Arts, Media, and Entertainment (AME) Career Technical Education Industry Skills Framework

https://www.cde.ca.gov/ci/ct/gi/ameindustrysector.asp

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Overview

The 2024 Industry Skills Framework (ISF) is a guidance document for local education agencies (LEAs) updating course and curriculum to align with industry competencies and for mapping CTE programs to preapprenticeship and youth apprenticeship. This document is intended to supplement the Arts, Media, and Entertainment (AME) Model Curriculum Standards.

Sections 1.0-20.0 have been submitted for approval as the Career Technical Education (CTE) Model Curriculum Standards publication. This section is organized by industry sector and pathway and should be referenced for preapprenticeship alignment and for obtaining linkage agreements with statewide registered programs.

Sections 21.0-33.0 provide occupation-specific guidance for programs aligning with Related and Supplemental Instruction (RSI) required for registered apprenticeship.

Description

The Arts, Media, and Entertainment (AME) CTE industry sector prepares students for occupations in creative industries. The work in this sector is highly technical and project based. AME programs teach essential workplace skills, train students on design processes and industry-standard technology and emulate professional environments to create authentic learning experiences for students.

The AME ISF integrates the *Standards for Career Ready Practice*[1] into *Career Ready Skills*, establishes *Cross-Pathway Skills* for cross-curricular learning, and organizes *Pathway Skills* into unique *Focus Areas* to effectively align CTE learning with occupation-specific competencies. It also provides guidance for programs offering *Related and Supplemental Instruction* in alignment with registered occupations.

Career Ready Skills (1.0-12.0) build on the California Standards for Career Ready Practice and emphasize the importance of 21st century skills, essential

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[1]Standards for Career Ready Practice https://www.cde.ca.gov/ci/ct/sf/documents/ctescrpflyer.pdf

workplace skills and literacy. They are at the core of CTE instruction and are embedded in every level of a CTE pathway.

Cross-Pathway Skills: (13.0-16.0) are specific to each industry sector and address universal knowledge that apply to all pathways. They serve as prerequisite and corequisite learning for pathway students and outline the importance of industry-specific transferable skills including business and marketing, legal responsibility, media production, and project management.

Pathway Skills: (17.0-20.0) align with occupation-specific technical skills and competencies and build on the Career Ready Skills and Cross-Pathway Skills. They ensure students leave high school with a general knowledge that will allow them to specialize in a particular career after high school. Pathway Skills are organized by Focus Areas and address the following topics:

- **Skill Building:** Students will gain and refine technical 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 industry-specific emerging technology and create impact projects specific to the focus area.

Focus Areas: Focus Areas are pathway skills organized by occupation clusters. A CTE pathway program may design curriculum around skills from one or more focus areas. The purpose of focus areas is to help CTE programs align with advanced training opportunities, such as preapprenticeship and youth apprenticeship, within the sector. Preapprenticeship programs should align with a single focus area.

AME Pathway Skills (Preapprenticeship alignment) are organized in three Pathways and eight Focus Areas:

- Design, Visual, and Media Arts Pathway
  - Animation, Visual Effects, and Games
  - Design and Graphic Arts
  - Studio Arts
- Performance, Music, and Live Entertainment Pathway
  - Stage and Event Technology
  - Dance and Theatre
  - Music and Recording Arts

- ○ Media Production Pathway
  - ■ Film and Television
  - ■ Digital Communications

Related and Supplemental Instruction (RSI) Skills (21.1-33.0) are for programs offering advanced coursework specific to registered occupations. The Career Ready Skills, Cross-Pathway Skills, and Pathway Skills are prerequisite and corequisite to the RSI Skills.

Implementation

The ISF is a guidance document for CTE educators and outlines industry-aligned learning objectives to prepare students for careers. Local educational agencies (LEAs) have autonomy to select unique names, themes, and content for CTE pathway courses in alignment with the AME ISF. This document is intended to supplement the CTE Model Curriculum Standards and provide guidance for CTE programs aligning to preapprenticeship and apprenticeship.

Pathways may be organized into focus areas to support occupational alignment and work-readiness. CTE programs should align with the Pathway Skills relevant to their target occupations.

Educators have autonomy to incorporate skills at varying levels of depth, incorporate multiple skills in a single lesson, or build units around single skills. Skills can be implemented through a variety of instructional strategies including direct instruction, project-based instruction, work-based learning, and workplace simulation.

The ISF are designed to be meaningful, manageable, and measurable, and to support a competency-based or standards-based educational model. They provide a career-readiness framework that sets goals for achievement and familiarizes students with what to expect in a workplace.

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

Sample Aligned Course Titles: LEAs have autonomy to emphasize a specific career focus, medium, or technical skill set in their CTE pathways. The sample course titles listed under each focus area help LEAs understand which types of courses align with the focus area (pathway) skills.

Career Readiness Processes and Guidance for High Quality Pathway Sequencing Tables[2]: *Guidance for High Quality Pathway Sequencing Tables* (sequencing tables) are organized by *Career Readiness Processes.* The goal of sequencing tables is to ensure students receive a well-rounded CTE education that does not limit class time to activities such as rehearsal and lecture. The sequencing tables are designed to assist with course outline development,

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[2] The AME Guidance for High Quality Sequencing tables aid in the development of AME courses that receive both academic credit and CTE credit.

inclusion of Career Ready, Cross-Pathway, and Pathway Skills, and alignment to the Artistic Processes[3] outlined in the *2019 California Arts Standards*.

Sequencing tables are organized into four career readiness processes:

- **Connecting***:* Relating to careers and applications across industries.
- **Applying***:* Applying academic, creative, and technological knowledge to professional projects.
- **Creating***:* Conceiving, developing, and refining new creative ideas and work.
- **Producing***:* Realizing and presenting creative ideas and work in an industry-specific environment.

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[3] The California Arts Standards Artistic Processes are: Connecting, Reflecting, Creating, and Producing. AME is designed to support career-readiness for students interested in pursuing careers in creative fields (rather than supplant, displace, or replace Arts Education courses).

Arts, Media, and Entertainment: Career Ready Skills

The AME Career Ready Skills serve as a foundation for all CTE programs. They supplement the California Standards for Career Ready Practice and emphasize the importance of social responsibility, media literacy, digital literacy, and career-readiness across CTE pathways. The Career Ready Skills outline essential skills and knowledge required for a myriad of occupations and workplace environments.

1.0 Academics
Apply appropriate technical skills and academic knowledge.

1.1 Investigate pioneers, innovators, and icons from diverse genres, regions, cultures, backgrounds, and experiences.

1.2 Develop and apply scientific and mathematical skills to industry-specific projects (i.e., applied geometry, algebra, acoustics, and physics).

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

1.4 Apply principles of art, design, and composition to creative works across disciplines[4]

1.5 View, analyze, and respond to a variety of artistic and creative products.

2.0 Communication
Communicate clearly, effectively, and with reason.

2.1 Effectively and respectfully communicate information and ideas in a variety of professional and educational environments.

2.2 Correctly use industry-appropriate terminology when discussing projects, writing proposals, and presenting work.

2.3 Speak extemporaneously and professionally when interviewing and presenting creative work.

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

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[4] Arts Education is part of an adopted course of study per *Education Code* Section 51220. Refer to the 2019 Arts Standards for academic alignment of CTE and Arts Education.

2.5 Differentiate industry-specific writing processes, formats, and conventions; write professional copy, emails, memos, reports, and/or presentations.

3.0 Career Planning and Management
Develop an education and career plan aligned with personal goals; participate in a continuum of career exploration, exposure, engagement, and experience (work-based learning).

3.1 Explore the wide array of creative and technical jobs across industries.

3.2 Conduct interest, aptitude, and career research to develop a career plan.

3.3 Understand the importance of professional networking, including building and sustaining partnerships and relationships.

3.4 Understand the entry level positions for different careers (and how to obtain them).

3.5 Interpret a job offer; understand how to negotiate fair compensation, terms, and benefits relative to individual circumstances.

3.6 Compare and contrast costs, benefits, and tax implications of temporary, permanent and work-for-hire/freelance employment.

3.7 Research labor unions, guilds and professional associations and articulate the requirements and processes for membership.

3.8 Develop a professional resume and industry-specific web-based portfolio that highlights creative skills, technical proficiencies, and iterative processes.

4.0 Technology
Apply technology to enhance productivity.

4.1 Practice internet safety, identify malicious activity (i.e., phishing and malware), discern and avoid misinformation, and keep personal information private.

4.2 Use standard business software to create documents and presentations, share files and connect with collaborators and clients.

4.3 Use job-specific hardware/software for workflows and delivery of content to various platforms.

4.4 Differentiate and utilize different operating systems, version control, databases, and cloud services for data management.

4.5 Apply rendering and exporting techniques to comply with industry standards.

4.6 Use industry-standard asset tracking, file naming conventions and storage/back-up protocols.

4.7 Explore and evaluate applications, implications, ethics, and responsible use of artificial intelligence (AI) and machine learning in creative industries.

4.8 Explore and evaluate emerging technology, technological trends, and the application of technological advancements (i.e., immersive media, virtual and augmented reality, and interactive/participatory web-based interactions).

5.0 Critical Thinking and Problem Solving
Utilize critical thinking to make sense of problems and persevere in solving them.

5.1 Use inductive and deductive reasoning to solve problems and make informed decisions.

5.2 Solve industry-specific challenges, accept critique, and apply feedback to improve skills.

5.3 Use questioning, reflection, and feedback to iterate when solving problems and exploring ideas for creative development.

5.4 Explore different approaches to solving creative problems and evaluate what makes each approach effective.

5.5 Avoid fallacies of logic when presenting ideas and discussing perspectives.

6.0 Health and Safety
Practice personal health and understand financial literacy.

6.1 Contribute to healthful workplace culture through safety-related decision-making and problem-solving techniques.

6.2 Practice workplace safety as defined by industry standards, including the appropriate use of tools, equipment, personal protective equipment, injury prevention, and callouts.

6.3 Attend to wellness needs and practice self-care including rest, ergonomics, nutrition, exercise, and personal hygiene.

6.4 Attend to mental health needs including emotional, psychological, and social well-being.

6.5 Practice individual and collective strategies for social and emotional care and stress management.

6.6 Emulate a workplace culture that mitigates discriminatory practices, employs strategies of accountability, and is conducive to interpersonal repair.

6.7 Examine and apply principles of financial literacy to budgeting, taxes, and money management.

7.0 Leadership and Community Engagement
Act as a responsible citizen in the workplace and the community.

7.1 Identify the responsibilities, competencies, and behaviors of successful leaders.

7.2 Understand how to take direction from leaders, work collaboratively, and follow through with individual responsibilities as a team member.

7.3 Demonstrate independent initiative and work ethic.

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

7.5 Lead in an inclusive and positive manner, with a focus on productivity, morale, and organizational culture.

8.0 Ethics and Social Responsibility
Model integrity, ethical leadership, and effective management.

8.1 Demonstrate personal integrity and ethical behavior in the workplace.

8.2 Seek cross-cultural inspiration and understanding through exploration of various resources and materials.

8.3 Differentiate cultural appreciation and cultural appropriation to avoid stereotypes and misrepresentation of different groups.

8.4 Examine the history and impact of discrimination and other forms of injustice to support inclusivity and uplift diverse experiences and perspectives.

8.5 Analyze how individual and collective biases can influence decision making.

8.6 Analyze how power and social dynamics impact collaborative and managerial decision making.

8.7 Evaluate the rules and principles that inform the ethical development and responsible use of AI technology.

9.0 Collaboration and Teamwork

Work productively in teams while integrating cultural and global competence.

9.1 Collaborate with a team to realize, refine, finalize, and launch a creative project.

9.2 Behave respectfully and contribute to an inclusive team environment.

9.3 Respond thoughtfully to diverse and/or divergent perspectives.

9.4 Discuss issues and topics with creative teams to establish priorities or positions.

9.5 Demonstrate the ability to effectively navigate challenges with teammates and de-escalate conflict in collaborative situations.

