

Animation II

Level: 3

Career Cluster: Media Arts

Program: Design and Digital Arts

Pathway: Graphic Design

Course Catalog Description

Students apply advanced digital animation principles, storytelling, and computer-based production workflows to create polished 2D or 3D animation projects using industry-standard software and digital media tools.

Summary

Builds on foundational animation skills by guiding students through the development of fully realized, portfolio-quality digital animation projects. Students apply advanced animation principles, storytelling techniques, and computer-based production workflows to create original animated works in 2D or 3D formats using digital tools and software platforms. The course emphasizes the full digital production pipeline, including preproduction planning, digital asset creation, rigging, animation, sound integration, rendering, and postproduction editing. Students also develop leadership, collaboration, and project management skills through individual and team-based projects, while applying ethical and professional standards in digital media creation. Through critique, refinement, and public presentation, students produce polished digital animation projects that demonstrate technical proficiency, creative expression, and readiness for postsecondary education and careers in animation and digital media.

Notes

The updated course reflects a significant shift from a traditional advanced animation course to a more comprehensive, industry-aligned production program. The original course primarily emphasized advanced animation techniques, character development, and project completion within a largely technique-driven framework. In contrast, the revised course expands these foundations into clearly structured learning strands that align with the full digital animation production pipeline, including preproduction planning, asset creation, rigging, animation, sound integration, rendering, and postproduction workflows. Additionally, the updated version strengthens professional expectations by incorporating project management, leadership, ethical practices, work-based learning, and portfolio development, along with a formal final assessment project. These enhancements improve alignment with current CTE standards by emphasizing real-world production environments, collaborative workflows, and postsecondary readiness while maintaining the advanced technical animation skills central to the original course.

Student Learning Outcomes

1. Career Exploration and Postsecondary Opportunities

Objective: Students will explore and analyze digital animation career pathways by examining professional roles, software, hardware, work environments, ethical and legal expectations, certifications, professional organizations, and Colorado postsecondary education options to make informed academic and career decisions.

- 1) Identify employment opportunities in digital animation, motion graphics, game art, visual effects, and related computer-based media fields with a focus on digital animation production
 - a. Recognize the work typically performed, tools and technology used, and nature of work environments
 - b. Identify potential certifications within the careers
 - c. Find membership organizations associated with the careers
 - d. Understand the necessary education associated within the careers
- 2) Define professionalism within the context of graphic design
 - a. Criticism and evaluation
 - b. Presentation
 - c. Assessment
- 3) Recognize laws, regulations, and ethics significant to the fields of graphic design
- 4) Identify postsecondary opportunities offered in the state of Colorado
 - a. Technical college, community college, 4-year institutions
 - b. Certificates, associates, bachelor, and advanced degree opportunities

2. Professional Ethics, Copyright and Digital Compliance

Objective: Students will apply ethical and legal standards in digital animation production by demonstrating responsible conduct, copyright compliance, and respect for intellectual property.

- 5) Demonstrate ethical conduct in collaborative and client-based animation projects.
- 6) Apply copyright laws and fair-use guidelines to animated and multimedia assets.
- 7) Model respect for intellectual property when remixing, editing, or animating digital content.
- 8) Differentiate acceptable use policies, copyright, and Creative Commons licensing.
- 9) Evaluate ethical implications of asset reuse, AI-assisted creation, and media distribution.

3. Leadership, Planning and Production Management

Objective: Students will demonstrate leadership and time-management skills by planning, organizing, and completing animation tasks efficiently within production constraints.

- 10) Employ planning and time-management strategies to meet production deadlines.
- 11) Develop task lists, schedules, and milestones for animation projects.
- 12) Analyze workflow efficiency within team-based production settings.
- 13) Evaluate personal and team productivity and adjust strategies accordingly.

4. Technical Communication and Animation Production Literacy

Objective: *Students will apply professional communication methods by using digital, verbal, visual, and technical systems to plan, document, and explain animation concepts and computer-based production processes.*

- 14) Operate digital communication systems to present ideas and production updates.
- 15) Explain animation choices using appropriate technical vocabulary.
- 16) Analyze framing, staging, camera angles, lighting, transitions, and edits in animation.
- 17) Evaluate clarity and effectiveness of production communication.

