advance CTE Sub-Cluster Alignment: *Design and Digital Arts, and Fine Arts*.

⁴. Advance CTE Sub-Cluster Alignment: *Lighting and Sound Technology and Performing Arts*.

⁵. Advance CTE Sub-Cluster Alignment: *Media Production and Broadcasting*.

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Pathway Standards: (17.0–20.0) Pathway Standards build on the Career Ready Standards and Cross-Pathway Standards to incorporate technical skills, practical application, and industry practices. Pathway standards are organized by *focus areas* to facilitate occupational and postsecondary alignment. Pathway Standards are organized in four general categories:

- **Skill Building:** Students will gain and refine technical and/or creative skills specific to the focus area.
- **Process and Practice:** Students will work in collaborative environments, engage in the creative process, and apply technical skills to industry projects.
- **Career Exploration:** Students will explore careers specific to the focus area.
- **Advanced Technology and Impact:** Students will examine topics such as emerging technology, environmental sustainability, and social responsibility relevant to the pathway.

Focus Areas: Focus areas are pathway standards organized by occupation-specific skills, knowledge, and competencies. The purpose of focus areas is to help CTE programs align with advanced training opportunities such as registered apprenticeship and postsecondary pathways.

Occupational Alignment to O*Net-Standard Occupational Classification (SOC)

Codes⁶: The O*NET Program is a federal career database and the nation's primary source of occupational information. It is regularly updated to provide workforce information and economic data. O*Net-SOC Codes are referenced for alignment to Advance CTE National Framework[®], registered apprenticeship and for the purposes of career research. The occupations listed in each focus area include relevant O*Net-SOC codes in the federal database.

⁶. O*Net Database: <https://www.onetonline.org/find/career?c=020100>.

Career Ready Standards

Career Ready Standards outline the essential skills, knowledge, and behaviors students need to succeed in any workplace or industry. Flexible by design, the Career Ready Standards emphasize transferable skills that prepare students for employment, postsecondary education, and long-term career growth.

Applied across all Career Clusters, these standards serve as a unifying framework that connects classroom learning to industry expectations and bridges education with workforce needs. The Career Ready Standards also provide CTE teachers with a valuable planning resource. Programs are not required to teach every standard and may adapt their depth and breadth to best fit local priorities and student needs.

1.0 Academics

Integrate academic standards and knowledge (i.e., Common Core English Language Arts and Mathematics, Next Generation Science Standards, and other content-area standards) in CTE pathways.

1.1 Literacy:

Apply academic literacy skills (e.g., reading, writing, speaking, and listening) to design, test, and refine solutions for challenges encountered in authentic industry contexts.

1.2 Applied STEAM:

Develop and apply scientific, technical, engineering, artistic, and mathematical skills to industry-specific projects, in cross-industry scenarios, and within the context of a career pathway.

1.3 Cultural & Historical Influences:

Investigate historical achievements, accomplishments, and advancements by industry pioneers, innovators, inventors from diverse genres, regions, cultures, backgrounds, and experiences.

1.4 Critical Response:

Examine industry-specific case studies and identify key trends, challenges, and innovations.

2.0 Communication

Develop professional written and verbal communication skills and communicate clearly, and with reason.

2.1 Professional Communication:

Respectfully communicate information and ideas in a variety of professional and educational environments.

2.2 Industry Vocabulary:

Use industry-appropriate terminology when discussing projects, writing proposals, and presenting work.

2.3 Oral Communication & Presentation Skills:

Apply extemporaneous speaking skills by adapting language and approach in real time to address questions, solve problems, and manage audience or client needs.

2.4 Social Media Networking:

Examine and explain the importance of establishing professional social media for the purpose of career-related networking and communication.

2.5 Workplace Writing Formats:

Differentiate industry-specific writing processes, formats, and conventions when completing written tasks (e.g., proposals, technical documentation, emails, memos, reports, and presentations).

2.6 Multimedia Communication:

Communicate information and ideas to multiple audiences using a variety of media and formats.

2.7 Digital Citizenship:

Practice safe, legal, and responsible use of digital technology for communication purposes.

2.8 Meeting Deadlines:

Coordinate with cross-functional teams to plan, execute, and evaluate projects, ensuring tasks are completed on schedule and deliverables meet expectations.

2.9 Communication Patterns:

Identify recurring structures, terminology, and formats that contribute to clear and aligned communication within an industry.

3.0 Career Planning & Management

Explore careers through career research, work-based learning, and ongoing career planning.

- 3.1 *Career Pathways:*
Research career pathways and identify required education and training, work experience, certifications, and credentials.
- 3.2 *Annual Career Planning:*
Conduct interest, skill, and aptitude assessments; develop a career plan that is adaptable and attainable; analyze how career planning can affect short- and long-term professional outcomes.
- 3.3 *Networking:*
Evaluate the importance of professional networking, including establishing and sustaining partnerships and relationships.
- 3.4 *Employment Opportunities:*
Search for jobs using online search engines; evaluate the application process for internships, apprenticeships, and entry-level positions.
- 3.5 *Understanding & Negotiating Job Offers:*
Interpret a job offer; practice how to negotiate fair compensation, terms, and benefits relative to individual circumstances.
- 3.6 *Employment Types:*
Compare and contrast costs, benefits, and tax implications of temporary, permanent, and work-for-hire/freelance employment.
- 3.7 *Professional Organizations & Unions:*
Research and describe the role of labor unions, guilds, and professional associations in business and government; explain the requirements and processes for membership or affiliation.
- 3.8 *Resumes & Portfolios:*
Develop a professional resume, personal statement, and industry-specific portfolio that highlights skills, technical proficiencies, and iterative processes.
- 3.9 *Entrepreneurship & Self-Employment:*
Demonstrate entrepreneurial skills (e.g., adaptability, confidence, discipline, perseverance, vision, and risk-taking) across industry contexts.

4.0 Technology

Evaluate technological advancements; use technology to complete industry-specific tasks.

- 4.1 *Digital Safety & Information Integrity:*
Practice internet safety, identify malicious activity (e.g., phishing and malware), discern and avoid misinformation, and keep personal information private.
- 4.2 *Business & Collaboration Tools:*
Use standard business software and online tools to gather information, create documents and presentations, share files, and connect with collaborators or clients.
- 4.3 *Industry-Standard Technology:*
Use industry-standard hardware, software, and technology to complete tasks accurately, efficiently, and safely.
- 4.4 *Computing Systems:*
Differentiate and use appropriate industry-standard operating systems, databases, and cloud services for data management.
- 4.5 *Document & Asset Management:*
Apply industry-standard asset and document tracking, file naming conventions, version control practices, and storage/back-up protocols to file management.
- 4.6 *Industry-Specific Artificial Intelligence (AI) Applications:*
Evaluate applications, implications, ethics, and responsible use of AI and machine learning in business and industry; analyze the current and future impact of AI technology when career planning.
- 4.7 *AI Responsible Use:*
Employ AI technology responsibly by writing clear and complex prompts, fact-checking, reviewing, editing, and refining all AI-generated content in alignment with business or organizational policies.
- 4.8 *Emerging Technologies:*
Analyze industry-specific technological advancements; adapt and innovate with emerging technologies, cross-industry trends, and evolving technological tools.

5.0 Critical Thinking & Problem Solving

Utilize critical thinking to make sense of problems and persevere in solving them.

5.1 Reasoning & Decision-Making:

Use inductive and deductive reasoning to collect and analyze qualitative and quantitative data, make informed decisions, and construct well-supported arguments.

5.2 Accepting & Applying Critique:

Accept critique and apply feedback to revise work and improve skills.

5.3 Reflection & Iterative Processes:

Use questioning, reflection, and feedback to refine problem-solving, explore multiple approaches, and evaluate the outcomes of each.

5.4 Creative Problem-Solving:

Ask purposeful questions, analyze information, and apply logical reasoning to evaluate options, solve problems, and make informed decisions in professional contexts.

5.5 Analyzing Arguments:

Examine and evaluate arguments to identify claims, evidence, assumptions, and logical strengths or weaknesses; recognize argumentative techniques and avoid being misled by logical fallacies.

5.6 Constructing Arguments:

Develop and present well-reasoned arguments using clear evidence and rhetorical devices (e.g., ethos, pathos, and logos) while maintaining logical consistency and avoiding fallacies.

5.7 Applied Academics:

Apply academic subject knowledge to real-world problem solving; apply critical thinking strategies in professional environments to successfully navigate unanticipated situations.

5.8 Systems Thinking:

Apply systems thinking to analyze complex problems, identify recurring issues and their causes, and generate solutions to inform decision-making.

5.9 AI & Critical Thinking:

Employ analysis and decision-making skills when using AI technology; analyze AI-generated outputs to ensure validity, credibility, and accuracy.

6.0 Health & Safety

Evaluate how workplace practices impact health, safety, and financial stability.

6.1 Equipment & Tools:

Appropriately and safely handle industry-specific tools, equipment, and personal protective equipment; Apply injury prevention and sanitation techniques in industry settings.

6.2 Workplace Safety:

Practice workplace safety as defined by industry-specific regulations, state licensing, and certification standards; identify how safety practices evolve with new technology and industry standards.

6.3 Self Care & Injury Prevention:

Practice self-care and injury prevention strategies (e.g., rest, ergonomics, proper nutrition, exercise, and personal hygiene).

6.4 Workplace Culture:

Contribute to healthful workplace culture through safety-related decision-making and problem-solving techniques; evaluate how organized labor can secure safe work environments and support financial stability.

6.5 Mental Health & Wellness:

Prioritize wellness and mental health needs including physical, emotional, psychological, and social well-being; practice individual and collective strategies for stress management.

6.6 Inclusion & Accountability:

Create a respectful and fair workplace by taking personal responsibility for harmful actions and working to repair relationships when conflicts occur.

6.7 Financial Planning & Literacy:

Apply financial literacy to analyze cost of living, plan budgets, manage income and expenses, file taxes, make informed spending decisions, and maintain credit responsibly.

6.8 Emergency Preparedness:

Evaluate workplace hazards and implement safety, emergency, and disaster preparedness procedures; assess operational continuity, risk management, crisis communication, and mitigation planning.

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6.9 *Workplace Policies and Worker Rights:*

Interpret policies, procedures, and regulations for the workplace, including employee rights and responsibilities; examine how unions promote worker voice through collective bargaining, workplace safety, and representation.

7.0 Social & Civic Responsibility

Act as a responsible and contributing member of society.

7.1 *Ethical Conduct & Workplace Integrity:*

Demonstrate personal integrity, confidentiality, and ethical behavior in the workplace.

7.2 *Cross-Cultural Understanding:*

Demonstrate cross-cultural understanding through exploration of various resources that represent diverse perspectives and global viewpoints.

7.3 *Avoiding Stereotypes:*

Evaluate individual and collective biases; avoid stereotypes and misrepresentation of individuals, groups, and communities.

7.4 *Recognizing & Addressing Bias:*

Recognize strategies for mitigating bias in industry environments; analyze how individual and collective biases influence decision making (e.g., hiring, promotion, and leadership).

7.5 *Civic Responsibility:*

Analyze how individual choices, collective efforts, and industry practices influence social, economic, and environmental outcomes within communities.

7.6 *Inclusive Workplace Practices:*

Support inclusivity, ensure accessibility, and uplift diverse experiences and perspectives in the workplace.

7.7 *Community Service:*

Engage in initiatives that support communities, promote inclusivity, and advance social good (e.g., volunteering, service learning, mentorship, sustainability programs, and advocacy).

7.8 *Industry & Community Connection:*

Engage in community partnerships, industry-aligned leadership development activities, and student-led community engagement projects.

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7.9 *Unions and Organized Labor:*

Explain how unions function as democratic, worker-led organizations and analyze their role in civic engagement and representation.

8.0 Leadership & Management

Model accountability, ethical decision-making, and leadership.

8.1 *Leadership Qualities:*

Recognize and reflect the traits, responsibilities, and skills of successful employees, leaders, and managers (e.g., emotional intelligence, communication, time management, conflict resolution, and interpersonal skills).

8.2 *Responsibility & Accountability:*

Demonstrate independent initiative, take direction from leaders, ask for help when needed, build positive professional relationships, and follow through with individual responsibilities.

8.3 *Work Ethic:*

Demonstrate independent initiative, time management strategies, versatility, and work ethic in professional environments.

8.4 *Constructive Feedback:*

Provide, accept, and integrate constructive feedback at various stages of a project.

8.5 *Leading with Purpose:*

Demonstrate the ability to lead inclusively and positively, foster teamwork and morale, and assess how leadership decisions impact team dynamics and outcomes.

8.6 *Leadership Development & Student Organizations:*

Participate in leadership development activities and Career Technical Student Organizations (CTSO) to enhance academic preparation, promote career choices, and prepare for employment opportunities.

8.7 *Organizational Culture:*

Analyze organizational culture and apply leadership strategies such as change management, conflict resolution, consensus-building, and communication.

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8.8 *Outcomes of Successful Leadership:*

Define the outcomes of successful leadership and management; develop personal management skills to function efficiently and collaboratively in industry environments.

8.9 *Organizational Dynamics:*

Differentiate the roles and responsibilities of employees across an organization, and analyze how hierarchical structure, management styles, and power dynamics impact decision making.

9.0 Collaboration & Teamwork

Work productively in teams while integrating cultural and global competence.

9.1 *Collaboration and Shared Responsibility:*

Work with teams to establish goals, share responsibilities, and contribute to collective decision-making.

9.2 *High-Performing Teams:*

Demonstrate the characteristics and qualities of successful teams (e.g., cooperation, communication, empathy, and shared decision-making) that support strong collaboration.

9.3 *Conflict Management:*

Navigate disagreements constructively and apply strategies to de-escalate and resolve conflict in collaborative environments.

9.4 *Inclusive Teams:*

Engage with peers, instructors, and collaborators in a professional and respectful manner, actively listening to diverse perspectives and valuing the contributions of others.

9.5 *Diverse Perspectives:*

Respect individual and cultural differences and respond thoughtfully to divergent perspectives and viewpoints to build trust and collaboration within a team.

9.6 *Adaptability and Flexibility:*

Adapt to changing and varied roles and responsibilities when working with teams.

9.7 *Time Management:*

Manage time in collaborative settings by prioritizing tasks, coordinating schedules, meeting deadlines, and supporting teammates to sustain trust and productivity.

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9.8 *High-Agency Mindset:*

Take ownership of collective and individual actions and outcomes, demonstrate initiative and persistence, and proactively address challenges while seeking opportunities for growth.

10.0 Creativity & Innovation

Apply original thinking to develop new ideas, approaches, or products.

10.1 *Conditions for Innovation:*

Create the physical (e.g., flexible workspaces, access to tools and technology) and mental conditions (e.g., growth mindset, autonomy, and trust) that allow for innovation and exploration of new ideas.

10.2 *Developing Ideas:*

Use research, brainstorming, and creative strategies to generate, refine, and expand original concepts.

10.3 *Visualization Techniques:*

Communicate and refine ideas through visual methods (e.g., diagrams, charts, mood boards, illustrations, wireframes, renderings, and storyboards).

10.4 *Building & Refining Concepts:*

Develop, test, and refine concepts through models, mock-ups, or prototypes that move ideas toward implementation.

10.5 *Iteration & Feedback:*

Reflect and ask questions to inform analysis and refinement of work; create multiple versions and/or drafts of a project and apply feedback throughout the process.

10.6 *Risk-Taking, Experimentation & Resilience:*

Explore and test new methods and approaches in safe and responsible ways; embrace uncertainty, pilot ideas, recover from setbacks, and use challenges as opportunities to learn and improve.

10.7 *Application & Implementation:*

Translate innovative concepts into real-world projects, processes, or products that meet identified goals or solve problems.

10.8 *Evaluation & Impact:*

Evaluate innovative outcomes for sustainability and economic impact and apply observations and insights to guide future innovation.

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10.9 Collaborative Creativity:

Leverage and apply the knowledge, skills, experiences, and strengths of team members to generate original ideas, experiment with approaches, and develop innovative solutions.

11.0 Research & Media Literacy

Employ valid and reliable research strategies.

11.1 Critical Inquiry & Media Analysis:

Demonstrate media literacy through critical inquiry, analysis, and reflection.

11.2 Diversity of Perspective:

Gather and synthesize information from diverse sources (e.g., research, interviews, observation, and experience) to develop original insight and perspective.

11.3 Citing Sources:

Avoid plagiarism and properly cite sources and proprietary information using appropriate formats.

11.4 Industry Trends:

Research current and emerging industry-specific technology, equipment, tools, and practices; collect, analyze, and apply quantitative and qualitative data to drive decisions.

11.5 Source Credibility & Bias:

Analyze and interpret resources from various sources to assess bias and discern the credibility, quality, and value of information collected online.

11.6 Use of Technology in Research:

Follow fair use guidelines, fact-check information, identify and cite source material, and respect intellectual property rights when using technology or web-based research tools.

11.7 Messaging:

Create original industry-specific messages (e.g., reports, presentations, digital communications, and product messaging) that demonstrate ethical use of information, clear purpose, and consideration of intended audiences.

12.0 Audience & Behavior

Understand the environmental, social, and economic impacts of human behavior.

12.1 *Emerging Technology:*

Analyze how emerging technologies and technological trends (e.g., AI, automation, biotechnology, and renewable energy) affect environmental sustainability, community well-being, and economic development.

12.2 *Environmental Responsibility:*

Evaluate and apply practices that reduce environmental impact and support sustainable resource use in industry-specific settings (e.g., lifecycle analysis, sustainable sourcing, resource management, and waste reduction).

12.3 *Social Impact:*

Develop and contribute to industry-specific projects that address social, cultural, environmental, and community needs.

12.4 *Audience Awareness:*

Study and engage with diverse audiences by observing perspectives, behaviors, and needs; examine how social and cultural trends influence communication, decision-making, and adoption of products or practices.

12.5 *Consumer Behavior:*

Evaluate how consumer choices are shaped by technology, data, and trends, and how those choices impact businesses and industries (e.g., algorithm-driven recommendations, data analytics, product reviews, and social influence).

12.6 *Economic Impact:*

Assess how individual and collective behaviors affect local and global economies, including supply chains, markets, and workforce needs.

12.7 *Civic & Ethical Responsibility:*

Examine how industries and individuals can promote ethical practices, accountability, and civic engagement to address societal challenges (e.g., fair labor, ethical sourcing, data privacy, and transparency).

