The Digital Animation & Visual Effects School

Addendum to 2024 Catalog

Printed April 9, 2024

The DAVE School is <u>not</u> enrolling in any of the programs listed in this addendum at this time.

Animation Program – Program Description

Animation Bachelor Program

The Bachelor's Degree in Animation provides students with a practical application to the animation process. This course will guide students through the primary principles and pipeline needed to start them on an entry-level career path. The students will learn and understand principles of movement, storytelling, acting, rigging, and performance using a variety of software.

120 Semester Credits

Core Courses (60 Credit Hours Required)

ANI 100 – History of Animation	3.0 Credits
ANI 150 – Visual Storytelling	3.0 Credits
ANI 175 – Acting for Animators	3.0 Credits
ANI 190 – Drawing for Animators I	3.0 Credits
ANI 250 – Introduction to 2D Animation	3.0 Credits
ANI 310 – Introduction to 3D Animation	3.0 Credits
ANI 330 – Rigging for 3D Animators	3.0 Credits
ANI 340 – Drawing for Animators II	3.0 Credits
ANI 342 – Previsualization	3.0 Credits
ANI 345 – Physical Animation	3.0 Credits
ANI 355 – Body Animation I	3.0 Credits
ANI 359 – Facial Animation	3.0 Credits
ANI 360 – Creature Animation I	3.0 Credits
ANI 370 – Character Animation I	3.0 Credits
ANI 450 – Body Animation II	3.0 Credits
ANI 460 – Creature Animation II	3.0 Credits
ANI 470 – Character Animation II	3.0 Credits
ANI 480 – Stylized Animation	3.0 Credits
ANI 490 – Student Animation Showcase	3.0 Credits
MOGA 405 – Career Development	3.0 Credits

General Education Courses (36 Credit Hours Required)

The required general education component must include at least one course from each of the following groups: Humanities, Mathematics and the Sciences, and Social Sciences.

Elective Courses (24 Credit Hours Required)

Animation Program – Course Descriptions

ANI 100 – History of Animation **3.0 Credits**
The purpose of this course is to provide a historical look the evolution of animation from art form to industry. Students will learn from various perspectives from before the invention of film to present day. The course will explore the different tools and technology used in animation as well as the various techniques used to produce animation.

ANI 150 – Visual Storytelling **3.0 Credits**
The purpose of this course is to give students an understanding of how to construct and tell a story visually. The course will explore how the history of story and character has evolved into modern day storytelling and will introduce students to the art of visual storytelling and film language. Students will learn various techniques such as scriptwriting, storyboarding, and the art of the story pitch.

ANI 175 – Acting for Animators **3.0 Credits**
The purpose of this course is to provide students with the basic acting theory that helps explain the differences between stage and film acting. The course demonstrates how to apply acting theory to animated characters or creatures. Students who complete this course will have a solid understanding of actor vs. animator, moving illustrations, acting principles, power centers and active listening.

ANI 190 – Drawing for Animators I **3.0 Credits**
The purpose of this course is to give students a comprehensive understanding of basic observational drawing techniques and principles. This course will introduce students to the art of drawing through a digital medium using 2D drawing software. Students who complete this course will have a solid understanding core drawing concepts such as line, form, volume, shading and rendering, and perspective.

ANI 250 – Introduction to 2D Animation **3.0 Credits**
The purpose of this course is to give students a comprehensive understanding of 2D animation fundamentals. This course will introduce students to the art and techniques of hand drawn animation through the use of a digital medium. Students who complete this course will have a solid understanding of timing and spacing, anticipation and overshoot, bounces and follow through, and squash and stretch.
Prerequisite: ANI 190

ANI 310 – Introduction to 3D Animation **3.0 Credits**
The purpose of this course is to give students a comprehensive understanding of 3D animation fundamentals. This course will introduce students to 3D animation software and will focus on the principles of animation. Students who complete this course will have a solid understanding of primitive 3D modeling and rigging concepts, basic 3D animation workflow, and 3D motion graph editing.

ANI 330 – Rigging for 3D Animators **3.0 Credits**

The purpose of this course is to provide students with a comprehensive understanding of the animation setup process. This course will introduce students to the fundamental concepts of rigging and how it pertains to the 3D animation process. Students who complete this course will have a solid understanding of rigging topics such as constraints and deformers, joints, skinning, and control systems, as well as animation topics such as space switching, animating constraints, and baking keyframes.
Prerequisite: ANI 310

ANI 340 – Drawing for Animators II **3.0 Credits**

The purpose of this course is to build upon the concepts learned in Drawing for Animators I. This course will introduce students to art of drawing the human form. Students who complete this course will have a solid understanding of basic human anatomy and proportion, and capturing the spirit of a pose through gesture drawing.
Prerequisite: ANI 190

ANI 342 – Previsualization **3.0 Credits**

The purpose of this course is to build upon concepts learned in Visual Storytelling and Intro to 3D Animation. The course will introduce students to digital video and audio editing techniques and will focus on the production process of a 3D animatic. Students who complete this course will have a solid understanding of 3D camera animation, character staging and scene setup, video editing and directing, and proxy animation.
Prerequisite: ANI 310 and ANI 150

ANI 345 – Physical Animation **3.0 Credits**

The purpose of this course is to build upon the concepts learned in Intro to 3D Animation. This course will introduce the fundamental concepts of physics as it applies to animation. Students will explore basic fundamentals of mechanical and physics based animation techniques and will leave the course with a solid understanding of animating vehicles, machines, and physically motivated phenomena.
Prerequisite: ANI 310

ANI 355 – Body Animation I **3.0 Credits**

The purpose of this course is to build upon the concepts learned in Intro to 3D Animation. This course will introduce students to the fundamental concepts of bipedal body animation, focusing on weight and balance, standing and sitting, and walk cycles. Students who complete this course will have a solid understanding of 3D animation workflow for basic bipedal locomotion.
Prerequisite: ANI 340

ANI 359 – Facial Animation **3.0 Credits**
The purpose of this course is to build upon the concepts learned in the Body Animation II. This course will introduce students to the fundamental concepts of facial animation. Students who complete this course will have a solid understanding of emotions through facial expression, eye and mouth movement, and the mechanics of lip sync animation.

ANI 360 – Creature Animation I **3.0 Credits**
The purpose of this course is to build upon the concepts learned in Body Animation I. This course will introduce students to concepts of quadruped body animation, focusing on walk cycles, running and galloping, and jumping. Students who complete this course will have a solid understanding of 3D animation workflow for basic quadruped locomotion.

