Texas CTE

Advanced Animation (Two to Three Credits)

General requirements. This course is recommended for students in Grades 11-12. Prerequisite: Animation.	**(a) General requirements. This course is recommended for students in Grades 11-12. Prerequisite: Animation.**
Introduction. Careers in animation span all aspects of motion graphics. Within this context, in addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to create two- and three-dimensional animations. The instruction also assists students seeking careers in the animation industry.	**(b) Introduction. Careers in animation span all aspects of motion graphics. Within this context, in addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to create two- and three-dimensional animations. The instruction also assists students seeking careers in the animation industry.**
Knowledge and skills.	**(1) The student applies academic knowledge and skills in animation projects. The student is expected to:** (A) apply English language arts knowledge and skills by demonstrating use of content, technical concepts, and vocabulary using correct grammar, punctuation, and terminology to write and edit documents; and (B) apply mathematics knowledge and skills by identifying whole numbers, decimals, and fractions applied to measurement and scale; demonstrating knowledge of arithmetic operations; using conversion methods such as fractions to decimals and inches to points; and applying measurement to solve problems.

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(2) The student applies professional communications strategies. The student is expected to:

(A) adapt language for audience, purpose, situation, and intent such as structure and style;

(B) organize oral and written information;

(C) interpret and communicate information, data, and observations;

(D) present formal and informal presentations;

(E) apply active listening skills to obtain and clarify information;

(F) listen to and speak with diverse individuals; and

(G) exhibit public relations skills to increase internal and external customer/client satisfaction.

(3) The student understands and examines problem-solving methods. The student is expected to employ critical-thinking and interpersonal skills independently and in teams to solve problems.

(4) The student applies information technology applications. The student is expected to use personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications for animation projects.

(5) The student understands animation systems. The student is expected to analyze and summarize the history and evolution of the animation field.

(6) The student applies safety regulations. The student is expected to:

(A) implement personal and workplace safety rules and regulations; and

(B) employ emergency procedures.

(7) The student applies leadership characteristics to student leadership and professional development activities. The student is expected to:

(A) employ leadership skills to accomplish goals and objectives by analyzing the various roles of leaders within organizations, exhibiting problem-solving and management traits, describing effective leadership styles, and participating in civic and community leadership and teamwork opportunities to enhance skills;

(B) employ teamwork and conflict-management skills to achieve collective goals;

(C) establish and maintain effective working relationships by providing constructive praise and criticism, demonstrating sensitivity to and value for diversity, and managing stress and controlling emotions;

(D) conduct and participate in meetings to accomplish work tasks by developing meeting goals, objectives, and agendas; preparing for and conducting meetings to achieve objectives within scheduled time; producing meeting minutes, including decisions and next steps; and using parliamentary procedure, as needed, to conduct meetings; and

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(E) employ mentoring skills to inspire and teach others.

(8) The student applies ethical decision making and complies with laws regarding use of technology in animation. The student is expected to:

(A) exhibit ethical conduct;

(B) apply copyright laws;

(C) model respect for intellectual property; and

(D) demonstrate proper etiquette and knowledge of acceptable use policies.

(9) The student develops employability characteristics. The student is expected to:

(A) participate in training, education, or certification for employment;

(B) demonstrate positive work behaviors and personal qualities needed to be employable;

(C) demonstrate skills related to seeking and applying for employment to find and obtain a desired job, including identifying job opportunities, developing a resumé and letter of application, completing a job application, and demonstrating effective interview skills; and

(D) maintain a career portfolio to document work experiences, licenses, certifications, and work samples.

(10) The student applies advanced technical skills for efficiency. The student is expected to employ planning and time-management skills to complete work tasks.

(11) The student develops an advanced technical understanding of animation. The student is expected to:

(A) operate communication systems to prepare and conduct verbal and visual communication;

(B) use production elements such as transitions, edits, framing, angle, and lighting techniques;

(C) use orthographic and isometric drawing techniques;

(D) demonstrate familiarity with commercial production applications;

(E) demonstrate animation principles and elements by:

(i) applying animation principles such as arcs, timing, and exaggeration; and

(ii) identifying animation elements such as cycles, layers, transitions, and transparency;

(F) apply the elements and principles of art to animation projects by:

(i) identifying animation design elements such as line, color, shape, and texture;

(ii) explaining the use of additive color theory; and

(iii) comparing various styles of animation;

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(G) apply pre-production processes by:

(i) analyzing target audience to identify needs and wants;

(ii) writing and editing scripts;

(iii) storyboarding; and

(iv) selecting aspect ratio and frame rate appropriate to delivery method;

(H) apply production processes by:

(i) designing color and compositional elements;

(ii) designing characters, environments, and props;

(iii) modeling characters, environments, and props;

(iv) lighting sets or animating lights as needed;

(v) developing rigs for animating characters;

(vi) assembling particle systems for visual effects such as rain, snow, and fire;

(vii) animating characters, environments, or cameras;

(viii) recording musical scores; and

(ix) rendering scenes; and

(I) apply post-production processes by:

(i) editing;

(ii) producing titles and credits;

(iii) adding visual effects and processing;

(iv) adding audio effects and processing; and

(v) producing output.