

# ANIMATION AND VISUAL EFFECTS (ANIM)

## **ANIM 101 Drawing Anatomy for Animation (3 credits)**

This robust and comprehensive course centers on drawing human anatomy, conveying the fundamentals of figure drawing, and bringing it to life. It is an exploration and breakdown approach to drawing the human figure and investigating individual human anatomy regions. Satisfies SEEDS Creative Expression student learning outcome in alignment with Self Discovery and Self Care value.

## **ANIM 102 Digital Color and Light Concepts (3 credits)**

This course examines the foundations of color theory and techniques in digital media, color harmony, and application. Topics include digital color applications in digital media and visualization examples inspired by the interaction of color applied in feature animation. Students will apply color theories and tools in class visualization assignments.

## **ANIM 103 Introduction to Animation and Visual Effects (3 credits)**

This course introduces students to computer graphics' fundamental concepts and terminology related to animation, visual effects, games, and film. Students will better understand the varied disciplines that collectively structure 2D and 3D animation and Visual Effects production.

## **ANIM 104 Figure Drawing: Animation (3 credits)**

Prerequisite(s): ANIM 101. In this course, students will establish imaginative self-expression as they understand essential drawing skills, original character design techniques, objects' natural flow and movement, speed, and processes particular to the art and science of animation, both 2-D and 3-D.

## **ANIM 201 2D Animation and VFX I (3 credits)**

Prerequisite(s): ANIM 103. Restriction(s): BFA Animation and VFX majors only. In this course, students will gain a fundamental knowledge of the principles of animation and VFX and produce animated work. It introduces the art of 2-D animation and VFX using lectures, in-class exercises, screenings, weekly assignments, and projects.

## **ANIM 202 3D Modeling I (3 credits)**

Prerequisite(s): ANIM 103. Restriction(s): Animation and VFX majors only. Students will be expanding their applications applying industry-standard 3D modeling software and embracing the traditional anatomy principles of shape, silhouette, scale, and proportion to create successful 3D sculptures. This course teaches students to develop polished 3D characters, creatures, assets, and environments.

## **ANIM 210 Visual Effects Compositing I (3 credits)**

Prerequisite(s): ANIM 201. Restriction(s): Animation & VFX majors only. This course incorporates creative and technical theories related to animation, compositing, and motion graphics for video. Students will become acquainted with motion graphics production for television, film, and advertising. Using non-linear editing and compositing techniques, students produce intricate video effects by layering animated video, text and still images. Students will ultimately generate video, using current video and effects software, that is individual and professional. Equivalent course ARIL 310 effective through Winter 2023.

## **ANIM 282 History of Animation and VFX (3 credits)**

Prerequisite(s): WRIT 106 or HONP 101. In this course, you will learn the chronological and thematic overview of the history and evolution of animation and VFX throughout the 20th century. The focus will be on significant animation and VFX milestones and how they reflected on events or changes during that period. This course will examine animation and VFX as an art form, with or without a narrative, of any time-span, looped, sequenced, generated in real time, with a special message, or as an obscure form. The course will also study the development of regional animation and VFX, particularly in the South East Asia region. The culmination of this course will touch on more contemporary aspects of animation and VFX used currently. You will learn to frame your investigations of the history and cultural exploration in a rigorous research framework that acknowledges relevant approaches and conventional citation formatting. Satisfies SEEDS Historical Thinking student learning outcome in alignment with Diversity and Intercultural Competency value.

## **ANIM 301 2D Animation and VFX II (3 credits)**

Prerequisite(s): ANIM 201. Restriction(s): Animation & VFX majors only. This course further acquaints students with proper staging and the ability to control the character's purpose, placement, and movement within a shot and scene. Students will envision and create environments which complement character animation and story. Storyboarding and layout design assignments will teach the necessity for successful results. Ultimately, students will strengthen their ability to create digital 2D animation. Equivalent course ARIL 362 effective through Winter 2023.