ANI 370 – Character Animation I **3.0 Credits**
The purpose of this course is to provide students with the basic understanding of 3D character animation specific to body language. This course will build upon concepts learned in Acting for Animators and will allow students to explore avenues for emotive expression through body animation. Students who complete this course will have a solid understanding of body language and pantomime, as well as proper 3D animation workflow for basic character performance.
Prerequisite: ANI 340

ANI 450 – Body Animation II **3.0 Credits**
The purpose of this course is to build upon the concepts learned in Body Animation I. This course will explore advanced concepts in biped body animation, focusing on lifting and pushing, running and jumping, starts and stops, and ragdoll animation. Students who complete this course will have a solid understanding of 3D animation workflow for advanced bipedal locomotion.
Prerequisite: ANI 355

ANI 460 – Creature Animation II **3.0 Credits**
The purpose of this course is to build upon the concepts learned in Creature Animation I. This course will explore advanced concepts in creature locomotion and performance. Students who complete this course will have a solid understanding of creature and animal behavior, decision making and emoting.
Prerequisite: ANI 360

ANI 470 – Character Animation II **3.0 Credits**
The purpose of this course is to provide students with the basic understanding of 3D character animation specific to facial performance. During the course students will explore avenues for emotive expression through facial animation with a goal of achieving an emotional response with their animation performance. Students who complete this course will have a solid understanding of emotive facial expressions, advanced lipsync concepts, and proper 3D animation workflow for facial performance.
Prerequisite: ANI 370

ANI 480 – Stylized Animation **3.0 Credits**

The purpose of this course is to provide students with the basic understanding of 3D character animation specific to exaggerated animation often found in cartoons. Students who complete this course will have a better understanding of multiple limbs, smears, motion lines and staggers seamlessly into your animation.

ANI 490 – Student Animation Showcase **3.0 Credits**

Students will apply their accumulated knowledge of animation to create an original animated short. The culmination of this knowledge will be a final animation project using 2D and/or 3D animation techniques. Students will explore various techniques, methodologies, and concepts to complete a professional animation project.

MOGA 405 – Career Development **3.0 Credits**

The course will provide the framework for the career decision making process. It stresses the connection between the student's chosen academic field and career objective. Among techniques employed include resume writing, interview skill development and internet research.

Digital Arts and Technology Program – Program Description

Digital Arts and Technology Bachelor of Fine Arts Program

The Bachelor of Fine Arts (BFA) in Digital Arts and Technology program will prepare students with the knowledge and technical skills needed to conceptualize, create and produce scripts, films and virtual projects using standard industry techniques in animation, interactive technology, video graphics, and special effects, as well as emerging technologies. Students will also acquire communication skills, knowledge in human behavior, cultural competence, visual culture, ethical responsibilities, and business strategies to proficiently work or establish their own businesses in the VFX or gaming industry. They may further develop skills in the use of artificial intelligence (Ai) and CGI as tools to enhance their productivity and product quality, or in other specialties depending in their concentration. Employers offering opportunities for graduates in a variety of roles may include digital media production companies, animation studios, advertising agencies, film and television production houses, game development studios, web design firms, and interactive media companies.

125/129 Semester Credits / 36 months

Delivery Method: Residential / Onground

PROGRAM OUTLINE – Select One Concentration Track

Digital Arts and Technology with a concentration in Visual Effects Production

The Bachelor of Fine Arts in Digital Arts and Technology degree program with concentration in Visual Effects Production (VFX) will prepare students from basic drawing and digital animation techniques, through the entire motion picture workflow, including previsualization, cinematography, film directing, audio and sound design, and postproduction. Students will demonstrate skills in the conceptualization, creation, and production of scripts, films and virtual projects while exploring AI principles and creative problem solving. They will build upon their creativity and know-how to attain the necessary skill set to excel in the VFX Production field.

Major Courses

DAVE110 Fundamentals of Asset Creation & 3D Design	15 Credits
DAVE210 3D Animation: The Art of Motion	15 Credits
VFX310 Compositing & VFX: Principles of Integration	15 Credits
VFX405 Advanced VFX Pipelines & Studio Production	15 Credits
	60 Credits

Core Courses

ANIM 1900 Drawing for Animators	3.0 Credits
ANIM 3420 Previsualization	3.0 Credits
DICP 1500 Audio Editing & Sounds Design	3.0 Credits
DICP 2500 Digital Cinematography	3.0 Credits

DICP 3500 Motion Picture Editing and Workflow	3.0 Credits
DICP 4500 Production Management	3.0 Credits
	18 Credits

General Education Courses

COMM 2200 Public Speaking	3.0 Credits
COMM 3000 Communication in Cultural Settings	3.0 Credits
COMM 4000 Cultural Studies	3.0 Credits
HUMA 2500 Visual Culture: Media, Art, and Technology	3.0 Credits
HUMA 3000 Public Policy and Artistic Expression	3.0 Credits
MATH 2750 3D Geometry	3.0 Credits
MATH 3000 Color Theory and Equations	3.0 Credits
MATH 4500 Proportions and Anatomy	3.0 Credits
PSYC 2005 Psychology of Emotion and Motivation	3.0 Credits
PSYC 2505 Cyberpsychology	3.0 Credits
ARIC 1500 Introduction to Screenwriting	3.0 Credits
ARIC 3350 Exploring the Metaverse	3.0 Credits
ARIC 4000 AI Principles in CGI Production	3.0 Credits
ARIC 4500 Creative Problem Solving through Project Based Learning	3.0 Credits
ARIC 4550 Professional Portfolio Development	2.0 Credits
PHIL 3000 Ethics and AI	3.0 Credits
	47 Credits
TOTAL CREDITS	**125**

Digital Arts and Technology with a concentration in Game Production

The Bachelor of Fine Arts in Digital Arts and Technology degree program with a concentration in Game Production will prepare the student in programming, scripting, level design, creature and character animation, as well as game evaluation and testing. Students will examine advanced aspects of digital arts for gamers, new AI methods, and emerging technologies. They will build upon their creativity and know-how to attain the necessary skill set to excel in the Game Production field.