5. Drawing Systems, Spatial Representation and Visualization

Objective: *Students will apply digital spatial visualization techniques by producing orthographic, isometric, and concept drawings in computer-based environments to support accurate animation and modeling.*

- 18) Apply orthographic and isometric drawing techniques for animation planning.
- 19) Analyze form, proportion, and spatial accuracy in drawings.
- 20) Translate 2D drawings into animated or modeled forms.

6. Animation Principles, Timing and Motion Design

Objective: *Students will apply advanced digital animation principles in software environments to create believable, expressive motion in characters, environments, and effects.*

- 21) Apply animation principles such as arcs, timing, spacing, anticipation, and exaggeration.
- 22) Analyze motion quality and character performance.
- 23) Refine animation sequences through iterative testing and adjustment.
- 24) Evaluate animation effectiveness based on realism, style, and clarity.

7. Elements of Animation and Artistic Application

Objective: *Students will integrate elements of art and design into digital animated projects to enhance storytelling, user experience, and visual cohesion.*

- 25) Identify and apply animation elements such as cycles, layers, transitions, and transparency.
- 26) Apply design elements including line, color, shape, texture, shadow, and negative space.
- 27) Explain the use of additive color theory in digital animation.
- 28) Compare animation styles across genres, cultures, and production contexts.
- 29) Evaluate stylistic consistency and visual impact.

8. Pre-Production: Audience Analysis and Story Development

Objective: Students will plan digital animation projects strategically by analyzing audiences and developing scripts, digital storyboards, and production documents that guide computer-based workflows.

- 30) Analyze target audiences to identify needs, interests, and expectations.
- 31) Write and edit scripts for animated narratives.
- 32) Create detailed storyboards for timing, movement, and camera direction.
- 33) Select appropriate aspect ratios and frame rates based on delivery platform.
- 34) Evaluate pre-production materials for clarity and feasibility.

9. Production: Asset Creation and Environment Design

Objective: Students will design and develop digital animated assets by creating characters, environments, and props with software tools that support narrative and visual goals.

- 35) Design color schemes and compositional elements for scenes.
- 36) Create and model characters, environments, and props digitally.
- 37) Analyze visual consistency across assets.
- 38) Refine designs based on technical and narrative needs.

10. Production: Rigging, Lighting and Effects Animation

Objective: Students will apply advanced digital production techniques by preparing assets for animation through software-based rigging, lighting, and effects systems.

- 39) Develop character rigs for movement and expression.
- 40) Apply lighting techniques to establish mood and depth.
- 41) Assemble particle systems for effects such as rain, snow, smoke, and fire.
- 42) Evaluate lighting and effects for realism and visual emphasis.

11. Production: Animation, Sound and Rendering

Objective: Students will animate and finalize digital scenes by integrating motion, sound, and rendering processes using industry-standard software workflows.

- 43) Animate characters, environments, cameras, and effects.
- 44) Incorporate music, sound effects, and dialogue appropriately.
- 45) Render scenes using correct settings and formats.
- 46) Evaluate technical quality and visual consistency prior to post-production.

12. Post-Production, Editing and Final Output

Objective Students will complete and deliver polished digital animations through software-based editing, visual effects, audio processing, file management, and final output preparation.

- 47) Edit animated sequences for pacing and continuity.
- 48) Produce titles, lower thirds, and end credits.

- 49) Apply visual effects and post-processing techniques.
- 50) Edit and mix audio for clarity and balance.
- 51) Export and deliver final animations in appropriate formats.
- 52) Evaluate finished work against project goals and industry standards.

13. Portfolio Development

Objective: *Students will develop and curate a professional animation portfolio by selecting, refining, documenting, and presenting work samples that demonstrate technical skill, creative growth, and readiness for postsecondary and career opportunities.*

- 53) Select and organize portfolio pieces that demonstrate a range of animation skills, production roles, and project outcomes.
- 54) Refine portfolio artifacts based on critique, technical standards, and intended audience.
- 55) Write artist statements, process reflections, and project descriptions using professional language and accurate technical terminology.
- 56) Evaluate portfolio quality for presentation, cohesion, and alignment to program or career goals.