10.0 Creativity and Innovation
Demonstrate creativity and innovation.

10.1 Create the physical and mental conditions that allow for innovation and exploration of new ideas.

10.2 Use research, imagery, and creativity to develop ideas.

10.3 Visualize thinking using different creative methods (i.e., mood boards, storytelling, experimentation, improvisation, illustration, sketching, collage, photography, and storyboarding).

10.4 Work with teams to generate ideas and bring concepts to life through iterative processes (i.e., mock-ups, prototypes, and performance).

10.5 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 Seek direct collaboration from people with diverse and/or divergent perspectives as an integral part of the creative process.

10.7 Develop an artist or designer's statement that describes conceptual values, creative processes, and challenges.

11.0 Research and Media Literacy
Employ valid and reliable research strategies.

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

11.2 Gather information and develop perspective through research, interviews, observation, and experience.

11.3 Properly cite sources and proprietary information using appropriate formats.

11.4 Research current industry-standard technology, tools, and practices.

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

11.6 Research and analyze the impact of history, culture, and technology on the creative industries.

12.0 Audience and Behavior
Understand the environmental, social, and economic impacts of decisions.

12.1 Study and engage with an intended audience by observing perspectives, environments, behaviors, and needs.

12.2 Explore and evaluate how social and cultural trends influence media creation, consumption, and dissemination.

12.3 Examine and articulate the role of audience and market research in marketing and distribution of creative works.

12.4 Demonstrate an understanding of how web-based algorithms, data analytics, ratings, views, and followers impact media creation, consumption, and trends.

12.5 Identify how emerging technology, technological trends, and technological advancements impact different audiences.

12.6 Examine and employ environmental sustainability practices in production environments and across AME industries.

12.7 Analyze and use government rating systems to assess suitability of media content for specific audiences, particularly children or adolescents.

12.8 Effectively package, disseminate, and market content to reach an intended audience.

Arts, Media, and Entertainment: Cross-Pathway Skills

The AME Cross-Pathway Skills are relevant to students in all AME Pathways. These skills outline the importance of business and marketing, legal responsibility, media content creation, and project management across creative careers and industries. These skills build off the Career Ready Skills and should be integrated into instruction across AME Pathways and Focus Areas.

13.0 Business and Marketing
Understand and employ effective business and marketing strategies.

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

13.2 Effectively pitch an original concept with a visual presentation and engaging narrative.

13.3 Develop and/or maintain a visually compelling and appropriate set of branded elements for a product, service, or experience.

13.4 Explore and apply content monetization strategies using different social media, distribution, and streaming platforms.

13.5 Effectively develop and manage budgets for business and marketing purposes.

13.6 Interact professionally with clients and help define clear and actionable objectives that satisfy their goals.

13.7 Develop and apply entrepreneurial skills to advance creative ideas.

13.8 Demonstrate an understanding of marketing and distribution across AME industries (i.e., marketing strategy, campaigns, press kits and publicity planning).

13.9 Identify the relationships between content publishers, developers, distributors, marketers, and retailers.

14.0 Legal Responsibility
Understand contracts, laws, regulations, and organizational norms.

14.1 Identify how copyright and trademark laws impact content creation, derivative works, performance, and publishing across various platforms.

14.2 Adhere to terms of use, including copyright laws and regulations.

14.3 Read and interpret a contract and/or legal document; use correct terminology as it applies to contracts and legal.

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

14.5 Examine and articulate the process for registering, trademarking, and/or copyrighting original creative works to protect intellectual property.

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

15.0 Media Content Creation
Develop and create original content.

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

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

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

15.4 Clearly communicate a story and theme using different industry-specific methods (i.e., outline, script, rundown, treatment, and synopsis) prior to capturing or creating content.

15.5 Use storyboarding and/or shot lists to plan an engaging and clear scene or sequence.

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

15.7 Use music and audio to enhance storytelling; generate and integrate audio elements (i.e., sound effects, dialog, and music) into seamless and effective sequences.

15.8 Review and test content to identify and resolve problems, ensure seamless transitions, and maximize the audience's experience; use industry-standard editing techniques appropriate to the project.

16.0 Production and Project Management
Understand production pipeline and project workflow.

16.1 Identify supplies, tools, and equipment by name, function, and purpose; properly handle, operate, maintain, and document supplies, tools, and equipment.

16.2 Understand roles and responsibilities for each member of a production/project team; communicate effectively, work collaboratively, and interact professionally to meet directorial goals, realize creative ideas, and execute project needs.

16.3 Design, plan and execute productions, activations, and/or events for different venue types, sites, locations, audiences, and purposes.

16.4 Develop, analyze, and breakdown creative plans (i.e., creative brief, script, storyboard, game design document, animatic, diagram, setlist, schematic and work order).

16.5 Develop a project/production budget and articulate the importance/ interrelationship between a development schedule and budget constraints.

16.6 Understand components and workflow for each stage associated with the pre-production, production, and post-production of a creative project.

16.7 Identify specific production/project needs and logistics (i.e., timeline, location/venue, casting, funding, insurance, permits, scheduling, and crewing/staffing).

16.8 Attend production/project meetings to discuss creative plans, budgets, timelines, and division of duties.

16.9 Track tasks and deliverables using industry-standard project management strategies and software.

Arts, Media, and Entertainment: Pathway Skills

Pathway Skills align with occupation-specific technical competencies and build on the Career Ready Skills and Cross-Pathway Skills. They ensure students leave high school with a general knowledge that will allow them to specialize in a particular creative career after high school.

Design, Visual, and Media Arts Pathway

Pathway Description:

Students will create, publish, and exhibit original works; design and animate characters, worlds, and environments; iterate products and services to meet client expectations; work collaboratively to manage projects; and prepare for specialized careers in user interface and experience design, graphic design, product design, animation, visual effects (VFX), game design, environment design and more.

Focus Areas:

Animation, Visual Effects, and Games
Design
Studio Arts

Guidance:

It is recommended that students entering AME Design, Visual, and Media Arts concentrator or intermediate courses complete an introductory Arts Education or CTE course as a prerequisite. Refer to the California Arts Standards for Visual Arts and Media Arts for academic alignment in CTE pathways.

Design, Visual and Media Arts Pathway

Animation, Visual Effects, and Games

Focus Area Description:

Students will develop their creative and technical skills in visual development, animation, visual effects (VFX), and game design; apply principles of art, design, and visual storytelling; develop skills in two-dimensional (2D) animation, three-dimensional (3D) animation, and VFX; and work collaboratively in production pipeline environments.

Recommended Prerequisites[5]:

Level 1–2 Visual Art/Design Course(s)
Level 1–2 Media Arts/Design Course(s)
Introductory AME Course

Occupational Alignment and O*Net-SOC Codes:[6]

13-1082.00 Project Management Specialists
15-1255.01 Video Game Designers
27-1011.00 Art Directors
27-1013.00 Fine Artists, Including Painters, Sculptors, and Illustrators
27-1014.00 Special Effects Artists and Animators
27-2012.00 Producers and Directors
27-2012.05 Media Technical Directors/Managers
27-4032.00 Film and Video Editors

Aligned Course Titles[7]

Animation, VFX, and Games
Animation
2D Animation
3D Animation
Game Design

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[5] It is recommended that students complete one or more of the listed prerequisites(s) before enrolling in a concentrator class.

[6] O*Net Codes are referenced for alignment to registered apprenticeship and for the purposes of career research.

[7] LEAs have autonomy to emphasize a specific career focus and select unique names for CTE courses.

Visual Development

17.0: Animation, VFX, and Games (AVG): Skill Building

AVG.17.1 Apply principles of art and design to the development of environments, props, and characters (i.e., scale, visual hierarchy, balance, negative space, composition, perspective, dimension, color theory, color modes, shading, contrast, and layering).

AVG.17.2 Apply a knowledge of anatomy, body mechanics, and facial expressions to human, animal, and fictional characters; utilize character dynamic poses to express personality, emotion, tone, and story points.

AVG.17.3 Apply principles of character design and development, world design, and/or level design to creative projects.

AVG.17.4 Apply principles of animation to objects, text, and characters.

AVG.17.5 Model digital props and characters and create turntable/orthographic views.

AVG.17.6. Apply principles of rigging to a digital character or prop using original animation and/or match moving.

AVG.17.7 Apply digital effects such as smoke, water, fire, destruction, and/or fur/hair to a scene.

AVG.17.8 Apply principles of color/lighting and texture to props, characters, and/or digital effects in a scene.

AVG.17.9 Apply principles of rotoscoping, digital paint, and compositing to a scene.

18.0 Animation, VFX, and Games: Process and Practice

AVG.18.1 Evaluate the production pipeline and responsibility of each department, including the steps, skills, and processes within each pipeline stage.

AVG.18.2 Understand artist workflows necessary to create models, textures, materials, lighting, VFX, rigging, and animation.

AVG.18.3 Use industry standard software for creating 2D and 3D animated projects.

AVG.18.4 Develop a storyboard and create an animatic that incorporates sound and music.

AVG.18.5 Turn an animatic into previsualization using computer generated characters, animatics, and props.

AVG.18.6 Work with a production team and contribute to a comprehensive animated scene, sequence, and/or game.

AVG.18.7 Demonstrate an understanding of video game design (i.e., player immersion, world design, level design, rules, interfaces, objectives, navigation, rewards, character development, performance, monetization, and accessibility).

AVG.18.8 Work with an editorial team to finalize an animated game, short, or other creative project.

19.0 Animation, VFX, and Games: Career Exploration

AVG.19.1 Explore careers in visual development, story, and concept art.

AVG.19.2 Explore careers in production coordination and management.

AVG.19.3 Explore careers in game design, technical art, and game development.

AVG.19.4 Explore careers for animation and VFX specialists and generalists.

20.0 Animation, VFX, and Games: Advanced Technology and Impact

AVG.20.1 Investigate how gaming engines and real-time rendering are used in virtual production.

AVG.20.2 Demonstrate an understanding of motion capture and its applications in animation and game development.

AVG.20.3 Evaluate how crowd simulation creates movement and/or dynamics for multiple objects or characters.

AVG.20.4 Demonstrate foundational knowledge of common programming languages and how scripting automates tasks in games.

AVG.20.5 Identify tools that protect artists' intellectual property and prevent digital artwork from being used without permission.

Design, Visual and Media Arts Pathway

Design and Graphic Arts

Focus Area Description:

Students will develop skills in design processes, user experience and interface design, graphic arts, and visual storytelling; engage in iterative processes; and work collaboratively to design campaigns, products, publications, services, artwork, environments, and experiences for a variety of audiences and clients.

Recommended Prerequisites:

Level 1–2 Media Arts Course(s)
Level 1–2 Visual Arts Course(s)
Introductory AME Course

Occupational Alignment: O*Net-SOC Codes

11-2011.00 Advertising and Promotions Managers
15-1255.00 Web and Digital Interface Designers
15-1255.01 Video Game Designers
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
27-1022.00 Fashion Designers
27-1024.00 Graphic Designers
27-1025.00 Interior Designers
27-1027.00 Set and Exhibit Designers
27-2012.00 Producers and Directors
27-4021.00 Photographers

Aligned Course Titles:

Design and Graphic Arts
Media Arts
Graphic Design
Publication Design
Digital Design

17.0 Design and Graphic Arts (DGA): Skill Building

DGA.17.1 Apply principles of art and design to original work (i.e., scale, visual hierarchy, balance, negative space, composition, perspective, and dimension).

DGA.17.2 Incorporate color theory, color modes, contrast, opacity, transparency, shading, and layering to create depth and movement within designs.

DGA.17.3 Use narrative, decorative, informative and/or conceptual illustrations to articulate a creative idea or vision.

DGA.17.4 Apply knowledge of typography and letterforms to set visual tone, deliver clear messages, and organize information.