Major Courses

DAVE110 Fundamentals of Asset Creation & 3D Design	15.0 Credits
DAVE210 3D Animation: The Art of Motion	15.0 Credits
GAME310 Game Asset Creation & Immersive Techniques	15.0 Credits
GAME405 Real-Time Technologies & Studio Production	15.0 Credits
	60 Credits

Core Courses

GMDS 2000 C++ Programming for Gamers	3.0 Credits
GMDS 3000 Foundations of Game Design	3.0 Credits
GMDS 4000 Level Design and Scripting	3.0 Credits
GMDS 4050 Game Design Evaluation and Testing	3.0 Credits
ANIM 3250 Creature Creation and Animation	3.0 Credits
ANIM 3500 Character Animation	3.0 Credits
ARIC 4500 Creative Problem Solving through Project-Based Learning	3.0 Credits
	21 Credits

General Education Courses

COMM 2200 Public Speaking	3.0 Credits
COMM 3000 Communication in Cultural Settings	3.0 Credits
COMM 4000 Cultural Studies	3.0 Credits
MATH 2750 3D Geometry	3.0 Credits
MATH 3000 Color Theory and Equations	3.0 Credits
MATH 4500 Proportions and Anatomy	3.0 Credits
HUMA 2500 Visual Culture: Media, Art, and Technology	3.0 Credits
HUMA 3000 Public Policy and Artistic Expression	3.0 Credits
ARIC 1500 Introduction to Screenwriting	3.0 Credits
ARIC 3350 Exploring the Metaverse	3.0 Credits
ARIC 4000 AI Principles in CGI Production	3.0 Credits
ARIC 4550 Professional Portfolio Development	2.0 Credits
PHIL 3000 Ethics and AI	3.0 Credits
PSYC 2005 Psychology of Emotion and Motivation	3.0 Credits
PSYC 2505 Cyberpsychology	3.0 Credits
	44 Credits
TOTAL CREDITS	**125**

Digital Arts and Technology with a concentration in Virtual Production

The Bachelor of Fine Arts in Digital Arts and Technology degree program with concentration in Virtual Production aims to nurture students' artistic expression, technical expertise, and critical-thinking skills, enabling them to further develop comprehensive understanding of digital arts and thrive in the dynamic and evolving landscape of the industry. Students will examine advanced scientific aspects of digital arts in areas of 3D geometry, psychology, motivation, ethics, and public policy. They will also engage in theoretical discussions, problem-solving exercises that demonstrate the application of AI methods, and mathematical principles that underpin cutting-edge CGI technologies.

Major Courses

DAVE110 Fundamentals of Asset Creation & 3D Design	15.0 credits
DAVE210 3D Animation: The Art of Motion	15.0 credits
VFX310 Compositing & VFX: Principles of Integration	15.0 credits
GAME310 Game Asset Creation & Immersive Techniques	15.0 credits
VPRO405 On Set Virtual Production	15.0 credits
	75 Credits

(Select 3 Core Courses)

VPRO 1500 Introduction to Traditional Film Roles	3.0 Credits
VPRO 2500 Unreal Cinematography	3.0 Credits
VPRO 3500 Production Design: Creating Immersive Visual Worlds	3.0 Credits
VPRO 4500 Virtual Production Studio Intensive: Crafting Immersive Virtual Experiences	4.0 Credits
GMDS 2000 C++ Programming for Gamers	3.0 Credits
	9/10 Credits

General Education Courses

COMM 2200 Public Speaking	3.0 Credits
COMM 3000 Communication in Cultural Settings	3.0 Credits
COMM 4000 Cultural Studies	3.0 Credits
HUMA 2500 Visual Culture: Media, Art, and Technology	3.0 Credits
HUMA 3000 Public Policy and Artistic Expression	3.0 Credits
MATH 2750 3D Geometry	3.0 Credits
MATH 3000 Color Theory and Equations	3.0 Credits
MATH 4500 Proportions and Anatomy	3.0 Credits
ARIC 1500 Introduction to Screenwriting	3.0 Credits
ARIC 3350 Exploring the Metaverse	3.0 Credits
ARIC 4000 Ai Principles in CGI Production	3.0 Credits
ARIC 4500 Creative Problem Solving Through Project-Based Learning	3.0 Credits
PSYC 2005 Psychology of Emotion and Motivation	3.0 Credits
PSYC 2505 Cyberpsychology	3.0 Credits
PHIL 3000 Ethics and AI	3.0 Credits
	45 Credits
TOTAL CREDITS	**129/130**

Digital Arts and Technology Program – Course Descriptions

ANIM 1900 Drawing for Animators 3.0 Semester Credits
The purpose of this course is to give students a comprehensive understanding of basic observational drawing techniques and principles. This course will introduce students to the art of drawing through a digital medium. Students who complete this course will have a solid understanding core drawing concepts such as line, form, volume, shading and rendering, and perspective.

ANIM 3250 Creature Creation and Animation 3.0 Semester Credits
This course focuses on teaching students how to design, model, and animate creatures for video games and will introduce students to concepts of quadruped body animation, focusing on walk cycles, running and galloping, and jumping. Students who complete this course will have a solid understanding of 3D animation workflow for basic quadruped locomotion.

ANIM 3420 Previsualization 3.0 Semester Credits
This course will introduce students to digital video and audio editing techniques and will focus on the production process of a 3D animatic. Students will use advanced CG tools to create preliminary 3D CG representations of environments, VFX, and motion picture sequences that are visually and technically representative of final production imagery.

ANIM 3500 Character Animation 3.0 Semester Credits
The purpose of this course is to provide students with the basic understanding of 3D character creation and animation specific to body language. This course will allow students to explore avenues for emotive expression through body animation. Students who complete this course will have a solid understanding of body language and pantomime, as well as proper 3D animation workflow for basic character performance.

ARIC 1500 Introduction to Screenwriting 3.0 Semester Credits
This course is designed as an introduction to screenwriting. Students will, for the first part of the course, learn the elements of storytelling and apply that knowledge to the analysis of short and feature length stories. For the second part of the course, students will take the knowledge gained in the first part of the course and apply it to short scripts that they will develop and rewrite.

ARIC 3350 Exploring The Metaverse 3.0 Semester Credits
In this course, students will analyze the evolution and cultural implications of The Metaverse and the impact on communication, individuals, society, and politics. Students will examine ways in which The Metaverse, influences, guides, interconnects, and affects today's culture as a driver of social change.

ARIC 4000 AI Principles in CGI Production 3.0 Semester Credits
Exploring AI methods in CGI is an advanced course that delves into the intersection of artificial intelligence and computer-generated imagery (CGI). The course includes hands-

on assignments and projects, where students will have the opportunity to apply the AI techniques they have learned to create their own CGI projects. The projects will cover a variety of applications, from creating realistic 3D models and animations, to generating virtual environments, to creating interactive experiences for users. Upon completion of the course, students will have gained a deep understanding of the latest AI techniques and algorithms used in CGI, and will have developed the skills necessary to create their own AI-driven CGI projects.

ARIC 4500 Creative Problem Solving through Project-Based Learning 3.0 Semester Credits
In this course, students will diagnose real-world problems through the application of interdisciplinary knowledge and practical skills to meaningful projects. Throughout the course, they will design project solutions using innovative ideas, challenging assumptions, and collaborating with peers, thus creating a vision of an inclusive, sustainable, and inspiring Metaverse. By the end of this course, students will demonstrate valuable project management skills, critical thinking and problem solving abilities, and effective collaboration and communication tools.

ARIC 4550 Professional Portfolio Development 2.0 Semester Credits
In this course, students will create a well-crafted and impactful portfolio that show case their skills, accomplishments, and potential to prospective employers or clients. Through a combination of practical exercises, critical analysis, and personalized feedback, students will discover how to curate their work effectively to enhance their professional opportunities. They will demonstrate the confidence and knowledge to present their work professionally and strategically, positioning themselves for career opportunities or freelance work in their chosen field.