12.8 *Adaptation & Change:*

Evaluate how industries, organizations, and professionals adapt to shifting environmental, social, and economic expectations, and apply strategies for resilience and innovation.

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12.9 *Long-term Impacts of Decisions:*

Analyze the interconnectedness of environmental, social, and economic systems to understand the long-term impacts of decisions (e.g., circular economy models, regenerative agriculture, and sustainable digital technology practices).

Cross-Pathway Standards

13.0 Business, Marketing, & Public Relations⁷

Evaluate and employ strategic business and marketing strategies.

13.1 *Storytelling for Product Value and Impact:*

Develop and present stories that demonstrate the value of a product, service, or experience.

13.2 *Pitching Creative Concepts:*

Pitch an original concept with a visual presentation and narrative that clearly communicates the idea and engages the audience.

13.3 *Brand Identity & Visual Merchandising:*

Develop, maintain, and present a visually compelling and consistent brand identity across products, services, experiences; design merchandising displays to reinforce brand recognition and establish visual impact.

13.4 *Content Monetization Strategies:*

Identify and compare ways creators earn income by analyzing examples of monetization strategies used on social media, video sharing, and streaming platforms.

13.5 *Managing Budgets:*

Develop and manage budgets for creative projects by forecasting costs, allocating resources, tracking expenditures, and evaluating return on investment (ROI).

13.6 *Client Interaction:*

Listen to client or customer needs, interact professionally, and help define clear and actionable objectives that satisfy their goals.

⁷. Refer to the *Marketing & Sales Career Cluster, Marketing, Advertising, & Public Relations Pathway* for related standards.

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13.7 *Business Acumen:*

Develop business acumen to advance a creative idea in a business life cycle (i.e., collaborating with key interest holders, networking to identify partnerships, pitching and refining business concepts, maintaining a brand identity, managing business finances, and sourcing and maintaining client relationships).

13.8 *Public Relations (PR):*

Apply PR strategies including media and audience engagement to the development of campaigns, press kits, crisis management, and publicity planning.

13.9 *Understanding the Content Ecosystem:*

Identify the relationships between content creators, publishers, developers, distributors, marketers, and retailers, and package content to reach an intended audience.

14.0 Legal Responsibility⁸

Evaluate legal and ethical fundamentals for creative industries.

14.1 *Intellectual Property (IP) Types:*

Identify the different types of intellectual property and related laws (e.g., copyright, trademark, rights of publicity, and patents) and explain how they protect creative and commercial assets.

14.2 *Fair Use:*

Define the factors used to determine fair use and analyze how emerging technology (e.g., generative AI) challenges traditional concepts of authorship, ownership, and fair use.

14.3 *Protecting Confidentiality:*

Apply rules and regulations regarding sharing of confidential information as determined by workplace practices including Non-Disclosure Agreements (NDAs).

⁸. Refer to the *Management and Entrepreneurship Cluster, Business Law, Regulation, & Responsibility* Pathway for related standards.

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14.4 *Contracts & Contract Terminology:*

Analyze contracts and/or legal documents to identify fair terms and ensure protection of creative IP and ownership rights; use correct terminology as it applies to contracts and legal matters.

14.5 *Terms of Use:*

Comply with the rules, regulations and conditions set by a platform, service, or website when accessing or using its resources.

14.6 *Fraud Prevention:*

Analyze strategies for fraud prevention by recognizing common threats, protecting sensitive information, and following privacy and compliance regulations in business and marketing settings.

14.7 *Employment Law:*

Examine employment laws related to hiring, wages, workplace safety, labor unions, and discrimination.

14.8 *Freelance Rights:*

Identify worker classifications, contract terms, compensation rights, and ethical responsibilities for independent contractors (freelance) and full-time creative roles.

14.9 *Comparing Business Entity Types:*

Differentiate types of businesses (e.g., sole proprietorship, partnership, limited liability corporation, S corporation, public benefit corporation, and 501(c) 3 organization).

15.0 Media Content Creation

Develop and create original content for storytelling and online publishing.

15.1 *Narrative Storytelling:*

Evaluate and demonstrate how narrative structure, point of view, character, conflict, theme, and setting impact story development.

15.2 *Platform-Specific Content:*

Develop original content for a specific media platform based on format, length, and intended audience.

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15.3 *Authentic Representation:*

Create content with authentic representation of diverse people, communities, perspectives, and stories.

15.4 *Storytelling Across Mediums:*

Tell engaging and compelling stories using a variety of artistic mediums and/or media formats.

15.5 *Pre-Production Planning:*

Develop and communicate a story using different industry-specific methods (e.g., outline, script, rundown, treatment, storyboarding, and shot lists) prior to capturing or creating content.

15.6 *Cinematic Techniques:*

Use angles, composition, framing, shots, and editing to enhance visual storytelling.

15.7 *Audio Integration:*

Use music and audio to enhance storytelling; generate and integrate audio elements (e.g., sound effects, dialog, and music) into cohesive projects.

15.8 *Editing Fundamentals:*

Assemble and refine audio or visual content, ensuring clarity, continuity, and audience engagement; use industry-standard editing techniques appropriate to the project.

15.9 *Rendering & Exporting:*

Apply rendering and exporting techniques to comply with industry standards.

16.0 Production & Project Management

Evaluate production pipeline and project workflow.

16.1 *Production Tools & Equipment:*

Identify supplies, tools, and equipment by name, function, and purpose; properly handle, operate, maintain, and document supplies, tools, and equipment used in exhibition, interior design, and production environments.

16.2 *Roles & Responsibilities:*

Evaluate roles and responsibilities for each member of a production or project team; work collaboratively and interact professionally to meet directorial goals, realize creative ideas, and execute project needs.

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- 16.3 *Event & Production Planning:*
Design, plan and execute productions, activations, and events for different venue types, sites, locations, audiences, and purposes.
- 16.4 *Creative Planning:*
Develop and analyze creative plans to identify project or production needs (e.g., creative brief, script, storyboard, game design document, setlist, and schematic).
- 16.5 *Budgeting & Scheduling:*
Develop, maintain, and execute a project or production budget and explain the importance and interrelationship between timelines and budget constraints.
- 16.6 *Production Phases & Workflow:*
Differentiate components and workflow for each stage associated with the preproduction, production, and post-production of a creative project.
- 16.7 *Collaboration Software:*
Contribute to multi-phase projects by managing shared tasks through professional project management software technology, collaboration platforms, shared drives, and version-controlled files.
- 16.8 *Project & Budget Meetings:*
Facilitate and contribute to production and project management meetings to discuss creative plans, budgets, timelines, constraints, responsibilities, and division of duties.
- 16.9 *Logistics & Resource Planning:*
Identify specific production or project needs and logistics (e.g., timeline, location/venue, casting, funding, insurance, permits, equipment, blueprints or schematics, scheduling, and crewing/staffing); adhere to all workplace safety standards and protocols for performance venues or locations.

Pathway Standards

Design, Visual, & Media Arts Pathway

Pathway Description:

The Design, Visual, & Media Arts pathway prepares students to develop original content for a variety of media platforms and audiences. Students in this pathway will learn to conceptualize, design, and produce professional quality visual and digital artwork while developing a strong foundation in fine art, design theory, digital technology, and public exhibition.

Students collaborate on projects (e.g., illustrations, animations, games, websites, branding and marketing materials, and art exhibits) while exploring professional roles and responsibilities across studio and production environments. The pathway emphasizes creative processes, visual storytelling, content creation, project management, and industry-standard practices in design, digital media, and visual arts.

Occupational Alignment: O*Net-SOC Codes

11-2011.00 – Advertising and Promotions Managers
13-1082.00 – Project Management Specialists
15-1254.00 – Web Developers
15-1255.00 – Web and Digital Interface Designers
15-1255.01 – Video Game Designers
25-1121.00 – Art, Drama, and Music Teachers
25-4011.00 – Archivists
25-4012.00 – Curators
25-4013.00 – Museum Technicians and Conservators
27-1011.00 – Art Directors
27-1013.00 – Fine Artists, Including Painters, Sculptors, and Illustrators
27-1014.00 – Special Effects Artists and Animators
27-1021.00 – Commercial and Industrial Designers
27-1024.00 – Graphic Designers
27-1027.00 – Set and Exhibit Designers
27-1029.00 – Designers, All Other
27-2012.00 – Producers and Directors
27-2012.05 – Media Technical Directors/Managers
27-4014.00 – Sound Engineering Technicians
27-4021.00 – Photographers

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

Focus Areas:

Animation & Visual Effects
Game Design
Design & Graphic Arts
Studio Arts

Advance CTE Sub-Cluster Alignment: *Design and Digital Arts, and Fine Arts.*

Design, Visual & Media Arts Pathway

Animation & Visual Effects

Focus Area Description:

The Animation & Visual Effects (VFX) focus area emphasizes creative and technical skills in visual development, concept art, animation, and VFX. Students will apply foundational principles of art, design, and visual storytelling while developing proficiency in two-dimensional (2D) animation, three-dimensional (3D) animation, and digital effects. Emphasis is placed on collaborative work within production pipeline environments, where students will experience the teamwork and workflow used in professional studios.

17.0: Animation & VFX (AV): Skill Building

AV.17.1 *Art & Design Fundamentals:*

Apply elements and principles of art and design to characters, props, and environments; differentiate lighting sources and types, and apply color theory to establish time, atmosphere and mood when lighting and shading a scene. ⁹

AV.17.2 *Life Drawing, Anatomy & Perspective:*

Create anatomically and physiologically accurate bipedal (human) and quadrupedal (animal) forms for use in animation; apply proportion, depth of field, anatomy, body mechanics, and facial expressions when designing characters.

AV.17.3 *Layouts & Environments:*

Design layouts, environments, and backgrounds using principles of visual composition; refine setting, lighting, and depth to align with character scale, story, style, and animation requirements.

⁹. CTE Standards are focused on career-readiness in the arts. Refer to the California Arts Standards for academic alignment to standards related to media arts and visual arts.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- AV.17.4 *Character Design & Posing:*
Use dynamic poses to develop turnarounds and action poses that convey emotion, gestures, personality and traits; generate multiple turntable and orthographic views including a range of character body types and costume designs.
- AV.17.5 *Storyboarding:*
Apply principles of composition, camera shots and angles (wide, medium, closeups, and extreme closeups), line work, and visual storytelling when developing storyboards for 2D and 3D animation.
- AV.17.6 *Animation Types:*
Compare different types of animation tools, workflows, visual styles, and industry applications (i.e., 2D, 3D, stop motion, and motion graphics).
- AV.17.7 *Animation Principles:*
Apply the twelve principles of animation to characters, objects, and text (e.g., squash and stretch, anticipation, staging, straight ahead action and pose to pose, follow through and overlapping action, slow in and slow out, arcs, secondary action, timing, exaggeration, solid drawing, and appeal).
- AV.17.8 *3D Animation Fundamentals:*
Design and model props, vehicles, and characters to demonstrate core animation principles (e.g., weight, timing, visual storytelling); develop and apply rigging systems to enable animation using keyframing and/or match moving.¹⁰
- AV.17.9 *VFX Techniques:*
Use VFX tools and techniques (i.e., rotoscoping, digital painting, and compositing) to isolate elements, enhance visuals, and seamlessly integrate layers within a scene; analyze emerging VFX technologies and workflows.

¹⁰. Refer to the *Game Design focus area* for standards specific to 3D animation in games.

18.0 Animation & VFX: Process and Practice

- AV.18.1 *Production Pipelines & Department Roles:*
Evaluate the production pipeline, roles, and responsibility of each department, including the steps, skills, and processes within each pipeline stage (e.g., pre-production, production, and post-production).
- AV.18.2 *Storyboarding & Animatics:*
Develop detailed storyboards and animatics that incorporate timing, camera framing, sound, and motion to plan scenes for both 2D and 3D animation.
- AV.18.3 *Previsualization Techniques:*
Convert animatics into detailed previsualizations by integrating characters, props, and environments to accurately plan timing, camera angles, and scene composition (rendered or in real-time).
- AV.18.4 *Animation Production:*
Animate scenes using keyframes, frame-by-frame techniques, motion capture, or procedural animation; apply animation principles to both 2D and 3D characters and elements in multiple scenes.
- AV.18.5 *Basic Effects:*
Enhance scene realism and visual interest by creating and integrating dynamic simulations and digital effects in alignment with the show's style and aesthetic (e.g., particle systems, smoke, fire, water, fur/hair, and destruction).
- AV.18.6 *Cinematic Lighting & Effects:*
Enhance realism and visual interest in animated scenes by integrating lighting effects, advanced shading, textures and material rendering techniques to define mood, simulate real-world surfaces, and support the story.
- AV.18.7 *Rendering & Compositing:*
Render final sequences or export frames; composite multiple layers, effects, and color corrections to produce seamless, polished animations for both 2D and 3D projects.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

AV.18.8 *Editorial Workflow:*
Collaborate with an editorial team to sequence shots, integrate sound design, voiceover, and music, apply color grading, and finalize the animation for distribution across platforms.¹¹

AV.18.9 *Pipeline Collaboration & Project Management:*
Coordinate workflows and communication among departments, utilize asset/version management systems, and follow project timelines and quality standards for both 2D and 3D animation productions.

19.0 Animation and VFX: Career Exploration

AV.19.1 *Pre-Production, Previs, & Concept Art:*
Explore careers in pre-production (e.g., pre-visualization, visual development, storyboarding, layout, voice casting, art direction, scriptwriting, and concept art).

AV.19.2 *Production Management:*
Explore careers in production management (e.g., production coordination, line production, asset management, post-production supervision, pipeline supervision, and operations).

AV.19.3 *Digital FX and VFX:*
Explore careers in VFX (e.g., digital matte painting, 3D modeling, rigging and animation, technical direction, FX animation, lighting, compositing, match moving, and coloring).

AV.19.4 *Virtual production:*
Explore careers that support integration of virtual production and real-time VFX technologies on set (e.g., LED walls, real-time compositing, camera tracking, and motion capture (MoCap), supervision).

AV.19.5 *Cross-Sector:*
Explore careers for animation and VFX professional across industry sectors (e.g., healthcare, automotive, aerospace, education, retail, and virtual training).

¹¹. Refer to the *Media Production Pathway, Digital Editing and Post-Production focus area* for standards specific to editing and post-production.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- AV.19.6 *Organized Labor:*
Demonstrate understanding of the role of unions and professional organizations in animation production, including labor rights, project jurisdiction, and collaboration with unionized artists and technicians.

20.0 Animation & VFX: Advanced Technology and Impact

- AV.20.1 *Virtual Production Technology:*
Investigate how animation and VFX workflows change in virtual production environments; explain how virtual production technology, including the use of MoCap, LED volume sound stages, gaming engines, and real-time rendering, has changed animation and VFX industries.
- AV.20.2 *Immersive Media:*
Adapt animation techniques for extended reality (XR), including 360° staging, character animation, and environmental interactions that respond to user input or gaze direction.
- AV.20.3 *Protecting Intellectual Property:*
Analyze how animation studios are developing and utilizing AI technology and workflow; identify the processes, tools, and methods for safeguarding intellectual property and preventing unauthorized use of digital artwork.
- AV.20.4 *Social Impact:*
Create animated stories that address social or environmental issues by building meaningful narratives and authentically portraying characters and communities.

Design, Visual & Media Arts Pathway

Game Design

Focus Area Description:

The Game Design focus area emphasizes both creative and technical skills in development, design, and production of video games. Students will apply foundational principles of art, design, and visual storytelling while developing proficiency in game engines, real-time rendering tools, level design, and technical art. Emphasis is placed on concept development, game art, world and level design, user experience (UX), user interface (UI), and production pipelines.

17.0: Game Design (GD): Skill Building

GD.17.1 *Game Design Fundamentals:*

Identify and explain core components of game design (e.g., gameplay systems, level design, world design, rules, user interfaces, reward structures, and accessibility features) that create immersive player experiences.

GD.17.2 *Game Concept Development:*

Develop original game ideas by choosing a genre, defining target player profiles, and designing the worlds, mechanics and themes that will drive gameplay and player engagement.

GD.17.3 *Narrative Design:*

Design branching narratives that use player choice, interactive dialogue, and worldbuilding to shape outcomes and give players influence over the story progression.

GD.17.4 *Art & Design Fundamentals:*

Apply elements and principles of art and design to develop game environments, characters, and props for use in interactive 3D games.¹²

¹². CTE Standards are focused on career-readiness in the arts. Refer to the California Arts Standards for academic standards related to media arts and visual arts.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- GD.17.5 *Character Design:*
Design game characters using anatomy and movement principles that communicate personality and gameplay function.¹³
- GD.17.6 *Scripting & Level Layout:*
Use visual scripting or basic coding to control game logic, activate in-game events, and structure levels to guide player movement and interaction.
- GD.17.7 *Gameplay Systems & Balancing:*
Design and balance core systems (e.g., movement, combat) and supporting systems (e.g., economy, difficulty, crafting, scoring, and upgrades) to align with the desired pace and theme of a game.
- GD.17.8 *Feedback Systems:*
Implement responsive feedback systems such as animations, cutscenes, sound effects, heads up display (HUD) updates, and dynamic Non Player Characters (NPC's) based on player actions to communicate gameplay systems and updates to players.
- GD.17.9 *Multiplayer & Networking Basics:*
Explain core multiplayer design principles and networking concepts (e.g., client-server models, latency, session management) that impact online and local player interactions.

18.0 Game Design: Process and Practice

- GD.18.1 *Production Pipelines & Department Roles:*
Analyze the game production pipeline by identifying department roles and collaborative processes from concept through prototyping, design, development, testing, and launch.

