Maryland CTE Programs of Study

Video and Audio Production III (2025)

GENERAL REQUIREMENTS. This course is recommended for students in Grades 10-12. 1

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INTRODUCTION 2

A Career and Technical Education (CTE) instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions. 2.A

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

C The Video and Audio Production program guides students from foundational to advanced media creation skills. Throughout these courses, students explore graphic design fundamentals, video editing, and audio capture, culminating in comprehensive proficiency with advanced editing suites, sound engineering, and broadcast technology. Participants build a robust portfolio while preparing for industry-recognized certifications (e.g., Adobe, Avid, Apple, CBT). Graduates emerge equipped to thrive in film, television, radio, and streaming, having mastered both creative storytelling and technical workflows. 2.C

D In Video and Audio Production III, students acquire advanced compositing and animation skills using Adobe After Effects, focusing on motion graphics and visual effects. The course emphasizes larger-scale projects with multi-camera shoots, complex lighting designs, and streaming/broadcast standards, preparing students to tackle real-world production environments. This level also explores emerging AI, virtual production, and immersive media, underscoring the ethical implications of modern content creation. 2.D

E Students will participate in at least two Career-Connected Education and Work-Based Learning experiences in this course, which might include informational interviews or job shadowing relevant to the program of study. 2.E

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F **Students are encouraged to participate in extended learning experiences through aligned Career and Technical Student Organizations (CTSOs). CTSOs are a cocurricular requirement in the Carl D. Perkins Act, and alignment to CTSO activities is an expectation for CTE programs in the state of Maryland.** 2.F

KNOWLEDGE AND SKILLS 3

A **The student demonstrates the necessary skills for career development, maintenance of employability, and successful completion of course outcomes. The student is expected to:** 3.A

1. Choose one specialization pathway (broadcast audio, live events, studio recording, or post- production) and produce capstone-quality work that demonstrates advanced competencies and industry-standard deliverables. 3.A.1
2. Identify and demonstrate positive work behaviors that enhance employability and job advancement, such as regular attendance, promptness, proper attire, maintenance of a clean and safe work environment, and pride in work. 3.A.2
3. Demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, active listening, and a willingness to learn. 3.A.3
4. Employ effective reading, writing, and technical documentation skills. 3.A.4
5. Solve problems using critical thinking techniques and structured troubleshooting methodologies. 3.A.5
6. Demonstrate leadership skills and collaborate effectively as a team member. 3.A.6
7. Implement safety procedures, including proper use of software and following privacy guidelines. 3.A.7
8. Exhibit an understanding of legal and ethical responsibilities in the video and audio production field, following data privacy laws and best practices for security. 3.A.8
9. Demonstrate time-management skills and the ability to prioritize tasks in a technical setting. 3.A.9

B **The student identifies various career pathways in the video and audio production field. The student is expected to:** 3.B

1. Develop a career plan that includes the necessary education, certifications, job skills, and experience for specific roles in video and audio production. 3.B.1
2. Create a professional resume and portfolio that reflect skills, projects, certifications, and recommendations. 3.B.2
3. Demonstrate effective interview skills for roles in media and video and audio production. 3.B.3

C **The student develops technology and digital literacy skills. The student is expected to:** 3.C

1. Use technology as a tool for research, organization, communication, and problem-solving. 3.C.1
2. Use digital tools, including computers, mobile devices, collaboration platforms, and cloud services, to access, manage, and create information. 3.C.2

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3 Demonstrate proficiency in using emerging and industry-standard technologies, including video editing skills and applying basic effects to create media content. 3.C.3

4 Understand ethical and legal considerations for technology use, including the principles of data protection, copyright, and responsible technology use. 3.C.4

D The student integrates core academic skills into video and audio production practices. The student is expected to: 3.D

1 Demonstrate the use of clear communication techniques, both written and verbal, that are consistent with industry standards. 3.D.1

2 Apply English concepts such as writing informative texts when documenting the design process and articulating goals. 3.D.2