14. Leadership

Objective: *Students will demonstrate leadership in animation and digital media settings by communicating professionally, contributing to team success, making responsible decisions, and reflecting on personal growth in collaborative production environments.*

- 57) Demonstrate initiative, responsibility, and dependability in individual and team-based animation tasks.
- 58) Apply collaboration and conflict-resolution strategies to support productive creative teams.
- 59) Practice leadership through critique, peer support, project coordination, or mentorship opportunities.
- 60) Evaluate personal leadership strengths and areas for growth in professional and academic contexts.

15. Work-Based Learning

Objective: *Students will connect classroom learning to industry practice by participating in authentic work-based learning experiences, applying professional expectations, and reflecting on career readiness in animation and digital media environments.*

- 61) Apply workplace expectations including punctuality, communication, accountability, and quality standards in project-based or industry-connected experiences.
- 62) Analyze how classroom animation skills transfer to workplace roles, client projects, internships, or industry.
- 63) Document work-based learning experiences, feedback, and professional growth using logs, reflections, or presentation materials.
- 64) Evaluate career readiness based on workplace performance, feedback, and identified next steps.

16. Final Assessment Project

Objective: *Students will complete a comprehensive final animation project by integrating preproduction, production, postproduction, presentation, and reflection skills to demonstrate mastery of course outcomes.*

- 65) Plan and produce a culminating animation project that demonstrates technical proficiency, creative intent, and effective workflow management.
- 66) Integrate design, animation, sound, editing, and delivery skills into a polished final product.
- 67) Present and defend final project decisions using appropriate production vocabulary, evidence of process, and reflection on revisions.
- 68) Evaluate the final project against course expectations, industry standards, and personal learning goals.

17. Career and Technical Student Organizations

Objective: *Using the CTSO Resource Document, chapter activities will provide some of the best opportunities CTSO members will have to learn by doing. A successful program of work creates a positive learning atmosphere in the classroom. CTSO members learn how to accept responsibility, work as a team, manage a budget, and handle success and failure. Per the CTE Admin Handbook, CTSOs are embedded into curriculum.*

Professional Development

Prepare each member for entry into the workforce and provide a foundation for success in a career. Becoming a professional does not stop with acquiring a skill, but involves an increased awareness of the meaning of good citizenship and the importance of labor and management in the world of work.

Community Service

Promote and improve goodwill and understanding among all segments of the community through services donated by CTSO chapters, and to instill in its members a lifetime commitment to community service.

Business and Industry Connections

Increase awareness of quality job practices and attitudes, and increase the opportunities for employer engagement and eventual employment.

Financial Leadership

Plan and participate in activities to allow all members to carry out the chapter's projects. Educate members on their own personal finance for current and future success.

Public Relations

Make the general public aware of the good work that students in career and technical education are doing to better themselves and their community, state, nation, and world.

Social Activities

To increase cooperation in the school and community through activities that allow CTSO members to get to know each other in something other than a business or classroom setting.

Academic Standards Alignment

Colorado CTE courses are required to integrate academic and essential skills into course content. The following academic standards have been identified as aligned to this course and should be integrated throughout instruction.

[CO CTE Academic Standards Resources](#) (Rubrics, integration strategies, etc)

[CDE Colorado Academic Standards Online](#) (Online standards lookup tool)

Note: Mathematics and Science standards will be added in the future. Visit the [Colorado Academic Standards](#) page for the most current version.

Reading, Writing and Communicating Crosswalk

Course: Animation II

Colorado Academic Standards – Reading, Writing and Communicating

Standard	Prepared Graduate Competency	Description	Course Evidence / Alignment
Standard 1: Oral Expression and Listening	Prepared Graduate 1 – Collaboration	Collaborate effectively as group members or leaders who listen actively and respectfully; pose thoughtful questions, acknowledge the ideas of others; and contribute ideas to further the group's attainment of an objective.	Students collaborate in advanced animation production teams, participate in structured critiques, and incorporate peer and instructor feedback to refine animated works.
Standard 1: Oral Expression and Listening	Prepared Graduate 2 – Oral Presentations	Deliver effective oral presentations for varied audiences and varied purposes.	Students present animation concepts, story arcs, technical workflows, and completed animations to varied audiences.
Standard 2: Reading for All Purposes	Prepared Graduate 4 – Informational Texts	Read a wide range of informational texts to build knowledge and to better understand the human experience.	Students read and apply advanced instructional texts including animation principles, software

