ANIMATION Course Descriptions and Outcomes

ANIM 2000 Introduction to Animation – 3 cr.
This class introduces students to various production techniques of 2D animation. Students explore basics of traditional character animation (Disney fundamentals) and experimental animation (cut-out, rotoscoping, paint on glass) through a series of brief exercises including flipbook, ball bounce, walk cycle, and sound sync. In addition, students receive a brief history of the medium through a series of screenings. Individual exploration is emphasized and explored through critiques and the creation of a final project. Prerequisite: Foundation: Media 1

Outcomes:
- Demonstrate an understanding of traditional drawn character techniques
- Design and complete animated exercises using both hand-drawn and digital techniques
- Employ disney fundamentals as vocabulary to discuss and execute work

ANIM 3010 Stop-Motion Animation – 3 cr.
This class provides a thorough understanding of stop-motion fundamentals with a focus on Claymation. Students explore the stop-motion toolbox including armature and character building, go motion, lip sync, replacements, simple casts, registration, photo cut, and strata cut. Students produce individual movies on Adobe After Effects and iStopMotion. Recommended readings, lectures, and demonstrations provide the critical skills to study a variety of stop-motion films screened in the course. Students produce a stop-motion short for their final project. Prerequisite: Introduction to Animation

Outcomes:
- Learn to construct character armature
- Explore variety of experimental material techniques
- Design and execute personal final project

ANIM 3012 Visual Effects Production – 1 cr.
This is the first of a two-part workshop that focuses on the production side of generating visual effects. In this workshop students create elements to be used in VFX scenes. Students are introduced to all major components of a VFX scene from film, 2D, and 3D elements to practical (real world) elements. Prerequisite: Introduction to Film and/or Introduction to Animation and/or Introduction to Graphic Design

Outcomes:
- Use film and computer animation techniques to create elements for a visual effects film
- Learn to shoot green screen elements
- Create digital assets for group projects

ANIM 3015 Maya for Non-Animators – 1 cr.
This workshop helps non-animators gain a basic understanding of Maya software—how it works and how it can be incorporated into your practice. Topics covered include

modeling objects, color, and light applications as well as rendering images. Prerequisite: Foundation: Media 1

Outcomes:

- Learn 3D modeling techniques for design and fine arts applications
- Learn animation techniques for design and fine arts applications
- Learn rendering for design and fine arts applications

ANIM 3020 Character Animation – 3 cr.
Believable characters remain the foundation and most difficult skill of successful animation. This class concentrates on creating credible characters that can walk, talk, and think, depicted through the techniques of timing, staging, and acting. Students begin with a basic drawing method for describing gesture and form, and then go on to produce pencil tests, animatics, and finished movement animations. Beginning with structured projects aimed at specific animation principles, students eventually develop their own scenarios and final project. Lectures, in-class drawing time, and weekly assignments are augmented by occasional demonstrations and visual aids. Students also analyze basic animation principles from single-frame viewing of short selected segments of classic animated shorts and features. Weekly group critiques and individual consultation during in-class work are also provided. Prerequisite: Introduction to Animation

Outcomes:

- Apply Disney fundamental priniciples to character exercises
- Analyze historical film examples to identify fundamentals in practice
- Design and execute final project

ANIM 3030 3D Animation – 3 cr.
Maya software is the industry standard of high-end three-dimensional computer animation. This class provides a basic understanding of Maya in order to teach students the fundamental principles of 3D animation. Students examine movement, timing, weight, character development, and basic animation and rendering techniques. Students learn basic motion techniques and the animation of objects and bipeds using keyframe, path animation, and dynamic simulations. Students complete a short film using a given character by mid-semester. The second half of the semester focuses on rendering, cameras, lighting, and surface properties. Both the Maya and Mental Ray render engines are explored. Prerequisite: Introduction to Animation

Outcomes:

- Discover and employ Maya software
- Relate fundamental principles of 3D animation to exercises
- Produce a short film using motion, animation and final rendering

ANIM 3035 Visual Effects Post-Production – 1 cr.
In the second half of this two-part workshop students learn how to manipulate background plates and incorporate additional elements such as green screen to both 2D and 3D. By the end of this workshop, students are able to assemble all of the elements collected in the Visual Effects Production workshop into a final product.

Prerequisite: Introduction to Film and/or Introduction to Animation and/or Introduction to Graphic Design

Outcomes:

- Use the elements created in the pre-production workshop to composite final pieces
- Learn to utilize digital filmmaking software tools
- Fulfill one's task in larger collaborative process

ANIM 3040 3D Modeling – 3 cr.
Ideally taken in sequence after 3D Animation, this course introduces students to all three types of models: NURBS, Polygon, and SubD. Students focus their energy on building a character using both NURBS and Polygon modeling and then build all of the necessary shapes for animating their character's face as outlined in the book Stop Staring. Topics covered include character models and topology, the whole-face expression, visemes and lip sync techniques, mouth and mouth keys, eye-and-brow emotion, and model-connection and control interfaces. Prerequisites: Introduction to Animation, 3D Animation

Outcomes:

- Learn hard surface and environmental CG modeling
- Learn CG character modeling
- Develop rigging techniques to prepare characters for animation

ANIM 3045 Studio and Set – 3 cr.
This course is designed to provide students with a basic understanding of the aesthetic, technical, theoretical, and conceptual issues related to artificial lighting used in the various aspects of still and moving image production. Technical information covered includes portrait lighting, studio set lighting, architectural lighting, electronic flash, continuous light, camera movement, blocking for actors, and color compensation. In addition to the technical and practical aspects of this course, students are expected and encouraged to develop a personal aesthetic and a conceptual foundation for their images. Prerequisite: Photography 1, or Introduction to Animation, or Introduction to Film, or Web + Screen