¹³. Refer to the Animation & VFX focus area for standards specific to concept art, animation and VFX

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- GD.18.2 *Game Design Document (GDD):*
Create and maintain a comprehensive GDD (or equivalent) detailing gameplay mechanics, narrative structure, art direction, systems design, and technical requirements to guide development.
- GD.18.3 *Concept Pitch & Iteration:*
Develop and pitch high-level game concepts, incorporating player demographics, gameplay loops, narrative arcs, and thematic pillars; iterate concepts based on feedback.
- GD.18.4 *Worldbuilding:*
Construct and document immersive game worlds using spatial logic, environmental storytelling, visual themes, and narrative alignment to support exploration, gameplay, and storytelling.
- GD.18.5 *Player Immersion:*
Build player immersion by integrating consistent visuals, interactive narrative elements, real-time feedback, and environmental storytelling techniques.
- GD.18.6 *Playtesting:*
Conduct playtesting sessions to evaluate prototypes; collect data and iteratively refine gameplay systems, level flow, user interface, and player engagement.
- GD.18.7 *UX & UI:*
Design intuitive UX and UI that support navigation, enhance usability, and provide seamless interaction between the player and the game system.
- GD.18.8 *Game Performance & Evaluation:*
Evaluate and optimize game performance through frame rate management, asset loading strategies, and hardware compatibility testing to ensure a smooth player experience.¹⁴

¹⁴. Refer to the *Media Production Pathway, Digital Editing and Post-Production focus area* for detailed editing standards.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- GD.18.9 *Monetization:*
Analyze monetization strategies (e.g., premium, freemium, in-app purchases, ads) and evaluate their design integration, player impact, ethical considerations, and application in different game genres and platforms.

19.0 Game Design: Career Exploration

- GD.19.1 *Pre-Production:*
Explore careers in pre-production for games (e.g., prototyping, concept art, visual development, storyboarding, layout design, art direction, scriptwriting, and pre-visualization).
- GD.19.2 *Game Design & Development:*
Explore careers in game design and development (e.g., animation, VFX, gameplay programming, technical art, level design, UX and UI design, and quality assurance).
- GD.19.3 *Esports:*
Explore careers in esports (e.g., competitive gameplay, team management, coaching, event production, broadcasting, shout casting, content creation, marketing, social media, and esports analytics).
- GD.19.4 *Cross-Sector:*
Explore careers for game designers across sectors (e.g., virtual training environments, drone interfaces, medical simulations, architectural visualization, and interactive media for learning).
- GD.19.5 *Entrepreneurship:*
Explore entrepreneurial and freelance career opportunities for game designers.

20.0 Game Design: Advanced Technology and Impact

- GD.20.1 *Virtual Production Technology:*
Examine and differentiate the use of MoCap and game engines in traditional gameplay development versus virtual production (e.g., real-time rendering, live camera tracking, and on-set performance capture).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- GD.20.2 *Accessibility & Ethics:*
Employ responsible and ethical game design practices; identify and integrate accessibility features throughout the game design process (e.g., subtitles, colorblind modes, and control remapping) to ensure access for all players.
- GD.20.3 *Game Development:*
Demonstrate knowledge of common programming languages (e.g., C++, Python, and JavaScript) used in game development by identifying their applications, syntax basics, and use cases across engines and platforms.
- GD.20.4 *Extended Reality (XR):*
Identify how animated 3D environments are optimized for real-time rendering in XR platforms (e.g., Virtual Reality (VR) and Augmented Reality (AR) headsets); apply 360° staging, character animation, and environmental interactions that respond to user input or gaze direction.
- GD.20.5 *Social Impact:*
Design games that address social or environmental issues by integrating meaningful narratives, ethical game mechanics, and inclusive design principles.

Design, Visual & Media Arts Pathway

Design & Graphic Arts

Focus Area Description:

The Design & Graphic Arts focus area emphasizes creative and technical skills in human-centered design, UI and UX design, graphic arts, and visual storytelling. Students will apply iterative design processes to explore ideas, respond to feedback, and refine their work for clarity, impact, and purpose. Through collaborative, real-world projects, students will design and produce marketing campaigns, products, publications, services, fashion concepts, artwork, environments, and immersive experiences that communicate to a variety of audiences and meet the needs of diverse clients.

17.0 Design & Graphic Arts (DGA): Skill Building

DGA.17.1 *Art & Design Fundamentals:*

Apply principles of art and design to original work; incorporate color theory, color modes, contrast, opacity, transparency, shading, and layering to create depth and movement within designs.¹⁵

DGA.17.2 *Human-Centered Design:*

Prioritize the needs, behaviors, and experiences of people at every stage of the design process; emphasize empathy, prototyping, and iterative testing to develop practical and meaningful solutions to design challenges.

DGA.17.3 *Visual Communication:*

Use narrative, decorative, informative, persuasive, and/or conceptual illustrations to explain a creative idea or vision.

DGA.17.4 *Typography & Visual Messaging:*

Apply knowledge of typography and letterforms to set visual tone, deliver clear messages, and organize information (e.g., hierarchy, legibility, alignment, kerning, and tracking).

¹⁵. CTE Standards are focused on career-readiness in the arts. Refer to the California Arts Standards for academic standards related to media arts and visual arts.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DGA.17.5 *Print Design:*
Use layout and vector-based software to create print applications like logos, posters, packaging, brochures, or signs.
- DGA.17.6 *UX & UI Design:*
Apply UX and UI principles to design experiences for websites, applications, social networks, and digital services (e.g., wireframing, prototyping, user testing, and responsive design).
- DGA.17.7 *Interaction Design:*
Apply principles of interaction design to identify user flow, logic, and behaviors of interactive elements and prioritize UX and UI in digital products and services.
- DGA.17.8 *Accessibility:*
Use accessible and inclusive design practices, considering the needs of people with different abilities (e.g., designing for diverse cultural perspectives, using accessible color contrasts, providing alt text for images, incorporating captions, following universal design principles, and testing with assistive technologies).
- DGA.17.9 *Motion Graphics & Effects:*
Create and integrate images, effects, motion graphics, and/or animation into final content (e.g., title sequences, animated infographics, visual transitions, and kinetic typography).¹⁶

18.0 Design & Graphic Arts: Process and Practice

- DGA.18.1 *Creative Problem-Solving:*
Explore and apply different approaches to solving design problems (e.g., brainstorming, mind mapping, iterative prototyping, and design sprints) and evaluate what makes each approach successful.
- DGA.18.2 *Project Briefs:*
Read and interpret a project brief and generate multiple relevant concepts that align with project goals and target audience.

¹⁶. Refer to the *Animation & VFX focus area* for detailed animation standards.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DGA.18.3 *Storytelling Through Design:*
Use design elements to convey a clear narrative and evoke emotion in the intended audience (e.g., composition, pacing, symbolism, and visual metaphors).
- DGA.18.4 *Defining Client Objectives:*
Help clients define clear and actionable design objectives that satisfy their goals and allow creative exploration while staying within scope, budget and timeline.
- DGA.18.5 *Proposal Development:*
Write a proposal for a client, including scope of work, pricing, timelines, relevant case studies, and work samples.
- DGA.18.6 *Project Execution:*
Collaborate on all phases of a complex design project within a professional setting (e.g., research, concept development, prototyping, production, quality review, and final execution).
- DGA.18.7 *Project Management Technology:*
Assign, track, maintain, and report progress for all tasks and deliverables using industry-standard project management software.
- DGA.18.8 *Project Management Best Practices:*
Monitor project milestones, deadlines, and deliverables; create project status presentations, present concepts, drafts, and final outcomes to clients and interest holders.
- DGA.18.9 *Meeting Deadlines:*
Collaborate with a cross-functional design team to finalize and deliver a project on time while ensuring quality standards are met.

19.0 Design & Graphic Arts: Career Exploration

- DGA.19.1 *Cross-Sector:*
Explore the range of design careers across industry sectors (e.g., architecture, automotive design, industrial design, and visual communications).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DGA.19.2 *Graphic Design:*
Explore careers in packaging, publication, and graphic design (e.g., book design, product packaging, magazine layout, social media, digital curation and exhibition).
- DGA.19.3 *Interactive Design:*
Explore careers in interactive and web design (e.g., app development, UX and UI, product design, system and information design, and digital wayfinding systems).
- DGA.19.4 *Advertising & Marketing:*
Explore careers in advertising, and digital marketing (e.g., social media management, advertisement design, influencer marketing, and brand strategy).
- DGA.19.5 *Entertainment:*
Explore careers for designers in film, television, and live entertainment (e.g., set design, lighting design, costume design, motion graphics, and event production).

20.0 Design & Graphic Arts: Advanced Technology and Impact

- DGA.20.1 *Environmental Sustainability:*
Apply sustainable design practices (e.g., selecting eco-friendly materials, reducing waste, optimizing energy use, designing for reuse, minimizing carbon footprint, and following certification standards).
- DGA.20.2 *Accessibility Compliance:*
Adhere to compliance standards (e.g., American with Disabilities Act [ADA], and Web Content Accessibility Guidelines [WCAG]).
- DGA.20.3 *Social Impact:*
Employ human-centered design practices and design solutions that address community, social, and environmental issues and concerns.
- DGA.20.4 *Computer-aided Design (CAD):*
Examine and explain how CAD software and other advanced design technology is used in environment, product, and/or scenic design.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

DGA.20.5 *Protecting Intellectual Property:*

Analyze how software companies are developing and embedding AI technology and workflow into design software; identify the processes, tools, and methods for safeguarding intellectual property and preventing unauthorized use of digital artwork.

Design, Visual & Media Arts Pathway

Studio Arts

Focus Area Description:

Students in the Studio Arts focus area will develop creative and technical skills across a range of digital and physical media. They will create, refine, price, and market original works, gaining insight into the professional practices of working artists and photographers. Through hands-on experience, students will design, curate, and install art exhibitions while learning to tailor their artistic approach for different audiences, commercial purposes, and clients. This focus area emphasizes both artistic expression, art production, and the business aspects of career in fine arts and photography.

17.0 Studio Arts (SA): Skill Building

- SA.17.1 *Art & Design Fundamentals:*
Apply elements and principles of art and design to original artwork and photography; incorporate color theory, shading, line, value, and contrast to create depth and movement when producing and refining visual compositions.¹⁷
- SA.17.2 *Visual Communication:*
Use photographic storytelling, conceptual imagery, and illustration to express ideas, topics, and stories.
- SA.17.3 *Perspective & Dimension:*
Apply knowledge of perspective and spatial relationships to enhance dimension in environments, scenic design, photography, and other artistic compositions and products.
- SA.17.4 *Anatomy, Posing & Character Expression:*
Apply a knowledge of anatomy, movement, and facial expressions, to design realistic and imaginative figures; pose and direct subjects in photography to convey emotion and capture expressive and well-composed images.

¹⁷. CTE Standards are focused on career-readiness in the arts. Refer to the California Arts Standards for academic standards related to media arts and visual arts.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- SA.17.5 *Equipment & Image Production:*
Responsibly and correctly handle and operate shared studio tools and equipment (e.g., cameras, lenses, art supplies, printmaking tools, and ceramics tools) using professional workflows.
- SA.17.6 *Artistic Techniques & Mediums:*
Apply a variety of techniques, materials, textures, mediums, and tools (e.g., traditional, digital, and photographic) to experiment, refine, and finalize original work.
- SA.17.7 *Image Manipulation:*
Combine and/or alter physical and digital images using various mediums and techniques (e.g., collage, painting, color, opacity, transparency, and layering).
- SA.17.8 *Documentation of Finished Work:*
Photograph or record artwork to accurately depict the physical qualities (e.g., scale, textures, colors, and materials) for promotion and preservation in digital or print formats.
- SA.17.9 *Critique:*
Apply critical response strategies throughout the creative process to support creative decision-making and to guide the refinement of original work.

18.0 Studio Arts: Process and Practice

- SA.18.1 *Themed Artwork:*
Produce a cohesive body of 2D or 3D work that reflects intentional creative decisions, aligning tools, media, and techniques with a chosen theme, concept, or story.
- SA.18.2 *Public Exhibition:*
Prepare and submit original visual work to public events (e.g., juried exhibitions, competitions, open calls, and gallery shows) in accordance with submission guidelines, media requirements, themes, and professional standards.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- SA.18.3 *Collaborative Exhibition Production:*
Collaborate with artists, directors, curators, and technical staff to realize an artistic vision in galleries, events, or public installations; plan exhibition logistics, including venues, permits, scheduling, budgets, insurance, transportation, equipment, and staffing.
- SA.18.4 *Professional Art Documentation & Installation:*
Apply professional gallery and exhibition standards to photograph, document, prepare, mount, label, and install original visual work (e.g., framing, matting, lighting, spatial planning, hanging systems, signage and accessibility).
- SA.18.5 *Installation Strike:*
Coordinate and execute the professional strike of an exhibition or installation, ensuring proper disassembly, documentation, packing, condition reporting, and storage or return of visual work and materials.
- SA.18.6 *Client-Based Artistic Production:*
Create artwork and photography that meets client specifications for commissioned or commercial purposes (e.g., murals, illustrations, photography, design work, and branded content), using appropriate materials, processes, and timelines.
- SA.18.7 *Art Valuation & Pricing Strategies:*
Determine the value of original artwork and apply appropriate pricing strategies for commercial sale, licensing, reproduction, exhibition, and consignment, factor in materials, labor, market trends, and gallery commission.
- SA.18.8 *Digital Marketing:*
Design and implement a marketing campaign to promote a product, service, public event, exhibition, or body of work using contemporary tools and platforms (e.g., social media, websites, email marketing, and digital portfolios).¹⁸

¹⁸. For comprehensive digital marketing standards, refer to the Marketing and Sales Career Cluster, Digital Marketing Pathway Standards.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- SA.18.9 *Developing a Professional Portfolio:*
Create, refine, and present a cohesive professional portfolio of original work that reflects a personal artistic voice, technical proficiency, and consistent style in a selected medium (e.g., painting, photography, sculpture, ceramics, and digital media).

19.0 Studio Arts: Career Exploration

- SA.19.1 *Cross-Sector:*
Explore careers for visual artists and photographers in commercial settings and across industries (e.g., graphic designer, illustrator, photographer, print production artist, and advertising artist).
- SA.19.2 *Arts Education:*
Explore careers in arts education and arts management (e.g., kindergarten through grade twelve (K–12) teacher, university professor, teaching artist, arts nonprofit director, community arts facilitator, and after-school program leader).
- SA.19.3 *Museum & Gallery:*
Explore careers for museum and gallery professionals (e.g., curators, archivists, exhibition designer, collections management and restoration professionals, gallery assistant, conservator, and museum education).
- SA.19.4 *Entertainment:*
Explore careers in visual development and art design/direction (e.g., concept artist, character designer, environment designer, art director, matte painter, storyboard artist, and pre-visualization artist).
- SA.19.5 *Entrepreneurship:*
Explore entrepreneurial and freelance careers for fine artists (e.g., freelance illustrator or painter, photographer, business owner, commission-based artist, printmaker, and muralist).

20.0 Studio Arts: Advanced Technology and Impact

- SA.20.1 *Creative Coding & Tech-Driven Art:*
Explore advanced technology (e.g., coding, computation, and data) as an artistic medium for art production, augmentation, and exhibition.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- SA.20.2 *Social Impact:*
Create art for the greater good; address a community need or problem with public art.
- SA.20.3 *Archiving & Preservation Technologies:*
Explore modern archiving and preservation techniques for maintaining artistic works.
- SA.20.4 *Protecting Intellectual Property:*
Analyze how software companies are developing and embedding AI technology and workflow into photography and illustration software; identify the processes, tools, and methods for safeguarding intellectual property and preventing unauthorized use of digital artwork.
- SA.20.5 *Accessibility & Inclusion in Creative Spaces:*
Implement accessibility practices in galleries, museums, and studios to ensure inclusive participation (e.g., ADA compliance, physical access, digital accessibility, assistive technologies, and inclusive program design).

Performance, Music, & Live Entertainment Pathway

Pathway Description:

The Performance, Music & Live Entertainment pathway prepares students for careers across a variety of entertainment settings by integrating artistic development with hands-on performance and production skills. Students understand all aspects of the performing arts ecosystem and execute production processes for events such as concerts, festivals, esports tournaments, theatrical productions, dance performances, and corporate presentations.

Students collaborate to create, produce, and showcase original work for live audiences. They explore on-stage, in-studio, and behind-the-scenes roles, including performance, directing, choreography, stage management, show design, event technology, and production coordination. The pathway emphasizes collaboration across departments, professional performance, technical precision, and creative expression.

Occupational Alignment: O*Net-SOC Codes

25-1121.00 – Art, Drama, and Music Teachers
27-1011.00 – Art Directors
27-1027.00 – Set and Exhibit Designers
27-2011.00 – Actors
27-2012.00 – Producers and Directors
27-2012.04 – Talent Directors
27-2022.00 – Coaches and Scouts
27-2031.00 – Dancers
27-2032.00 – Choreographers
27-2041.00 – Music Directors and Composers
27-2042.00 – Musicians and Singers
27-2091.00 – Disc Jockeys, Except Radio
27-2099.00 – Entertainers and Performers, Sports and Related Workers, All Other
27-3011.00 – Broadcast Announcers and Radio Disc Jockeys
27-3043.05 – Poets, Lyricists, and Creative Writers
27-4011.00 – Audio and Video Technicians
27-4015.00 – Lighting Technicians
27-4031.00 – Camera Operators, Television, Video, and Film
27-4014.00 – Sound Engineering Technicians
39-3092.00 – Costume Attendants
39-5091.00 – Makeup Artists, Theatrical and Performance
39-9031.00 – Exercise Trainers and Group Fitness Instructors

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

49-9096.00 – Riggers

Focus Areas:

Stage & Event Technology

Dance & Theatre

Music & Recording Arts

Advance CTE Sub-Cluster Alignment: *Lighting and Sound Technology and Performing Arts.*

Performance, Music, & Live Entertainment Pathway

Stage & Event Technology

Focus Area Description:

Students in the Stage and Event Technology focus area will design and produce different types of events for live audiences, developing technical proficiency with industry-standard equipment, hardware and software. They will learn to properly operate tools and equipment required for live productions, and collaborate across a variety of production environments, including dance and theatre performances, concerts, festivals, tournaments, and conferences. Through hands-on experience, students will build practical skills essential for successful live event production.