			documentation, production pipelines, and industry guidelines.
Standard 2: Reading for All Purposes	Prepared Graduate 5 – Language in Context	Understand how language functions in different contexts, command a variety of word-learning strategies to assist comprehension, and make effective choices for meaning or style when writing and speaking.	Students apply precise animation and visual media vocabulary appropriately in technical, creative, and professional communication.
Standard 3: Writing and Composition	Prepared Graduate 7 – Informational Writing	Craft informational/explanatory texts using techniques specific to the genre.	Students write detailed production notes, process documentation, critiques, and reflections explaining animation techniques and decisions.
Standard 3: Writing and Composition	Prepared Graduate 8 – Narrative Writing	Craft narratives using techniques specific to the genre.	Students develop complex visual narratives through storyboarding, character development, timing, sequencing, and cinematic storytelling.
Standard 3: Writing and Composition	Prepared Graduate 9 – Writing Process	Demonstrate mastery of their own writing process with clear, coherent, and error-free polished products.	Students revise, edit, and refine written and visual materials to produce polished, professional-quality animation projects.
Standard 4: Research Inquiry	Prepared Graduate 10 –	Gather information from a variety of sources;	Students research animation styles,

and Design	Research and Ethics	analyze and evaluate its quality and relevance; and use it ethically to answer complex questions.	cultural influences, and technical approaches; evaluate sources; and apply ethical practices including copyright, licensing, and attribution.
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Free Resource Links

1. Career Exploration and Postsecondary Opportunities

- Animation Career Review (animation careers, education pathways, industry roles)
<https://www.animationcareerreview.com/>
- ONET Online (career profiles, animation skills, job outlook)
<https://www.onetonline.org/>
- My Next Move (career exploration, animation pathways)
<https://www.mynextmove.org/>
- College Board BigFuture (postsecondary programs, animation and design majors)
<https://bigfuture.collegeboard.org/>

2. Professional Ethics, Copyright and Digital Compliance

- Creative Commons (copyright, licensing, media use)
<https://creativecommons.org/>
- U.S. Copyright Office (copyright law, intellectual property)
<https://www.copyright.gov/>
- Nolo Legal Encyclopedia (copyright, fair use, digital media law)
<https://www.nolo.com/legal-encyclopedia>
- Pixabay License Guide (asset use, attribution rules)
<https://pixabay.com/service/license/>

3. Leadership, Planning and Production Management

- Asana (project management, task planning)
<https://asana.com/>
- Trello (workflow organization, production tracking)
<https://trello.com/>
- Milanote (project planning, creative workflow)
<https://milanote.com/>
- Notion (project organization, team planning)
<https://www.notion.so/>

4. Technical Communication and Animation Production Literacy

- StudioBinder (production planning, shot lists, communication)
<https://www.studiobinder.com/>
- Khan Academy Pixar in a Box (animation concepts, storytelling communication)
<https://www.khanacademy.org/partner-content/pixar>
- Adobe Creative Cloud Learn (animation workflows, production tools)
<https://creativecloud.adobe.com/learn>
- YouTube Creators Academy (production communication, workflow)
<https://creatoracademy.youtube.com/>

5. Drawing Systems, Spatial Representation and Visualization

- Drawspace (drawing fundamentals, spatial visualization)
<https://www.drawspace.com/>

- Ctrl+Paint (digital drawing, perspective, visualization)
<https://www.ctrlpaint.com/library>
- Line of Action (gesture drawing, structure, spatial awareness)
<https://line-of-action.com/>
- Proko (figure drawing, anatomy, spatial design)
<https://www.proko.com/>

6. Animation Principles, Timing and Motion Design

- Animator Island (animation principles, timing exercises)
<https://www.animatorisland.com/>
- 11 Second Club (animation practice, timing, critique)
<https://www.11secondclub.com/>
- Animation Mentor Blog (character animation, timing, motion)
<https://www.animationmentor.com/blog/>
- Alan Becker Tutorials (animation fundamentals, motion design)
<https://www.youtube.com/@AlanBeckerTutorials>

7. Elements of Animation and Artistic Application

- Canva Design School (visual elements, color, composition)
<https://www.canva.com/learn/design/>
- Adobe Color (color systems, animation palettes)
<https://color.adobe.com/>
- Creative Bloq (animation styles, visual design inspiration)
<https://www.creativebloq.com/>
- Behance (animation projects, artistic styles)
<https://www.behance.net/>