3 Use mathematical concepts, such as applying proportional reasoning and scaling to understand image scaling, aspect ratios, and resolution adjustments in digital media. 3.D.3

E The student demonstrates the necessary skills to record, edit, and mix audio at a professional level using Avid Pro Tools, or when Pro Tools is unavailable, Audacity for comparable multitrack tasks. The student is expected to: 3.E

1 Configure and optimize a Pro Tools or Audacity session, including selecting appropriate sample rates, bit depths, and I/O settings to support high-fidelity audio recordings. 3.E.1

2 Demonstrate multi-track recording techniques, such as layering vocals, instruments, and sound effects, ensuring clean signal flow and minimizing noise. 3.E.2

3 Apply advanced audio editing tools (e.g., elastic audio, pitch correction, crossfades) to refine performances and transitions for clarity and impact. 3.E.3

4 Integrate mixing fundamentals (e.g., EQ, compression, automation, reverb) to create a polished, balanced mix, preparing students for Avid Pro Tools Certified User requirements while reinforcing transferable workflows mastered in Audacity. 3.E.4

F The student demonstrates the necessary skills to design and animate compelling motion graphics while integrating advanced visual effects. The student is expected to: 3.F

1 Apply compositing and layering techniques (e.g., keying, masking, track mattes) to seamlessly merge multiple visual elements into a cohesive scene. 3.F.1

2 Animate text, shapes, and images for titles, lower thirds, and brand graphics, experimenting with easing, keyframes, and motion paths to create professional animations. 3.F.2

3 Utilize 3D workspace features (cameras, lights, 3D layers) to enhance depth and realism, reflecting an advanced skill set aligned with Adobe Certified Professional: After Effects standards. 3.F.3

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4 Incorporate effects and presets (e.g., color correction tools, particle systems, transitions) to achieve cinematic visuals and dynamic storytelling. 3.F.4

G The student demonstrates the necessary skills to plan and carry out multi-camera and streamed video productions using school-level resources, while collaborating efficiently in post-production workflows. The student is expected to: 3.G

1 Plan and operate basic multi-camera shoots (e.g., live morning announcements, concerts, or sports), practicing camera placement, tally/communication signals, and simple live- switching or editing-in-post techniques for smooth scene transitions. 3.G.1

2 Design lighting setups that enhance storytelling, selecting gels or LED color settings to establish mood and focus; explore introductory DMX or simple console controls where equipment is available. 3.G.2

3 Apply entry-level streaming or recording settings, comparing common codecs (H.264, H.265), bit-rate presets, and frame-rate choices to balance visual quality with upload bandwidth for school broadcasts or online platforms. 3.G.3

4 Organize shared post-production projects by establishing file-naming conventions, folder structures, and basic revision-tracking (e.g., cloud-sync comments or timeline versions) to keep team edits aligned and efficient. 3.G.4

5 Select and justify master-file deliverables—choosing professional mezzanine codecs (e.g., ProRes 422, DNxHR HQ), constant/variable bit-rates, broadcast cadences (23.976 p, 29.97 i, 59.94 p), and wrappers (MOV, MXF)—and evaluate how these settings affect downstream transcodes, QC, and viewer playback across broadcast, OTT, and archival platforms. 3.G.5

H The student demonstrates the necessary skills to evaluate new technologies, address ethical considerations, and incorporate them effectively into video and audio production. The student is expected to: 3.H

1 Explore emerging AI-driven tools (e.g., auto-captioning, generative visuals, intelligent color matching) and assess potential benefits and ethical concerns in production. 3.H.1

2 Evaluate intellectual property and licensing issues, ensuring all music, images, and footage used in advanced productions comply with legal and ethical standards. 3.H.2

3 Recognize evolving broadcast regulations (e.g., closed captioning mandates, streaming content guidelines) and integrate them into media distribution plans. 3.H.3

4 Examine trends in immersive experiences (VR, AR, 360° video), investigating how lighting, sound design, and storytelling adapt to these formats. 3.H.4