COMM 2200 Public Speaking 3.0 Semester Credits
In this course, students will analyze the principal components of effective speech communication and its role as a discipline in multiple situations. Students will also employ critical thinking skills and relevant messaging strategies towards competent speaking techniques. They will design speeches and outlines necessary for effective and engaging delivery to a specific audience. Furthermore, they will develop self-confidence through reflective journaling and consistent self, peer, and instructor led feedback.

COMM 3000 Communication in Cultural Settings 3.0 Semester Credits
In this course, students will analyze principles, processes, and topics related to intercultural communication. They will also develop an increased awareness, understanding, and appreciation of other cultures. Furthermore, students will assess intercultural competence.

COMM 4000 Cultural Studies 3.0 Semester Credits
This course introduces students to a variety of cultural practices (literature, blogs, films, radio, and comics) from across the globe. Focuses on the ways that context, genre, and medium (e.g., written, visual, oral) affect how these practices are produced, circulated, and received.

DICP 1500 Audio Editing and Sound Design 3.0 Semester Credits
This course includes the role of sound in contemporary filmmaking, including the development of sound design as a part of contemporary cinema and essential aspects of field production audio recording, post-production workflow, studio mixing, audio effects, additional dialogue recordings (ADR), music and media asset management.

DICP 2500 Digital Cinematography 3.0 Semester Credits
This course focuses on digital cinematography and the aesthetic aspects of cinematic practice. Students evaluate core concepts of cinematography: composition, lighting, camera movement, lens selection and the technical limitations and advantages of digital cinematography. Students apply cinematic techniques using digital still and video cameras to shoot projects with live subjects.

DICP 3500 Motion Picture Editing and Workflow 3.0 Semester Credits
This course covers the history, theory and practice of motion picture editing and postproduction workflow. Students apply professional editing theory and techniques using non-linear editing systems on practical assignments.

DICP 4500 Production Management 3.0 Semester Credits
In this course, students will analyze script breakdowns for budget, schedule, casting, location, on-set procedures, and postproduction workflow. They will examine production meetings, practical demonstrations, and on-set performance in a department leadership role. Furthermore, students will apply industry practices in the development and execution of a professional production plan.

GMDS 2000– C++ Programming for Gamers 3.0 Semester Credits
The "Comprehensive C++ Game Development" course is designed to provide participants with a comprehensive understanding of C++ programming in the context of game development. This course is suitable for beginners with a basic understanding of programming concepts and intermediate programmers looking to expand their skills in game development using C++. Throughout the course, participants will learn the essential concepts, techniques, and best practices for developing games with C++. They will gain hands-on experience by creating interactive games and exploring various aspects of game development, including graphics, physics, input handling, artificial intelligence, and more. By the end of the course, participants will have a solid understanding of C++ game development, enabling them to create interactive and engaging games. They will have the skills and knowledge to work with game engines, implement core game mechanics, incorporate graphics and physics, develop AI systems, and tackle multiplayer and networking challenges. This course serves as a foundation for individuals pursuing careers in game development or those interested in creating their own games using C++.

GMDS 3000 Foundations of Game Design 3.0 Semester Credits
This course goes beyond the basics of Game Design in order to impart upon the student a deeper mastery of the game design process. Topics such as game theory, subtractive

design, and calm computing are introduced, as well as important design considerations such as localization and designing for cross-platform games.

GMDS 4000 Level Design and Scripting 3.0 Semester Credits
Using industry-standard tools, students in Level Design and Scripting will gain skill in translating written and visual descriptions of a game into actual environments, scenarios, and actions. Students will also explore the different kinds of game levels – how they vary in terms of starting and ending conditions, the critical path, and player perception of freedom.

GMDS 4050 Game Design Evaluation and Testing 3.0 Semester Credits
In this course, students learn how to evaluate games through the process of testing. From focus testing to AB testing, students explore how feedback can be applied to influence the design of a game, in order to create more engaging, entertaining, and profitable products. Special emphasis is placed on the collection and analysis of analytic data using industry tools.

HUMA 2500 Visual Culture: Media, Art, and Technology 3.0 Semester Credits
This course examines activities in all spheres of life, including the "artistic" impulses that dwell in the individual. Culture is addressed in broad terms of the many institutions and cultural forces that shape everyday activities of listening, seeing, and doing.

HUMA 3000 Public Policy and Artistic Expression 3.0 Semester Credits
In this course, students will analyze how public policies shape and impact artistic practice, cultural institutions, and creative communities. They will explore the intersection of government policies, regulations, and funding with artistic expression, freedom of speech, and the cultural landscape. By examining key policy areas and engaging in critical discussions, students will recognize the complexities of public policy and its potential effect on their artistic rights and interests.

MATH 2750 3D Geometry 3.0 Semester Credits
In this course, students will identify geometric principles and their application in artistic endeavors. They will explore the use of geometric concepts for the production of enhanced and informed artistic creations. Through a combination of theoretical learning and practical exercises, including perspective and spatial perception, composition and proportions, geometric patterns and tessellations, and fractals and iterative design, students will develop a deeper understanding of the influence of geometry on the visual world.

MATH 3000 Color Theory and Equations 3.0 Semester Credits
In this course, students will explore the mathematical foundations behind color and its application in visual arts. They will analyze color relationships, harmonies, and the underlying mathematical principles governing them. By the end of the course, students will recognize the creation of visually appealing, and harmonious artworks by leveraging color relationships and equations. Furthermore, they will demonstrate understanding of

the application of color theory for the enhancement of their artistic creations, both for print or digital media.

MATH 4500 Proportions and Anatomy 3.0 Semester Credits
In this course, students will evaluate the human figure and its proportional relationships through the lens of mathematical principles. They will develop the necessary skills for the accurate depiction of the human form in drawings, paintings, or sculptures. Furthermore, students will correlate the study of the mathematical aspects of proportions and anatomy to the creation of more realistic and visually compelling artworks.

PHIL 3000 – Ethics and AI 3.0 Semester Credits
This course aims to provide an in-depth understanding of the ethical issues related to the development and implementation of artificial intelligence (Ai) technologies. The course will engage students in critical thinking and discussion about the ethical challenges posed by AI and will provide them with the tools to identify and address these challenges. By the end of the course, students will have a deep understanding of the ethical issues related to Ai and will be able to apply ethical frameworks to evaluate and guide the development and implementation of Ai technologies.