## **ANIM 302 3D Modeling II (3 credits)**

Prerequisite(s): ANIM 202. Restriction(s): Animation & VFX majors only. This course resumes the exploration of advanced techniques in 3D sculpting and topology for animation, dynamics, and 3D printing. Students develop their practice building and sculpting 3D models through an in-depth analysis of character design and anatomy as well as hard-surfaced modeling. Equivalent course ARIL 302 effective through Winter 2023.

## **ANIM 321 3D Animation and Rigging I (3 credits)**

Prerequisite(s): ANIM 202. Restriction(s): Animation & VFX majors only. This course teaches students the fundamentals of a 3D animation workflow focusing on rigging techniques and implementing weighting methods for organic model deformation. Students learn to integrate their rigs into a production pipeline and create calisthenic tests and animation cycles for models ranging from a game character, environment props, and product construction. Meets the Graduation Writing Requirement for majors in Animation & VFX. Equivalent course ARIL 321 effective through Fall 2022.

## **ANIM 325 Interactive Game Development I (3 credits)**

Prerequisite(s): ANIM 321. Restriction(s): Animation & VFX majors only. This course studies and implements game design fundamentals and concepts using a platform for game development and creation of cutting-edge 3D environments used in live-action filming - real-time, video games, VR/AR, architectural visualization, and many other growing fields. Equivalent course ARIL 325 effective through Winter 2023.

**ANIM 330 Visual Effects Compositing II (3 credits)**

Prerequisite(s): ANIM 321. Restriction(s): Animation & VFX majors only. Our second-level intermediate compositing course picks up from ARIL 310. Students use compositing software the major visual effects studios use for feature films, television, commercials and music videos. Students will demonstrate an understanding of key concepts and techniques through the creation of animations and digital media. This course addresses computer generated motion graphics and digital video effects as they pertain to design, animation and performance art. Equivalent course ARIL 330 effective through Summer 2022.

**ANIM 331 Experimental Animation (3 credits)**

Prerequisite(s): ANIM 321. Restriction(s): Animation & VFX majors only. This course inspires students to push the boundaries of animation software, breaking away from the entertainment style of animation and limiting principles on rhythm and movement or structure of a story. Experimental animation encourages artistic license; students actualize their vision, focusing on conceptual and creative methods resulting in innovative practices within 3D Animation. Equivalent course ARIL 331 effective through Winter 2023.

**ANIM 335 Animated Illustration (3 credits)**

Prerequisite(s): ANIM 321. Technology enables illustrators to incorporate movement, animation, sound, music, and multimedia effects. Publications generate a distinct product by employing editorial illustrators to describe and represent an anecdote visually. Through various projects, this course covers the benefits of added mobility in illustration. Equivalent course ARIL 335 effective through Winter 2023.

**ANIM 349 Concept Design for Gaming (3 credits)**

Prerequisite(s): ANIM 321. Restriction(s): BFA Animation & VFX majors only. Game development, using a gaming engine, provides aspiring game creators to produce professional-quality games. This course is an overview of the characteristics of a game engine and how it can enable the student to create a game. We will examine how these basic concepts affect how gamers interact with our games while understanding what defines a "game" and the mechanics/rules behind different games. Students will form video games using industry-standard game development software. Equivalent course ARIL 349 effective through Winter 2023.

**ANIM 351 Animated Development and Pitch Bible (3 credits)**

Prerequisite(s): ANIM 201. Animated Development and Pitch Bible incorporates the development and selling of an animated TV series. This course aims to provide the fundamentals for developing an animated series, from creating dynamic characters to a pitch bible. Students will learn how to sell their show, network, and pitch it within the industry. Other topics cover domestic and international markets, financing, production, licensing, and merchandising. Equivalent course ARIL 351 effective through Winter 2023.

**ANIM 355 Immersive Technology (3 credits)**

Prerequisite(s): ANIM 321. This course is designed to equip each student with foundational knowledge covering the wide range of immersive technologies while at the same time providing hands-on experience with AR/VR equipment, use of required software development kits and implementation of an immersive tech to solve real-world problems. Equivalent course ARIL 355 effective through Winter 2023.