DGA.17.5 Use layout and vector-based software to create print applications like logos, posters, packaging, brochures, or signs.

DGA.17.6 Use User Experience (UX) and User Interface (UI) principles to design experiences for websites, applications, social networks, and digital services.

DGA.17.7 Apply principles of interaction design, to prioritize UX and UI in digital products and services.

DGA.17.8 Use accessible design practices, considering the needs of people with different abilities.

DGA.17.9 Create and integrate images, effects, motion graphics, and/or animation into final content.

18.0 Design and Graphic Arts: Process and Practice

DGA.18.1 Explore and apply different approaches to solving design problems and evaluate what makes each approach effective.

DGA.18.2 Read and interpret a project brief and generate multiple relevant concepts.

DGA.18.3 Tell a compelling story through design elements.

DGA.18.4 Help clients define clear and actionable design objectives that satisfy their goals and allow creative exploration.

DGA.18.5 Write an effective proposal for a client, including pricing, relevant case studies and work samples.

DGA.18.6 Contribute to a comprehensive design project in a professional environment.

DGA.18.7 Track tasks and deliverables using project management software.

DGA.18.8 Monitor project milestones and deliverables and create project status presentations.

DGA.18.9 Collaborate with a cross-functional design team to finalize a project.

19.0 Design and Graphic Arts: Career Exploration

DGA.19.1 Explore the range of design careers (i.e., fashion design, costume design, stage design, product design) across industry sectors.

DGA.19.2 Explore careers in packaging, publication, and graphic design.

DGA.19.3 Explore careers in interactive design including UX and UI, web design, system and information design.

DGA.19.4 Explore careers in branding design, advertising, and digital marketing.

DGA.19.5 Explore careers for designers in film, television, and live entertainment.

20.0 Design and Graphic Arts: Advanced Technology and Impact

DGA.20.1 Understand the environmental impact of design and employ sustainable design practices.

DGA.20.2 Employ inclusive, equitable, and accessible design practices.

DGA.20.3 Use design for the greater good; design a solution for a community need or problem.

DGA.20.4 Examine how computer-aided design (CAD) software is used in environment, product, and/or scenic design.

DGA.20.5 Identify tools that protect designers' intellectual property and prevent digital work from being used without permission.

Design, Visual and Media Arts Pathway

Studio Arts

Focus Area Description:

Students will develop skills in a variety of digital and physical mediums; create, refine, price, and market original work; design, curate, and install public art exhibitions; and understand how to apply artistic skills and practices to produce work for different audiences, purposes, and clients.

Recommended Prerequisites:

Level 1–2 Visual Arts Course(s)
Level 1–2 Media Arts Course(s)
Introductory AME Course

Occupational Alignment: O*Net-SOC Codes

11-2011.00 Advertising and Promotions Managers
11-9151.00 Social/Community Service Managers
27-1011.00 Art Directors
27-1013.00 Fine Artists, Including Painters, Sculptors, and Illustrators
27-1014.00 Special Effects Artists and Animators
27-1022.00 Fashion Designers
27-1027.00 Set and Exhibit Designers
25-1121.00 Art, Drama, and Music Teachers
25-4011.00 Archivists
25-4012.00 Curators
25-4013.00 Museum Technicians and Conservators
27-4021.00 Photographers

Aligned Course Titles
Studio Arts
Visual and Commercial Art
Ceramics
Painting
Photography

17.0 Studio Arts (SA): Skill Building

SA.17.1 Apply principles of art and design to original work (i.e., scale, visual hierarchy, balance, negative space, composition, perspective, and dimension).

SA.17.2 Incorporate color theory, shading, line, and contrast to create depth and movement within images.

SA.17.3 Use narrative, decorative, informative and/or conceptual illustrations to articulate a creative idea or vision.

SA.17.4 Apply a knowledge of anatomy, body mechanics, and facial expressions, to images of human, animal, and fictional characters.

SA.17.5 Use different techniques, materials, textures, and artistic mediums to produce desired effects in original work.

SA.17.6 Apply a knowledge of perspective and dimension to environments, scenic design, photography, and other artistic products.

SA.17.7 Combine and/or manipulate a range of physical, digital, and virtual mediums (i.e., painting, color, opacity, transparency, and layering).

SA.17.8 Operate camera equipment effectively, capture various types of images, and transfer, render, and optimize images using industry-standard editing software.

SA.17.9 Apply appropriate techniques in handling tools and materials used to design, plan, create and install 2D or 3D artwork.

18.0 Studio Arts: Process and Practice (exhibition)

SA.18.1 Identify appropriate specific exhibition needs, including venue type, permits, scheduling, budgeting, and staffing.

SA.18.2 Determine the value of artwork and price appropriately for commercial purposes, display, and sale.

SA.18.3 Design and execute a digital marketing campaign for a product, service, public event or gallery opening.

SA.18.4 Work with artists, artistic directors, curators, and technical staff to realize an artistic vision in a gallery, event, or public space.

SA.18.5 Create, arrange, caption, label, and install artistic work for a client or public audience.

SA.18.6 Create artwork aligned to client specifications, commercial purposes, and specific project guidelines.

SA.18.7 Coordinate the strike of an installation and properly disassemble, store, and document artistic works.

SA.18.8 Create and submit artwork to public shows or galleries according to a specific theme, topic, style, and/or medium.

SA.18.9 Create, refine, showcase, and value an original collection of artworks, demonstrating technical skill in a specific medium and style.

19.0 Studio Arts: Career Exploration

SA.19.1 Explore careers for visual artists and photographers in commercial settings and across industries.

SA.19.2 Explore careers in arts education and arts management.

SA.19.3 Explore careers for museum and gallery professionals including curators, archivists, collections management and restoration professionals, and museum educators.

SA.19.4 Explore careers in visual development, concept art, and art design/direction.

20.0 Studio Arts: Advanced Technology and Impact

SA.20.1 Explore advanced technology (i.e., coding, computation, and data) as an artistic medium for art production, augmentation, and exhibition.

SA.20.2 Create art for the greater good; address a community need or problem with public art.

SA.20.3 Explore modern archiving and preservation techniques for maintaining artistic works.

SA.20.4 Identify tools that protect artists' intellectual property and prevent digital work from being used without permission.

Performance, Music, and Live Entertainment Pathway

Pathway Description:

Students will understand the artistic and technical career opportunities surrounding and supporting performers; gain proficiency in production processes and workflows for live entertainment and events (i.e., concerts, tours, festivals, sports events, tournaments, plays, musicals, and corporate presentations); and engage with studio environments and live audiences.

Focus Areas:

Stage and Event Technology
Dance and Theatre
Music and Recording Arts

Guidance

It is recommended that students entering AME Performance, Music, and Live Entertainment concentrator or intermediate courses complete an introductory Arts Education or CTE course as a prerequisite. Refer to the California Arts Standards for Performing Arts disciplines for academic alignment in CTE pathways.

Performance, Music, and Live Entertainment Pathway

Stage and Event Technology

Focus Area Description:

Students will design and produce events for live audiences; properly operate tools and equipment; gain technical proficiency with industry-standard hardware and software; and work collaboratively in a variety of production environments including performances, concerts, festivals, tournaments, and/or conferences.

Recommended Prerequisites:

Level 1–2 Technical Theatre Course(s)
Introductory AME Course

Occupational Alignment: O*Net-SOC Codes

11-1021.00 General and Operations Managers
11-2011.00 Advertising and Promotions Managers
11-9151.00 Social and Community Service Managers
13-1082.00 Project Management Specialists
27-1011.00 Art Directors
27-1013.00 Fine Artists, Including Painters, Sculptors, and Illustrators
27-1027.00 Set and Exhibit Designers
27-2012.00 Producers and Directors
27-2012.05 Media Technical Directors/Managers
27-4011.00 Audio and Video Technicians
27-4012.00 Broadcast Technicians
27-4015.00 Lighting Technicians
27-4031.00 Camera Operators, Television, Video, and Film
39-3092.0 0 Costume Attendants
39-5091.00 Makeup Artists, Theatrical and Performance
49-9096.00 Riggers

Aligned Course Titles

Stage and Event Technology
Production Design
Stage Technology
Theater Technology
Production Management

17.0 Stage and Event Technology (ST): Skill Building (Design)

ST.17.1 Illustrate how production elements (i.e., lighting, audio, video, scenic, special effects, and automation) can achieve desired effects for an audience.

ST.17.2 Differentiate design and technical needs for dance, theatre, music, sports events, live events, and presentations; determine artistic elements for a live production.

ST.17.3 Execute production design in alignment with the creative director's vision.

ST.17.4 Research and identify the needs of props, set, costumes, hair, and makeup in alignment with show design and creative direction.[8]

ST.17.5 Understand music structure and how to accent music-driven performances with production elements.

ST.17.6 Experiment with technical design elements (i.e., projection, lighting, costumes, property, and scenic) to make artistic decisions and enhance a performance.

ST.17.7 Use industry-standard software for scenic, lighting, and sound design purposes (i.e., CAD, previsualization programs, and digital audio workstations) to achieve the intended effect for an audience.

ST.17.8 Participate in the production process by managing attendance for rehearsals, completing tasks on schedule, and skillfully applying director and choreographer notes.

18.0 Stage and Event Technology: Process and Practice (Production)

ST.18.1 Program and operate consoles and digital control environments (i.e., video, audio, lighting, automation, and special effects).

ST.18.2 Properly decipher technical drawings and renders to develop a technical implementation plan.

ST.18.3 Apply knowledge of power and data distribution (i.e., signal flow, networking systems, connectors, cabling, show power, and balancing of power loads).

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[8] Intentionally source and/or create visual elements with attention to art direction, lighting, individual cultures, skin, and hair types.

ST.18.4 Demonstrate understanding of how to safely rig equipment and structures.

ST.18.5 Rig and operate lighting equipment to control shadows, brightness, color, and effects.

ST.18.6 Operate sound equipment (i.e., dynamic, condenser, lavalier/lapel, speakers, mixers, and amplifiers) to achieve high quality audio capture and reproduction.

ST.18.7 identify and describe scenic elements (i.e., staging, automation, soft goods, and floor surfaces); safely handle and operate tools and materials to construct and dress a set.

ST.18.8 Identify the components of live video systems and their uses (i.e., led screens, projectors, projection screens, cameras, switchers, and monitors); describe the relationship between video and other live production elements.

ST.18.9 Coordinate the strike and load out of a live production and properly transport and/or store production equipment.

19.0 Stage and Event Technology: Career Exploration

ST.19.1 Explore careers across live production environments (i.e., concerts, theatre, festivals, esports, tournaments, and conferences).

ST.19.2 Explore careers in the production crafts (i.e., lighting, audio, video, special effects, scenic, automation, and stagehand).

ST.19.3 Explore careers for producers, creative directors, and designers.

ST.19.4 Explore careers in venue management and operations.

ST.19.5 Explore careers for promoters, tour managers, booking agents, talent managers, and entertainment marketing professionals.

20.0 Stage and Event Technology: Advanced Technology and Impact

ST.20.1 Investigate how automation has created new opportunities for spectacle and fundamentally changed the roles and responsibilities of technical crews.

ST.20.2 Examine and articulate the fundamentals of special effects and pyrotechnics from a technician's perspective.

ST.20.3 Demonstrate an understanding of how virtual and augmented reality, real-time technology, and dynamic media is used in live production.

ST.20.4 Examine and employ sustainable production and touring practices that reduce environmental impact in live entertainment.

Performance, Music, and Live Entertainment Pathway

Dance and Theatre

Focus Area Description:

Students will perform in professional environments; devise and refine original work; explore and differentiate opportunities for performers in commercial and concert industries; apply elements of production design; and examine careers surrounding performing artists.

Note: Dance and Theatre focused pathways indicate common standards within Dance and Theatre CTE courses; it is key to remember that the techniques and expression of these standards are unique and discrete between Dance curriculum and Theatre curriculum. While there is opportunity for cross-discipline collaboration between Dance and Theatre courses, this document is not intended to be interpreted as guidance to combine Dance and Theatre CTE programs together or limit offerings to students.

