

# Animation (ANI)

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## Courses

### **ANI 122 Digital Rendering for Animation\* (3 Hours)**

**Prerequisites or corequisites:** CDTP 135.

This basic digital rendering course is designed for animators and game artists. Students will study basic and advanced digital rendering elements and principles. Students will produce digitally rendered elements used in animation and gaming, including realistic and stylistic character designs, vehicles, architecture, weapons and environments. 6 hrs. integrated lecture/lab/wk.

### **ANI 125 Introduction to 2D Animation\* (3 Hours)**

**Prerequisites or corequisites:** CDTP 135.

In this course students will learn all aspects of traditional 2 dimensional animation, including flipbook, cell, puppet and claymation. Students will write a short story and create storyboards, an animatic and a 2-dimensional character. Students will explore the key principles of animation and learn the rules of filmmaking. Experimental animation will be integrated into the course using various artistic mediums. 6 hrs. integrated lecture/lab/wk.

### **ANI 130 Motion Graphics and Effects\* (3 Hours)**

**Prerequisites or corequisites:** CDTP 135.

In this course the student will create motion graphics and effects using 2D and 3D elements. Students will create render passes, create 3D elements and effects, and then composite the layers back into After Effects for further manipulation and polish. Students will also explore rotoscoping, motion tracking, motion stabilization, animating effects, text and shape animation, create and set up 2D and 3D text, lighting, materials and basic compositing. 6 hrs. integrated lecture/lab/wk.

### **ANI 150 Introduction to 3D Modeling and Game Art\* (3 Hours)**

**Prerequisites or corequisites:** CDTP 135.

This course provides an introduction to 3D modeling and creating game art assets for next-generation games. Students will learn industry production pipelines and create high polygon and low polygon gaming models, such as architectural, weapons, vehicles and other model assets. Students will also learn how to create photorealistic textures, light and render, create construction and texture worksheets, and export them into an existing game engine. 6 hrs. integrated lecture/lab/wk.

### **ANI 210 Digital Sculpting\* (3 Hours)**

**Prerequisites:** ANI 250 or.

**Prerequisites or corequisites:** ANI 150.

In this course the student will create basic organic-shaped models using a high-end sculpting program like ZBrush. Students will explore film and game production pipelines, basic digital sculpting techniques and alpha brush detailing. Students will also explore advanced brush techniques, polypainting and spotlight tools; rendering, lighting and materials will be covered. 6 hrs. integrated lecture/lab/wk.

### **ANI 220 CG Environments and Animation (3 Hours)**

In this course students will create interior and exterior environments, generating various types of vegetation and terrain. The details of modeling for film and commercial environments and a range of simple to complex lighting and rendering techniques will be covered. Advanced materials and shaders will be explored. Students will also be introduced to render passes and render layers, and composite the rendered images into a polished animation product. 6 hrs. integrated lecture/lab/wk.

### **ANI 235 Character Modeling and Rigging\* (3 Hours)**

**Prerequisites:** ANI 250 or.

**Prerequisites or corequisites:** ANI 150.

In this course the student will create a character using high-end software like Maya. Students will explore character design, organic modeling, photorealistic texturing, character rigging, facial rigging, character deformation and portfolio presentation. Students will also explore advanced modeling techniques; clothing, hair and advanced materials will be covered. 6 hrs. integrated lecture/lab/wk.

### **ANI 245 Character Animation\* (3 Hours)**

**Prerequisites:** ANI 250 or.

**Prerequisites or corequisites:** ANI 150.

Students will develop and refine new skills in creating 3-dimensional character animation. The computer and cutting-edge software have become increasingly important tools in creating character animatics and 3-dimensional character animations. More principles and elements of character animation will be introduced to create more realistic, believable and engaging stories. Continued focus on the importance of plot, character development, key principles of animation and artistic skill will push students into realms of endless creativity and imagination. 6 hrs. integrated lecture/lab/wk.

**ANI 255 Advanced Animation and Effects\* (3 Hours)**

**Prerequisites or corequisites:** ANI 220.

The Advanced Animation and Effects course exposes students to various particle effects, rigid and soft body dynamics, and effects like rain, snow, lightning, fire and different types of shatter. Through hands-on tutorials students will simulate and render a variety of visual effects including liquid, cloth and hair. Students will also explore rendering layers and passes, and composite these elements into stunning portfolio work. 6 hrs. integrated lecture/lab/wk.

**ANI 258 Game Level Design\* (3 Hours)**

**Prerequisites:** ANI 250 or.

**Prerequisites or corequisites:** ANI 150.

This course provides an introduction to game level design and how to create interior and exterior levels using the same state of the art editing tools that are used in high-end video games. Students learn to build white box levels first and then populate the level with detailed original game artwork. Students will create terrain maps and textures, and interactively place static meshes into the game editor to enhance the visual aspects of the level. Students explore how to build a map that is purposeful and exciting to play. 6 hrs. integrated lecture/lab/wk.

**ANI 260 Animation Capstone\* (3 Hours)**

**Prerequisites or corequisites:** ANI 255.

In this course, the student will use all the knowledge attained in previous core animation courses and develop a finished 1-2 minute independent movie following a predetermined animation production process and schedule. Students will develop a portfolio including illustrations of characters, model and texture work sheets, storyboards, props, environments, textures and final rendered scenes created for the movie. 6 hrs. integrated lecture/lab/wk.

**ANI 270 Visual Effects and Compositing\* (3 Hours)**

**Prerequisites:** ANI 145 or.

**Prerequisites or corequisites:** ANI 220.

This course emphasizes the importance of breaking down visual effects shots for effective compositing. Advanced topics will include 2 dimensional/3 dimensional motion tracking, rotoscoping, garbage mattes, 2D/3D visual effects, blue screen or green screen removal, traveling mattes, image correction, lighting and shading. An introduction to the production pipeline used in professional film and TV work will also be covered. 6 hrs. integrated lecture/lab/wk.

**ANI 275 Animation Career Preparation\* (3 Hours)**

**Prerequisites or corequisites:** ANI 255.

This course will provide animation majors instruction in the presentation of his or her work in a digital portfolio format of professional quality. A website, resume and cover letter will be produced. Self-promotion, networking, job searches and interview skills will also be covered. 6 hrs. integrated lecture/lab/wk.