**ANIM 360 VFX, Lighting, and Rendering (3 credits)**

Prerequisite(s): ANIM 321. Students create work using methods for visual effects, such as staging, lighting 3D environments, rendering techniques, migration, and establishing cohesion between background and foreground attributes. Particular focus is on reflectivity, optical depth, dynamics, and rendering methods. This course introduces the art and science of visual effects for broadcast and digital filmmaking. Equivalent course ARIL 360 effective through Winter 2023.

**ANIM 370 Immersive Storytelling (3 credits)**

Prerequisite(s): ANIM 321. Immersive storytelling is changing filmmaking, games, documentaries, storybooks, advertising, and journalism. This course covers storytelling using mixed media: 3D animation, visual effects, live-action, performance, drawing, text, sound, and virtual reality. Students develop their creative storytelling practice throughout the semester and develop an entrepreneurial and critical knowledge of the creative industries uniting immersive technologies.

**ANIM 380 VFX for Film (3 credits)**

Prerequisite(s): ANIM 210. In this course, we will be creating procedural effects and learning the fundamentals of 3D noise. Topics include simulating nature using simple points and lines as the cornerstone for effects: vines and leaves, moss, scattered trees, branches, roots, rocks, snow, and ice. Building on basic geometry to do non-sim FX, we will create particle simulations, such as exploring fireworks and debris.

**ANIM 400 Visual Effects Compositing III (3 credits)**

Prerequisite(s): ANIM 330. This course includes advanced 3D animation and visual effects development methods, including 3D pre-visualization, match-moving, and dynamics. Topics also comprise rendering and compositing techniques for 3D computer graphics. Students will set up scenes for post-production, including photorealistic materials and texturing, HDR image capture, radiosity and global illumination lighting techniques, and multi-pass rendering.

**ANIM 401 Industry Preparation (3 credits)**

Prerequisite(s): ANIM 321. Professional experience during a college career is a significant necessity and initiation to the industry. This course supervises students throughout the individual portfolio and website development. Students learn how to form a proper resume and drafting a suitable cover letter for explicit job opportunities. Lessons and projects include an online profile set-up and resume upload to networking sites, and methods of research and application to internships. Students learn professional practices, etiquette, and are required to attend networking events. Projects involve preceding classwork crafted to a professional level as well as projects specific to internship trends. Upon the conclusion of the course, students will apply to a minimum of fifteen internships. Equivalent course ARIL 301 effective through Winter 2023.

**ANIM 421 3D Animation and Rigging II (3 credits)**

Prerequisite(s): ANIM 321. This course incorporates the essential principles of animation and an eye for timing. Students apply 2D animation principles to their 3D rigged characters and props, reinforcing lessons learned in previous animation classes. Projects introduce new animation tools within the 3D animation workflow. Students will create drawings and rough timing before animating in 3D software for assignments. Equivalent course ARIL 421 effective through Winter 2023.

**ANIM 423 Thesis I (3 credits)**

Prerequisite(s): ANIM 380. Restriction(s): BFA Animation & VFX majors only. Part one of the senior thesis occurs during the fall semester of the last year in the major. Teamwork amongst students is expected; however, each student is responsible for the film's completion. Successful projects are exhibited in the final thesis show.

**ANIM 424 Thesis II (3 credits)**

Prerequisite(s): ARIL 422. Part two of the senior thesis is completed during the last semester before graduation. Students work to their directed independent production with ongoing dialogue via one on one adviser/ student meetings and group critiques. Successful projects are exhibited in the final thesis show. Equivalent course ARIL 423 effective through Winter 2023.

**ANIM 425 Interactive Game Development II (3 credits)**

Prerequisite(s): ANIM 325. Continuing from ANIM 325, this course continues on scripting and building sophisticated interactive games. Students are encouraged to construct experimental interactive 3D designs by utilizing the various tools of the game engine and outside 3D software. Equivalent course ARIL 425 effective through Winter 2023.

**ANIM 455 Collaborative Production (3 credits)**

Prerequisite(s): ANIM 321. From concept to completion, students work in teams to produce a completed animated short. This course provides a collaborative environment for pitching ideas, visual development and creative problem solving during production. Equivalent course ARIL 455 effective through Winter 2023.