

# Digital Media Animation/Games/Visual Effects (DAGV)

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To register for courses and see a real-time listing of classes and sections offered, view the add/drop system (<https://userve.uvu.edu/StudentRegistrationSsb/ssb/term/termSelection/?mode=search>).

## **DAGV 1200. 3D Modeling Essentials. (3 Credits)**

Covers the 3D pipeline which includes pre-production (rough placeholder art), production (finished art), and post production (composite and effects). Instructs students to develop 3D models, UV maps, and 2D textures. Teaches how to integrate models into a realtime rendering engine. Lab access fee of \$45 applies.

## **DAGV 1300. Animation Essentials. (2 Credits)**

Corequisite(s): DAGV 130L

Introduces animation principles and processes used in the animation industry. Emphasizes the synthesis of technology and aesthetics in the production of animated titles.

Software fee of \$15 applies.

Lab access fee of \$45 for computers applies.

## **DAGV 130L. Animation Essentials Lab. (1 Credit)**

Corequisite(s): DAGV 1300

Applies animation principles and processes introduced in DAGV 1300. Emphasizes the synthesis of technology and aesthetics in the production of animated titles. Introduces traditional animation methods in the construction of motion projects.

## **DAGV 1400. Scripting Essentials. (3 Credits)**

Introduces the fundamentals of computer programming and problem solving using the current industry standard scripting languages. Emphasizes the fundamentals of structured and object-oriented programming, syntax, semantics, control structures, arrays, file I/O, testing/debugging, implementation, and the construction of graphical user interfaces. Applies these concepts to manipulate digital images, sound, movies, text, and web pages that are heavily used as digital media.

Lab access fee of \$45 applies.

## **DAGV 1500. Concept Essentials. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Introduces animated title production from initial idea to finished film. Explores the fundamentals of figure structure, proportion, and shape. Serves as the foundation for advanced courses in layout, character development, rigging, and animation for films and games. Utilizes live and/or on-line resources to draw the human form.

## **DAGV 1600. Studio Technology Essentials. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Introduces 2D animation processes used in industry today. Teaches both traditional paperless and cut-out animation. Introduces node-system software technology and the use of a script editor.

## **DAGV 2210. 3D Modeling and Animation. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Addresses the basics of 3D modeling, texturing, animation, and rendering. Demonstrates how to utilize these techniques in a production pipeline for games and animation. Includes basic practices and theories common in the animation industry.

Software fee of \$15 applies.

Course fee of \$19 for equipment applies.

Lab access fee of \$45 for computers applies.

## **DAGV 2230. Animation I. (2 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Corequisite(s): DAGV 223L

Explores and applies animation pipeline practices. Emphasizes the study of characters and objects in motion and the communication of key ideas in the development of second-year animation projects. Covers both aesthetic and technical processes.

Lab access fee of \$45 for computers applies.

Software fee of \$15 applies.

Course fee of \$18 for software and plug-ins applies.

## **DAGV 223L. Animation I Lab. (1 Credit)**

Prerequisite(s): Portfolio Review Acceptance

Corequisite(s): DAGV 2230

Applies animation principles and software processes. Emphasizes the research and construction of character motion to communicate emotional impact. Covers both aesthetic and technical processes.

**DAGV 2240. Character Development. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Teaches an in-depth study and application of character development practices for animation and interactive games. Includes research, design, construction, and testing of an original animated character. Requires the application of the Principles of Animation.

Software fee of \$15 applies.

Lab access fee of \$45 for computers applies.

**DAGV 2330. Introduction to Rigging. (2 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Corequisite(s): DAGV 233L

Introduces fundamental rigging practices for typical 2D characters to be used in animated films and interactive games.

Software fee of \$15 applies.

Lab access fee of \$45 applies.

**DAGV 233L. Introduction To Rigging Lab. (1 Credit)**

Prerequisite(s): Portfolio Review Acceptance

Corequisite(s): DAGV 2330

Applies fundamental rigging processes on typical 2D and/or 3D characters for simple performance in animated films and interactive games.

**DAGV 2340. Digital Storyboarding. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Introduces contemporary storyboarding practices, both linear and non-linear, key to communicating information clearly and consistently in a cost effective manner.

Lab access fee of \$45 for computers applies.

Software fee of \$15 applies.

Course fee of \$12 for software and plug-ins applies.

**DAGV 2440. Scripting for Animation and Games I. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Focuses on the basic elements of scripting languages in contemporary software applications. Develops a firm understanding of basic scripting concepts in an animation and/or game, including: libraries, expressions, arrays, conditionals, loops, and functions. Discusses simplification of complex user operations and the development of basic user interfaces.

Laptop Required.

Software fee of \$15 applies.

Lab access fee of \$45 for computers applies.