17.0 Stage & Event Technology (ST): Skill Building

- ST.17.1 *Production Design Fundamentals:*
Apply principles of art and design to production elements (e.g., sound, lighting, costuming, and architectural) to shape audience perception and performer interaction; determine design and technical requirements for various types of venues and live events (e.g., dance, theatre, concerts, sports, and presentations).
- ST.17.2 *Music-Driven Production Design:*
Analyze music structure, rhythm, and dynamics to synchronize lighting, projection, audio, and scenic design in live performances; evaluate how phrasing and thematic content shape timing, atmosphere, and audience engagement.
- ST.17.3 *Costumes & Makeup Design:*
Design, source, and assemble costumes and makeup that reflect aesthetic and cultural context, address performer needs, and use visual elements to support storytelling, define character, and engage audiences.¹⁹

¹⁹. Refer to the Fashion Design & Merchandising Standards for garment design and assembly standards.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- ST.17.4 *Scenic & Props:*
Design, source and construct scenic and property elements (e.g., staging, automation, soft goods, and 3D-printed components) to realize a creative vision; apply safety practices, adhere to industry-standard regulations, and ensure technical reliability.
- ST.17.5 *Power & Data Systems:*
Apply knowledge of power distribution and data routing (e.g., signal flow, networking, connectors, cabling, show power, load balancing) to scenic, lighting, video, and audio systems; ensure safe, reliable, and compliant installation, maintenance, and operation while protecting workers and audiences.
- ST.17.6 *Rigging:*
Apply knowledge of rigging systems to safely lift, suspend, and support lighting, audio, video, and scenic elements in alignment with production design; identify load limits, ensure proper anchoring, select and secure hardware, and mitigate hazards to protect workers, performers, and audiences.
- ST.17.7 *Lighting:*
Apply knowledge of lighting systems to safely install, operate, and adjust equipment; control intensity, hue, saturation, position, and effects to enhance mood, direct audience focus, and ensure performer and production safety.
- ST.17.8 *Audio:*
Select, install, operate, and adjust sound equipment (e.g., microphones, speakers, mixers, amplifiers, playback devices, and networked audio); coordinate radio frequency (RF) signals, route audio, and calibrate systems to deliver clear, balanced, and reliable sound.
- ST.17.9 *Live Video Integration:*
Configure, install, and operate live video systems (e.g., LED screens, projectors, cameras, switchers, and media servers); manage signal distribution, networking, and latency, and coordinate with lighting, audio, and scenic elements.

18.0 Stage & Event Technology: Process and Practice

- ST.18.1 *Reading Technical Drawings:*
Interpret technical drawings, stage plots, schematics and renders and create implementation plans; translate documents into actionable production tasks using scale and industry notation to ensure precision, safety, and alignment with design intent.
- ST.18.2 *Event Design Software Tools:*
Use industry-standard software (e.g., CAD, previzualization, show flow, cuing, image mapping, and presenter programs, and digital workstations) to create virtual stage models, visualize lighting and effects, and determine technical feasibility and alignment with creative direction.
- ST.18.3 *Console Operation:*
Program and operate control consoles for lighting, audio, video, automation, special effects, and broadcast systems; manage cues, transitions, and real-time adjustments (e.g., levels, timing, and troubleshooting) to maintain performance quality, system reliability, and safety for workers, performers, and audiences.
- ST.18.4 *Design & Test:*
Evaluate and refine technical and creative design elements (e.g., projection, lighting, costumes, and scenic) to finalize artistic decisions; collaborate with directors, designers, and departments to ensure safety, compliance, system performance, and audience experience.
- ST.18.5 *Stage Management:*
Coordinate rehearsals and live productions by maintaining schedules, calling cues, managing backstage communication, and preparing performers and crew.
- ST.18.6 *Rehearsal Workflow:*
Follow rehearsal procedures by arriving on time, presetting equipment, completing start-up tasks, and applying director or stage manager notes; execute cues, equipment adjustments, and technical changes to ensure continuity, safety, and alignment with production requirements.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- ST.18.7 *Live Equipment Troubleshooting:*
Diagnose and correct equipment issues (e.g., cabling faults, RF interference, lighting or video errors); apply safe and immediate fixes, document actions, and maintain reliability while protecting workers, performers, and audience experience.
- ST.18.8 *Live Event Execution:*
Operate all technical systems during a live event, following cues, maintaining safety, and managing show flow; communicate clearly, apply proper communications etiquette, and coordination with stage management to ensure seamless execution.
- ST.18.9 *Strike & Load-Out:*
Coordinate teardown and load-out of production equipment by following safe shutdown procedures and ensuring proper handling, transport, and storage to protect materials and maintain efficiency.

19.0 Stage & Event Technology: Career Exploration

- ST.19.1 *Cross-Sector:*
Explore careers across live production environments (e.g., concerts, theatre and dance, festivals, esports, tournaments, and conferences).
- ST.19.2 *Production Technology:*
Explore careers in the production crafts and trades (e.g., lighting, audio, video, special effects, scenic, automation, and stagehand).
- ST.19.3 *Creative Direction:*
Explore careers for producers, creative directors, and designers (e.g., production design, lighting design, sound design, experiential marketing direction, and tour direction).
- ST.19.4 *Venue Operations:*
Explore careers in venue management and operations (e.g., operations coordination, box office, facilities supervision, and event services).
- ST.19.5 *Touring & Booking:*
Explore careers in touring, talent management and booking (e.g., tour promotion, booking, talent management, tour management, and sustainability coordination).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- ST.19.6 *Organized Labor:*
Demonstrate understanding of the role of unions and professional organizations in live production environments, including labor rights, workplace safety, jurisdiction, and collaboration with union crews.

20.0 Stage and Event Technology: Advanced Technology and Impact

- ST.20.1 *Accessibility:*
Apply accessibility standards and inclusive design (e.g., venue access, seating, signage, captioning, audio description, assistive listening systems, and staff training) to ensure equitable participation for all audiences.
- ST.20.2 *Automation & Show Control Systems:*
Research how automation technology (e.g., rigging systems, moving lights, motorized scenery and stages, and programmable effects) integrates into live event production to support safety, precision, and creative impact.
- ST.20.3 *Special Effects:*
Analyze the design and safe execution of special effects (e.g., pyrotechnics, atmospheric effects, lasers, water features, and soundscapes) to support storytelling and audience engagement.
- ST.20.4 *Projection Mapping & Visual Technologies:*
Examine the use of projection mapping, LED video walls, and real-time rendering systems to create immersive stage environments and enhance live audience experiences.
- ST.20.5 *Environmental Sustainability:*
Identify sustainable practices in live event production (e.g., energy-efficient lighting, reusable scenic materials, waste reduction, and green transportation options).

Performance, Music, & Live Entertainment Pathway

Dance & Theatre

Focus Area Description:

Students in the Dance & Theatre focus area will devise and refine original work to perform in professional settings. They will explore and distinguish career opportunities for performers across educational, commercial and concert environments and apply elements of production design to support live performance. Through hands-on experience, students will also examine a range of careers for performers and those who work behind the scenes in the performing arts.

Note: The Dance & Theater focus area indicates common standards within both dance and theatre CTE courses. The techniques and expression of these standards are distinct for each discipline. While there is an opportunity for cross-discipline collaboration between dance and theatre courses, the focus area does not intend to combine dance and theatre CTE programs, supplant performing arts programs, or limit discrete dance and theatre offerings to students.

17.0 Dance & Theater (DT): Skill Building

- DT.17.1 *Physical Conditioning:*
Practice strengthening, coordination, balance, flexibility, and/or alignment exercises to improve physical technique for dance and/or theatre performance (e.g., warm-ups, conditioning drills, cross-training, and stretching).
- DT.17.2 *Technique Across Styles & Genres:*
Explore and refine techniques from different styles, crafts, forms, and genres in acting and/or dance disciplines.
- DT.17.3 *Performance Elements:*
Utilize proper breath control and performance elements (e.g., gesture, cadence, projection, pitch, power/energy, space, timing, and tone) to communicate character, intention, and emotion.
- DT.17.4 *Spatial Awareness:*
Safely navigate physical spaces and develop spatial and environmental awareness through practice and performance (e.g., stage directions, levels, formations, and blocking).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DT.17.5 *Wellness & Injury Prevention:*
Apply techniques that support overall wellness and reduce the risk of injury (e.g., yoga, Pilates, meditation, breathwork, nutrition, and mindfulness strategies).
- DT.17.6 *Audition & Performance Readiness:*
Attend auditions and prepare digital audition videos that respond to audition requirements; integrate technical skill and clear intent in ensemble, group, and solo performances.
- DT.17.7 *Directing Fundamentals:*
Apply directing techniques and communicate artistic ideas with performers, including blocking, text interpretation, pacing, character development, and feedback.
- DT.17.8 *Performing & Stage and Screen:*
Differentiate directing, choreography, and performance techniques for live theatre versus filmed productions (e.g., projection vs. microphone use, stage presence vs. camera framing, and timing vs. editing).
- DT.17.9 *Critique:*
Apply critical response strategies throughout the creative process to support creative decision-making and to guide the refinement of original work.

18.0 Dance & Theatre: Process and Practice

- DT.18.1 *Creative Collaboration:*
Participate fully in the collaborative creative process with peers, directors, and choreographers by contributing ideas, responding constructively, and supporting group goals.
- DT.18.2 *Improvisation for Creative Exploration:*
Use improvisation to explore ideas through movement, character choices, and spontaneous responses (e.g., physical games, ensemble activities, unscripted dialogue, and movement studies).
- DT.18.3 *Body Mechanics & Anatomy:*
Apply knowledge of anatomy and body mechanics to a safe physical practice (e.g., posture, alignment, balance, flexibility, strength, and injury prevention techniques).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DT.18.4 *Expression & Storytelling:*
Utilize movement and gesture to express character, emotion, and story points (e.g., facial expression, body language, mime, and symbolic gesture).
- DT.18.5 *Mood & Timing:*
Experiment with mood and timing to shape audience perception by integrating music, sound effects, silence, and/or spoken narrative (e.g., pacing, rhythm, dramatic pause, comedic timing, and tension-building).
- DT.18.6 *Technical Design:*
Experiment with technical design elements (e.g., projection, lighting, costumes, property, and scenic) to make artistic decisions and enhance performance.
- DT.18.7 *Promotional Content:*
Experiment with camera shots, angles, editing techniques, and digital tools to create professional promotional materials (e.g., reels, trailers, performance excerpts, behind-the-scenes clips, and audition tapes).
- DT.18.8 *Rehearsal & Performance Professionalism:*
Demonstrate professionalism during rehearsal and performance by preparing and refining work (e.g., memorizing material, adhering to production schedules, collaborating with cast and crew, and applying director/choreographer notes).
- DT.18.9 *Ensemble Skills:*
Develop ensemble awareness by actively listening, responding, and supporting fellow performers (e.g., building trust, maintaining focus, adjusting timing, and contributing to group dynamics).

19.0 Dance & Theatre: Career Exploration

- DT.19.1 *Performance:*
Explore careers for performers across concert, commercial, and tourism industries (e.g., cruise ship performance, theme park entertainment, music video performance, and corporate event acting).
- DT.19.2 *Arts Management:*
Explore careers in arts management. (e.g., studio management, venue management, company management, arts non-profit management, grant writing, and event coordination).
- DT.19.3 *Physical Fitness & Wellness:*
Explore careers in fitness, wellness, and physical therapy (e.g., fitness instruction, physical therapy, Pilates training, movement coaching, and somatic therapy).
- DT.19.4 *Creative Leadership:*
Explore careers in creative leadership (e.g., artistic direction, choreography, show design and production, casting, and stage direction).
- DT.19.5 *Arts Education:*
Explore careers in arts education (e.g., K–12 education, post-secondary education, teaching artistry, community arts facilitation, and expanded learning).
- DT.19.6 *Cross-Sector:*
Describe how performing artists are well equipped with transferable skills that apply to careers across industries (i.e. public speaking, project management, corporate training, and event planning).
- DT.19.7 *Entrepreneurship:*
Examine the realities and scope of opportunity within the entertainment industry for performing artists. (e.g., freelance performance and gig work, union membership, talent agent representation, and studio and company ownership); investigate grants and other funding opportunities.

20.0 Dance and Theatre: Advanced Technology and Impact

- DT.20.1 *Projection & Video Technology:*
Examine how video projection, projection mapping, and holographic technology can enhance possibilities for performers.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DT.20.2 *Automation:*
Investigate how stage automation technology can enhance possibilities for performers and production quality; examine how performers interact safely with moving set pieces, lifts, rigging systems, and automated lighting or props.
- DT.20.3 *Motion Capture Technology:*
Examine and explain the principles and applications of motion capture from the performer's perspective, including body tracking, facial capture, and gesture recognition in live performance, film, and animation.
- DT.20.4 *Environmental Sustainability:*
Examine and outline how sustainable production and touring practices reduce environmental impact in live entertainment (e.g., energy-efficient lighting, reusable set materials, responsible waste management, digital scripts, green transportation, and carbon footprint reduction).
- DT.20.5 *Site-Specific Performance:*
Design and perform site-specific work tailored for a particular location or environment; adapt performance elements to engage with the site's physical, cultural, or historical context.

Performance, Music, & Live Entertainment Pathway

Music & Recording Arts

Students in the Music & Recording Arts focus area will develop a strong foundation in music theory while devising and refining original work. They will learn to properly handle and operate instruments, use of voice, audio equipment, and digital audio workstations (DAWs), gaining proficiency in audio production and engineering software. Through hands-on experience, students will record and/or perform in live and studio settings and examine a variety of careers across the music industry that support and surround musicians and music producers.

Note: Music & Recording Arts focused pathways indicate common industry standards for CTE courses. The techniques and expression of these standards can be applied across vocal, instrumental, and digital CTE music programs. The Music & Recording Arts focus area is not intended to supplant music education programs or limit music education offerings to students.

17.0 Music & Recording Arts (MRA): Skill Building

MRA.17.1 *Structure & Style:*

Use critical listening to identify and describe key elements and styles of musical selections, including instrumentation, form, intent, context, and arrangement.²⁰

MRA.17.2 *Microphone Use:*

Apply professional microphone techniques (e.g., close micing, room micing, stereo recording, live reinforcement) to achieve optimal clarity, balance, tone, and overall sound quality for various sound sources.

MRA.17.3 *Microphone Selection & Placement:*

Differentiate and position microphones for specific sound sources (e.g., dialogue, instruments, ambient sound) to ensure proper capture and maintain overall sound quality.

²⁰. CTE Standards are focused on career-readiness in the arts. Refer to the California Arts Standards for detailed academic standards related to music education.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- MRA.17.4 *Live & Studio Performance:*
Execute professional live performance with precise timing, dynamics, transitions, and audience engagement; adjust sound, effects, and instrumentation in real time to achieve the intended performance quality.
- MRA.17.5 *Harmony & Music Structure:*
Analyze and apply music organization, harmony, piano voicings, and chord progressions to create, perform, or arrange musical pieces with accuracy and musicality.
- MRA.17.6 *Emotional Impact in Music:*
Describe how the emotional aspects of music such as tempo, dynamics, timbre, and feeling can invoke a particular response from the listener.
- MRA.17.7 *Digital Music Production:*
Apply Musical Instrument Digital Interface (MIDI) and DAW principles (e.g., recording, mixing, and mastering) to create and edit music.
- MRA.17.8 *Recording Process & Signal Flow:*
Differentiate analog and digital recording processes, including strategies for managing latency and signal flow.
- MRA.17.9 *Mixing Techniques in DAWs:*
Apply techniques (e.g., panning, gain levels, and EQ) for mixing instruments, vocals, and other sounds using a DAW.

18.0 Music & Recording Arts: Process and Practice

- MRA.18.1 *Experimentation & Improvisation:*
Experiment with different sounds, arrangements, samples, and pieces of music, using instruments, vocal techniques, and/or music technology to test and evaluate creative ideas.
- MRA.18.2 *Songwriting & Producing:*
Develop musical ideas based on themes and other sources of inspiration; understand and apply techniques for writing beats, loops, lyrics, melodies and harmonies.
- MRA.18.3 *Music Production Workflow:*
Produce original work using industry-standard equipment, hardware and software; record, edit, mix, master, and publish music in distinct styles.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- MRA.18.4 *Mood & Sound Design:*
Create desired music and sound effects to invoke a particular mood and impact an audience experience.
- MRA.18.5 *Commercial Music:*
Create original music for a client or commercial medium, such as advertising, video games, film soundtracks, etc.
- MRA.18.6 *Session & Performance Logistics:*
Identify logistics needs from production documents (e.g., stage plot, input list, run of show, rehearsal schedule); coordinate studio or live performance logistics, including load-in, setup, and load-out of audio equipment and instruments.
- MRA.18.7 *Technical Planning:*
Create and analyze a setlist and determine the flow, length, and equipment requirements of a show and/or a studio session.
- MRA.18.8 *Live Audio Technology:*
Set up, test, and regulate input levels and monitor mixing to ensure sound quality during live performances and recording sessions.
- MRA.18.9 *Mastering & Publishing Music:*
Record, edit, master, and publish music in distinct styles; export a final master in accordance with platform or distribution specifications for the optimal listening experience.

19.0 Music and Recording Arts: Career Exploration

- MRA.19.1 *Recording Studios:*
Explore careers for recording studio professionals (e.g., studio operations and management, mixing engineering, mastering, audio production, audio editing, and recording engineering).
- MRA. 19.2 *Live Audio:*
Explore careers in live audio and audio technology (i.e. front-of-house engineer, monitor engineer, live sound technician, and audio systems operator).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- MRA.19.3 *Music Education:*
Explore careers in music education and arts management (e.g., elementary and secondary education, post-secondary education, teaching artistry, arts nonprofit management, community arts facilitation, and expanded learning).
- MRA.19.4 *Contracts, Licensing, & Music Royalties:*
Differentiate types of contracts available to musicians (e.g., royalty splits, sync licensing, mechanical royalties, and contract agreements for songwriting, composition, recording and publishing).
- MRA.19.5 *Entrepreneurship:*
Examine the realities and scope of opportunity within the entertainment industry for musicians. (e.g., freelance performance and gig work, split-sheets, union membership, Performing Rights Organizations, studio and band ownership).
- MRA.19.6 *Cross-Sector:*
Explore careers for musicians and music producers across industries (e.g., music marketing, film and television composition, music supervision, game audio design, music direction, and session musician).

20.0 Music & Recording Arts: Advanced Technology and Impact

- MRA.20.1 *Projection & Video Technology:*
Explore and explain how video projection, projection mapping, and holographic technology can enhance possibilities for performers.
- MRA.20.2 *Automation:*
Investigate how automation has created new opportunities for spectacle and fundamentally changed what is possible in live entertainment.
- MRA.20.3 *Special Effects:*
Describe how special effects are used in live productions to enhance a musical performance.
- MRA.20.4 *Environmental Sustainability:*
Examine and explain how sustainable production and touring practices reduce environmental impact in live entertainment.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

MRA.20.5 *Immersive Audio:*

Investigate how spatial and immersive audio technology can enhance the listening experience and alter audio workflows.