PSYC 2005 Psychology of Emotion and Motivation 3.0 Semester Credits
In this course, students will explore the intricate relationship between psychological processes, artistic expression, and the experience and portrayal of emotions and motivations in artwork. They will analyze the psychological mechanisms underlying human emotions and motivations, as a foundation for the creation of more impactful and evocative artwork. Students will also examine theories of emotion, emotional intelligence, motivation and creativity, and the intersection of emotion, motivation, and inspiration.

PSYC 2505 – Cyberpsychology 3.0 Semester Credits
This course provides an overview of the field of cyber psychology, including the history of the internet, the evolution of technology, and the impact of technology on human behavior, emotion, and cognition. Students will gain a deeper understanding of the complex interplay between technology and psychology and the ways in which technology can both enhance and detract from human well-being.

VPRO 1500 Introduction to Traditional Film Roles 3.0 Semester Credits
In this course, students will acquire an in-depth understanding of the entire filmmaking process, along with the various positions and responsibilities within a traditional film crew. Throughout the course, students will examine the key aspects of traditional cinematography, including camera operation, shot composition, lighting techniques, and visual storytelling. They also will demonstrate hands-on experience with traditional film cameras, lenses, and other essential equipment commonly used in analog filmmaking.

VPRO 2500 Unreal Cinematography 3.0 Semester Credits
In this course, students will develop the skills and knowledge required for the creation of compelling and immersive visuals using Unreal Engine, a powerful real-time rendering

platform widely used in the gaming and film industries. They will apply cinematographic principles within a virtual environment to stunning visuals and dynamic camera work for cinematic experiences, virtual reality (VR), and augmented reality (AR) projects. They will practice navigating the Unreal Engine's tools and features specifically tailored for cinematography, as well as the artistic and technical aspects of virtual camera operation, shot composition, lighting, and post-processing effects.

VPRO 3500 Production Design: Creating Immersive Visual Worlds 3.0 Semester Credits
In this course, students will explore the key elements and processes involved in production design, including conceptualization, research, visual storytelling, collaboration, and execution. They will translate scripts and narratives into visually compelling sets, locations, and atmospheres that enhance storytelling and immerse the audience in the intended world. Students will practice their skills by engaging in hands-on activities, including creating concept art, designing sets, props, costumes, and overall aesthetic design elements.

VPRO 4500 Virtual Production Studio Intensive: Crafting Immersive Virtual Experiences 4.0 Semester Credits
In this course, students will analyze advanced topics, techniques and workflows involved in virtual production. They will complete hands-on exercises that simulate a virtual production studio environment. They will practice using industry-standard tools and techniques, exploring the integration of real-time rendering, virtual cameras, motion capture, and virtual set design to create high-quality virtual content.

Game Production Associate Program – Program Description

Game Production Associate Program

The Associate's Degree in Game Production is designed to give each student practical exposure to complete each of the major disciplines needed for game art content creation. This includes games produced by both major game studios working on AAA titles and independent production houses working on mobile gaming and other applications. Students will learn the proper tools and techniques used by industry professionals.

This program is in teach out. New students may only be enrolled if they transfer in credits and are scheduled to complete before the Teach-Out date and before the maximum pace rate percentage is reached.

75 Semester Credits

Courses

DAVE 101 – Digital Modeling and Sculpting	12.0 Semester Credits/288 hours
DAVE 201 – Fundamentals of Computer Animation	12.0 Semester Credits/288 hours
DAVE 302 – Advanced Asset Creation & Look Development	12.0 Semester Credits/288 hours
GAME 402 – Real-Time Rendering & Emerging Technologies	12.0 Semester Credits/288 hours
GAME 502 – Emerging Real-Time Tech & Pipelines	12.0 Semester Credits/288 hours

General Education Courses (15 Credit Hours Required)
The required general education component must include at least one course from each of the following groups: Humanities, Mathematics and the Sciences, and Social Sciences.

Game Production Associate Program – Course Descriptions

See Course Descriptions in Catalog.

Interactive Media Programs – Program Descriptions

Interactive Media Associate Program

The Interactive Media Associate Degree Program prepares students to produce compelling visual stories and technology-based commerce designs for an expanding digital media marketplace. Students collaborate with a creative team within a digital landscape and media distribution marketplace.

60 Semester Credits

Core Courses (60 Credit Hours Required)

DAVE 101 Digital Modeling and Sculpting	12.0 Credits
DAVE 201 Fundamentals of Computer Animation	12.0 Credits
DCP 175 Digital Editing	3.0 Credits
AGD 1010 Digital Imaging I	3.0 Credits
AGD 2010 Digital Imaging II	3.0 Credits
AGD 2020 Applied Design	3.0 Credits
WGD 1010 Introduction to Web Design	3.0 Credits
MOGA 202 Motion Graphics Production I	3.0 Credits
DCP 250 Digital Cinematography	3.0 Credits

General Education Courses (15 Credit Hours Required)

The required general education component must include at least one course from each of the following groups: Humanities, Mathematics and the Sciences, and Social Sciences.

Interactive Media Bachelor Program

The Interactive Media Bachelor Degree Program prepares students to produce compelling visual stories and technology-based commerce designs for an expanding digital media marketplace. Students collaborate with a creative team within a digital landscape and media distribution marketplace.

120 Semester Credits

Core Courses (63 Credit Hours Required)

DAVE 101 Digital Modeling and Sculpting	12.0 Credits
DAVE 201 Fundamentals of Computer Animation	12.0 Credits
DCP 175 Digital Editing	3.0 Credits
AGD 1010 Digital Imaging I	3.0 Credits
AGD 2010 Digital Imaging II	3.0 Credits
AGD 2020 Applied Design	3.0 Credits
WGD 1010 Introduction to Web Design	3.0 Credits
MOGA 202 Motion Graphics Production I	3.0 Credits

DCP 250 Digital Cinematography	3.0 Credits
DCP 150 Digital Producing	3.0 Credits
DCP 275 Sound Design	3.0 Credits
DCP 350 Film Directing	3.0 Credits
DCP 450 Production Management	3.0 Credits
DCP 475 Digital Cinema Post-Production	3.0 Credits
IMA 499 Portfolio Production	3.0 Credits

General Education Courses (36 Credit Hours Required)
The required general education component must include at least one course from each of the following groups: Humanities, Mathematics and the Sciences, and Social Sciences.

Elective Courses (21 Credit Hours Required)

Interactive Media Programs – Course Descriptions

DAVE 101 Digital Modeling and Sculpting 12.0 credits
The purpose of this Block is to give students a comprehensive understanding of 3D modeling and digital sculpting techniques needed to construct objects for feature films and video games. Students who complete this term will have a concrete knowledge of hard surface and organic modeling techniques, UV mapping, and digital sculpting.