Recommended Prerequisites:

Level 1–2 Dance Course(s)
Level 1–2 Theatre Course(s)
Introductory AME Course

Occupational Alignment: O*Net-SOC Codes

11-1021.00 General and Operations Managers
11-2032.00 Public Relations Managers
11-9179.01 Fitness and Wellness Coordinators
13-1082.00 Project Management Specialists
25-1121.00 Art, Drama, and Music Teachers
27-2011.00 Actors
27-2012.04 Talent Directors
27-2031.00 Dancers
27-2022.00 Coaches and Scouts
27-2012.00 Producers and Directors
27-1011.00 Art Directors
27-3043.05 Poets, Lyricists, and Creative Writers
27-2032.00 Choreographers
39-9031.00 Exercise Trainers and Group Fitness Instructors

Aligned Course Titles (Dance):

Dance
Choreography
Professional Dance
Musical Theatre
Dance Fitness

Aligned Course Titles (Theatre):

Theatre
Acting
Acting for Camera
Professional Theatre
Musical Theatre
Drama

17.0 Dance and Theater (DT): Skill Building

DT.17.1 Practice strengthening, coordination, balance, flexibility, and/or alignment exercises to improve physical technique for dance and/or theatre performance.

DT.17.2 Explore and refine techniques from different styles, crafts, forms, and genres in acting and/or dance disciplines.

DT.17.3 Utilize proper breath control and performance elements (i.e., gesture, cadence, projection, pitch, power/energy, space, timing, and tone) to effectively communicate character, intention, and emotion.

DT.17.4 Safely navigate physical spaces and develop spatial and environmental awareness through practice and performance.

DT.17.5 Apply techniques that help reduce the risk of injury and contribute to emotional, mental, and physical wellness (i.e., yoga, Pilates, meditation, and breathwork).

DT.17.6 Attend auditions and demonstrate effective performance skills in response to audition requirements; integrate technical skill and clear intent in ensemble, group, and solo performances.

DT.17.7 Understand elements of directing and effectively communicate artistic ideas when working with performers.

DT.17.8 Differentiate techniques for directing, choreographing, and performing for film and for live audiences.

18.0 Dance and Theatre: Process and Practice

DT.18.1 Use improvisation to experiment with creative ideas.

DT.18.2 Apply knowledge of anatomy and body mechanics to a safe physical practice.

DT.18.3 Utilize movement and gesture to express character, emotion, and story points.

DT.18.4 Experiment with mood and timing using music, sound effects, and/or spoken narrative to make artistic decisions and enhance a performance.

DT.18.5 Experiment with technical design elements (i.e., projection, lighting, costumes, property, and scenic) to make artistic decisions and enhance a performance.

DT.18.6 Experiment with camera shots, angles, and editing to create professional reels and performance excerpts.

DT.18.7 Participate in the production process by memorizing performance material, managing timelines, and skillfully applying director and choreographer notes to improve performance.

DT.18.8 Create site-specific work designed for a particular location or environment.

19.0 Dance and Theatre: Career Exploration

DT.19.1 Explore careers for performers across concert, commercial, and tourism industries.

DT.19.2 Explore careers in arts management and business, including studio, venue, and company management.

DT.19.3 Explore careers in fitness, wellness, and physical therapy.

DT.19.4 Explore careers for producers, directors, and choreographers.

DT.19.5 Explore careers for dance and theatre educators and teaching artists.

DT.19.6 Describe how performing artists are well equipped with transferable skills that apply to careers across a variety of industries.

DT.19.7 Examine the realities and scope of opportunity within the entertainment industry for performing artists.

20.0 Dance and Theatre: Advanced Technology and Impact

DT.20.1 Explore and articulate how video projection, projection mapping, and holographic technology can enhance possibilities for performers.

DT.20.2 Investigate how stage automation technology and rigging can enhance possibilities for performers.

DT.20.3 Examine and articulate principles of motion capture from the performer's perspective.

DT.20.4 Create impact projects that address social, environmental, and cultural issues.

Performance, Music, and Live Entertainment Pathway

Music and Recording Arts

Focus Area Description:

Students will gain an understanding of music theory, devise and refine original work; properly handle and operate instruments, audio equipment and digital audio workstations; gain proficiency in audio production and engineering software; record and/or perform in professional environments; understand how to navigate the music industry and examine careers surrounding musicians.

Recommended Prerequisites:

Level 1–2 Music Course(s)
Level 1–2 Media Arts Course(s)
Introductory AME Course

Occupational Alignment: O*Net-SOC Codes

11-1021.00 General and Operations Managers
13-1011.00 Agents and Business Managers of Artists, Performers, and Athletes
13-1082.00 Project Management Specialists
25-1121.00 Art, Drama, and Music Teachers
27-2012.00 Producers and Directors
27-2012.04 Talent Directors
27-2041.00 Music Directors and Composers
27-2042.00 Musicians and Singers
27-2091.00 Disc Jockeys, Except Radio
27-3043.05 Poets, Lyricists, and Creative Writers
27-4011.00 Audio and Video Technicians
27-4012.00 Broadcast Technicians
27-4014.00 Sound Engineering Technicians

Aligned Course Titles

Music and Recording Arts
Audio Production
Commercial Music
Music Technology
Pop Music
Professional Music

17.0 Music and Recording Arts (MRA): Skill Building

MRA.17.1 Use critical listening to identify and describe key music elements and styles, including acoustic and electronic instrumentation; Identify song form and musical sections in contemporary/popular music across genres.[9]

MRA.17.2 Demonstrate an understanding of microphone acoustics through playing and recording acoustic instruments.

MRA.17.3 Rehearse, memorize, and skillfully perform or present solo and group material in live and/or studio environments.

MRA.17.4 Identify and demonstrate understanding of organizational elements of song structure, basic harmony, piano voicings, and chord progressions.

MRA.17.5 Describe how the emotional aspects of music such as tempo, dynamics, timbre, and feel can invoke a particular response from the listener.

MRA.17.6 Demonstrate an understanding of the analog and digital recording processes, including strategies for managing latency and signal flow.

MRA.17.7 Explore and apply techniques for mixing instruments, vocals, and other sounds using a Digital Audio Workstation (DAW).

MRA.17.8 Understand and apply Musical Instrument Digital Interface and DAW principles to create and edit music.

MRA.17.9 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.

18.0 Music and Recording Arts: Process and Practice

MRA.18.1 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 Develop musical ideas based on themes and other sources of inspiration; understand and apply techniques for writing beats, loops, lyrics, and melodies.

MRA.18.3 Produce original work using industry standard equipment, hardware and/or software synthesizers; record, edit, master, and publish music in distinct styles.

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9 Introductions, verse, pre-chorus, chorus, bridge, instrumental breaks/solos, and outros to projects.

MRA.18.4 Create desired music and sound effects to invoke a particular mood and impact an audience experience.

MRA.18.5 Create original music for a commercial medium, such as advertising, video games, film soundtracks, etc.

MRA.18.6 Identify specific project needs and coordinate logistics for a studio session and/or live performance; execute the load in, set up, and load out of audio equipment and instruments.

MRA.18.7 Create and analyze a setlist and determine the flow, length, and technical needs of a show and/or a studio session.

MRA.18.8 Set up, test, and regulate input levels and monitor mixing to ensure sound quality during live performances and recording sessions.

MRA.18.9 Demonstrate an understanding of microphone selection and placement on sound sources to optimize sound quality.

19.0 Music and Recording Arts: Career Exploration

MRA.19.1 Explore careers for studio and live audio professionals (i.e., mixing, mastering, and engineering).

MRA.19.2 Explore careers for artists, arrangers, songwriters, composers, musicians, and music producers across industries (i.e., film and television, games, and live events).

MRA.19.3 Explore careers in music education.

MRA.19.4 Explore careers for promoters, tour managers, booking agents, talent managers, and entertainment marketing professionals.

MRA.19.5 Differentiate types of contracts available to musicians and describe the difference between royalty splits, mechanical royalties, and contract agreements for songwriting, composition, recording and publishing.

MRA.19.6 Create an Electronic Press Kit (EPK) that demonstrates creative and technical abilities.

MRA.19.7 Examine and describe the role of Performing Rights Organizations and synchronization licensing in the music industry.

20.0 Music and Recording Arts: Advanced Technology and Impact

MRA.20.1 Explore and articulate how video projection, projection mapping, and holographic technology can enhance possibilities for performers.

MRA.20.2 Investigate how automation has created new opportunities for spectacle and fundamentally changed what is possible in live entertainment.

MRA.20.3 Describe how special effects are used in live productions to enhance a musical performance.

MRA.20.4 Examine and employ sustainable production and touring practices that reduce environmental impact in live entertainment.

MRA.20.5 Investigate how immersive audio technology can enhance the listening experience and alter audio workflows.

Media Production Pathway[10]

Pathway Description:

Students will create and edit audio and visual (A/V) content for a variety of platforms; apply skills to meet client and audience expectations; properly handle and operate equipment; develop skills in visual storytelling, filmmaking, media literacy and journalism; understand production workflow, and work collaboratively in all phases of physical production.

Focus Areas:

Digital Communications
Film and Television

Guidance:

It is recommended that students entering AME Media Production concentrator or intermediate courses complete an introductory Arts Education or CTE course as a prerequisite. Refer to the California Arts Standards for Media Arts for academic alignment in CTE pathways.

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[10] Refer to Cross-cutting Skills for foundational Content Creation and Production related skills.

Media Production Pathway

Film and Television

Focus Area Description:

Students will understand the cinematic process; properly operate tools, equipment, hardware, and software used in filmmaking; gain proficiency in digital editing and work collaboratively in physical (live-action) production environments across scripted, unscripted, episodic, commercial, music video and/or virtual production to produce original work.

Recommended Prerequisites:

Level 1–2 Media Arts Course(s)
Introductory AME Course

Occupational Alignment: O*Net-SOC Codes

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
27-4012.00 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
39-3092.00 Costume Attendants
39-5091.00 Makeup Artists, Theatrical and Performance
49-9096.00 Riggers

Aligned Course Titles

Film and Television
Film/Video Production
Cinematic Arts
Filmmaking

17.0 Film and Television (FT): Skill Building (Production)

FT.17.1 Apply the cinematic process (i.e., writing, casting, shooting, editing, and screening) when developing a film or show.

FT.17.2 Identify the roles and responsibilities for each department[11]; create, interpret, and/or use call sheets for production planning and management.

FT.17.3 Scout and observe sets/locations to determine potential challenges, filming, and lighting requirements.

FT.17.4 Research and identify the needs of each department (i.e., camera, set lighting, props, set, costumes, hair, and makeup[12]) in alignment with show design and creative direction.[13]

FT.17.5 Confer with directors and department heads to execute filming sequences, camera movements, and lighting requirements.

FT.17.6 Properly handle, place, and operate cameras and related equipment (i.e., lenses, and filters) to capture high-quality content and achieve desired effects for an audience.

FT.17.7 Apply knowledge of power and data distribution (i.e., signal flow, networking systems, connectors, cabling, show power, and balancing of power loads).

FT.17.8 Place and operate sound equipment (i.e., dynamic, condenser, lavalier/lapel, and shotgun/boom microphones, and speakers) to capture high quality audio.

FT.17.9 Operate grip and set lighting equipment (i.e., green screens, camera mounts, Century Stands (C-Stands), tripods, and/or camera dollies) to control shadows, brightness, color, and effects.

18.0 Film and Television: Process and Practice (Post-production)

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[11] Casting, camera, grip, set lighting, art direction and production design, property (props), sound, construction, set dressing, set painting, special effects, costumes, hair and makeup, script supervision, editing, color correction, music writing and recording, audio mixing, visual effects, production coordination, post-production, etc.

[12] Consider individual cultures, skin, and hair types.