Media Production Pathway

Pathway Description:

The Media Production pathway²¹ prepares students for careers in film, television, podcasting, broadcast, streaming, and immersive media by integrating creative development with hands-on production and post-production skills. Students learn to plan, capture, edit, and deliver high-quality audio and visual content across multiple platforms using industry-standard tools and workflows.

Students collaborate on scripted and unscripted projects (e.g., short films, news segments, commercials, podcasts, livestreams, and social media content) while exploring professional roles and responsibilities across production environments. The pathway emphasizes visual storytelling, production planning, content creation, digital editing, and industry-standard practices in film, television streaming, and broadcast media.

Occupational Alignment: O*Net-SOC Codes

11-2011.00 – Advertising and Promotions Managers
13-1082.00 – Project Management Specialists
27-1011.00 – Art Directors
27-1014.00 – Special Effects Artists and Animators
27-1024.00 – Graphic Designers
27-1027.00 – Set and Exhibit Designers
27-2012.00 – Producers and Directors
27-2012.03 – Media Programming Directors
27-2012.05 – Media Technical Directors/Managers
27-3011.00 – Broadcast Announcers and Radio Disc Jockeys
27-3023.00 – News Analysts, Reporters, and Journalists
27-3041.00 – Editors
27-4011.00 – Audio and Video Technicians
27-4012.00 – Broadcast Technicians
27-4014.00 – Sound Engineering Technicians
27-4015.00 – Lighting Technicians
27-4021.00 – Photographers
27-4031.00 – Camera Operators, Television, Video and Film
27-4032.00 – Film and Video Editors
39-3021.00 – Motion Picture Projectionists

²¹. Refer to Cross-Pathway Standards for foundational *Content Creation, Production & Project Management* standards.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

39-3092.00 – Costume Attendants

39-5091.00 – Makeup Artists, Theatrical and Performance

49-9096.00 – Riggers

Focus Areas:

Digital Communications

Film and Television

Digital Editing & Post-Production

Advance CTE Sub-Cluster Alignment: *Media Production and Broadcasting.*

Media Production Pathway

Film & Television

Focus Area Description:

Students in the Film & Television focus area will develop a comprehensive understanding of the cinematic process and learn to properly operate tools, equipment, hardware, and software used in filmmaking. Students will gain proficiency in digital editing and collaborate in physical (live action) production environments across scripted, unscripted, episodic, commercial, music video, and virtual production. Through industry-standard production practices, students will work collaboratively to produce original work and build skills essential for careers in film and television.

17.0 Film & Television (FT): Skill Building

- FT.17.1 *Pre-Production & Art Direction:*
Outline the pre-production process; explain how creators/writers, directors, and the art department collaborate to plan, schedule, and develop the visual design of a production based on a script and directorial vision.
- FT.17.2 *Screenwriting:*
Develop and revise original scripts by applying industry-standard formatting, narrative structure, character development, and dialogue techniques; prepare scripts for pitching, table reads, or production.
- FT.17.3 *Union Protocols:*
Outline professional standards and union protocols related to crew roles, safety procedures, break schedules, equipment handling, and labor rules on set.
- FT.17.4 *Camera Operation & Technique:*
Identify camera functions; properly handle, place, and operate cameras and related equipment (e.g., lenses, and filters) to capture high-quality content and achieve desired effects for an audience.
- FT.17.5 *Costuming, Hair & Makeup:*
Prepare and apply costumes, hair, and makeup (e.g., wigs, prosthetics, wardrobe fittings, continuity adjustments, and touch-ups) to align with the art direction; ensure character and cultural authenticity, continuity across scenes, and safe application for performers on set.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- FT.17.6 *Set Lighting, Power & Data Distribution:*
Apply knowledge of equipment, power and data distribution (e.g., signal flow, networking, connectors, cabling, load balancing) for safe installation and strike; operate lighting equipment to control intensity, color, and direction under the cinematographer's guidance.
- FT.17.7 *Audio & Sound Recording:*
Set up and operate on-set audio equipment (e.g., boom mics, lavaliers, mixers, timecode sync slates, and recorders) to capture clean audio and perform basic mixing and level adjustments during filming to ensure clarity and balance.
- FT.17.8 *Grip Department:*
Assemble and operate grip equipment (e.g., century stands [C-stands], flags, frames, truss systems, and camera dollies) needed to rig lights and cameras; apply techniques to shape light, rig backdrops, and support camera movement in accordance with the needs of the cinematographer.
- FT.17.9 *Special Effects:*
Identify materials and techniques used to create practical special effects on set (e.g., squibs, breakaway glass, smoke, rain rigs, animatronics); distinguish between physical effects and digital visual effects (i.e., VFX added in post-production).

18.0 Film & Television: Process and Practice

- FT.18.1 *Art Department:*
Collaborate with writers, show runners and directors to analyze a script for visual cues; design show elements using pre-production processes (e.g., concept art, storyboards, animatics, previsualizations and set designs) to establish visual style.
- FT.18.2 *Script Breakdown:*
Analyze scripts to determine technical and creative requirements; plan scene blocking, shot lists, and storyboards that communicate movement, timing, and spatial relationships.
- FT.18.3 *Production Planning & Location Scouting:*
Create and interpret call sheets; define departmental roles and needs based on script, visual style, and art direction; scout and assess locations to determine filming requirements and logistical challenges.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- FT.18.4 *Scheduling and Logistics:*
Develop and revise shooting schedules in collaboration with the first assistant director (First AD) based on production constraints, location needs, cast/crew availability, and weather; manage logistics using industry-standard tools and workflows.
- FT.18.5 *Continuity and Script Supervision:*
Monitor continuity across all departments in alignment with the script; use script supervision tools to maintain visual and narrative consistency.
- FT.18.6 *Talent Direction and Collaboration:*
Work collaboratively with actors to communicate scene objectives, emotional tone, and performance goals; apply professional on-set protocols for rehearsal, direction, and maintaining a respectful and productive filming environment.
- FT.18.7 *Production Management & Coordination:*
Coordinate cross-departmental communication and production documents, budgets, and permits to maintain workflow and ensure compliance with union and industry standards.
- FT.18.8 *Cinematography:*
Plan and execute visual storytelling by selecting shot types, lenses, camera movement, and lighting setups in collaboration with the director; confer with department heads to execute filming sequences.
- FT.18.9 *End-to-End Production Workflow:*
Manage a complete filmmaking process from concept to final screening by applying all production phases (e.g., development, pre-production, production, post-production, and distribution) and coordinating across departments to ensure creative and technical alignment.

19.0 Film & Television: Career Exploration

- FT.19.1 *Production Across Media Formats:*
Explore careers in different production environments (e.g., commercials, music videos, scripted and unscripted television, independent films, and feature films).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

FT.19.2 *Physical Production:*

Explore careers in physical production and production crafts (e.g., Casting, camera, grip, set lighting, production design, property (props), sound, construction, set dressing, set painting, special effects, costumes, hair and makeup, script supervision, editing, color correction, music supervision, VFX, production coordination, and post-production).

FT.19.3 *Creative Direction:*

Explore careers in creative decision-making (e.g., independent filmmakers, art directors, directors of photography, directors and first assistant directors, screenwriters, showrunners, production designers, editors, casting directors, and post-production supervisors).

FT.19.4 *Cross-Sector:*

Explore media and marketing careers across industries for filmmakers and editing professionals (e.g., brand storytelling, corporate training, social media content creation, branded content, and advertising).

FT.19.5 *VFX & Virtual Production:*

Explore careers in VFX and virtual production (e.g., on-set VFX, compositing, motion capture, VFX supervision, 3D animation, LED volume technician, real-time rendering, and virtual production coordination).

ST.19.6 *Organized Labor:*

Demonstrate an understanding of the role of unions in film and television including labor rights, workplace safety, jurisdiction, and collaboration with union crews.

20.0 Film & Television: Advanced Technology and Impact

FT.20.1 *Virtual Production Technology:*

Examine and differentiate the use of motion capture and game engines in traditional gameplay development versus virtual production, focusing on applications such as real-time rendering, live camera tracking, and on-set performance capture.

FT.20.2 *Virtual Production Workflow:*

Outline the virtual production pipeline (e.g., virtual storyboarding, virtual art department, virtual scouting, motion capture, motion control, and LED volume soundstages).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- FT.20.3 *XR Integration in Film Production:*
Analyze how content is produced for XR experiences by using 360° camera workflows, spatial staging, and interactive elements; apply techniques for capturing and editing immersive footage that supports audience engagement in virtual, augmented, and mixed reality environments.
- FT.20.4 *Environmental Sustainability:*
Identify sustainable practices that reduce the environmental impact of film and television production (e.g., sourcing reusable or recycled set materials, minimizing single-use plastics, adopting green transportation options, and sustainability coordination).
- FT.20.5 *Immersive Audio:*
Investigate how immersive audio technology can enhance the listening experience and alter post-production workflows.

Media Production Pathway

Digital Communications

Focus Area Description:

Students in the Digital Communications focus area will apply narrative and journalistic processes to develop and refine original A/V content. They will learn to capture and edit content tailored to specific media formats, purposes, and audiences while properly operating tools, equipment, hardware, and software for recording, editing, broadcasting, and streaming across different platforms. Through hands-on experience, students will build skills essential for digital communication and multimedia production.

17.0 Digital Communications (DC): Skill Building

- DC.17.1 *Narrative & Journalistic Storytelling:*
Research and apply journalistic and narrative storytelling techniques (e.g., leads, scripting, interview framing, voiceovers, and story arcs) to inform, engage, or persuade audiences.
- DC.17.2 *Scripting & Voice Performance:*
Write scripts for voiceover, anchoring, interviews, or narration; demonstrate on-camera presence, voice delivery, and pacing for live or recorded segments (e.g., news reports, podcasts, and promotional content).
- DC.17.3 *Content Capture Techniques:*
Capture high-quality audio, video, and images using professional tools (e.g., cameras, microphones, and mobile devices); adjust framing, lighting, composition, and sound levels for studio, field, and mobile environments.
- DC.17.4 *Mobile & Multiplatform Production Tools:*
Use portable gear (e.g., gimbals, mobile mics, editing apps) to capture edit, and prepare content for real-time publishing across platforms.
- DC.17.5 *Podcasting & Audio Production:*
Plan, record, edit, and mix audio content with clear structure and sound design; apply EQ, noise reduction, music beds, and vocal processing.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DC.17.6 *Photojournalism & Visual Reporting:*
Ethically capture and edit photographs that document events and tell compelling stories, using composition, lighting, and exposure techniques for professional-quality imagery.
- DC.17.7 *Multimedia Content Design:*
Design content for specific formats (e.g., social media, podcasts, news broadcasts, and public service announcements) by planning story structure and incorporating visual elements (e.g., titles, lower thirds, thumbnails, overlays, and captions) to ensure accessibility and platform readiness.
- DC.17.8 *Broadcast Switching & Engineering:*
Operate broadcast equipment (e.g., video switchers, audio mixers, and signal routing systems) in live or studio environments; troubleshoot signal flow, monitor levels, and manage live production cues.
- DC.17.9 *Editing & Distribution:*
Edit and refine audio, video, and multimedia content to ensure clarity of message and audience engagement; prepare final materials to meet platform specifications and distribution requirements (e.g., formatting standards, metadata tagging, and rights management).²²

18.0 Digital Communications: Process & Practice

- DC.18.1 *Content Planning & Preproduction:*
Develop and organize content ideas through research, audience analysis, and storyboarding (e.g., background research, topic selection, scriptwriting, shot lists, and production scheduling).
- DC.18.2 *Audience & Story Development:*
Identify audience needs and craft stories with clear objectives, tone, and messaging (e.g., community issues, audience preferences, trending topics, and public requests).

²². Refer to the *Digital Editing and Post-Production focus area* for standards specific to editing.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DC.18.3 *News & Reporting:*
Research, write, and deliver news and feature content across multiple formats; refine and edit material to match pacing, tone, and duration for each platform (e.g., reels, news packages, podcasts, and long-form reports).
- DC.18.4 *Live Commentary & Interviewing:*
Conduct interviews and moderate panels online or during live events (e.g., sports, conventions, parades, concerts); provide balanced and professional commentary.
- DC.18.5 *Remote Transmission & Streaming:*
Set up, operate, and monitor remote broadcast and streaming systems (e.g., location scouting, networking, bandwidth management, and live feed troubleshooting).
- DC.18.6 *Digital Publishing Tools:*
Use publishing platforms and scheduling tools to distribute content with correct metadata, descriptions, and formatting across digital and broadcast channels.
- DC.18.7 *Audience Engagement & Analytics:*
Monitor engagement metrics (e.g., likes, shares, views, and retention) to assess performance and inform content refinement.
- DC.18.8 *Commercial Media & Messaging:*
Produce content for commercial and sponsored purposes that communicates the value of products, goods, or services.
- DC.18.9 *Ethical & Legal Responsibilities:*
Apply media ethics, copyright law, and journalism standards (e.g., responsible reporting, copyright, attribution, fact-checking, fair use, and informed consent) when producing and sharing content.

19.0 Digital Communications: Career Exploration

- DC.19.1 *Cross-Sector:*
Explore careers for content creators and editors across industries (e.g., social media management, content strategy, brand storytelling, digital marketing, copywriting, and short-form video editing).

Career Technical Education Model Curriculum Standards:
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- DC.19.2 *Podcasting & Broadcast:*
Explore careers for podcast, streaming, radio, and broadcast professionals (e.g., producing, audio editing, live streaming, directing, shout casting, show hosting, and streaming content management).
- DC.19.3 *Journalism:*
Explore careers in journalism and documentary storytelling (e.g., news reporting, investigative journalism, documentary filmmaking, media relations coordination, media anchoring, and writing).
- DC.19.4 *Sports Broadcasting & Media:*
Explore careers in sports broadcasting and media (e.g., play-by-play announcing, color commentary, sideline reporting, sports journalism, camera operation, production editing, and digital content creation).
- DC.19.5 *Entrepreneurship:*
Examine the realities and scope of opportunity for content creators. (e.g., freelance work, influencer marketing, brand partnerships and sponsorships, subscriptions, e-commerce and merchandise sales, and content licensing).

20.0 Digital Communications: Advanced Technology and Impact

- DC.20.1 *Algorithms & Content Feeds:*
Describe how algorithms dictate user experiences and curated content feeds and are changing the ways creators produce, finance, distribute, and earn money from content.
- DC.20.2 *Streaming Technology:*
Investigate how streaming protocols, encoding technology, adaptive bitrate technology, and content delivery networks allow for real-time viewing of live events.
- DC.20.3 *Immersive Media:*
Explore possibilities with immersive storytelling and journalism through virtual and augmented reality technology.
- DC.20.4 *Generative AI & Deepfakes:*
Examine how generative AI tools create or manipulate images, including techniques used to alter content, style, or context, and evaluate their potential to shape viewer perception and influence opinions.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DC.20.5 *Digital Accessibility:*
Design and produce digital content that is accessible to all users, including those with disabilities, by applying accessibility standards (e.g., WCAG) and inclusive design principles.
- DC.20.6 *Social Impact:*
Develop and manage digital campaigns that promote positive social change, foster community engagement, and align with ethical and culturally responsible communication practices.

Media Production Pathway

Digital Editing & Post-Production

Focus Area Description:

The Digital Editing & Post-Production focus area prepares students for careers in editing film, television, animation, video games, and digital media content. Students use industry-standard software and tools for non-linear editing, motion graphics, sound design, and finishing workflows. Emphasis is placed on managing collaborative editorial processes, responding to creative direction, and executing technical tasks such as versioning, quality control, and packaging deliverables for diverse distribution platforms. Students explore professional workflows across scripted, unscripted, commercial, branded, and virtual productions while learning to meet the technical and creative standards required for professional post-production environments.

17.0 Digital Editing & Post-Production (DEP): Skill Building

- DEP.17.1 *Post-Production Pipeline Overview:*
Identify and describe the key phases of the post-production process (e.g., media ingest, editorial, sound, VFX, color, finishing, and delivery); differentiate post-production processes across film, animation, games, and digital media.
- DEP.17.2 *Media Ingest & Project Setup:*
Ingest media and organize all digital assets using proper folder structures, naming conventions, and asset management tools.
- DEP.17.3 *Non-Linear Editing Fundamentals:*
Assemble and refine sequences using industry-standard software (e.g., layered music, dialogue, cuts, dissolves, wipes) to maintain visual flow and narrative continuity based on guided creative direction.
- DEP.17.4 *Footage Review & Shot Selection:*
Review and evaluate all available media to select the strongest takes based on performance, continuity, coverage, and guided creative direction
- DEP.17.5 *Syncing & Multi-Cam Editing:*
Synchronize audio and video using timecode, slate, or waveform matching to organize and edit multi-camera or multi-source recordings within a synced sequence.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DEP.17.6 *Audio Editing & Sound Design:*
Edit and dialogue, voice over, music, ambient sound, and effects using digital audio software to enhance audio quality and storytelling (e.g., fades, EQ, and noise reduction).
- DEP.17.7 *Graphics & Visual Effects Integration:*
Create and integrate motion graphics, overlays, titles, captions, and lower thirds; apply basic visual effects and compositing techniques to enhance the visual experience.²³
- DEP.17.8 *Color Correction & Grading Fundamentals:*
Apply color grading techniques (e.g., color correction, exposure, color temperature) to establish mood, continuity, and visual style according to delivery specifications of the distribution platform.
- DEP.17.9 *Quality Control Review:*
Identify and resolve typical editing problems such as dropped frames, sync errors, rendering errors, missing media, color mismatches, and file format compatibility problems.

18.0 Digital Editing & Post-Production: Process and Practice

- DEP.18.1 *Media Management & Organization:*
Organize and label assets using scene numbers, file names, metadata, and script notes; apply consistent tagging and naming conventions to support collaboration, efficient retrieval, and long-term asset management.
- DEP.18.2 *Rough Cut Assembly:*
Assemble a rough cut by selecting footage and adding placeholders for graphics, sound, and effects; edit scenes for visual continuity and emotional impact using pacing, dialogue overlaps, and transitions (e.g., match cuts, J-cuts, L-cuts, fades, and gameplay wipes).

