

# Advanced Animation (Two to Three Credits)

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

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

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**(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.

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**(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.

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

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**(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;
- (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.