DAVE 201 Fundamentals of Computer Animation 12.0 credits
The purpose of this Block is to give students a thorough understanding of computer animation. Students who complete this term will have a solid understanding of camera and vehicle animation, parent/child hierarchies, character rigging, character animation, facial animation, lip syncing, and motion capture for film and gaming.
Pre-Requisite: DAVE 101

DCP 175 Digital Editing 3.0 credits
This course covers the history, theory and practice of motion picture editing and post-production workflow. Students evaluate and apply editing techniques and theory using digital still and video cameras based on practical assignments developed by the instructor. Practical assignments will receive individual and peer critiques. Students apply professional editing theory and techniques using non-linear editing systems on practical assignments developed by the instructor. Practical assignments will receive individual and peer group critiques. Students will learn to apply knowledge of a digital editing system like Adobe Premiere, AVID or Final Cut Pro.

AGD1010 Digital Imaging I 3.0 credits
This course is an introduction to creation of graphic art for the web using pixel and vector editing software. Topics include the use of bitmapped painting tools, creative use of fonts, and use of layers in graphics layout. Lab included.

AGD2010 Digital Imaging II 3.0 credits

Digital Imaging II is a continuation of AGD1010. It covers the basics of optics, photography, lighting, photo enhancement and stylized text/font overlays associated with digital photography. Students are instructed how to use scanners as input devices to create digital images. Students discover effective picture taking techniques as they employ digital cameras. Emphasis is placed not only on photographing a subject, but also on creating effective photo backdrops, and use of diffuse lighting. Students employ a commercial product such as Photoshop®, Lover's Eye®, ArcSoft®, or similar software to retouch/airbrush their photos, create layers, add textures, text and apply special 3-D effects such as gradients, glows, drop shadows, highlights and vanishing points. Because the students will apply these concepts to Web pages, image compression and Web-safe color subjects are emphasized. Lab included.
Prerequisite: AGD 1010

AGD2020 Applied Design 3.0 credits
This course focuses on computer generated, three-dimensional graphics. The student will be instructed in the creation of 3D scenes and characters with sophisticated 3D rendering software. Lab included.
Prerequisite: AGD 2010

WGD1010 Introduction to Web Design 3.0 credits
This course introduces the student to the basics of designing web pages using HyperText Markup Language (HTML). It explores the essential elements involved in good web page design including content, navigation and incorporation of graphics. Focus is placed on what constitutes a pleasing and aesthetically-designed web site balanced between marketing and download constraints. Lab included.

MOGA 202 Motion Graphics Production I 3.0 credits
This course trains students in basic techniques of motion graphics creation through the use of software programs employed by design and animation studios. Students will explore the production pipeline and focus on design with an emphasis on problem-solving. Students will learn the requirements of a motion-graphics project by demonstrating the creation of designed assets and gain a thorough understanding of animation techniques, special effects, image compositing, and motion graphics. Students will composite video, digital images, motion graphics, vector and pixel graphics, titles, and kinetic typography into cohesive motion graphics pieces. Narrative and non-narrative form will be explored. Projects include: kinetic logo design, animated public service announcements, broadcast titling, and advertising spots. Students will assemble a demo reel of motion work.

DCP 250 Digital Cinematography 3.0 credits
This course focuses on digital cinematography and the aesthetic aspects of cinematic practice. Students evaluate core concepts of cinematography: composition, lighting, camera movement, lens selection and the technical limitations and advantages of digital cinematography. Students apply cinematic techniques using digital still and video cameras to shoot projects with live subjects.

DCP 275 Sound Design 3.0 credits

This course includes the role of sound in contemporary filmmaking, including the development of sound design as a part of contemporary cinema and essential aspects of field production audio recording, post-production workflow, studio mixing, audio effects, additional dialogue recordings (ADR), music and media asset management.

DCP 450 Production Management 3.0 credits

Working collaboratively as director, director of photography, assistant director, or production manager, students develop a film production from pre-production through production and post-production. This course includes script breakdowns for budget, schedule, casting, location, cinematography and production design, on-set procedures, and post-production work-flow. Students apply industry practices to develop and execute a professional production plan. This course covers production meetings, practical demonstrations, on set performance in a department leadership role, response to Executive Producer editorial notes, meeting postproduction distribution requirements and delivering a production wrap book. Practical assignments receive individual and peer-group critiques. Collaborative production of short film projects using professional equipment.

DCP 475 Digital Cinema Post-Production 3.0 credits

Students work collaboratively editing digital cinema projects shot during Production Management.

Pre-requisite: DCP 450

IMA 499 Portfolio Production 3.0 credits

This course is the culmination of the program, where the student develops their final project, and their personal branding. The student must include a resume and self-promoting piece. The student will present their final portfolio project before a Review Board of their peers and faculty, for the purposes of both a professional critique and an interview preparation.

Motion Design Programs – Program Descriptions

Motion Design Diploma Program

The Motion Design diploma program will allow students to relay complete thoughts and messages to viewers through the combination of different media such as broadcast, film, and graphic design. The students will be able to create the opening credits for film, as well as animations based in web, and graphic bumpers for television networks. The students will learn and understand principles of composition, design, compositing and animation using a variety of software.

60 Semester Credits

Core Courses (60 Credit Hours Required)

MODA 101 Motion Design Concepts	12.0 Credits
MODA 201 2D Motion Design	12.0 Credits
MODA 251 3D Motion Design	12.0 Credits
MODA 301 Motion Design Production	12.0 Credits
MODA 401 Portfolio Development	12.0 Credits

Motion Design Associate Program

The Associates Degree in Motion Design will allow students to relay complete thoughts and messages to viewers through the combination of different media such as broadcast, film, and graphic design. The students will be able to create the opening credits for film, as well as animations based in web, and graphic bumpers for television networks. The students will learn and understand principles of composition, design, compositing and animation using a variety of software.

75 Semester Credits

Core Courses (60 Credit Hours Required)

MODA 101 Motion Design Concepts	12.0 Credits
MODA 201 2D Motion Design	12.0 Credits
MODA 251 3D Motion Design	12.0 Credits
MODA 301 Motion Design Production	12.0 Credits
MODA 401 Portfolio Development	12.0 Credits

General Education Courses (15 Credit Hours Required)

HUM1010 Humanities	3.0 Credits
PSY1010 Introduction to Psychology	3.0 Credits
SOC3201 Social Psychology	3.0 Credits
COM4000 Cultural Studies	3.0 Credits
MAT1011 PreAlgebra	3.0 Credits

Motion Design Bachelor Program

The Bachelor's Degree in Motion Design will allow students to relay complete thoughts and messages to viewers through the combination of different media such as broadcast, film, and graphic design. The students will be able to create the opening credits for film, as well as animations based in web, and graphic bumpers for television networks. The students will learn and understand principles of composition, design, compositing and animation using a variety of software.