[13] Intentionally source and/or create visual elements with attention to art direction.

FT.18.1 Properly transcode and import all media and digital assets from production after each shoot to prepare for edit and proper delivery specifications.

FT.18.2 Organize and tag all digital assets and footage based on camera logs, notes from script supervisors, and scene numbers or shoot dates using editorial script programs.

FT.18.3 Review footage, select scenes, and assemble into a rough cut according to the lead creative's vision.

FT.18.4 Edit scenes together with smooth transitions (i.e. cut, dissolve, and wipe) using industry-standard software.

FT.18.5 Generate and/or integrate effects, motion graphics, captions, credits, and/or animation into editorial workflow.

FT.18.6 Collaborate with the artistic and editorial team to apply constructive feedback, finalize an edit, and lock the film according to the director's instruction.

FT.18.7 Create a locked final edit to initiate the final color and sound editing process.

FT.18.8 Assist and understand the process for spotting sound, music, and VFX in a final edit.

FT.18.9 Export final master for distribution in accordance with specs and legal requirements of platform or distributor.

19.0 Film and Television: Career Exploration

FT.19.1 Explore careers in different production environments (i.e., commercials, music videos, scripted and unscripted television, independent films, and feature films).

FT.19.2 Explore careers in physical production and production crafts (i.e., below the line).

FT.19.3 Explore careers for producers, actors, writers, and directors (i.e., above the line).

FT.19.4 Explore corporate and marketing careers across industries for filmmakers, content creators, and editing professionals.

FT.19.5 Explore careers in VFX and virtual production.

20.0 Film and Television: Advanced Technology and Impact

FT.20.1 Demonstrate an understanding of the VFX pipeline including on-set VFX, inclusive of physical and virtual production technologies (i.e., virtual storyboarding, virtual art department, virtual scouting green screen, motion capture, motion control, and LED soundstages).

FT.20.2 Explore and articulate how gaming engines and real-time rendering are used in virtual production.

FT.20.3 Examine and describe principles of motion capture and its applications in virtual production and VFX.

FT.20.4 Identify sustainable production practices that reduce environmental impact in the film and television industry.

FT.20.5 Create impact projects that address social, environmental, and cultural issues.

FT.20.6 Investigate how immersive audio technology can enhance the listening experience and alter post-production workflows.

Digital Communications

Focus Area Description:

Students will apply narrative and journalistic processes to the development and refinement of original audio and/or visual (A/V) content; learn how to capture and edit content for specific purposes and audiences; and properly operate tools, equipment, hardware, and software for capturing, editing, broadcasting, and streaming content in different environments.

Recommended Prerequisites:

Level 1–2 Media Arts Course(s)
Introductory AME Course

Occupational Alignment: O*Net-SOC Codes

11-2011.00 Advertising and Promotions Managers
13-1082.00 Project Management Specialists
13-1161.01 Marketing Strategist
27-1024.00 Graphic 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
27-3031.00 Public Relations Specialist
27-4011.00 Audio and Video Technicians
27-4012.00 Broadcast Technicians
27-4014.00 Sound Engineering Technicians
27-4021.00 Photographers
27-4031.00 Camera Operators, Television, Video, and Film
27-4032.00 Film and Video Editors

Aligned Course Titles

Digital Communications
Broadcast Journalism
Multimedia Production
Podcasting
Radio Broadcast

17.0 Digital Communications (DC): Skill Building (Production)

DC.17.1 Apply techniques to capture/record content for various platforms, including camera and/or microphone selection and placement.

DC.17.2 Examine and apply best practices to transmit content from remote locations, using streaming, networking, and/or broadcast equipment.

DC.17.3 Scout and observe locations for potential challenges and to determine filming and lighting requirements.

DC.17.4 Properly operate equipment, hardware, and software in a recording or broadcast studio including switchers, mixing boards, Digital Audio Workstations (DAW), receivers, and transmitters.

DC.17.5 Review, manipulate, and enhance digital content to tell a clear story, using industry-standard software.

DC.17.6 Properly handle, place, and operate lighting and camera equipment (i.e., lenses, accessories, and filters) to capture high-quality content and achieve desired effects for an audience.

DC.17.7 Apply knowledge of power and data distribution (i.e., signal flow, networking systems, connectors, cabling, show power, and balancing of power loads).

DC.17.8 Operate sound equipment (i.e., dynamic, condenser, lavalier/lapel, speakers, mixers, and amplifiers) to achieve high quality audio capture and reproduction.

DC.17.9 Generate and/or integrate images, effects, graphics, captions, and/or animation into final content; Collaborate with artistic and editorial team to apply constructive feedback and finalize an edit.

18.0 Digital Communications: Process and Practice (Story Development)

DC.18.1 Identify the target audience, main objective, message, and tone of a story; select content based on community interests, audience preference, and/or requests from the public.

DC.18.2 Study background information, including relevant perspectives, statistics, and data; write outlines, scripts, and interview questions to prepare for programs or interviews.

DC.18.3 Design content around specific formats (i.e., social media, podcast, news broadcast, and public service announcements) and determine appropriate story structure and media elements.

DC.18.4 Prepare, write, and deliver reports (i.e., news, sports, and weather); Organize material to convey a specific message and to fit specific time slots.

DC.18.5 Refine and edit digital content to ensure it effectively conveys the intended message and tells a clear story.

DC.18.6 Create content that describes or demonstrates the value of products, goods, or services.

DC.18.7 Provide commentary and conduct interviews online and/or during live events, (i.e., sporting events, parades, conventions, and concerts).

DC.18.8 Moderate panels or discussions on topics such as current affairs, art, education, etc.

19.0 Digital Communications: Career Exploration

DC.19.1 Explore careers for content creators and editors in marketing, branding, and other commercial and web-based environments.

DC.19.2 Explore careers for podcast, live streaming, radio, and broadcast professionals.

DC.19.3 Explore careers in public relations, journalism, and documentary storytelling.

DC.19.4 Explore careers for show hosts, commentators, shout casters, and media anchors.

20.0 Digital Communications: Advanced Technology and Impact

DC.20.1 Demonstrate an understanding of how web-based technologies are evolving and changing the way content is funded, produced, monetized, and consumed.

DC.20.2 Investigate how innovative technology has changed what is possible in live streaming and broadcast, including the roles and responsibilities of streaming platforms and content creators.

DC.20.3 Explore possibilities with immersive storytelling and journalism through virtual and augmented reality technology.

DC.20.4 Explore the use of AI technology and investigate how images can be generated and altered to manipulate an audience.

DC.20.5 Create impact projects that address social, environmental, and cultural issues.

DC.20.6 Investigate how immersive audio technology can enhance the listening experience and alter post-production workflows.

Guidance for High Quality Pathway Sequencing Tables

Sample Middle School and High School Introductory Course(s)

Connecting	Applying	Creating	Producing
1.0 Academics 1.1-1.5 **3.0 Career Planning and Management** 3.1-3.3 **7.0 Leadership and Community Engagement** 7.1-7.2 **8.0 Ethics and Social Responsibility** 8.1-8.3 **14.0 Legal Responsibility** 14.1-14.3	**2.0 Communication** 2.1-2.4 **4.0 Technology** 4.1-4.2 **5.0 Critical Thinking and Problem Solving** 5.1-5.2 **6.0 Health and Safety** 6.1-6.4 **9.0 Collaboration and Teamwork** 9.1-9.2	**10.0 Creative Process** 10.1-10.3 **11.0 Research and Media Literacy** 11.1-11.3 **15.0 Media Content Creation** 15.1-15.4	**16.0 Production and Project Management** 16.1-16.2

Guidance for High Quality Pathway Sequencing

Sample Concentrator Course(s)

Connecting	Applying	Creating	Producing
1.0 Academics 1.1-1.5 **3.0 Career Planning and Management** 3.1-3.4 **7.0 Leadership and Community Engagement** 7.1-7.4 **8.0 Ethics and Social Responsibility** 8.1-8.4 **12.0 Audience and Behavior** 12.1-12.3 **13.0 Business and Marketing** 13.1-13.3 **14.0 Legal Responsibility** 14.1-14.3 **19.0 Career Exploration** 19.1- 19.5	**2.0 Communication** 2.1-12.5 **4.0 Technology** 4.1-4.4 **5.0 Critical Thinking and Problem Solving** 5.1-5.5 **6.0 Health and Safety** 6.1-6.5 **9.0 Collaboration and Teamwork** 9.1-9.3 **11.0 Research and Media Literacy** 11.1-11.4	**10.0 Creative Process** 10.1-10.7 **15.0 Media Content Creation** 15.1-15.8 **17.0 Skill Building** 17.1-17.4	**16.0 Production and Project Management** 16.2-16.7 **18.0 Process and Practice** 18.1-18.2

Guidance for High Quality Pathway Sequencing

Sample Capstone Course(s)

Connecting	Applying	Creating	Producing
1.0 Academics 1.1-1.5 **3.0 Career Planning and Management** 3.1-3.9 **7.0 Leadership and Community Engagement** 7.1-7.5 **8.0 Ethics and Social Responsibility** 8.1-8.7 **12.0 Audience and Behavior** 12.1-12.8 **13.0 Business and Marketing** 13.1-13.9 **14.0 Legal Responsibility** 14.1-14.6 **19.0 Career Exploration** 19.1- 19.9 **20.0 Advanced Technology and Impact** 20.1- 20.9	**2.0 Communication** 2.1-2.5 **4.0 Technology** 4.1-4.8 **5.0 Critical Thinking and Problem Solving** 5.1-5.5 **6.0 Health and Safety** 6.1-6.7 **9.0 Collaboration and Teamwork** 9.1-9.5 **11.0 Research and Media Literacy** 11.1-11.6	**10.0 Creative Process** 10-1-10.7 **15.0 Media Content Creation** 15.1-15.8 **17.0 Skill Building** 17.5- 17.9	**16.0 Production and Project Management** 16.1-16.9 **18.0 Process and Practice** 18.1- 18.9

CTE Youth Apprenticeship Program Alignment

Focus area alignment should be prioritized when developing youth apprenticeship and preapprenticeship pathways. CTE can align with registered apprenticeship (RA) programs by developing courses using the ISF.

CTE instruction in apprenticeship pathways should focus on skills and competencies found in the ISF. Pathways can submit course outlines and required documentation, including a linkage agreement with a registered apprenticeship program sponsor, to the Division of Apprenticeship Standards (DAS) for approval.

Programs applying for registered preapprenticeship status should refer to California Labor Code § 3100 for guidance:

> ***Preapprenticeship:*** *(1) A program seeking approval as a preapprenticeship program shall submit to the Division of Apprenticeship Standards a request for approval, on a form developed by the division.*
>
> *(2) The request for approval shall include documentation evidencing that the program's preapprenticeship training activities are conducted in partnership with one or more apprenticeship programs approved by the Division of Apprenticeship Standards. Valid documentation for purposes of this section shall include a copy of a memorandum of understanding or other formal written agreement that does all the following:*
>
> *(A) Verifies the apprenticeship program's support for the preapprenticeship program.*
>
> *(B) Gives priority but not a guarantee to preapprenticeship graduates for acceptance into the apprenticeship program.*
>
> *(C) Makes a commitment as to the number of preapprenticeship graduates that may be accepted into the apprenticeship program.*
>
> *(c) To qualify for approval, a preapprenticeship program shall include the following elements:*
>
> *(1) Training and curriculum based on industry standards and approved by the documented registered apprenticeship program partner or partners that will prepare individuals with the skills and competencies needed to enter one or more registered apprenticeship programs.*
>
> *(2) Strategies that increase registered apprenticeship opportunities for underrepresented, disadvantaged, or low-skilled individuals, such that, upon completion, those individuals will meet the entry requirements, gain*

consideration, and be prepared for success in one or more registered apprenticeship programs. These strategies include any of the following:

(A) Strong recruitment efforts focused on outreach to populations underrepresented in local, state, and national registered apprenticeship programs.