8. Pre-Production: Audience Analysis and Story Development

- Storyboard That (storyboarding, narrative development)
<https://www.storyboardthat.com/>
- Boords (storyboarding tools, planning sequences)
<https://boords.com/>
- Milanote (story planning, concept development)
<https://milanote.com/>
- Khan Academy Storytelling (narrative structure, audience focus)
<https://www.khanacademy.org/arts-humanities/storytelling>

9. Production: Asset Creation and Environment Design

- Blender (3D modeling, environment design, animation)
<https://www.blender.org/>
- Sketchfab (3D assets, environment inspiration)
<https://sketchfab.com/>
- Krita (2D asset creation, illustration)
<https://krita.org/>

- Unsplash (reference images, environment inspiration)
<https://unsplash.com/>

10. Production: Rigging, Lighting and Effects Animation

- Blender Tutorials (rigging, lighting, particle systems)
<https://www.blender.org/support/tutorials/>
- Autodesk Maya Learning (rigging, lighting workflows)
<https://www.autodesk.com/education>
- BandH Explora (lighting techniques, visual effects)
<https://www.bhphotovideo.com/explora>
- CG Cookie (rigging, lighting, animation techniques)
<https://cgcookie.com/>

11. Production: Animation, Sound and Rendering

- Blender Documentation (rendering, animation workflows)
<https://docs.blender.org/>
- Premiere Pro Tutorials (editing, rendering workflows)
<https://helpx.adobe.com/premiere-pro/tutorials.html>
- Audacity (audio editing, sound integration)
<https://www.audacityteam.org/>
- DaVinci Resolve (editing, rendering, production workflows)
<https://www.blackmagicdesign.com/products/davinciresolve>

12. Post-Production, Editing and Final Output

- Adobe After Effects Tutorials (effects, post-production editing)
<https://helpx.adobe.com/after-effects/tutorials.html>
- Clipchamp (video editing, exporting, final output)
<https://www.clipchamp.com/>
- Canva Video Editor (editing, exporting, presentation)
<https://www.canva.com/video-editor/>
- Vimeo Video School (editing, post-production techniques)
<https://vimeo.com/blog/category/video-school/>

13. Portfolio Development

- ArtStation (animation portfolios, showcasing 2D/3D work, industry examples)
<https://www.artstation.com/>
- Behance (animation portfolios, project presentation, case studies)
<https://www.behance.net/>
- Adobe Portfolio (portfolio creation, animation showcase, web presentation)
<https://portfolio.adobe.com/>
- Frame.io Blog (demo reels, feedback, portfolio refinement)
<https://blog.frame.io/>

14. Leadership

- MindTools – Leadership Skills (communication, teamwork, decision-making)
https://www.mindtools.com/pages/main/newMN_LDR.htm
- SkillsYouNeed – Leadership (collaboration, conflict resolution, professionalism)
<https://www.skillsyouneed.com/lead/>
- TED Talks – Leadership (communication, influence, creative leadership)
<https://www.ted.com/topics/leadership>
- Indeed Career Guide – Leadership Skills (initiative, teamwork, workplace readiness)
<https://www.indeed.com/career-advice/career-development/leadership-skills>

15. Work-Based Learning

- CareerOneStop – Work-Based Learning (internships, apprenticeships, career exploration)
<https://www.careeronestop.org/ExploreCareers/learn/work-based-learning.aspx>
- Colorado Work-Based Learning (state guidance, employer connections)
<https://cdle.colorado.gov/work-based-learning>
- ACTE Work-Based Learning Resources (career readiness, employability skills)
<https://www.acteonline.org/professional-development/work-based-learning/>
- Animation Career Review (animation careers, pathways, industry expectations)
<https://www.animationcareerreview.com/>

16. Final Assessment Project

- PBS LearningMedia – Media Production Projects (project ideas, assessment, rubrics)
<https://www.pbslearningmedia.org/>
- 11 Second Club (animation challenges, critique, performance assessment)
<https://www.11secondclub.com/>
- Adobe Creative Cloud Tutorials (animation projects, workflows, production)
<https://creativecloud.adobe.com/learn>
- Rubistar (project rubrics, assessment tools)
<https://www.rcampus.com/rubistar/>



