

2026 Animation, Game Development and Visual Effects Tracks



2D Animation



3D Animation
And Visual Effects



Game and XR
Development

2026 Animation, Game Development and Visual Effects Tracks

Your Blueprint for Success: The 2D Animation Track

TRACK FOCUS



Hybrid Animation Focus

Focuses on hand-drawn and puppet animation for film/TV using traditional and digital tools.



SOFTWARE TOOLKIT



Professional Software & AI

Mastery of Toon Boom (Harmony/Storyboard Pro) assisted by AI tools like Ember.

TECHNICAL TIPS



32GB RAM for Reliability

While 16GB is the entry-level minimum, 32GB is the required professional standard.

HARDWARE REQUIREMENTS

The Professional Laptop Standard

Requires a Mac or PC (under 2 years old) budgeted between \$1,400-\$2,000.



Essential Drawing Peripherals

A dedicated Wacom or Huion tablet is required, iPads are recommended for asset creation.

PROFESSIONAL GOALS



Career-Ready Outcomes

Build physical/digital assets and professional networks to secure employment or side hustles.

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Roadmap to the Big Screen: 3D Animation & VFX Track Guide (2026)

THE SOFTWARE TRINITY

Autodesk Maya: The Animation Core
Primary tool for character modeling, rigging, and best-in-class animation, featuring the Breese visual programming environment for procedural effects.



ESSENTIAL TOOLS & MOBILITY

Laptop: Mac or PC
Choose a high-performance workstation (M4 Pro/Max for Mac or i9/RTX for PC) no older than 2 years to ensure software compatibility.



THE 2026 HARDWARE POWERHOUSE



CPU: Intel i9 / Ryzen 9
High-core-count processors (up to 24 cores) are necessary for handling multi-threaded simulation and heavy CPU rendering tasks.

GPU: NVIDIA RTX 4070 or Better
A dedicated GPU with 8GB to 12GB of VRAM is critical for AMD GPU rendering and maintaining smooth viewport performance in complex scenes.

RAM: 32GB to 64GB DDR5
32GB is the professional minimum for 4K workflows, while 64GB is recommended for complex simulations and Unreal Engine integration.

Storage: 1TB+ NVMe SSD
Fast NVMe storage is non-negotiable for reducing I/O bottlenecks when loading massive scene files and caching simulations.

Hardware Performance Tiers (2026)

| Component | Entry Level (Students) | Pro / Studio Ready |
|-----------|------------------------|-----------------------------|
| CPU | Intel i7 / Ryzen 7 | Intel i9 / Ryzen 9 M4 Max |
| GPU | RTX 4060 (8GB VRAM) | RTX 4090+ (12GB+ VRAM) |
| RAM | 16GB - 32GB DDR5 | 64GB - DDR5 |
| Storage | 512GB - 1TB NVMe | 2TB - NVMe SSD |

CAREER PREPARATION & NETWORKING



Portfolio Development
Focus on building high-quality assets and their real pieces that shows can be integrated into the 3D pipeline.

iPad for Asset Creation
A versatile tool for sketching concepts and creating mobile assets that can be integrated into the 3D pipeline.

Industry Networking
Learn to collaborate with peers on group projects and engage with professional forums and user groups to build a career network.

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Level Up: Your 2026 Guide to Game and XR Development

PRO-TIP: STUDENT SAVINGS
Helping students maximize their \$1400-\$2000 budget via available discounts.

| Brand | 2023 Student Benefit |
|---------|---|
| Apple | Up to \$200 off Macs + Free AirPods |
| Dell | Extra \$100 off + 12-month financing |
| Lenovo | 8% site-wide discount (Excluding doorbusters) |
| SAMSUNG | Up to 10% off laptops and tablets |

THE QUEST AHEAD (Career Path)

Build Your Professional Portfolio
Success is driven by tangible work, focus on creating high-quality assets and finished project pieces.

Peer Networking & Collaboration
Learns to work in teams, as most modern game development is a collaborative, cross-disciplinary effort.

Employment & Side Hustles
Develop marketable assets that can be sold on digital marketplaces or used to secure industry employment.

THE 2026 SPEC SHEET (Hardware)

CPU: i9 or Ryzen 9 Performance
High-performance processors are required for smooth engine performance and viewport responsiveness in complex scenes.

GPU: NVIDIA RTX (4070 or Higher)
Requires 8GB - 12GB of VRAM to handle Unreal Engine 5's real-time rendering and heavy texture sets.

RAM: 32GB Minimum / 64GB Recommended
Essential for asset streaming in large cinematic projects and running multiple creative apps simultaneously.