²³. Refer to the Design, Visual, & Media Arts Pathway, *Animation & VFX focus area* for standards specific to VFX.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DEP.18.3 *Review Cycles & Feedback Integration:*
Manage and respond to editorial notes from the director, producer, showrunner, or creative director, and deliver new cuts based on feedback and creative direction; track revisions, maintain version control, implement changes, and lock final picture and audio.
- DEP.18.4 *Audio Spotting & Workflow Prep:*
Review a project with a post-production team to identify where dialogue editing, music, Foley, and effects are needed; prep and organize audio tracks for sound design or mixing in film, animation, and game environments.
- DEP.18.5 *Prepare Picture for Grading & Finishing:*
Prepare timelines by replacing proxy files with the highest resolution media available for color grading; apply and customize look up tables (LUTs), balance exposures, and render files according to finishing or platform specifications.
- DEP.18.6 *Sound Mixing & Final Audio Prep:*
Balance and mix dialogue, music, and sound effects to industry standards, export stems, splits, or multi-channel deliverables for final delivery.
- DEP.18.7 *Final Export & Quality Control:*
Export final master files in accordance with technical and legal specifications of the target platform or distributor; perform quality control checks to ensure deliverables meet standards.
- DEP.18.8 *Distribution Packaging & Delivery Standards:*
Prepare and deliver project files, audio stems, graphics, subtitles, metadata, and legal documentation for distribution across streaming, theatrical, broadcast, or digital platforms; archive media for long-term storage and retrieval.

19.0 Digital Editing & Post-Production: Career Exploration

- DEP.19.1 *Production Across Media Formats:*
Explore careers in different production environments (e.g., scripted and unscripted television, independent film, feature films, commercials, and music videos)

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- DEP.19.2 *Post-Production Careers:*
Explore careers in editing and finishing for film, television, and streaming (e.g., assistant editor, editor, sound editor, colorist, and post-production supervisor).
- DEP.19.3 *Creative Leadership:*
Explore creative decision-making careers in post-production (e.g., supervising editor, showrunner, director, producer, and post-production coordinator).
- DEP.19.4 *VFX & Motion Graphics:*
Explore careers in visual effects and motion graphics (e.g., VFX editor, compositor, motion designer, animation editor, and VFX coordinator).
- DEP.19.5 *Cross-Sector:*
Explore editing careers in non-entertainment sectors (e.g., branded content, social media editing, advertising, corporate communications, and training media).

20.0 Digital Editing & Post-Production: Advanced Technology and Impact

- DEP.20.1 *Virtual Production Post-Production Workflows:*
Investigate how real-time rendering, game engines, LED volume walls, and virtual environments are integrated into post-production workflows (e.g., editing, compositing, set extensions, VFX, and color grading) to support final output.
- DEP.20.2 *MoCap Technology:*
Analyze how motion and performance capture data are processed, edited, and integrated into digital characters and effects during post-production.
- DEP.20.3 *XR Post-Production:*
Identify post-production workflows for XR content, including stitching and editing 360° footage, integrating spatial audio, applying visual effects in immersive environments, and preparing content for delivery across AR, VR, and mixed reality (MR) platforms.
- DEP.20.4 *Immersive Audio:*
Evaluate how spatial audio formats are mixed and mastered to create immersive soundscapes for interactive, cinematic, or XR experiences.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

DEP.20.5 *Environmental Sustainability:*

Identify and apply sustainable practices in post-production workflows (e.g., minimizing on-site energy use, using cloud-based collaboration tools to reduce travel, limiting physical media duplication, and optimizing rendering settings to conserve computing resources).

Fashion & Interior Design Pathway

Pathway Description:

The Fashion & Interior Design Pathway prepares students for careers in apparel, textile, costume, and spatial design by combining creative development with hands-on experience in design, fashion construction, and client-focused practices. Students learn to apply design principles, produce original products, and work across fashion and interior design industries.

Students collaborate on projects (e.g., designing apparel collections, drafting patterns, styling interiors, creating visual merchandising displays) while exploring professional roles and responsibilities across design environments. The pathway emphasizes material selection, functional design, aesthetic appeal, and meeting the needs of diverse clients and audiences. Students develop skills through hands-on projects, work-based instruction, and leadership experiences.²⁴

Occupational Alignment and O*Net-SOC Codes:

27-1021.00 – Commercial and Industrial Designers
27-1022.00 – Fashion Designers
27-1025.00 – Interior Designers
27-1026.00 – Merchandise Displayers and Window Trimmers
27-1027.00 – Set and Exhibit Designers
27-2012.00 – Fashion Production
39-3092.00 – Costume Attendants
41-2031.00 – Retail Salespersons
51-6051.00 – Sewers, Hand
51-6052.00 – Tailors, Dressmakers, and Custom Sewers
51-6092.00 – Fabric and Apparel Patternmakers

Focus Areas:

Fashion Design & Merchandising
Interior Design

²⁴. Leadership development can occur through participation in Career Technical Student Organizations such as Family, Career, and Community Leaders of America (FCCLA).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

Advance CTE Sub-Cluster Alignment: *Fashion & Interiors*²⁵

²⁵. Personal Services Pathway Standards are part of the *Health & Human Services Career Cluster*.

Fashion and Interior Design Pathway

Fashion Design & Merchandising

Focus Area Description:

Students in the Fashion Design & Merchandising focus area will apply design principles to develop and refine original garments, textiles, costumes, and fashion concepts. They will build skills in fashion illustration, garment construction, pattern making, and digital fashion design while exploring fashion history, color theory, trend forecasting, styling, and textile selection. Students will also learn to market fashion products and understand consumer behavior.

17.0: Fashion Design & Merchandising (FDM): Skill Building

- FDM.17.1 *Fashion Design Fundamentals:*
Apply the elements of design (e.g., line, silhouette, texture, shape, pattern, form, and color) and the principles of design (e.g., balance, proportion, rhythm, harmony, emphasis, variety, and movement) to the creation and evaluation of fashion projects.
- FDM.17.2 *Textile Types & Care:*
Identify fiber composition, construction methods, performance properties, and proper care techniques for woven, knit, and nonwoven fabrics.
- FDM.17.3 *Industry Tools & Software:*
Use industry-standard design software and professional tools (e.g., CAD patternmaking software, manual patternmaking tools, industrial sewing machines, and sergers) to create patterns and develop, construct, and finish garments.
- FDM.17.4 *Sketching & Technical Flats:*
Use hand sketching and industry software to develop concept sketches and detailed technical flats for diverse bodies, specifying fabric type, color palette, garment construction details, trims, and accessories.
- FDM.17.5 *Design Specifications:*
Review sketches, samples, and design specifications to calculate fabric needs and identify the shapes, sizes, and quantities of pattern pieces required for production.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

FDM.17.6 *Draping & Patterns:*

Identify professional draping and patternmaking techniques (e.g., manual, 2D software, and CAD 3D software) to design and draft samples of garments and accessories; draft patterns and cut fabric based on accurate measurements and specifications.

FDM.17.7 *Construction & Alteration Techniques:*

Apply a variety of professional sewing and alteration techniques to different materials (e.g., fabrics, plastics, and metals) to construct or modify toiles, mockups, prototypes, finished samples or garments.

FDM.17.8 *Garment Finishing:*

Evaluate designs, test construction techniques, confirm fabric suitability and apply finishes and modifications to create complete garments, accessories, and products

FDM.17.9 *Upcycling & Recycling:*

Create original garments or accessories using secondhand or repurposed clothing, footwear, and textiles.

18.0 Fashion Design & Merchandising: Process and Practice

FDM.18.1 *Print Design & Color Theory:*

Apply principles of standard print design (e.g., abstract, geometric, floral, engineered, ethnic and cultural motifs) and color theory (e.g., tone-on-tone, complementary, analogous, multi-color harmony, and monotone) to projects.

FDM.18.2 *Trend Forecasting:*

Demonstrate how trends, color, and societal forecasting are used in the fashion industry (e.g., adaptation of historical trends, integration of beauty trends, footwear, and product styling).

FDM.18.3 *Styling:*

Curate garments, accessories, hair, make-up, and beauty elements into finished looks to convey an artistic vision and to showcase fashion designs in a fashion show or photography shoot.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

FDM.18.4 *Product Pricing & Inventory Control:*

Analyze costs and formulate cost sheets including manufacturer's costs, markup, and profit margin to determine the price of products; apply inventory control practices (e.g., tracking stock levels, monitoring turnover, and managing shrinkage) to determine accurate pricing and maintain profitability.

FDM.18.5 *Visual Merchandising:*

Construct displays using various fixtures (e.g., mannequins, shadow boxes, wall and tabletop displays, and props) to demonstrate an understanding of visual merchandising and product styling, and to convey specific messages.

FDM.18.6 *Fashion Business Operations:*

Identify and outline basic operational procedures for all aspects of the industry (e.g., quality control, inventory control, distribution, quick response marketing, production, and accounting).

FDM.18.7 *Market Analysis:*

Identify market trends for target consumer groups looking at how demographics and cultural factors tie into consumer buying patterns; analyze data for merchandise planning.

FDM.18.8 *Collections:*

Develop a collection of complete looks for a specific purpose and audience, create a digital portfolio to showcase the collection, and conceptualize a marketing strategy for a target market.

FDM.18.9 *Client Relations:*

Confer with clients to prepare custom looks for individuals, retailers, events, and theatre or film productions.

19.0 Fashion Design & Merchandising: Career Exploration

FDM.19.1 *Costume & Wardrobe:*

Explore careers in costume design and wardrobe for theatre, film and television (e.g., costume designer, wardrobe supervisor, costume technician, set costumer, dresser, and costume coordinator for film, TV, and theater).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

FDM.19.2 *Design & Merchandising:*

Explore careers across fashion design, textile design, brand development, and fashion merchandising (e.g., fashion designer, textile designer, brand designer, fashion merchandiser, retail buyer, trend forecaster, technical designer, CAD designer, and CAD Patternmaker).

FDM.19.3 *Family & Consumer Sciences Education:*

Research postsecondary education options and explore careers in secondary and postsecondary education (e.g., Family and Consumer Sciences educator and college professor)

FDM.19.4 *Entrepreneurship:*

Examine the realities and scope of opportunity for fashion entrepreneurs. (e.g., freelance work, influencer marketing, brand partnerships and sponsorships, subscriptions, e-commerce and merchandise sales).

20.0 Fashion Design & Merchandising: Advanced Technology and Impact

FDM.20.1 *Environmental Sustainability:*

Identify and apply sustainable industry practices (e.g., recycled/upcycled materials, low-impact dyes and finishes, ethical supply chains, waste reduction, and fair labor practices) to minimize environmental and social impact.

FDM.20.2 *Fast Fashion:*

Evaluate the global impact of mass garment production and rapid fashion cycles (e.g., textile waste, water and energy use, labor conditions, and economic effects on communities) on the environment, society, and local industries.

FDM.20.3 *Emerging Technology:*

Investigate and apply advanced technologies (e.g., 3D design, digital textile printing, automated cutting and sewing, and smart fabrics) to enhance product development, efficiency, and innovation; distinguish how advanced technology is used in patternmaking, grading, and marking.

FDM.20.4 *Circular & Regenerative Practices:*

Implement design and production strategies that extend product lifecycle (e.g., recycling, upcycling, take-back programs, modular or repairable garments) to support circular and regenerative systems.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

FDM.20.5 *Social & Cultural Impact:*

Assess how design decisions influence society and communities (e.g., inclusive sizing, culturally responsive design, equitable labor practices, community engagement, and wellness-focused products).

FDM.20.6 *Manufacturing & Supply Constraints:*

Evaluate how production-related factors affect merchandise planning (e.g., cost of materials, production capacity, supply chain logistics, tariffs, trade agreements, lead times, and sustainability practices).

Fashion & Interior Design Pathway

Interior Design

Focus Area Description:

Students in the Interior Design focus area will apply design principles to develop and refine interior spaces that balance function, aesthetics, and human-centered needs. Students will build creative and technical skills in spatial planning, material selection, and interior design visualization. Students will gain proficiency in industry-standard software and collaborate in studio-based, project-driven settings that reflect professional interior design practices, developing the skills needed to plan, present, and execute design concepts.

17.0: Interior Design (ID) Skill Building

- ID.17.1 *Design Fundamentals:*
Apply the elements and principles of design (e.g., balance, proportion, rhythm, emphasis, unity, and harmony) when selecting color schemes, furniture arrangements, textiles, lighting, and accessories to create functional and aesthetically pleasing interior spaces.
- ID.17.2 *Technical Drawings & Renderings:*
Produce accurate technical and visual communication documents (e.g., scale drawings, perspectives, sections, elevations, 3D renderings, and sample boards) to convey design concepts.
- ID.17.3 *Interpreting Blueprints:*
Read architectural drawings and interpret construction symbols (e.g., plumbing, electrical, mechanical, and fire safety systems) to evaluate space for circulation, clearance, and adherence to building codes.
- ID.17.4 *Interior Design Software:*
Use industry-standard digital tools (e.g., CAD, Building Information Modeling [BIM], 3D modeling, VR, and AR) to design, present, and manage interior spaces.
- ID.17.5 *Measurement & Space Requirements:*
Measure square footage and apply spatial standards (e.g., circulation paths, clearance, accessibility, workflow efficiency, and storage integration) to ensure functional and safe layouts.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- ID.17.6 *Textile Properties:*
Identify and evaluate textiles and finishes for interior use (e.g., upholstery, drapery, and wall coverings) based on properties such as fiber content, fire ratings, abrasion resistance, acoustics, cleanability, and maintenance.
- ID.17.7 *Furniture Materials:*
Differentiate construction and material characteristics of furniture and accessories (e.g., wood types, frames, fillers, trims, composites, metals, glass, and plastics) to assess quality, durability, and style.
- ID.17.8 *Fixtures & Finishes:*
Select and specify appropriate finishes and fixtures (e.g., lighting, flooring, wall coverings, acoustical treatments, hardware, window treatments, and surface materials) based on function, aesthetics, safety, and maintenance.
- ID.17.9 *Sourcing & Evaluation:*
Research, source, and evaluate furnishings and materials by comparing factors such as quality, vendor reliability, ethical sourcing, lead times, and cost.

18.0 Interior Design: Process and Practice

- ID.18.1 *Planning:*
Collaborate with clients to establish project parameters (e.g., budget, architectural preferences, lifestyle needs, sustainability, accessibility, style, purpose, and function).
- ID.18.2 *Project Coordination:*
Coordinate with construction professionals (e.g., architects, engineers, contractors, inspectors, code officials, plumbers, and electricians) to ensure successful project execution.
- ID.18.3 *Costing & Budgeting:*
Estimate and track costs of materials, labor, fabrication, and installation (e.g., cost sheets, markups, profit margins, and work orders) and develop client budgets and designer fee structures.
- ID.18.4 *Appliances & Cabinetry:*
Evaluate and recommend appliances, cabinetry, custom millwork, built-ins, and modular systems to meet project scope, client needs, and budget.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- ID.18.5 *Client Relations:*
Guide clients in selecting furnishings and finishes, skillfully present design concepts, manage expectations, and document approvals.
- ID.18.6 *Space Optimization & Staging:*
Provide professional recommendations for arranging furnishings, décor, and accessories to maximize visual appeal, highlight architectural features, improve traffic flow, and create a sense of spaciousness and balance in residential or commercial properties.
- ID.18.7 *Interior Environments:*
Adapt design strategies for varied environments (e.g., residential, commercial, hospitality, healthcare, retail, and mobile/transportation).
- ID.18.8 *Blueprints, Codes & Construction:*
Apply technical knowledge of construction documents, regulatory standards, and building systems (e.g., blueprint reading, code compliance, structural integration, and material specifications) to ensure accuracy, safety, and feasibility.

19.0 Interior Design: Career Exploration

- ID.19.1 *Cross-Sector:*
Explore careers for interior designers across residential, commercial, hospitality and corporate environments.
- ID.19.2 *Interior Styling & Visual Presentation:*
Explore careers in interior styling and visual presentation for residential and commercial spaces (e.g., interior stylist, staging specialist, visual merchandiser, set decorator, and design consultant).
- ID.19.3 *Set and Scenic Design:*
Explore careers in set design and spatial styling for theatre, film, television, and live events (e.g., set designer, production designer, props coordinator, scenic artist, and set dresser).
- ID.19.4. *Interior Design & Merchandising:*
Explore careers across interior design, space planning, materials sourcing, and interior product merchandising (e.g., interior designer, space planner, showroom designer, furniture designer, interior merchandiser, textile and materials specialist, and CAD/BIM designer).

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

- ID.19.5 *Entrepreneurship:*
Examine the realities and scope of opportunity for interior design entrepreneurs (e.g., boutique firm ownership, freelance interior design, e-design services, home décor product lines, influencer partnerships, branded content, and online design platforms).

20.0 Interior Design: Advanced Technology & Impact

- ID.20.1 *Universal Design & Accessibility:*
Incorporate universal design principles and accessibility standards into interior plans by addressing mobility, sight, and hearing considerations; ensuring safe circulation and clearances; and maintaining compliance with the Americans with Disabilities Act (ADA).
- ID.20.2 *Ergonomic Design:*
Evaluate how ergonomic and anthropometric concepts assist clients in the selection and adaptation of furnishings.
- ID.20.3 *Environmental Sustainability:*
Comply with environmental laws and incorporate sustainable design practices (e.g., energy-efficient lighting, recycled and renewable materials, low volatile organic compound [low-VOC] finishes, and water conservation strategies) to minimize environmental impact.
- ID.20.4 *Advanced Technology Applications:*
Use emerging technologies (e.g., generative AI, VR/AR visualization, smart home systems, and BIM) to enhance design planning, client presentations, and project management.
- ID.20.5 *Social & Cultural Impact:*
Integrate social, cultural, and ethical considerations into design solutions (e.g., inclusive spaces, culturally responsive aesthetics, community engagement, and wellness-focused environments) to create meaningful and equitable interior experiences.

Implementation

The MCS publication serves as a guidance document for CTE educators. It outlines the industry-aligned knowledge, skills, and competencies needed to prepare students for success in a wide range of careers. These standards are intended to help teachers align classroom instruction with workforce expectations, while still allowing for local flexibility.

Though the standards outline the industry knowledge, skills, and competencies that should be covered in a CTE pathway, CTE educators can determine how they are implemented and taught. The standards are designed to support every level of instruction through the scaffolding of appropriate activities and projects. Educators have the flexibility to integrate the MCS at various levels of instructional depth. Educators may incorporate multiple standards into a single lesson or build extended units of instruction around a single standard. The standards can be implemented through a wide range of instructional strategies, including direct instruction, project-based learning, work-based learning experiences, and workplace simulations.