(B) Educational and prevocational services that prepare individuals to meet the entry requisites of one or more registered apprenticeship programs, such as specific career and industry awareness workshops, job readiness courses, English for speakers of other languages, adult basic education, financial literacy seminars, and mathematics tutoring.

(C) Exposing participants to local, state, and national registered apprenticeship programs and providing direct assistance to participants applying to those programs.

(D) Facilitating access to appropriate support services during both the preapprenticeship program and a significant portion of the registered apprenticeship program.

(E) Efforts to sustain the ongoing partnership between the preapprenticeship program and registered apprenticeship program partner or partners, including collaborative efforts that promote alignment with the California Workforce Innovation and Opportunity Act (WIOA) Unified Strategic Workforce Development Plan and use of the registered apprenticeship program as a preferred means for employers to develop a skilled workforce and create career opportunities for individuals.

(F) Providing physical preparedness training for jobs where physical ability and endurance are key elements of success.

(G) Providing training on safe working practices where applicable to the job.

(H) Providing hands-on training to individuals in a simulated lab experience or through volunteer opportunities that accurately simulate industry and occupational conditions while observing proper supervision and safety protocols, provided that such experience and opportunities do not supplant or reduce the compensable work of paid employees.

(I) Providing for automatic acceptance or priority credits for acceptance into apprenticeship programs of individuals who have successfully completed the preapprenticeship program, and when applicable, giving advance credit

in the apprenticeship program for skills and competencies already acquired in the preapprenticeship program.

(d) Preapprenticeship programs shall be evaluated and approved based on a determination of the strengths of the elements described in subdivision (c), as demonstrated in the application.

(e) Approval of a preapprenticeship program shall expire in three years unless the program requests and obtains renewal of its approval by the division. Renewed approval shall be based on the program's success in implementing the elements described in subdivision (c).

CTE instruction in youth apprenticeship pathways must be occupation specific. This may require significant prerequisite learning that can occur in introductory and concentrator courses. Youth apprenticeship programs must include 144 hours of related and supplemental instruction (that may occur in a capstone course) and paid on-the-job training for students according to the state and federal minimums for the registered occupation. Youth apprenticeship programs can begin in high school and continue after high school depending on the employer needs and program design. While related and supplemental instruction can occur as part of a student's pathway, paid employment is a required component of a youth apprenticeship program.

The following Statewide AME Sector Intermediaries have registered AME occupations. LEAs can develop advanced related and supplemental instruction that cover competencies necessary for on the job training.

To become a statewide AME youth apprenticeship program please email ameprograms@cde.ca.gov

Related and Supplemental Instruction (RSI) Skills

RSI guidance is for programs designing advanced coursework specific to registered occupations. The Career Ready Skills, Cross-Pathway Skills, and Pathway Skills are prerequisite and corequisite to the RSI Skills.

BRIC Foundation: Animation, VFX, and Games

21.0 BRIC Foundation: Visual Effects (VFX) and/or Digital Effects (FX) Artists

BF.21.1 Differentiate which processes to use for creating digital effects (FX) for games, live action and animation.

BF.21.2 Demonstrate comprehensive knowledge of the VFX post-production pipeline.

BF.21.3 Create and/or maintain a library of digital effects as presets.

BF.21.4 Apply rotoscoping, digital paint, and compositing to a scene using multiple layers.

BF.21.5 Apply traditional cinematography concepts to the lighting and rendering of FX elements, and create realistic shaders and textures.

BF.21.6 Demonstrate the ability to art-direct a simulation based on a director or supervisor's feedback.

BF.21.7 Apply advanced techniques of color/lighting and texture to digital character assets (i.e., clothing, fur, and hair).

BF.21.8 Demonstrate a comprehensive understanding of the physics of natural phenomena and how to connect those to digital simulations.

BF.21.9 Design and create photo realistic particles, rigid body, fluid systems, and other effects using appropriate software (i.e., such as smoke, water, fire, destruction).

22.0 BRIC Foundation: Technical Artist

BF.22.1 Understand Artist Workflow, Data Management, Version Control, Game Development Tools, Software Design, UX, and Project Management.

BF.22.2 Break down complex artistic processes into clear system components and identify opportunities to improve or streamline the components.

BF.22.3 Experiment with Software Design, Tools Development and UX to build streamlined artist tools.

BF.22.4 Build fluency in creating digital assets in common digital content creation software (Maya, Blender, Houdini, Substance Painter, Substance Designer, Photoshop).

BF.22.5 Develop familiarity with Visual Scripting using engine node graphs (Blueprint).

BF.22.6 Develop fluency with common commercial game engines by authoring and optimizing game content (Unreal Engine 5, Unity, Roblox Studio).

BF.22.7 Research and understand the tools for performance profiling and optimization of engine assets.

BF.22.8 Understand data management, storage, data transformation, and validation.

BF.22.9 Gain experience with batch processing and process automation.

23.0 BRIC Foundation: 2D Animator

BF.23.1 Create storyboards, drawings, and layouts, determine color palettes and style, and draw sequential images (frame-by-frame) that demonstrate actions of an object or character.

BF.23.2 Create walk cycles or other movements for 2D characters.

BF.23.3 Create 2D animated effects such as smoke, water, fire, destruction, and/or fur/hair for a scene.

BF.23.4 Demonstrate proficiency in ink and paint for 2D animation.

BF.23.5 Coordinate and sync visual actions with audio and voice over elements.

BF.23.6 Create an original animated sequence or short that includes unique visual assets, sound design, backgrounds, and effects.

BF.23.7 Coordinate with the creative team and/or clients regarding the style and approach for an animated project.

BF.23.8 Create exposure sheets for an animated project (i.e., actions, timing, dialogue, music, layers, backgrounds, and perspective).

24.0 BRIC Foundation: Concept Artist (Character)

BF.24.1 Interpret design briefs and apply advanced artistic and design skills when illustrating key characters, costumes, and/or props.

BF.24.2 Conduct research and design concept boards in alignment with artistic vision.

BF.24.3 Create original character model sheets, with dynamic poses, expressions, costuming, and backstory.

BF.24.4 Complete multiple iterations and revisions of concepts using varied styles using industry-standard technology.

BF.24.5 Refine digital drawing and illustration techniques for designing human, fictional, animal, and mechanical character forms.

BF.24.6 Apply digital painting painting techniques to a keyframe illustration.

BF.24.7 Demonstrate advanced proficiency in multiple illustration styles.

BF.24.8 Develop and present a comprehensive concept art pitch packet.

25.0 BRIC Foundation: Background Artist (Environments)

BF.25.1 Interpret design briefs and apply advanced artistic and design skills when illustrating environments in film, animation, and games.

BF.25.2Use approved storyboard panels to create detailed backgrounds for each scene.

BF.25.3 Design environments and layouts with close attention to perspective and the way the foreground and background interact.

BF.25.4 Complete multiple iterations and revisions of concepts using varied styles using industry-standard technology.

BF.25.5 Apply digital painting/matte painting techniques to a scene or sequence.

BF.25.6 Refine digital drawing and illustration techniques for designing environments and worlds.

BF.25.7 Demonstrate advanced proficiency in multiple animation-specific illustration styles.

BF.25.8 Develop and present comprehensive orthographics and design sheets.

27.0 BRIC Foundation: Project/Production Management

BF.27.1 Demonstrate advanced understanding of the production process and workflow from pre-production to post.

BF.27.2 Develop a brief that clearly outlines production office needs (i.e., equipment, supplies, budgets, staff, travel, accommodations, and scheduling).

BF.27.3 Make a comprehensive production budget for a creative project.

BF.27.4 Create and maintain a project schedule based on artistic direction, production timelines, and budgets.

BF.27.5 Develop, refine and/or distribute schedules, crew and cast lists, scripts and script revisions.

BF.27.6 Assign duties or responsibilities to project personnel and use project management software and collaboration tools to track deliverables and maintain timelines.

BF.27.7 Prepare presentations, schedules, and facilitate project meetings; Submit project deliverables to clients and make revisions according to specifications.

BF.27.8 Demonstrate the ability to de-escalate conflict, manage a team, and ensure deliverable deadlines are met.

28.0 BRIC Foundation: Game Design

BF.28.1 Understand Artist Workflow, Data Management, Version Control, Game Development Tools, Software Design, and UX.

BF.28.2 Develop Proficiency in Python Programming for basic script automation.

BF.28.3 Gain a foundational understanding of Code Collaboration (GitHub) by working on shared coding projects.

BF.28.4 Create game design documents to design, develop, and produce a game from concept to execution.

BF.28.5 Differentiate game genres and types and identify the fundamentals of game play: player goals, player actions, systems, rewards, and challenges.

BF.28.6 Create a concept for a level design incorporating player capabilities, game mechanics, obstacles, and discoverable elements.

BF.28.7 Within a level design, incorporate story elements and immersive methods to tie gameplay and storytelling together.

BF.28.8 Collaborate with the development team in order to create a game demo.

29.0 BRIC Foundation: Storyboard Artist

BF.29.1 Create a visual representation of the animation's narrative.

BF.29.2 Complete multiple revisions of a storyboard based on directives and artistic vision; Develop a concept from storyboard to animatic.

BF.29.3 Translate a script and the creative director's vision into an illustrated series of panels to ensure continuity of scenes.

BF.29.4 Complete multiple iterations of story panels to establish a style and clean up lines, sharpness, color, and contrast.

BF.29.5 Identify appropriate lighting requirements and include special effects in storyboard frames.

BF.29.6 Ensure each scene is framed in a way that creates an emotional reaction for the audience, relays an accurate point of view, and depicts conflict in alignment with the story.

BF.29.7 Include scene directions and key dialogue within each frame of a storyboard.

BF.24.8 Develop and present a comprehensive storyboard pitch packet.

29.0 BRIC Foundation: Real-time/3D Artist (Generalist)

BF.29.1 Create mock-ups and previz layouts; Determine color palettes and style.

BF.29.2 Digitally create, sculpt, and/or add detail to 3D characters, props, vehicles, environments and other assets.

BF.29.3 Create walk cycles and other movements for 3D characters in 3D environments.

BF.29.4 Create photo realistic stylized digital animated effects such as smoke, water, fire, destruction, and/or fur/hair for a scene.

BF.29.5 Demonstrate proficiency in color and lighting techniques for 3D animation.

BF.29.6 Utilize cinematography techniques when creating scenes in real-time renders.

BF.29.7 Apply advanced modeling, texturing, rigging animation, and lighting techniques for characters and environments.

BF.29.8 Use diagnostic tools to refine content and enhance performance in game engines.

BF.29.9 Coordinate and sync visual actions with audio and voice over elements.

Event Vocational Education Network (EVEN): Stage and Event Technology

21.0 EVEN Foundation (EF): Lighting Technician

EF.21.2 Demonstrate advanced proficiency in lighting control protocols including basic networking skills

EF.21.3 Define and describe types of lighting fixtures and their uses; Demonstrate advanced knowledge of the mechanics and purposes of lighting fixtures

EF.21.4 Demonstrate advanced understanding of music terminology and music structure as it applies to lighting.

EF.21.5 Troubleshoot, complete repairs and maintain lighting equipment.

EF.21.6 Demonstrate an understanding of the image chain; the path that light travels from the source to the subject, to the eye in both live and video workflows.

EF. 21.7 Use various project management skills to efficiently steward projects and teams.

EF 21.8 Demonstrate advanced knowledge of electrical safety and event safety procedures.

22.0 EVEN Foundation: Scenic and Staging

EF.22.1 Use various staging components and tools to build stages and risers for a live event.

EF.22.2 Demonstrate an advanced understanding of safety and potential hazards when building staging and scenic elements.

EF.22.3 Develop and read technical drawings and paperwork related to staging and scenic elements.

EF.22.4 Visualize and model advanced stage layouts in a 3D environment using computer-aided design (CAD) software, including sets and displays.