120 Semester Credits

Core Courses (60 Credit Hours Required)

MODA 101 Motion Design Concepts	12.0 Credits
MODA 201 2D Motion Design	12.0 Credits
MODA 251 3D Motion Design	12.0 Credits
MODA 301 Motion Design Production	12.0 Credits
MODA 401 Portfolio Development	12.0 Credits

General Education Courses (36 Credit Hours Required)

The required general education component must include at least one course from each of the following groups: Humanities, Mathematics and the Sciences, and Social Sciences.

Elective Courses (24 Credit Hours Required)

Motion Design Programs – Course Descriptions

MODA 101 Motion Design Concepts 12.0 credits

The purpose of this course is to give students a comprehensive understanding of layout and design concepts. Students who complete this term will have a concrete knowledge of color theory, composition, graphic design concepts and typography and digital illustration.

Prerequisite(s): None

MODA 201 2D Motion Design 12.0 credits

The purpose of this course is to give students a thorough understanding of the fundamentals of 2D animation. Students who complete this course will have a solid understanding of twelve principles of animation. Some of the topics include squash and stretch, anticipation, staging, timing, camera composition, camera animation and text animation for motion design.

Prerequisite(s): MODA 101

MODA 251 3D Motion Design 12.0 credits The purpose of this course is to give students a comprehensive understanding of 3D modeling and texturing techniques needed to construct objects for motion design. Students who

complete this term will have a concrete knowledge of hard surface and organic modeling techniques, UV mapping, and texturing.
Prerequisite(s): MODA 201

MODA 301 Motion Design Production 12.0 credits
The purpose of this block is to give students a comprehensive understanding of compositing and integration of elements for motion design. Students who complete this term will have a solid understanding of masking, layered composting, basic photography, 2D FX, expressions and how to create production ready graphics.
Prerequisite(s): MODA 251

MODA 401 Portfolio Development 12.0 credits
The purpose of this course is to allow students to work with their instructors to guide them in creating a production ready portfolio for motion design. Students will be working with their instructors on learning industry standard production techniques, typical motion graphics, production pipelines, the importance of working as a team, how to apply problem solving skills to meet production deadlines.
Prerequisite(s): MODA 301

Production Programming Bachelor Program – Program Description

The Bachelor's Degree in Production Programming is designed for students who want a specified range of skills in production programming. Students who complete this degree program will have a solid understanding of production programming development for Autodesk, Foundry and other industry standard software packages to develop apps and productivity tools utilized in the film industry and related fields, such as simulation.

120 Semester Credits

Core Courses (33 Credit Hours Required)

PROG 111 – Introduction to Discrete Structures	3.0 Credits
PROG 121 – Introduction to Computer Programming	3.0 Credits
PROG 131 – Introduction to Database Management	3.0 Credits
PROG 211 – Computer Systems and Architecture	3.0 Credits
PROG 221 – Data Structures and Analysis	3.0 Credits
PROG 231 – Pipeline Development I	3.0 Credits
PROG 241 – Object-Oriented and Concurrent Programming	3.0 Credits
PROG 251 – Design and Analysis of Computer Algorithms	3.0 Credits
PROG 261 – Computer Graphics	3.0 Credits
PROG 271 – Current Trends and Projects in Computer Science	3.0 Credits
PROG 281 – Introduction to Probability/Statistics for Computer Scientists	3.0 Credits

Game Design Courses (27 Credit Hours Required)

GMDS 101 Introduction to Game Design	3.0 Credits
GMDS 102 Game Design Fundamentals	3.0 Credits
PRPG 301 C# for Games	3.0 Credits
GMDS 201 Visual and Audio Design	3.0 Credits
GMDS 202 Storytelling for Games	3.0 Credits
GMDS 301 Advanced Game Design Concepts	3.0 Credits
GMDS 302 Usability and Human Computer Interaction	3.0 Credits
GMDS 401 Level Design and Scripting	3.0 Credits
GMDS 402 Game Design Evaluation and Testing	3.0 Credits

General Education Courses (36 Credit Hours Required)

The required general education component must include at least one course from each of the following groups: Humanities, Mathematics and the Sciences, and Social Sciences.

Elective Courses (24 Credit Hours Required)

Production Programming Bachelor Program – Course Descriptions

GMDS 101 – Introduction to Game Design 3.0 Credits
This course acts as a starting point for students interested in learning about game design. It covers a wide variety of introductory topics, including the role of a game designer, the history of game design, genres, mechanics, features, rules, scope, documentation, usability, storytelling, and testing.

GMDS 102 – Game Design Fundamentals 3.0 Credits
This course guides students through the process of designing games from conception to finished product and beyond. The development of a game design document is the primary focus of Game Design Fundamentals; and at the same time, students will explore and understand the various other documents that are necessary to designing exceptional games.
Prerequisite: GMDS 101

GMDS 201 – Visual and Audio Design 3.0 Credits
In this course, students are introduced to aspects of design that both drive and are influenced by the look and sound of a game. Basic visual elements (such as line, shape, and color) are covered, as well as art styles which are commonly found in games. Auditory elements (such as sound effects, music, and voice-overs) are covered as well.
Prerequisite: GMDS 102

GMDS 202 – Storytelling for Games 3.0 Credits
Students in this course gain mastery of the storytelling aspects of game design. Topics such as genre, theme, and foreshadowing - as well as storytelling tools like the Hero's Journey and archetypes - are explored as they relate to interactive entertainment. Students also work to develop specific narrative elements in game design - cut scenes, dialogue, scenery, and music, for instance.
Prerequisite: GMDS 201

GMDS 301 – Advanced Game Design Concepts 3.0 Credits
This course goes beyond the basics laid out in Game Design Fundamentals in order to impart upon the student a deeper mastery of the game design process. Topics such as game theory, subtractive design, and calm computing are introduced, as well as important design considerations such as localization and designing for cross-platform games.
Prerequisite: GMDS 202

GMDS 302 – Usability and Human Computer Interaction 3.0 Credits
This course explores the communication that occurs between a human being and an artificial system, within the context of game design. Students gain a solid grasp of the capabilities and limitations of human sensation and perception in order to design games

that accommodate a wider range of players. Students will also learn and use Nielsen's Heuristics in order to design more usable games.
Prerequisite: GMDS 301

GMDS 401 – Level Design and Scripting 3.0 Credits
Using industry-standard tools, students in Level Design and Scripting will gain skill in translating written and visual descriptions of a game into actual environments, scenarios, and actions. Students will also explore the different kinds of game levels – how they vary in terms of starting and ending conditions, the critical path, and player perception of freedom.
Prerequisite: GMDS 302

GMDS 402 – Game Design Evaluation and Testing 3.0 Credits
In this course, students learn how to evaluate games through the process of testing. From focus testing to AB testing, students explore how feedback can be applied to influence the design of a game, in order to create more engaging, entertaining, and profitable products. Special emphasis is placed on the collection and analysis of analytic data using industry tools.
Prerequisite: GMDS 401

PROG 111 – Introduction to Discrete Structures 3.0 Credits
This course is designed to instruct students in fundamental concepts of discrete mathematics.