The MCS are designed to be meaningful, manageable, and measurable. They represent the highest level of competency, allowing educators to scaffold instruction and create grade-level appropriate rubrics. The MCS is designed to help define clear expectations for student achievement while familiarizing learners with the habits, knowledge, and behaviors expected in professional work environments.

The Career Ready and Cross-Pathway Standards (Standards 1.0 through 16.0) are focused on the essential workplace skills and knowledge central to CTE instruction. These standards offer flexibility in curriculum design, articulation, and course sequencing because they transfer seamlessly across multiple pathways and focus areas. These standards are also especially helpful in middle school and other introductory CTE programs, where students are being introduced to skills and knowledge that will support multiple high school pathways. The Career Ready and Cross-Pathway Standards are prerequisite and corequisite to Pathway Standards for all Career Clusters.

The Pathway Standards (Standards 17.0 through 20.0) are specific to technical skill development and professional practice within a particular career pathway. These Pathway Standards support students as they prepare for entry-level work and postsecondary planning in targeted occupations. It is highly recommended that Career-Ready and Cross-Pathway Standards are addressed in introductory and concentrator courses, prior to implementing Pathway Standards.

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

CTE programs may develop curriculum around a single focus area or use an integrated, project-based instructional model that blends standards from multiple focus areas within a single pathway. Many focus areas are aligned with registered apprenticeship occupations, making it easier for programs to develop pre-apprenticeship programs and apprenticeship-aligned curricula. Focus areas can be used to design different types of courses within a pathway should be prioritized for dual enrollment, pre-apprenticeship²⁶ and youth apprenticeship alignment in CTE.

Example of Leveled Implementation of a Career Ready Standard

10.4 *Building & Refining Concepts:*

Develop, test, and refine concepts through models, mock-ups, or prototypes that move ideas toward implementation.

Introductory Level:

At the entry level, students are introduced to the fundamentals of group collaboration and creative development. They learn how to brainstorm in teams, give and receive feedback, and build simple mock-ups or prototypes using accessible materials. Emphasis is placed on exploration, communication, and creative risk-taking.

Sample Activities:

- Participate in small group brainstorming sessions using visual aids (e.g., mind maps or mood boards).
- Create rough mock-ups using paper, cardboard, or other basic materials.
- Practice presenting unfinished ideas to peers for constructive feedback.
- Iterate on a basic concept in response to peer input.

Intermediate Level:

At the intermediate level, students begin working more independently within teams to develop refined design solutions. Students use digital and physical tools and materials to create working models or prototypes and begin applying a more structured feedback process to improve their work.

²⁶. Pre-apprenticeship definitions: Labor Code 3100.

Career Technical Education Model Curriculum Standards:
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Sample Activities:

- Collaborate in teams to develop design proposals that address a specific client need.
- Create prototypes or models using tools like foam core, fabric, or entry-level digital fabrication tools.
- Use structured critique sessions (e.g., peer reviews or class critiques) to revise work.

Advanced Level:

At the advanced level, students lead or contribute significantly to team-driven design projects with multiple rounds of revision. Students are expected to produce fully realized concepts and prototypes, present work in a professional manner, and demonstrate how feedback shaped their final product.

Sample Activities:

- Assign industry roles to team members (e.g., UX/UI designer, creative director, graphic artis) and create multiple iterations of a brand strategy for a client.
- Use professional software or equipment (e.g., Adobe Creative Suite, 3D printers, laser cutters) to build final prototypes.
- Present concept development from idea to final product using visual documentation and process mapping.

Example of Leveled Implementation of a Cross-Pathway Standard

13.5 *Managing Budgets:*

Develop and manage budgets for creative projects by forecasting costs, allocating resources, tracking expenditures, and evaluating return on investment (ROI).

Introductory Level:

At the entry level, students are introduced to the purpose of budgeting and the basic components of a simple budget. Students learn to estimate costs, distinguish between fixed and variable expenses, and track spending using basic templates or tools.

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Sample Activities:

- Identify typical expenses in a creative project (e.g., materials, labor, equipment).
- Create a basic budget using a spreadsheet or printed template.
- Categorize expenses as fixed or variable
- Compare estimated vs. actual costs in a sample project.

Intermediate Level:

In the intermediate phase, students apply budgeting skills to real or simulated projects. They explore how to justify expenses, make adjustments based on constraints, and allocate funds across categories such as production, marketing, and labor.

Sample Activities:

- Develop a line-item budget for a short film or production using a template.
- Use spreadsheet software (e.g., Google Sheets or Excel) with formulas to calculate totals and track changes.
- Analyze a sample project budget to identify areas for cost-saving.
- Present a budget proposal with rationales for key expenses.

Advanced Level:

At the advanced level, students are expected to create and manage detailed budgets that reflect industry expectations. Students consider contingency planning, return on investment (ROI), and client expectations, and revise budgets based on real-time changes or feedback.

Sample Activities:

- Create a professional-level budget for a short film or production.
- Monitor and adjust a project budget in response to simulated changes (e.g., vendor delays, cost increases).
- Analyze the financial impact of creative decisions and report on ROI.
- Work as a team to present a full project pitch, including timeline, deliverables, and budget justification.

Example of Leveled Implementation of a Pathway Standard:

- DC.19.5 *Entrepreneurship:*
Examine the realities and scope of opportunity for content creators. (e.g., freelance work, influencer marketing, brand partnerships and sponsorships, subscriptions, e-commerce and merchandise sales, and content licensing).

Introductory Level:

At the entry level, students are introduced to the concept of content creation as a business. They explore how creators earn income, learn basic terminology, and examine real-world examples of monetized content across platforms.

Sample Activities:

- Research and present on different ways content creators generate revenue.
- Define key terms such as monetization, sponsorship, affiliate marketing, and licensing.
- Analyze case studies of content creators who have built audiences.
- Brainstorm potential content niches and platforms aligned with student interests.

Intermediate Level:

In the intermediate phase, students begin applying entrepreneurial thinking to content creation. They learn how to define an audience, develop a personal brand, and explore income streams like merchandise, partnerships, or paid subscriptions.

Sample Activities:

- Develop a basic pitch deck for a brand.
- Simulate outreach to businesses for partnership or sponsorship.
- Design mockups for branded merchandise or digital products.
- Set up a sample creator profile (with bios, content themes, and visual branding) that can be used on social media.

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Advanced Level:

At the advanced level, students demonstrate a full understanding of the content creation economy. They build business plans, analyze performance data, and make strategic decisions around scaling, monetization, and rights management.

Sample Activities:

- Create a monetization strategy that includes multiple revenue streams (e.g., affiliate links, merchandise, licensing).
- Draft a pitch for a real or simulated brand partnership, including content samples.
- Explore copyright, licensing, and intellectual property as they relate to digital content and contracts.

Contributors

The CDE extends its sincere appreciation to the members of the standards development committee for their invaluable time, expertise, and collaborative efforts in shaping the MCS.

Rabia Abedin, Manager Early Career Programs and Diversity Outreach, DreamWorks
Ashley Adams, Executive Director, Creative Educators Network*

Jewyl Alderson, Integrated Curriculum Coordinator, San Diego County Office of
Education

Brian Alli, Vice President of Global Artist Relations and Strategic Partnerships, Roland
Sean Bacon, Designer; Adjunct Faculty, San Diego City College

Becki Barabas, Global Manager Product Relations, JBL Professional

Jorrel Batac, Chief Operating Officer, North America Scholastic Esports Federation

Marc Bayangos, CTE Instructor, San Francisco Unified School District

Love Beach, Vice President of Creative Strategy, Blavity

Anne Bown Crawford, Resident Artist, Google Quantum AI Labs; Executive Director,
California Arts Council (2018-2022)*

Leah Bratcher, CTE Instructor, Huntington Beach Union High School District; FCCLA
Board of Directors*

Inez S. Bush, Partner Programs Director, College of Continuing and Professional
Education

Sam Cabrera, President, American Institute of Graphic Arts (AIGA) Los Angeles

Tracy Campbell, Director of Production Training and Development, Walt Disney
Animation Studios, Women in Animation

Jorge Caridad, CTE Instructor, Los Angeles Unified School District

Matthew Carlson, Director of User Experience Design, Adobe Creative Cloud*

Laura Clark, Director of Live Nation Gives, Live Nation

Grazia Como, Early Careers, Netflix Animation

Danielle Collins, Director, Inspire EDU*

Julie Ann Crommett, Founder and Chief Executive Officer, Collective Moxie; Board
Member, Women in Animation

Kale Cummings, President, American Federation of Musicians, Local 6

Collin Derrick, Technical Manager, The Bobbie Bailey School of Music, Kennesaw State
University

Career Technical Education Model Curriculum Standards:
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Michael Despars, Theatre Instructor, Fullerton Joint Union High School District; Past President, California Educational Theatre Association

Joanne DiVito, Professor, California State University, Northridge

Morenike Dosu, Director, Diversity Equity, and Inclusion, DreamWorks

Stephani Downey, Diversity and Inclusion Business Partner, Apple

Alexandra Drosu, Director of Communication and Outreach, The IATSE Local 839, Animation Guild

Camille Eden, Vice President of Early Careers and Recruiting, Nickelodeon (former)

Sebastien Elkouby, CTE Instructor, Inner City Education Foundation (ICEF) View Park Preparatory High School

DeJon Ellis, Business Manager, International Alliance of Theatrical Stage Employees, Moving Picture Technicians, Artists, and Allied Crafts (IATSE) Local 80*

Harvey Estrada, Professor of Commercial Music, Compton College

Melecio Estrella, Artistic Director, Bandaloop

James Fauntleroy, Grammy award winning singer-songwriter and record producer; CEO, Laboratory*

Reut Feldman, Studio General Manager, Clear Lake Recording Studios

Allison Frenzel, Education Programs Consultant, California Department of Education*

Jack Friedman, Founder, Study Smart Tutors, and Educational Gaming Services

Damara Vita Ganley, Performer, Choreographer, Director, Educator, Arts Administrator, Joe Goode Performance Group, Bandaloop, University of California Santa Cruz*

Alexander Gemignani, Associate Professor, Northwestern University; Artistic Director, American Music Theatre Project and National Music Theatre Conference

Elizabeth Gerber, Senior Educator, Programs and Engagement, Los Angeles County Museum of Art (LACMA)

Carl Gist, Director of Entertainment Initiatives, Los Angeles Urban Backstage Careers

Alton Glass, Chief Executive Officer GRX Immersive Labs

Cherie Glisson, CTE Instructor, Apple Valley Unified School District

Jinko Gotoh, Producer, Sony Animation; Vice President, Women in Animation*

Katherine Goyette, Computer Science Coordinator, California Department of Education*

PK Graff, Commissioner, Georgia Scholastic Esports Federation; Mentor, North American Scholastic Esports Federation

Malik Grant, Senior Creative Producer, Trask House; Co-Founder, Events Vocational Education Network (EVEN)*

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

Jostin Grimes, Education Specialist, Spotify
Devlin Grimm, Senior Recruiter, Sony Pictures Animation
Greg Grusby, Director, PR & Communications, Industrial Light & Magic
Scott Hagen, Chief Executive Officer, Victrola
Erika Hall, Co-Founder, Mule Design
Ri-Karlo Handy, Chief Executive Officer, Producer, Sun Rise Media; Executive Director
and Founder, The Handy Foundation*
Chris Hansen, Director, Recording and Broadcast, Harmon
Nathan Harrenstein, Director of Education and Training, San Diego Theatrical Training
Corporation; IATSE 122*
Nicole Hendrix, Executive Director and Co-Founder, BRIC Foundation, Executive
Producer, 9B Collective; Concept Art Association*
Laura Hohman, Early Careers, Nickelodeon (former)
Kim Hoj, CTE Instructor, Ojai Unified School District*
Jackie Huang, Business Agent, The IATSE Local 839, Animation Guild
Rose Huey, Director of Education, Dancer, Bandaloop*
Steven Issacs, Secondary Education Manager, Epic Games*
Juliana Iturralde, Executive Assistant, Nickelodeon
Bob Johnson, Entertainment Attorney; Senior Partner, RJT Advisors
David Johnson, CTE Instructor, Oakland School for the Arts
Meia Johnson, Creative Careers Initiative, Los Angeles County Arts and Culture
Cynthia Kanner, SVP Post-Production, HBO, Warner Bros Discovery
Dr. Amarpal Khanna, Assistant Professor, Graphic Design, Los Angeles City College
Kyle Kim-Greenberg, Learning and Development Manager, Riot Games (former)
Jeanette King, President, The IATSE Local 839, Animation Guild
Jonathan Kirkland, Actor, Writer, Singer; Chief Executive Officer/Founder, Virtual
Kickbacks; producer and education consultant *
Brian Kullas, Global Product Specialist Lead, Native Instruments
James Fauntleroy, Grammy Award Winning Songwriter and Producer; Founder and
CEO, The Laboratory.
Jeff Larson, CTE Instructor, San Francisco Unified School District
Ann Le Cam, Global Head of Talent and Animation Production, Weta Digital
Chris Leahy, Director, Global Talent Acquisition, Sony Pictures Animation

Career Technical Education Model Curriculum Standards:
Arts, Entertainment & Design Career Cluster

Rahel Lebsekal, VP of Outreach and Programs, Laboratory

Magnus Lehmann, Head of Creative Department, Riot Games*

Katerina Leinhert, Strategist, Imprint Projects

MaeLin Levine, President, AIGA San Diego

Ann Whitney McCombs, Manager, Talent Acquisition, Skydance Animation

Robyn MacNair, Arts Administrator, Santa Ana Unified School District

Donovan Malloy, Human Resources, Microsoft

Arnon Manor, Education Chair, The Visual Effects Society; Senior Vice President of
Visual Effects Production, Sony Pictures (former)*

Alison Mann, Co-Founder, BRIC Foundation; Manager and Co-president, Fourth Wall
Management

Kristain Markus, Associate Director of Educational Technology, Study Smart Tutors

Hector De Marquez, Fashion Designer, and Arts Education Consultant, C.I.R Clothing*

Phil Metz, Director of Entertainment, Nascar

Amanda Miller, Executive Producer, PSYOP

Tiffany Miranda, Executive Director, Girls Make Beats

Sierra Mon, Marketing Manager, Artstation

Mike Monteiro, Creative Director, Mule Design

Stephanie Morse, Early Careers and Recruiting, Walt Disney Animation Studios

Lucas Mosing (FaZe Blaze), Content Creator; Co-Founder, FaZe Clan*

Kait Nader, Customer Advisory Board Manager Ad Marketing, Amazon

Aba Ngissah, CTE Coordinator, Inglewood Unified School District

Gayle Nicholls-Ali, CTE Instructor, La Canada Unified School District (Former); Founder,
Altadena Photographers Recovery, LLC

Karen Olivo, Associate Professor and Director of Musical Theatre Certificate Program,
Northwestern University

Jena Olson, Head of Operations, Women in Animation

Mike Packer, CEO, Inspire EDU*

Andrew Pak, CTE Coordinator, Los Angeles Unified School District

Eugene Palmer, Theater Supervisor, University of California Berkeley; Local 107

John Petrocelli, Chief Executive Officer, Bulldog Media

Vanessa Pfeiffer, Director, Equity and Inclusion Pipeline Programs, Warner Bros.
Discovery

Career Technical Education Model Curriculum Standards:
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Jonelle Pickett, CTE Instructor, Burbank Unified School District*

Anna Pilhoefer, Director, Equity & Multilingual Learner Services, Santa Barbara Unified School District

Julia Pinhey, CTE Instructor, Simi Valley Unified School District*

Anthony Pisano, Founder, Game Over Talent

Jean Pongsai, Design Director, Founder, AIGA Los Angeles, Studio DBJ

Simone Price, Manager of Corporate Social Responsibility, The Walt Disney Company

Arabian Prince, Chief Executive Officer, Inov8 Next and GGGoat

Scott Pruitt, Strategic Advisor, Volume LLC 1500 Sound Academy

Shannon Prynoski, Vice President, Titmouse Animation

Stephanie Quinn, Director of Marketing, ToonBoom

Renee Reid, Manager, User Experience Design Research, LinkedIn

Chad Reisfelt, Education Manager, Soundtrap by Spotify

Jean Francios Revan, CTE Instructor, Oakland School for the Arts; Member, IATSE Local 107

Linzie Reynolds, Director of Enterprise Business, Wacom (former)

Seth Robinson, Inventor, Robospot; Lighting Designer; Co-founder, EVEN*

Marco Robles, Business Agent, IATSE Local 80*

Luis Rodriguez, CTE Instructor, Centinela Valley Union High School District*

Talisha Romero, Director of Marketing, Pensado's Place

Sooner Rae Routhier, Show Designer, Sooner Rae Creative, Co-Founder, EVEN*

Louise Sanhaus, Faculty, Founder/Co-Director, The People's Graphic Design Archive, Cal Arts

Andrew Saunders, Co-Founder Futureproof Ventures, Global Head of Entertainment and Culture Marketing, Amazon (former)

John Scanlon, Senior Manager Dolby Institute and Experiential Technology, Dolby

Bryan Schiller, Event Sales Manager, Golden 1 Center; Strategic Partnerships, The Grammy Museum (former)

Tyler Scott, Social Media Director, Pensado's Place

Nurit Siegel Smith, Executive Director, Music Forward Foundation (former)

Irene Silbert, CTE Pathways Director, Simi Valley Unified School District

Malakhi Simmons, Set Lighting Technician, and Instructor, IATSE Local 728*

Carson Smith, Vice President of Community Engagement, Nickelodeon (former)

Career Technical Education Model Curriculum Standards:
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Tom Smith, Lead Game Designer, Roblox*

Paula Spence, Recording Secretary, IATSE Local 839 The Animation Guild

Erik Speth, CTE Instructor, Renaissance Arts Academy*

Daniel Spinka, Linked Learning Coordinator, Sacramento City Unified School District

Sonia Stella Ontiveros, Fashion Designer, Sonia Stella Design; FCCLA Board of Directors*

Deb Stone, Director of Talent Recruitment, Illumination

Nancy Rae Stone, Deputy Director Film and TV Tax Credit Program, California Film Commission

Whitney Taber, Strategic Partnerships, Girls Make Beats Ariana Tejero, Senior Producer, Spectrum News

David Dylan Thomas, Founder & Chief Executive Officer, David Dylan Thomas, LLC

Dr. Delores Thomson, CTE Pathways Director, Oakland School for the Arts*

Abigail Thurston, Senior Creative Resource Manager, PSYOP

John Tourtellotte, CTE Instructor, Los Angeles Unified School District

James Tracy, CTE Coach; Fashion, Arts, Media and Entertainment Pathways, Oakland Unified School District*

Herb Trawick, Host, Co-founder, Pensado's Place; Senior Partner, RJT Advisors*

Ariana Tejero, Senior Producer, Spectrum News

Tacy Trowbridge, Global Education Lead for Thought Leadership and Advocacy, Adobe (Former)

Ralph Valenzuela, Apparel Production Management, Cuts Company*

Lisa Vasquez, Corporate Social Responsibility Manager, Education and Research, The Walt Disney Company

Edmund Velasco, President, American Federation of Musicians, Local 7

Laura Walls, Education Programs Consultant, California Department of Education*

Lisa Washmuth, CTE Instructor, San Luis Coastal Unified School District

Matthew Waynee, CTE Instructor, Los Angeles Unified School District*

Dennis Weaver, CTE Instructor, Twin Rivers Unified School District*

Melissa Webb, Education Programs Consultant, California Department of Education*

Adam West, Business Representative, Motion Picture Costumers IATSE Local 705

Patricia West, Performer, Choreographer, Director, Educator, Arts Administrator, Joe Goode Performance Group, Cal Performances*

Harry Weston, Performer, Arts Administrator, Educator, Versa-Style Dance Company

Career Technical Education Model Curriculum Standards:
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Tosha Whitten, PR Strategist, FrontPage Firm*

Kenneth Williams, Music Instructor, East Side Unified School District

Jim Winkvist, Technical Art Director, Riot Games*

Greg Wondra, CTE Instructor, Kern County Regional Occupational Center

Christina Wun, Art Director and Project Lead, Riot Games

Dawn Yamazi, Senior Vice President of Worldwide Talent, Illumination

Susan Zwerman, VFX, Virtual Production Producer, Visual Effects Society; Executive
Producer Exceptional Minds

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Glossary

2D Animation: The process of creating movement in a two-dimensional space, including characters, backgrounds, and effects using frame-by-frame techniques or digital software.