**DAGV 2460. Game Development I. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Provides a foundation for basic game development pipeline. Covers low poly count modeling in a variety of software packages and use of 3D models in an industry-standard game development engine.

Software fee of \$15 applies.

Lab access fee of \$45 for computers applies.

**DAGV 2470. Game Development II. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Explores interactive video and computer gaming from historic, economic, and production perspectives. Introduces game theory, analysis, design documentation, and development.

Lab access fee of \$45 applies.

**DAGV 2480. Introduction to Compositing. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance

Introduces animation compositing processes, including lighting, filters, masks, effects, render, and export of finished scenes.

**DAGV 301R. Digital Lecture Series. (1 Credit)**

Prerequisite(s): University Advanced Standing

Uses guest speakers who lecture on current topics in digital media. May be repeated for a maximum of 3 credits toward graduation.

**DAGV 3310. Technical Design and Direction. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Introduces industry standard technical direction (TD) problem solving practices. Includes project management, aesthetic development, film and/or game play design.

Software fee of \$15 applies.

Course fee of \$20 applies.

Lab access fee of \$45 for computers applies.

**DAGV 3350. Animation and Game Production I. (2 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Corequisite(s): DAGV 335L

Prepares students to implement the full animation production pipeline. Uses composition, lighting, character animation, compositing, and rendering.

Requires junior-level projects to be initiated and completed within the semester.

Lab access fee of \$45 for computers applies.

**DAGV 335L. Animation and Game Lab I. (1 Credit)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Corequisite(s): DAGV 3350

Emphasizes the application of title-development processes. Covers composition, lighting, texture, color, and rendering in the production of junior-level animation and game titles.

**DAGV 3360. Advanced Character Rigging. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Studies the process of rigging, and the motion of characters and objects for animation and interactive games. Includes full character, muscle, facial, and dynamic rigs. Reinforces principles of animation.

Lab access fee of \$45 for computers applies.

**DAGV 3440. Scripting for Animation and Games II. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Provides in-depth instruction in advanced scripting concepts and practices in video game development. Focuses on the application of advanced technical topics as they impact game construction. Addresses networking and distributed systems issues, including scalability and latency compensation techniques, in designing games for online multi-player environments.

Software fee of \$15 applies.

Lab access fee of \$45 for computers applies.

**DAGV 3450. Animation and Game Production II. (2 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Corequisite(s): DAGV 345L

Develops pre-production of a team project for animation and game development students. Includes research, writing, scripting, designing, storyboarding, and pre-visualization of an animated short film or an interactive game project.

Software fee of \$15 applies.

Course fee of \$19 for software and plug-ins applies.

Lab access fee of \$45 for computers applies.

**DAGV 345L. Animation and Game Lab II. (1 Credit)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Corequisite(s): DAGV 3450

Emphasizes the application of pre-production processes in the development of a multi-semester project for animation and game development projects. Includes research, writing, scripting, designing, storyboarding, and pre-visualization of a short title.

**DAGV 3460. Game Development III. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Continues the study of game theory, analysis, and design documentation. Emphasizes game construction using an industry-standard development engine. A laptop computer is required for this course.

Software fee of \$15 applies.

Lab access fee of \$45 for computers applies.

**DAGV 3470. Animation Story Development WE. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Covers short themed script development for animated and interactive titles. Discusses specific scriptwriting subjects such as initiating the idea, researching, outlining, and rewriting. Includes weekly writing assignments that are read and analyzed according to structure and the execution of a goal. Requires the presentation of a completed animatic.

Lab access fee of \$45 applies.

**DAGV 4350. Advanced Technical Direction I. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Focuses on the production of digital special effects and compositing in 2D and 3D environments. Includes multi-layer effects, green screen, digital mattes, and grading. Includes visual effects editing and particle generation.

Software fee of \$15 applies.

Course fee of \$19 for software and plug-ins applies.

Lab access fee of \$45 for computers applies.

**DAGV 4450. Advanced Technical Direction II. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Focuses on the use of digital special effects in two and three-dimensional environments including high-end particle effects, digital fluids, and advanced simulation. Tools include industry standard software applications.

Software fee of \$15 applies.

Lab access fee of \$45 for computers applies.

**DAGV 4550. Performance Animation. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Covers advanced animation and/or game development principles. Includes timing and spacing, overlapping action, flexibility, and successive breaking-of-joints. Analyzes theatrical performance, emotional, and dialoged animation. Explores expressive character action representative of life. Augments the fourth-year capstone experience assisting in portfolio development.

Software fee of \$15 applies.

Lab access fee of \$45 for computers applies.

**DAGV 490R. Senior Capstone. (3 Credits)**

Prerequisite(s): Portfolio Review Acceptance and University Advanced Standing

Provides a capstone animation and game development experience for senior students. Develops individual and team real-world projects in consultation with a faculty advisor. May be repeated for a maximum of 6 credits toward graduation.