PROG 121 – Introduction to Computer Programming 3.0 Credits
This course is designed to instruct students in the history, technology and use of computer science. Students will learn programming fundamentals by developing web pages using HTML and JavaScript.

PROG 131 – Introduction to Database Management 3.0 Credits
This course is designed to instruct students in database design and theory of methodologies.

PROG 211 – Computer Systems and Architecture 3.0 Credits
This course is designed to instruct students in the perspective of the logic designer, the assembly language programmer, and the computer architect.

PROG 221 – Data Structures and Analysis 3.0 Credits
This course is designed to instruct students in organizing, reorganizing, exploring, and retrieving data in digital computers, and the mathematical analysis of those techniques.
Prerequisite: PROG 131

PROG 231 – Pipeline Development I 3.0 Credits

This course is designed to instruct students in the basics of creating tools for users to help speed up production processes for pipeline development.
Prerequisite: PROG 111, PROG 121, and PROG 131

PROG 241 – Object-Oriented and Concurrent Programming 3.0 Credits
This course is designed to instruct students in the use and principles of object-oriented and concurrent programming.
Prerequisite: PROG 121

PROG 251 – Design and Analysis of Computer Algorithms 3.0 Credits
This course is designed to instruct students in the basic data structures and programming techniques often used in efficient algorithms.
Prerequisite: PROG 111 and PROG 121

PROG 261 – Computer Graphics 3.0 Credits
This course is designed to instruct students in the key concepts, algorithms, technologies, and applications used to design and make computer graphics.

PROG 271 – Current Trends and Projects in Computer Science 3.0 Credits
This course is designed to instruct students by giving an overview of Computer Science and where it is headed in the future.

PROG 281 – Introduction to Probability/Statistics for Computer Scientists 3.0 Credits
This course is designed to instruct students to understand more advanced topics such as random sequences, continuous-time random processes, and statistical signal processing.

PRPG 301 – C# for Games 3.0 Credits
This course is designed to instruct students on how to write C# code that is simple, powerful, robust, secure, and maintainable.
Prerequisite: PROG 111, PROG 121, PROG 211, PROG 221, and PROG 241

Visual Effects Production Associate Program – Program Description

Visual Effects Production Associate Program

The Associate's Degree in Visual Effects Production gives students a broad range of skills which allows them to pursue jobs in the computer graphics industry, including feature film and television effects, game art, print advertising, architectural visualization and military simulation.

This program is in teach out. New students may only be enrolled if they transfer in credits and are scheduled to complete before the Teach-Out date and before the maximum pace rate percentage is reached.

75 Semester Credits

Courses

DAVE 101 – Digital Modeling and Sculpting	12.0 Semester Credits/288 hours
DAVE 201 – Fundamentals of Computer Animation	12.0 Semester Credits/288 hours
DAVE 302 – Advanced Asset Creation & Look Development	12.0 Semester Credits/288 hours
DAVE 402 – VFX & Compositing	12.0 Semester Credits/288 hours
DAVE 502 – Emerging VFX Tech & Pipelines	12.0 Semester Credits/288 hours

General Education Courses (15 Credit Hours Required)
The required general education component must include at least one course from each of the following groups: Humanities, Mathematics and the Sciences, and Social Sciences.

Visual Effects Production Associate Program – Course Descriptions

See Course Descriptions in Catalog.

Short Programs – Program Descriptions

Animation for Video Games Diploma Program

Students of this workshop will demonstrate proficiency in video game animation techniques particular to industry-standard engines, such as Unreal and Unity. Students will learn how to create animation navigation systems, blend trees, and transitions. Students will participate in the construction of a virtual play space that incorporates animation techniques taught during the workshop.

20 Clock Hours

Course

AVG 120 – Animation for Video Games	20 hours

Art for Mixed Reality (VR/AR) Diploma Program

Students of this workshop will demonstrate knowledge of digital asset creation, specifically as it pertains to virtual and augmented reality systems. Students will model, texture, UV, and create materials. Students will understand the technical requirements imposed by the use of VR and AR as a medium for interactive entertainment.

20 Clock Hours

Course

AMR 120 – Art for Mixed Reality (VR/AR)	20 hours

Destruction and Effects-Blow Stuff Up! Diploma Program

Students of this workshop will demonstrate mastery of particle systems in an industry-standard tool such as Maya. Students will apply particle emitters, fields, shaders and lighting systems to achieve realistic physical effects such as explosions and fluids in motion. Students will aid in the creation of visual effects suitable for use in a film, television program, or video game.

20 Clock Hours

Course

DES 120 – Destruction and Effects-Blow Stuff Up!	20 hours

Unreal 4-Blue Prints Diploma Program

Students of this workshop will demonstrate proficiency in the use of a visual scripting system – specifically Blueprints for Unreal. Students will develop an understanding of how Unreal handles data storage, events, and logic via nodes. Students will gain experience creating and linking nodes to generate systems which drive interactivity in a video game environment.

20 Clock Hours

Course

UBP 120 – Unreal 4-Blue Prints 20 hours

Short Programs – Course Descriptions

AMR 120 – Art for Mixed Reality (VR / AR) 20 Hours

This workshop is designed to teach students the creative requirements needed for industry standard assets in virtual reality (VR) and augmented reality (AR). Students will gain an understanding of the technical limitations required for these cutting edge technologies. Students will gain the skills to start creating their own mixed reality assets. The final artistic project will focus on modeling, uv, texture and material creation for mixed reality.

AVG 120 – Animation for Video Games 20 Hours

This workshop introduces students to creating animation navigation systems and blend trees in a game engine. Students learn the interface, tools and how to utilize the game engines features to create believable moving characters in Unity or Unreal. The process of preparing and importing animations, setting up and creating motion trees, creating animation blends, and proper transitions. The project consists of a character moving through a test level with proper navigation, action and aim blend animations.

DES 120 – Destruction & Effects – Blow Stuff Up! 20 Hours

This workshop teaches students the foundation of Autodesk Maya's dynamics system, utilizing Maya's advanced nParticle systems and Maya Fluids. Students will learn the fundamental physical principles of an explosion and how to create that inside of Maya. Students will learn techniques for particle emission, use of particle emitters, how to control particle motion with the use of fields, emitting particles in fluid and shading and lighting for realism. The project consists of students having an image sequence that is ready for compositing.

UBP 120 – Unreal 4 – Blueprints 20 Hours

This workshop focuses on teaching students how to create interactivity utilizing Unreal 4 Blueprint system. No code! Students learn to navigate the Blueprint interface and how Blueprints work. The project for this workshop consist of students creating their own class Blueprint with interactive properties that can be used across an entire game.