The Laptop Standard: Mac or PC
Aims for a machine no older than 2 years in the \$1,400-\$2,000 range to ensure compatibility with 2026 software versions.

REQUIRED PERIPHERALS

Dedicated Drawing Tablet
A Wacom or Huion tablet is required for precision modeling, texturing, and digital sculpting.

Mobile Asset Creation: iPad
Recommended as a versatile tool for sketching concepts and creating portable digital assets.

THE DIGITAL ARMORY (Software Toolkit)

3D Modeling & Animation: Maya
Used for creating complex characters, expensive worlds, and high-end rigging for film and games.

Procedural FX: Houdini
The industry standard for procedural effects, world-building, and complex physics simulations like fluids and pyro.

Real-Time Engines: Unity & Unreal Engine
The primary environments for assembling games, handling real-time lighting, and deploying AR applications.

CORE FOCUS AREAS

Immersive & Interactive Media
The track covers the full spectrum of modern play, from mobile games and AAA blockbusters to Immersive AR/VR/AR titles.

Beyond the Screen: Physical Games
Development isn't limited to digital; students also explore the design and logic of physical board games.

High-End to Uber-Casual
Students build assets and logic for diverse styles, ranging from simple 3D mobile experiences to complex, high-fidelity 3D worlds.

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2026 Animation, Game Development and Visual Effects Tracks

The 2D Animation track will focus on hand-drawn and puppet animation. Its primary focus is on the style of traditional and digital animation, both film and Television. The track will explore Traditional, Digital, and AI-driven tools and build digital and physical assets. Tools include: ToonBoom and hand-made assets.

2D Animation

The 3D Animation and Visual Effects will focus on 3D animation in the style of studios such as Disney, Pixar, and DreamWorks. Students may also export other studio styles, such as Industrial Light and Magic. The track will explore Traditional, Digital, and AI-driven tools, and build Digital and Physical assets. Tools include: Maya, ZBrush, and Houdini.

3D Animation And Visual Effects

The Game and XR track will focus on four major areas of Game development. Mobile games, AAA games, XR/VR/AR titles, and physical games such as board games. Styles range from 2D, uber-casual to high-end games. The track will explore Traditional, Digital, and AI-driven tools, and build Digital and Physical assets. Tools Include: Maya, Houdini, Unity, and Unreal.

Game and XR Development

2026 Animation, Game Development and Visual Effects Tracks

 Total Credits: 120

~ General Education — 30 Credits

 Writing

ENGL 1010 — Introduction to Academic Writing (or ENGL 1005)

ENGL 2010 — Intermediate Academic Writing

 Quantitative Literacy (Choose One)

MAT 1030 / MAT 1035 — Quantitative Reasoning

STAT 1040 / STAT 1045 — Statistics

MATH 1050 / 1055 / 1090 — College Algebra

American Institutions (Choose One)

HIST 1700, HIST 1740

HIST 2700 & 2710

POLS 1000 or POLS 1100

 Distribution Areas

Biology

Physical Science

Humanities

Fine Arts

Social/Behavioral Science

Personal, Professional, & Civic Growth

 Discipline Core — 22 Credits

DGM 1110 — Digital Media Essentials I

DAGV 1200 — 3D Modeling Essentials

DGM 3120G — Digital Media for Intercultural Communication (GI)

DAGV 3470 — Animation Story Development (WE)

DAGV 3480 — Writing for Technical Directors
(or DGM 3110)

DAGV 4900R — Senior Capstone



2026 Animation, Game Development and Visual Effects Tracks



2D Animation Track

Focus: Hand-drawn animation, rigging, and storytelling

Key Courses Include:

2D Animation Essentials + Lab

Visual Development

2D Animation I

2D Character Development

2D Rigging I & II

Storyboarding & Compositing

Production I & II

Advanced Technical Direction I & II

Performance Animation

✦ Includes 36 upper-division credits

✦ + 20 advisor-approved electives

(4 must be upper-division)

2D Animation



3D Animation & VFX Track

Focus: Character animation, simulation, and film production

Key Courses Include:

3D Animation Essentials

Game Development Essentials

Visual Development I & II

3D Animation I–IV

3D Character Development I & II

3D Rigging I & II

Visual Effects I & II

Group Project + Portfolio

Development

✦ Includes 40 upper-division credits

✦ + 14 advisor-approved electives

3D Animation And Visual Effects



Game & XR Development Track

Focus: Game design, real-time systems, and XR

Key Courses Include:

Game Development I–IV

3D Character Development I & II

Visual Development I & II

Mixed Reality Experiences

Game Engine & FX I & II

3D Rigging I & II

Group Project + Portfolio

Development

✦ Includes 40 upper-division credits

✦ + 14 advisor-approved electives

Game and XR Development