EF.22.5 Perform repairs in the field and in the shop using staging and scenic tools.

EF.22.6 Coordinate with production management and stage management to successfully load in, set up, and load out a stage and scenic elements.

EF.22.7 Understand music terminology and music structure to be able to properly execute cuing.

EF.22.8 Construct scenic and staging elements according to technical drawings and in alignment with creative direction.

23.0 EVEN Foundation: Audio Technician

EF.23.1 Demonstrate advanced knowledge of audio terminology and concepts including sound waves, latency, and data signal flow.

EF.23.2 Balance audio loads in live entertainment environments.

EF.23.3 Differentiate microphone types and proficiently operate wireless audio systems.

EF.23.4 Demonstrate an advanced understanding of audio system design and development.

EF.23.5 Apply knowledge of mixing console workflow and digital mixing console operations to live audio.

EF.23.6 Differentiate speaker types, uses and placement to optimize live audio.

EF.23.7 Troubleshoot, complete repairs and maintain audio equipment.

24.0 EVEN Foundation: Automation Technician

EF 24.1 Demonstrate an advanced knowledge and understanding of automation terminology.

EF 24.2 Identify and avoid potential hazards and the safe use of automation equipment.

EF 24.3 Demonstrate an understanding of emergency stop operations.

EF 24.4 Apply a knowledge of automation-specific communications in production environments – including run of show calls from show caller.

EF 24.5 Differentiate between the types of automation systems used for live events.

EF 24.6 Apply a knowledge of automation system design and development to safe installation and operation of equipment.

EF 24.7 Understand the mechanics of automation and how to operate in different venue types.

EF 24.8 Communicate any changes that need to be made to automation technology specific to venue capabilities; Identify and communicate how these changes will affect the show.

25.0 EVEN Foundation: Special Effects Technician

EF.25.1 Demonstrate an advanced knowledge and understanding of special effects terminology used in live event production.

EF.25.2 Identify and avoid potential hazards, and ensure the safe use of special effects.

EF.25.3 Apply special effects safety standards & regulations to safe operation.

EF.25.4 Demonstrate an understanding of special effects workflows, system design, and development.

EF.25.6 Properly operate consoles and firing systems during a live production.

EF.25.6 Differentiate types of special effects and the visual impact each one brings to the show.

EF 24.7 Communicate scaling of special effects technology specific to venue capabilities; Identify and communicate how these modifications will affect the show.

26.0 EVEN Foundation: Video Technician

EF.26.1 Demonstrate an advanced understanding of video and streaming terminology.

EF.26.2 Capture high-quality content using single camera, multi-camera, and drone coverage for projection, streaming, and/or documenting live events.

EF.26.3 Demonstrate an advanced understanding of video signal flow, outputs, inputs, and devices used to connect and operate video systems.

EF.26.4 Demonstrate an advanced understanding of video system design and development.

EF.26.5 Demonstrate an advanced understanding of various types of video equipment and their uses.

EF.26.6 Identify important moments in a live event to be able to properly direct cameras and the audience's viewpoint.

EF.25.7 Communication with other departments on any necessary re-mapping/re-sizing decisions made on show days.

Handy Foundation: Film and Television

21.0 Handy Foundation: Assistant Editor

HF.21.1 Demonstrate user skills, workflows, and concepts of non-linear editing on industry standard software.

HF.21.2 Review footage with the editorial and creative team to determine editorial needs.

HF.21.3 Prep selected scenes by take, scene numbers, and/or time codes on materials and mark frames where a particular shot or piece of sound is to begin or end.

HF.21.4 Trim segments to specified lengths and group footage together from multiple cameras and audio sources using industry-standard software.

HF.21.5 Manage different versions of edits, including revisions, alternate cuts, and final versions.

HF.21.6 Identify and resolve problems of exposure control, subject and camera movement, changes in subject distance, and related variables.

HF.21.7 Generate and/or integrate effects, motion graphics, captions, and/or animation into editorial workflow.

HF.21.8 Communicate with the editing team, directors, producers, and other crew members to flag potential technical problems, ensure the project's goals and deadlines are met.

HF.21.9 Demonstrate an understanding of the post-production finishing processes (i.e., color grading, sound design, visual effects, rotoscoping and compositing, graphic design, etc.) to finalize a scene or sequence.

22.0 Handy Foundation: Audio Editor

HF.22.1 Demonstrate an understanding of the different stages of audio production process and post-production processes.

HF.22.2 Demonstrate an understanding of audio editing and mixing software used for creating projects, syncing media, exporting media, managing media and general organization.

HF.22.3 Organize audio assets into an industry-standard template when the mix is done using recommended software. (i.e. Pro-tools software).

HF.22.4 Apply the post-production finishing planning process to complete editing tasks and meet project deadlines.

HF.22.5 Utilize appropriate post asset tracking, file naming conventions and storage/back-up protocols in post-production.

HF.22.6 Demonstrate an understanding of non linear, industry-standard audio software (i.e., Avid Pro Tools).

HF.22.7 Demonstrate a working understanding of media management, audio conforming, audio editorial (not limited to dialogue editing, foley and sound effects editing, splitting tracks and printing audio for delivery).

HF.22.8 Adhere to technical broadcast specifications for content capture, editorial and mastering purposes.

23.0 Handy Foundation: Data Wrangler

HF.23.1 Determine and adhere to film production needs, including but not limited to project management, media managing and organization.

HF.23.2 Apply knowledge of the media pipeline and professional workflow for film and television projects, including the steps, skills and processes required within each stage of the pipeline.

HF.23.3 Demonstrate an understanding of procedures, technology and tasks customary to digital media management; transfer data without any data loss or corruption.

HF.23.4 Utilize independent judgment and research for troubleshooting and working with evolving production technology.

HF.23.5 Demonstrate an understanding of media management, hardware encryption, offline editorial practices for data wranglers.

HF.23.6 Demonstrate an understanding of the technical specifications of Original Camera Masters and audio media.

HF.23.7 Demonstrate an understanding of industry-standard equipment and software options based on the specifications of an appropriate project type and needs.

HF.23.8 Understand location constraints.

HF.23.9 Demonstrate the ability to generate and read technical reports customary to the role.

24.0 Handy Foundation: Post/Production Coordinator

HF.24.1 Outline and map out specific project needs, including but not limited to creating schedules, tracking assets, onboarding employees, communicating with production teams, network communications.

HF.24.2 Demonstrate an understanding and apply post/production pipeline and workflow (i.e., the steps, skills and processes required within each stage of pre-production, principal photography, post, finishing pipelines) to projects.

HF.24.3 Create calendars for the post and production planning process to meet project deadlines.

HF.24.4 Maintain and manage budgeting, cost accounting reports, and scheduling used in post/production management environments.

HF.24.5 Complete daily tasks customary to post/production management, using industry standard software (i.e. Movie Magic, Excel, Word, Google Suite, and Final Draft).

HF.24.6 Apply the process for verifying on-screen credits.

HF.24.7 Coordinate calls and schedule meetings for the post-production department and studio.

HF.24.8 Manage and track vendor contracts, Non Disclosure Agreements, Certificates Of Insurance and other forms.

HF.24.9 Track gear, manage equipment check in and out, and prepare gear manifests.

25.0 Handy Foundation: Assistant Story Producer

HF.25.1 Demonstrate user skills, workflows, and concepts of foundational editing on industry standard software.

HF.25.2 Demonstrate an understanding of the appropriate media management, file naming conventions and story department protocols throughout all stages.

HF.25.3 Select footage to assemble for a stringout according to the creative vision; insert placeholders for graphics, sound elements and music.

HF.25.4 Create scenes and Acts from footage and hot sheets.

HF.25.4 Review footage for editorial and creative team to determine editorial and story needs.

HF.25.5 Mark frames where a particular shot needs to begin or end.

HF.25.6 Demonstrate understanding of specific Film/Television story elements, including but not limited to characters, story beats or moments, scenes, acts, Story Arcs, Story Styles, Genre, Formats.

HF.25.7 Gain proficiency in non linear editing software (i.e., Avid Media Composer), using industry standard software necessary for operating in a post story environment.

HF.25.8 Demonstrate an understanding of the documents necessary to facilitate the job, including but not limited to episode outlines, character trackers, hot sheets, field logs, scene trackers, Voice Over/Advance Dialogue Recording trackers, episode grids.

HF.25.9 Create an outline for scenes from footage; Demonstrate and understanding of different stages of the post-production story process, not limited to stringout, working with an editor, working with post producers, addressing notes.

26.0 Handy Foundation:Virtual Production Specialist

HF.26.1 Demonstrate a working understanding of industry standard virtual production software (i.e. Unreal Engine) and other technologies to create high-quality content; Utilize keyboard shortcuts for common commands in Unreal Engine.

HF.26.2 Demonstrate a working understanding of a Virtual Reality (VR) project pipeline stages from concept to pre-visualization to production to post-production.

HF.26.3 Optimize Unreal Engine deployment for virtual production and content creation purposes. Understanding real time rendering considerations for immersive environments.

HF.26.4 Create VR assets using blueprint visual scripting in the Unreal Engine to create the overall flow and user experience.

HF.26.5 Create VR assets by breaking down the blueprint visual scripting anatomy and shortcuts.

HF.26.6 Demonstrate an understanding of the process for using pre-created assets in Unreal Engine vs creating new assets (i.e. characters, props, and backgrounds).

HF.26.7 Understand camera tracking & lighting prep for Virtual Production LED Wall shoot.

HF.26.8 Demonstrate basics of Sequencer use, including creating a single sequence, a master sequence, and methods of rendering out cinematics.

Key Code Media: Digital Communications

21.0 Key Code Media (KCM): Film/Media Post-production Engineer

KCM.21.1 Demonstrate technical skills, advanced computer literacy, and the ability to support post-production workflows that utilize industry-standard software.

KCM.21.2 Learn to operate and support desktop, virtual, and server operating systems used throughout the industry. This includes Apple MacOS, Amazon Web Services, Microsoft Windows, and Azure.

KCM.21.3 Set up and maintain shared server storage amongst multiple editorial, audio, and VFX systems utilizing the same media.

KCM.21.4 Demonstrate networking/IT literacy with the ability to set up and configure network settings for both simple and advanced post-production environments. This includes understanding the differences between client types, media types, and their specific networking needs (i.e. bandwidth, throughput, latency, etc.).

KCM.21.5 Identify the ever-evolving list of current and new media formats utilized in production and how they are managed in post-production. This includes transcoding, consolidating, decomposing, and copying with verification.

KCM.21.5 Become fluent in media management on both local and networked systems to include naming schemes, bin/folder organization, and establishing proper channels of communications to confirm and execute deletions.

KCM.21.6 Understanding basic and advanced operations on industry standard software in order to design, implement, and support post-production workflows.

KCM.21.7 Provide technical support for the variety of issues that arise at varying phases of the post-production process (i.e. software, hardware, storage, and computer support).

KCM.21.8 Support the post-production pipeline and finishing process to include deliverables, archival, and moving files between the different creative systems.

Music Forward Foundation: Music and Recording Arts and Marketing

22.0 Music Forward Foundation: General Marketing Coordinator/Marketing Manager

MFF.22.1 Develop and/or maintain a brand to leverage for marketing and sponsorship opportunities.

MFF.22.2 Design a cross-platform marketing campaign for the purpose of promoting an event, business, or organization.

MFF.22.3 Optimize digital content, such as text, graphics, or video assets, for search engine optimization (SEO) or for display and usability on internet-connected devices.

MFF.22.4 Participate in the development or implementation of digital marketing strategy; identify target audiences and conduct post-campaign analysis.

MFF.22.5 Execute and manage marketing campaigns across digital platforms.

MFF.22.6 Confer with clients and development teams to prioritize needs, resolve conflicts, develop content criteria, and/or choose solutions.

23.0 Music Forward Foundation: Audio Engineer (Live)

MFF.23.1 Demonstrate advanced knowledge of audio terminology and concepts including sound waves, latency, and data signal flow.