I The student demonstrates the necessary skills to synthesize technical expertise with strong communication, leadership, and problem-solving, preparing for high-level certifications and industry expectations. The student is expected to: 3.I

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1. Present complex project proposals and final deliverables through clear written, visual, and oral communication, catering to diverse audiences (clients, peers, instructors). 3.I.1
2. Employ advanced analytical and mathematical concepts (frame rates, timecode calculations, synchronization offsets) to refine editing and mixing precision. 3.I.2
3. Lead production teams in setting goals, assigning roles, and resolving conflicts, demonstrating professional ethics and accountability. 3.I.3
4. Curate a specialized digital portfolio, showcasing advanced audio mixes (Pro Tools) and dynamic motion graphics (After Effects), reflecting readiness for Avid Pro Tools Certified User and Adobe Certified Professional: After Effects exams. 3.I.4

J The student demonstrates advanced live/broadcast audio integration. The student is expected to: 3.J

1. Configure networked audio where available (e.g., school-safe Dante/USB audio interfaces) for stage-to-control-room routing. 3.J.1
2. Implement redundant recording (board mix + camera scratch + handheld backup) and reconcile in post using timecode/markers. 3.J.2
3. Evaluate room acoustics and propose practical treatment for school venues to improve speech intelligibility and musical clarity. 3.J.3

K The student pursues an advanced specialization pathway and produces a capstone-quality project. The student is expected to: 3.K

1. Select one specialization pathway—Broadcast Audio, Live Events (FOH/Monitors), Studio Recording, or Post-Production Sound—and submit a written proposal with scope, timeline, crew/roles, equipment list, and success criteria. 3.K.1
2. Plan and execute the capstone production using industry-standard practices for the chosen pathway (e.g., tech rider/stage plot and input list for Live Events; session plan and cue mixes for Studio; dialogue edit/SFX/Foley/stems for Post; intercom/IFB and mix-minus for Broadcast). 3.K.2
3. Apply advanced techniques appropriate to the pathway (e.g., loudness targets and mix- minus for Broadcast; PA coverage choices and monitor mixes for Live Events; multitrack recording and comping for Studio; noise reduction, EQ, dynamics, and deliverable stems for Post). 3.K.3
4. Deliver professional artifacts for assessment, such as: finalized mix/master, stems, program/ISO records, session files, presets/scenes, and a 1–2 page process document explaining key technical and creative decisions. 3.K.4
5. Demonstrate quality control using checklists (routing, timecode/sync, redundancy, file integrity) and resolve issues using structured troubleshooting. 3.K.5
6. Reflect on outcomes with a brief retrospective connecting learning to industry roles, certifications, and next steps (internship, portfolio, credential). 3.K.6

L The student collaborates across disciplines to integrate video and audio workflows in a live, live-to-tape, or multi-deliverable production. The student is expected to: 3.L

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1. Form a cross-discipline team (e.g., Broadcast/Live-sound student with Multi-camera Director/TD; Post-sound student with Picture Editor/Mograph lead) and define responsibilities, communication protocols, and handoffs. 3.L.1
2. Integrate systems and roles by coordinating audio-to-switcher/encoder routing, intercom/IFB, timecode or slate sync, and camera/record feeds to meet both live and post needs. 3.L.2
3. Meet platform standards (e.g., school broadcast/stream loudness and captioning guidelines; aspect-ratio/adaptation for web/social) and verify on PA, stream return, and recorded outputs. 3.L.3
4. Produce dual deliverables—one live (e.g., PA/stream with board mix) and one post (e.g., polished edit with final mix/stems)—and submit accompanying documentation (stage plot/input list, call sheet, scene/patch files, presets). 3.L.4
5. Manage risks and redundancy (backup power/media, secondary audio record, failover plan) and log changes during rehearsal and show. 3.L.5
6. Conduct a post-mortem evaluating team communication, technical choices, and workflow efficiency; propose at least two improvements aligned to industry best practices. 3.L.6