Technology Student Association – National Competitive Events

Digital Video Production

Objective: *Students will plan, produce, document, and present an original digital video or animated short that meets TSA Digital Video Production requirements for storytelling, technical production, copyright compliance, and interview presentation.*

- Research the annual TSA Digital Video Production theme and develop an original animated or video production concept.
- Analyze the target audience, purpose, visual style, delivery format, and production needs before beginning production.
- Create a script, storyboard, shot plan, or production plan that guides the project from pre-production through final output.
- Design and produce original animation, video, graphics, transitions, sound, titles, credits, or visual effects that support the story.
- Edit and refine the final production using appropriate pacing, audio, framing, lighting, composition, and post-production techniques.
- Document the production through a portfolio that includes purpose, storyboard, script, hardware/software list, references, permissions, consent forms, and work log.
- Participate in an interview explaining the video concept, production process, technical decisions, and creative choices.

Resources

- Technology Student Association – Digital Video Production competition guidelines
<https://tsaweb.org/competitions-programs/tsa/themes-problems>
- Adobe Premiere Pro – Video editing and production tools
<https://www.adobe.com/products/premiere.html>
- Blender – 3D animation, modeling, visual effects, and rendering software
<https://www.blender.org/>
- DaVinci Resolve – Video editing, color, audio, and post-production tools
<https://www.blackmagicdesign.com/products/davinciresolve>



Technology Student Association – National Competitive Events

Virtual Reality Simulation (VR)

Objective: *Students will design, develop, document, and present a virtual reality simulation that uses 3D graphics, animation, sound, and immersive design to communicate a scientific, technical, or conceptual topic aligned with TSA Virtual Reality Simulation requirements.*

- Research the annual TSA Virtual Reality Simulation theme and identify a topic, concept, or process that can be effectively communicated through VR.
- Plan the simulation using scripts, storyboards, scene layouts, user-flow diagrams, or interaction maps.
- Design characters, environments, props, lighting, cameras, visual effects, and animated elements that support the simulation.
- Develop a virtual environment using appropriate 3D modeling, animation, rendering, game engine, sound, and interaction tools.
- Apply design principles related to immersion, navigation, user experience, visual clarity, pacing, and technical communication.
- Prepare a documentation portfolio that explains research, purpose, design process, software/hardware used, development decisions, and revisions.
- Present the VR simulation and explain the purpose, value, research, animation choices, and design process during the interview.

Resources

- Technology Student Association – Virtual Reality Simulation (VR) competition guidelines
<https://tsaweb.org/competitions-programs/tsa/themes-problems>
- Unity Learn – VR and interactive 3D development tutorials
<https://learn.unity.com/>
- Unreal Engine – Virtual reality development resources
<https://dev.epicgames.com/documentation/en-us/unreal-engine/virtual-reality-development-in-unreal-engine>
- Blender – 3D modeling, animation, visual effects, and rendering software
<https://www.blender.org/>



Technology Student Association – National Competitive Events

Video Game Design

Objective: Students will design, develop, test, document, and present an original video game that meets TSA Video Game Design requirements for gameplay, technical quality, creativity, documentation, and presentation.

- Research the annual TSA Video Game Design theme and develop an original game concept.
- Plan gameplay, rules, goals, mechanics, characters, environments, visual style, sound, and user interaction.
- Create game-ready assets such as characters, rigs, environments, props, sprites, animations, particle effects, title screens, or interface elements.
- Develop a playable game using appropriate programming, game engine, animation, or interactive media tools.
- Test and refine the game to improve animation quality, functionality, usability, balance, clarity, and player experience.
- Prepare documentation that explains the game concept, development process, technical tools, testing, revisions, and final output.
- Present the game to judges and explain design decisions, animation choices, technical implementation, and response to the annual theme.

Resources

- Technology Student Association – Video Game Design competition guidelines
<https://tsaweb.org/competitions-programs/tsa/themes-problems>
- Unity Learn – Game development tutorials
<https://learn.unity.com/>
- Godot Engine Documentation
<https://docs.godotengine.org/>
- Blender – 3D modeling, animation, visual effects, and rendering software
<https://www.blender.org/>