MFF.23.2 Balance audio loads in live entertainment environments.

MFF.23.3 Operate wireless audio systems.

MFF.23.4 Demonstrate an advanced understanding of audio system design and development.

MFF.23.5 Demonstrate an advanced understanding of mixing console workflow and digital mixing console operations.

MFF.23.6 Demonstrate an advanced understanding of speaker types and uses.

MFF.23.7 Demonstrate an advanced understanding of how to maintain gear and troubleshoot.

MFF.23.8 Place microphones and adjust the audio balance and sound sources by mixing, overlaying and reinforcing the sound.

MFF.23.9 Manage all technical aspects of sound during a recording, live performance or event.

24.0 Music Forward Foundation: Meeting, Conventions, and Event Planner (special events)

24.1 Determine price schedules and discount rates for events based on anticipated costs and revenues.

24.2 Review operational records and reports to project sales and determine profitability.

24.3 Read work orders or other instructions to determine event specifications or materials requirements.

24.4 Demonstrate a working understanding of how to generate event orders for internal staffing and planning purposes.

24.5 Plan and coordinate event logistics including layout, facilities, permits, contracts, etc.

24.6 Maintain accurate event financial records and adhere to required organizational processes/protocol.

24.7 Plan event production and operational procedures or sequences.

24.8 Demonstrate ability to assist with proposals, contract negotiations and contract execution.

24.9 Assist with directing and coordinating activities involving live event sales.

25.0 Music Forward Foundation: General and Operations Coordinator

MFF.25.1 Direct and coordinate activities related to the pricing and sales of live events.

MFF.25.2 Direct and coordinate activities related to the production of live events.

MFF.25.3 Prepare staff schedules and assign specific duties to team members.

MFF.25.4 Analyze and coordinate financial or budget activities to fund operations and increase efficiency.

MFF.25.5. Review financial statements, sales, activity reports, and other performance data to measure productivity.

MFF.25.6 Assist with planning or directing activities, such as sales promotions, that require coordination with other department managers.

MFF.25.7 Evaluate and plan environmental management or sustainability programs addressing issues such as recycling, conservation, or waste management.

MFF.25.8 Develop marketing plans and strategies and coordinate event sales with respective teams.

MFF.25.9 Demonstrate best practices for maintaining professional interactions within the company and across social media.

26.0 Music Forward Foundation: Junior Talent Buyer

MFF.26.1 Research potential clients and attend live shows to maintain knowledge of available acts and assess an artist or band's ability to draw an audience.

MFF.26.2 Demonstrate a working understanding of how to negotiate contract agreements with acts and agents.

MFF.26.3 Evaluate roles and responsibilities for serving as an event liaison between managers, performers, and industry representatives.

MFF.26.4 Participate in marketing and ticketing of scheduled live events.

MFF.26.5 Manage a show's budget and assess potential for ticket sales and revenue.

MFF.26.6 Determine what type of promotional campaign is needed to sell tickets for a show or event.

MFF.26.7 Differentiate between responsibilities for a talent buyer working for a venue and a talent buyer working for production companies.

MFF.26.8 Evaluate how to appeal to the core audience that typically fills a particular venue.

MFF.26.9 Support a production team, secure equipment, and advertise events in collaboration with venue managers, concert promoters, and event operations coordinators.

27.0 Music Forward Foundation: Audio/Visual Technician (Multisource)

MFF.27.1 Demonstrate an advanced understanding of audio terminology and concepts including sound waves, latency, and data signal flow.

MFF.27.2 Balance audio loads.

MFF.27.3 Demonstrate an advanced understanding of wireless audio systems, audio system design, and development.

MFF.27.4 Demonstrate an advanced understanding of mixing console workflow and digital mixing console operations.

MFF.27.5 Demonstrate an advanced understanding of speaker types and uses; demonstrate the ability to maintain gear and troubleshoot.

MFF.27.6 Demonstrate an advanced understanding of video terminology, types of video equipment, and their uses.

MFF.27.7 Demonstrate an advanced understanding of video system design and development; Understand video signal flow, outputs, inputs, and devices used to connect and operate video systems.

MFF.27.8 Identify important moments in a live event to be able to properly direct cameras and the audience's viewpoint.

MFF.27.9 Capture high-quality content using single camera, multi-camera, and drone coverage for projection, streaming, and/or documenting live events.

28.0 Music Forward Foundation: Music Publishing

MFF.28.1 Maintain and update data in an internal database.

MFF.28.2 Demonstrate an understanding of how to promote musical work on behalf of the composer or songwriter.

MFF.28.3 Understand and engage in the process of registering works with a Performing Rights Organization and other royalty entities.

MFF.28.4 Evaluate and apply laws and regulations related to copyright management.

MFF.28.5 Research catalogs, song histories, credits, and recording information.

MFF.28.6 Seek out potential clients by attending live events and tracking social media platforms.

MFF.28.7 Take inquiries from clients regarding music publishing-related issues and assist in resolving claim and asset disputes.

MFF.28.8 Understand how to negotiate publishing deals with songwriters and effectively promote artists for film, television show, video game, advertisement, or other media.

29.0 Music Forward Foundation: Music Supervision

MFF.29.1 Select songs or recordings for use in film, television, video games, and/or advertising to enhance a project or scene's emotional and/or narrative elements.

MFF.29.2 Collaborate with directorial and/or advertising teams to make music choices that enhance the artistic vision.

MFF.29.3 Demonstrate advanced understanding of music synchronization and licensing laws and processes.

MFF.29.4 Evaluate and apply laws and regulations related to copyright management.

MFF.29.5 Determine and articulate how a particular music selection would complement a specific project or scene.

MFF.29.6 Maintain cue sheets and collaborate with music editors to determine details of the music's placement, style, tone, and duration.

MFF.29.7 Write a production's list of musical credits.

MFF.29.8 Negotiate rights and costs with licensing representatives employed by record labels, music publishers, and/or original artists and songwriters.

MFF.29.9 Find cost-effective solutions when a project requires an expensive or difficult to license recording.

30.0 Music Forward Foundation: Stagehand

MFF.30.1 Read work orders or other instructions to determine event specifications or equipment requirements.

MFF.30.2 Assist with lighting adjustments to artist or event specifications.

MFF.30.3 Accommodate artist/ event A/V requirements and maintain production or event equipment.

MFF.30.4 Maintain and repair of sound light and stage equipment including drapes and risers.

MFF.30.5 Ensure proper care and handling of all company and rental lighting and A/V equipment.

MFF.30.6 Assist audio crew with stands, microphones, cables, etc.

MFF.30.7 Collaborate with other workers to use equipment or perform technical procedures.

MFF.30.8 Perform the load-in and load-out of band equipment and rental equipment.

MFF.30.9 Interact professionally with visiting production crews to ensure a successful show.

31.0 Music Forward Foundation: Costume Attendant

MFF.31.1 Create worksheets for dressing lists, show notes, or costume checks; Distribute costumes or related equipment and keep inventory records of item status.

MFF.31.2 Demonstrate a working understanding of how to purchase, rent, or requisition costumes or other wardrobe necessities.

MFF.31.3 Provide maFnagers with budget recommendations and take responsibility for budgetary line items related to costumes, storage, or related needs.

MFF.31.4 Assign lockers to employees and maintain locker rooms, dressing rooms, wig rooms, or costume storage or laundry areas.

MFF.31.5 Read work orders or other instructions to determine event specifications or wardrobe requirements.

MFF.31.6 Examine costume fit on cast members and sketch or write notes for alterations; Provide assistance to cast members.

MFF.31.7 Clean and press costumes before and after performances and perform any minor repairs; Monitor, maintain, or secure inventories of costumes and related items.

MFF.31.8 Review scripts or other production information to determine a story's locale or period, as well as the number of characters and required costumes; Study books, pictures, or examples of period clothing to determine styles worn during specific periods in history.

MFF.31.9 Design or construct costumes or send them to tailors for construction, major repairs, or alterations.

32.0 Music Forward Foundation (MFF): Lighting Technician

MFF.32.1 Demonstrate advanced knowledge of industry-standard lighting and equipment terminology; Demonstrate advanced knowledge of types of lighting fixtures and their uses.

MFF.32.2 Set up, rig and test lighting equipment; adjust the intensity, color, and direction of various types of lighting fixtures to create different moods and effects that enhance a performance.

MFF.32.3 Coordinate with other members of the crew to ensure that the lighting is synced up with the sound, video, and other elements of the performance.

MFF.32.4 Demonstrate advanced understanding of music terminology and music structure as it applies to lighting.

MFF.32.5 Program lighting cues using specialized software.

MFF.32.6 Demonstrate an understanding of the image chain; the path that light travels from the source to the subject, to the eye in both live and video workflows.

MFF.32.7 Operate lighting consoles and make real-time adjustments to lighting as needed to enhance performance and respond to changes in the music or other show elements.

MFF.32.8 Check and maintain lightning equipment, make repairs as needed.

MFF.32.9 Manage power distribution.

33.0 Music Forward Foundation: Grip/Rigger/Climber

MFF.33.1 Understand the purpose and safe operation of automated equipment including lifts, motorized hoists, and other elevator platform equipment.

MFF.33.2 Differentiate between knot types and use appropriate knots to secure/suspend items.

MFF.33.3 Demonstrates comprehensive understanding of rigging terminology; Implements, documents and ensures compliance with rigging safety protocol and equipment safety inspections.

MFF.33.4 Identify and properly operate various kinds of dollies and crane arms including rigging and leveling track.

MFF.33.6 Apply proper technique for various types of rigging including scaffolding, truss building, chain motors, tenting, and boom lift rigs.

MFF.33.7 Assists Crew Chief and/or Head Rigger in ensuring safe setup, use & maintenance of rigging equipment used during concerts & special events.

MFF.33.8 Hangs rigging points; rigs soft goods and hard set pieces.

MFF.33.9 Strikes equipment upon completion of the event, packs equipment cases and loads trucks.

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Glossary

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.

Career Ready Standards: Universal and cross-curricular skills and knowledge for all Arts, Media, and Entertainment (AME) students across pathways; Based on the California Standards for Career Ready Practice.

Artificial Intelligence (AI): Recreation and/or imitation of human intelligence and tasks by computer systems.

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.

Capstone Course: Advanced, final course in career technical education (CTE) pathway sequence of courses. Capstone courses are offered to students grades nine through twelve.

Code-Switching: the practice of alternating between two or more languages or varieties of language in conversation.

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.

Concentrator Course: Intermediate level, focus area course in CTE pathway sequence of courses. Concentrator courses are offered to students grades nine through twelve.

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

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

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

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.

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.

Digital Audio Workstation: Technology used in audio and music production to acquire and save multiple tracks of audio recordings, and to mix, equalize, and add audio effects.

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

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.

Focus Area: Career-specific area of study within a pathway.

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.

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.

Cross-Pathway Standards: Universal and cross-curricular skills and knowledge outlining the importance of business and marketing, legal responsibility, media production and project management skills across creative industries.

Introductory Course: Exploratory, beginning-level course in a CTE pathway.[14] Introduction courses are offered to students in grades seven through twelve.

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

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

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

Pathway Standards: Learning objectives that align with career-specific skills and competencies. Pathway Standards are organized by Focus Area.

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: A persuasive presentation of information, services, products, creative ideas, etc.

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.

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[14] There is one introductory course option for all AME pathways.

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.[15]

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.

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

Rig: 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.

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.

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.

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.

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.

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[15] Schools that demonstrate alignment to Guidance for High Quality Pathway Sequencing will be eligible to register as pre-apprenticeship programs in registered occupations.

User Experience: The experience of a person using web-based technologies, services, software, applications, and products.

User Interface: The interaction design and usability of web-based technologies, 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.

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

Virtual Production: The use of real-time rendering and visual effects in film production, inclusive of motion capture technology, green and blue screen studios, and/or a LED volume stage.

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

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

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