3D Animation: Animation that involves creating three-dimensional moving images using digital modeling and rendering tools.

21st Century Skills: Essential workplace skills, habits, and characteristics such as collaboration, communication, creativity, critical thinking, and problem solving.

Above the Line: Referring to the types of jobs in a film production budget that are not predictable due to specific and varied rates for actors, directors, and writers.

Acoustics: The science of sound, including production, control, transmission, reception, and effects.

Analog Audio: A continuous signal of sound coming directly from the source.

Animatic: A sequence of storyboard images edited together with sound to visualize how a scene or project will play out before full production begins.

Apparel Construction: The process of assembling garments using sewing, fitting, and finishing techniques.

Artificial General Intelligence (AGI): Artificial General Intelligence is the ability of an AI system to perform tasks with flexibility and autonomy across domains.

Artistic Processes: Creative stages outlined in the California Arts Standards: Creating, Performing/Producing/Presenting, Responding, and Connecting.

Art & Design Elements: Line, shape, form, color, value, texture, space

Art & Design Principles: Balance, contrast, emphasis, movement, pattern, rhythm, proportion, unity, variety.

Asset Management: The organization, naming, storage, and retrieval of digital files and assets for creative projects.

Augmented Reality (AR): Augmented reality is the modification of a real-life environment by the addition of sound, visual elements, or other sensory stimuli.

Authentic Learning Experiences: Classroom experiences that emulate situations, tasks and interactions found in professional environments.

Automation (Stage Technology): Mechanical moving scenery in live entertainment.

Below the Line: Referring to the jobs in a film production budget that are predictable in terms of departments, production crafts, skilled labor, and related wages.

Brand: The identity of a product or company, including its name, logo, and reputation.

Building Information Modeling (BIM): A digital modeling process that creates a 3D representation of a building or interior space linked with data about materials, systems, schedules, and costs, enabling collaboration, visualization, and conflict detection.

Call Sheet: A document used in production that outlines the schedule, crew, cast, and location details for each day of filming or event execution.

Campaign: A coordinated series of marketing activities designed to achieve a specific goal.

Capstone Course: Advanced, final course in career technical education (CTE) pathway sequence of courses.

Career Clusters: Industry sectors as defined by groupings from Standard Occupational Classification (SOC) and North American Industry Classification System (NAICS) codes.

Career Ready Standards: Standards (1.0–12.0) that define essential employability and academic skills, aligned to the National Career Clusters Framework® Career Ready Practices and the California Standards for Career Ready Practice.

Career-Ready Practices: California’s “Career Ready Standards” are based on the California Standards for Career Ready Practice²⁷ and Advance CTE’s Career Ready Practices²⁸ and are customized based on industry cluster application in the MCS.

Choreography: The art of designing and arranging movement sequences for dancers and performers.

²⁷. California Standards for Career Ready Practice:
<https://www.cde.ca.gov/ci/ct/sf/documents/ctescrpflyer.pdf>.

²⁸. Advance CTE’s Career Ready Practices:
<https://careertech.org/wp-content/uploads/2024/10/Career-Ready-Practices.pdf>.

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Cluster Groupings: Large purpose-driven meta-sectors that help guide young people toward Clusters that are aligned with their interests, their sense of purpose, and the impact they want to make on their communities.

Color Grading: The process of adjusting color tones and visual aesthetics in video or film to achieve a desired mood or style.

Color Theory: The study of how colors interact, the visual effects of color combinations, and the principles for color harmony and contrast.

Competencies: Measurable objectives that provide targeted goals and outcomes for student learning.

Compositing: Compositing involves combining visual elements from different sources into single images to create a unified scene.

Composition (Visual Arts): The arrangement of visual elements within a design or artwork to create balance, emphasis, and flow.

Computer-Aided Design (CAD): Software used to create precise 2D drawings and detailed 3D models for design, engineering, and manufacturing applications.

Concentrator Course: Intermediate level, focus area course in CTE pathway sequence of courses.

Conceptual: pertaining to abstract or original thoughts or plans in early stages of development.

Consumer Behavior: The study of individuals' purchasing decisions and preferences, often used to inform design and marketing strategies.

Content: Any material or media appearing on a website or other electronic medium.

Costing: The process of calculating the total expense of producing a project, including materials, labor, and overhead.

Creative Brief: A planning document that outlines project goals, target market, key messages, and tone for a creative assignment.

Creative Careers: Careers where creativity is central to the job requirements and duties.

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Creative Economy: Global economic term describing employment, output, and outcomes of industries such as design, digital media, entertainment, music, live events, performance, arts, and culture, and more.

Creative Industries: Industries such as design, digital media, entertainment, music, live events, performance, arts, and culture, and more.

Cross-Cutting Clusters: Clusters that are based on *both* sector-specific and contextualized functions. Cross-Cutting Cluster standards can be used across all industry sectors or be used for an independent Career Cluster.

Cross-Pathway Standards: Interdisciplinary standards (13.0–16.0) that apply across all pathways in each Career Cluster.

Cross-Platform Content: Media content created to be distributed and consumed across multiple digital or physical platforms.

Cuing: To respond to a cue or set a piece of audio or video equipment in readiness to play.

Cultural Appreciation: To expand understanding of different cultures and show respect for unique practices, people, appearances, ceremonies, etc.

Cultural Appropriation: To mimic, use, or claim cultural behaviors, symbols, artifacts, genres, rituals, etc. for personal interest or gain.

Demographics: Statistical data about a population used to identify target markets (e.g., age, gender, income).

Design Board: A visual presentation of a design concept, often including fabric swatches, sketches, color palettes, and textures.

Design Principles: Fundamental ideas like balance, contrast, emphasis, rhythm, and unity that guide aesthetic composition.

Digital Marketing: The use of websites, social media, email, and other digital platforms to promote products or services.

Digital Audio Workstation: Software used for recording, editing, mixing, and producing digital audio content.

Draping: The technique of pinning and manipulating fabric on a dress form to create the structure and shape of a garment.

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Editorial Workflow: The structured sequence of post-production tasks such as media ingestion, editing, and exporting final versions of content.

Electronic Press Kit: A digital set of promotional materials used in the music industry.

Elevation (Interior Design): A type of drawing that shows a vertical view of a wall or surface within a space used to communicate design details that are not visible in floor plans.

Ergonomics: The study of designing products and spaces that optimize comfort, efficiency, and safety for human use.

Essential Workplace Skills: Transferable skills for the workplace. Often referred to as “soft skills.”

Ethical: Referring to workplace or educational behavior; a set of rules, principles, values, and standards that students, instructors, employees, and employers follow in workplace and/or educational environments.

Exhibition: The public display or presentation of creative work in a gallery, museum, school, or virtual space.

Export Stem: An individual track or grouped audio element (e.g., dialogue, music, sound effects) exported separately from a project, allowing for flexible mixing, mastering, or integration into other media workflows.

Fashion Forecasting: The practice of predicting upcoming fashion trends based on research, market analysis, and cultural insights.

Flat Sketch: A two-dimensional technical drawing of a garment that includes proportions and construction details.

Focus Area: A sub-group of standards within a pathway organized by occupation-specific skills, knowledge, and competencies.

Form: organization, shapes, and arrangement of the components in a visual or performing artwork.

Generalist: A person prepared to perform a broad range of duties rather than specialized work in a particular field.

Generative Artificial Intelligence (AI): Generative AI refers to algorithms that can create new content by learning patterns from large datasets.

Grip & Lighting Control: The tools and techniques used in film and video production to manage light placement, intensity, and direction.

Human-Centered Design (HCD): A creative problem-solving approach that prioritizes the needs, behaviors, and experiences of people at every stage of the design process; emphasizes empathy, prototyping, and iterative testing to develop solutions that are practical, usable, and impactful.

Immersive Media: Interactive media experiences using technologies such as virtual reality (VR), augmented reality (AR), or mixed reality (MR).

Implementation: The process by which educators adopt, adapt, and deliver curriculum based on the standards.

Inclusive, Equitable, and Accessible Design Practices: Design practices that consider and engage with groups that have historically been disadvantaged or harmed by design, especially those who might be impacted by the outcomes of the design project in question.

Industry-Standard: Tools, equipment, technology, and practices used in professional environments.

Interactive Design: A user-centered design approach that focuses on meaningful interaction between people and digital products or services.

Interior Finishes: Materials and treatments applied to interior surfaces such as walls, floors, and ceilings, including paint, tile, fabric, and wood.

Introductory Course: Exploratory, beginning-level course in a CTE pathway.

Iteration: A repeated process of testing, revising, and refining creative work based on feedback and analysis.

J-Cut: An editing technique where the audio from the next scene begins before the visual cut appears, creating a smoother and more natural transition.

Kerning: The adjustment of spacing between individual letters or characters in typography to improve visual balance, readability, and overall design cohesion.

L-Cut: An editing technique where the audio from the current scene continues to play after the visual cut has moved to the next scene, allowing dialogue or sound to bridge between shots.

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Lighting Design: The technical and artistic process of creating lighting effects to enhance mood, focus, and visual storytelling in live or recorded productions.

Look-Up Table (LUT): A digital file that maps input colors to output colors, used in photo, video, and film production to apply consistent color grading, create stylistic looks, or match footage across different cameras.

Machine Learning: Computer systems that use algorithms and data to adapt and change without explicit commands or instructions from a user.

Market Research: The process of gathering and analyzing data about customers, competitors, and trends.

Media Literacy: The ability to research, organize, analyze, evaluate, and create media in a variety of forms.

Merchandising: The promotion and presentation of products in retail settings to drive consumer interest and sales.

Metadata: Embedded information that describes and organizes digital media files (e.g., images, video, audio, design documents), including details such as file type, resolution, creation date, copyright, author, and keywords; used to streamline asset management, searchability, and distribution.

Monetize: To create and sell a product, idea, artwork, or other intellectual property.

Mood Board: A collage of images, textures, colors, and materials used to convey the intended look and feel of a design concept.

Motion Capture (MoCap): A digital technique used to record physical movements of performers and apply them to digital character models in 3D animation or VFX.

Motion Graphics: Animated visual elements used in film, video, or multimedia projects to convey information or enhance storytelling.

Negative Space: The empty or open space around and between the main subjects of a design or composition, used to create balance and focus.

Occupational Alignment: The matching of CTE standards to specific industry job classifications (e.g., O*NET-SOC Codes).

Pathway: A sequence of courses in a specific industry area that prepares students for further education and careers.

Pathway Standards: Standards (17.0–20.0) focused on technical and occupational competencies within each pathway.

Pattern Drafting: The process of creating templates for garment pieces that guide fabric cutting and assembly.

Performing Rights Organization (PRO): An organization that collects income on behalf of songwriters, artists, and music publishers when a song is publicly played or performed.

Pitch Deck: A visual presentation used to communicate a creative concept, product, or proposal to interest holders or clients.

Previsualization (Previs): The process of planning shots, scenes, or animation sequences digitally before full-scale production begins.

Principles of Production Design: Unity, functionality, balance, contrast, focus, scale and proportion, color and lighting, and storytelling

Principles of Visual Composition: Perspective, contrast, hierarchy, focal points, staging, scale, structure.

Production Pipeline: The sequence of steps taken to develop and produce creative projects from concept to delivery.

Projection Mapping: A technique that uses projected images to transform physical surfaces into dynamic visual displays.

Real-Time Rendering: Animation or media content that is rendered instantaneously and can be computer generated in real time for use in games, virtual production environments and immersive media.

Registered Pre-Apprenticeship: A classroom-based prerequisite program for registered apprenticeship that is approved by program sponsors and registered with the Division of Apprenticeship Standards.

Registered Youth Apprenticeship: An apprentice training program that is registered with the Division of Apprenticeship Standards and/or the United States Department of Labor, consisting of paid on-the-job training, classroom-instruction, and related certifications; “Youth” refers to a target age range of 16–24.²⁹

²⁹. California Division of Apprenticeship Standards: <https://www.dir.ca.gov/das/>.

Render (Digital Content): The final stage of processing and optimizing a digital or traditional image, illustration, model, or animation.

Renderings: Detailed visual illustrations of an interior or fashion concept, used to communicate the design before execution.

Rigging (Digital Production): In animation, the process of creating a digital skeleton for characters to enable movement; in stage or production, refers to the safe hanging of lighting and scenic elements.

Rigging (Physical Production and Stage Technology): To use ropes, cables and other equipment to secure lights, curtains, scenery, audio equipment, or other technical needs in theatre or filmed productions.

Rotoscoping: A frame-by-frame animation tracing technique used to produce realistic action in animated and live action projects.

Rule of Thirds: A compositional guideline that divides the frame into thirds (horizontally and vertically) to place focal points along intersections for balance and interest.

Sample Aligned Course Titles: Examples of course names that demonstrate alignment with Pathway Standards, allowing local flexibility.

Scenic Design: The creation and organization of visual stage elements, such as sets, props, and environments, to support a performance or production.

Sequencing Tables: Tables that show how standards are applied across multiple courses and over time to support high-quality pathway design.

Set Dressing: The process of decorating a set with objects, props, and visual elements to establish time, place, and mood.

Show Flow: A document or schedule detailing the sequence and timing of cues, events, and transitions for a live performance or broadcast.

Soft Goods: Drapes, curtains, and other cloth-based elements of the stage or scenery.

Sound Synthesis: The process of generating sound artificially through electronic or digital means or creating variations on existing sounds, including sounds that do not occur naturally.

Specification Sheet (Spec Sheet): A detailed document outlining garment measurements, materials, construction methods, and labeling.

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Spotting: The editorial process of deciding where a musical score and/or sound effects should be included in a film. Spotting takes place after the film is "locked" by the director and involves time cues to support sound design.

Stagecraft: The technical aspects of theatrical, film, or live performance production, including lighting, sound, set design, and rigging.

Storyboard: A series of drawings or images laid out in sequence to pre-visualize a film, animation, or video project.

Storyboarding: The process of visually planning scenes or sequences through sketches or images to communicate story structure and timing.

Striking (a set): The process of dismantling and removing a set, stage installation, or exhibition following a production or event.

Sub-Clusters: Major groupings of career areas within a given field that have similar skills as defined by industry area. Career Clusters (below) are organized by Cluster Grouping. Cluster Groupings can be used to support introductory-level CTE students in selecting appropriate pathways or "Sub-Clusters".

Synchronization (Sync) Licensing: A legal agreement between the owner of a piece of music (the licensor) and a media producer or creator (the licensee) for the use of that music in a visual or audiovisual production such as films, TV shows, commercials, video games, and other forms of media.

Synthesizer: An electronic musical instrument that generates sound by creating and manipulating electrical signals.

Textile Science: The study of the properties, structures, and behaviors of different fabrics and fibers.

Transcode: Digital conversion of one type of encoded data (video or audio) to another, often because the target device that will be used to display the content requires a smaller file size.

Trend Analysis: The systematic evaluation of current and past market trends to inform future design decisions.

Universal Design: A design approach that ensures spaces are usable by all people, regardless of age, ability, or status, often overlapping with ADA and accessibility principles.

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Unpacking a Standard: The process of analyzing a curriculum standard to identify its key knowledge, skills, and competencies, helping educators design lessons, assess learning, and ensure alignment with the standard.

User Experience (UX): The experience of a person using web-based technology, services, software, applications, and products.

User Interface (UI): The interaction design and usability of web-based technology, services, software, applications, and products.

Vector-based software: Software that creates and manipulates images using commands and mathematical formulas, allowing users to create and scale images without losing quality.

Virtual Production: A filmmaking approach that blends live-action footage with real-time digital environments using game engines and LED walls.

Visual Effects (VFX): The digital manipulation or creation of imagery that cannot be captured during live-action filming.

Visual Merchandising: The practice of designing retail displays and layouts to attract and engage customers.

Virtual Reality: Computer-generated simulation of an interactive three-dimensional environment using specific technology that allows the user to experience various sensor stimuli.

Visual Hierarchy: Organization and arrangement of visual elements in a composition to draw attention to certain things and show order of importance.

Voice Casting: The process of selecting and directing voice actors for characters in animation, video games, or other media.

Web-based technology: Online applications and tools allowing individuals to connect and interact with each other, goods, and services in digital spaces.

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