Outcomes:

- Employ advanced lighting techniques for studio and location still and moving images
- Use continuous LED, tungsten and fluorescent lighting systems
- Use an electronic flash system
- Build, dress and art-direct sets
- Safely operate all lighting equipment and lighting support systems
- Articulate concepts and techniques through class critique

ANIM 3050 Storyboard – 3 cr.
This course is geared toward animation, filmmaking, and comic art students. Working from preexisting and student-created scripts and narrative ideas, students analyze the various techniques involved in the visualization of stories and sequences for film and

animation production. This includes script and story adaptation, continuity, camera placement, image sequencing, shot composition, styling, and mood. Students learn the visual language of storyboarding and continuity sketching and the various professional and artistic needs these forms serve. Vigorous in-class critiques address storyboard effectiveness with a strong emphasis on the process of revision and refinement. Assignments include the development of several short animation and film storyboards and a final project consisting of a two- to five-minute production storyboard from the student's own script or story. Prerequisites: Introduction to Animation, Foundation: Drawing 1

Outcomes:

- Develop film language staging skills
- Generate storyboards for a variety of production purposes
- Learn to draw clearly for storyboard purposes
- Convey fundamental film and animation techniques

ANIM 3061 Video Game Design with Unreal 4 – 1 cr.
In this course students learn the basics of creating playable, first-person video game levels using the Unreal 4 game engine software. Students construct a basic level layout and learn simple theory regarding the design of those assets. Classroom activities include Unreal 4 tool demonstrations, design theory, lectures, gameplay video, and discussion regarding game design. Prerequisite: Foundation: Media 2 or permission from instructor

Outcomes:

- Identify a new game engine software
- Employ specific tools and protocols with Unreal 4
- Produce distinct exercise with virtual spaces

ANIM 3062 Sound Design for Time-Based Media – 1 cr.
This course explores the use of sound as a major narrative and environmental component for visual time-based media including film, animation, game, and video installation. Through editing and manipulating audio to establish tone, space, realism (or surrealism), and intensity, students design sound that takes their visual work to the next level. The course covers the full range of sound design from single sound effects to six-channel ambience and from acquisition to final implementation. Prerequisite: Foundation: Media 1

Outcomes:

- Record, edit, and manipulate audio for picture
- Operate audio software effects plugins
- Use sound as a narrative device for visual media
- Identify successful sound design in all forms of media
- Work quickly within limited time constraints

ANIM 3063 Surround Sound Mixing – 1 cr.
Sound effects, ambient tracks, foley, dialog, and music must work together to support any visual media and the secret to success is in the mix. This course provides students

hands-on experience with mixing automation, equalization, compression, mastering, and final output in 5.1 surround sound using the M/LAB audio studio and exhibition space. Students create an array of challenging individual projects to increase their skills in mixing for auditorium, home theater, and gallery exhibition. Prerequisite: Foundation: Media 1

Outcomes:

- Operate an audio studio
- Perform multi-track audio mixing with automation
- Generate output files for specific playback systems in different formats
- Implement proper data management techniques

ANIM 3065 Sound – 3 cr.
Designed to acquaint students technically and conceptually with the medium of sound, this course provides a basic working vocabulary for understanding, discussing, and producing sounds. Topics covered include basic perceptual concepts and fundamentals of composing sound such as pitch, rhythm, duration, and volume. Students complete a series of assigned projects designed to demonstrate and assess competencies with microphones, studio recording, and digital editing, mixing, and processing. Prerequisite: Foundation: Media 2

Outcomes:

- Record clean professional sound in studio and location situations
- Record using MCAD's sound production facilities
- Edit, mix and sweeten sound using professional audio software
- Articulate concepts and techniques through class critique

ANIM 3081 Experimental Animation: Material – 1 cr.
After a brief study of the history of process-oriented animation, students engage in experiments with camera and physical materials. Techniques may include but are not restricted to: direct animation on film stock, paint/sand/ink on backlit glass, pixilation, and straight-ahead improvisational drawing. With the vocabulary they develop, students plan and execute one larger structured piece. Prerequisite: Foundation: Media 1

Outcomes:

- Explore various material animation processes
- Reference historical precedents in work
- Execute final personal project

ANIM 3082 Experimental Animation: Digital – 1cr.
After a brief study of software-based experimental film, students engage in experiments using the computer and software as laboratory tools. Students are taught motion graphics techniques in Adobe After Effects but are encouraged to work with whatever software is most familiar to them: Maya, Flash, Premiere, etc. With the vocabulary they develop, students plan and execute one larger structured piece. Prerequisites: Foundation: Media 1 and Experimental Animation: Material

Outcomes:

- Explore various digital animation processes
- Reference historical precedents in work
- Execute final personal project

ANIM 3083 Experimental Animation: Sound – 1 cr.
The history of experimental animation is rich with examples of "visual music," responses in animation to an analysis of sound. In addition to conducting sound collage exercises, students work together as a group creating a visual compliment to Kurt Schwitters's Ursonata. Prerequisites: Foundation: Media 1 and Experimental Animation: Material and Digital

Outcomes:
- Learn to plan frame by frame animation from audio track
- Collaborate with other students on large scale sound animation
- Reference the history of animation made to an analysis of sound

ANIM 4000 Professional Practice – 3 cr.
The primary focus of this class is to provide media arts students with the tools that will enable them to enter professional practice immediately following graduation. Each student is required to produce a polished resume, artist statement, website, professional identity system, and portfolio. Topics include long-range goal creation and planning; financial, legal, and other business considerations; grant writing; and communication and marketing skills involving verbal, written, and visual presentations. Topics are presented through lectures, critiques, and presentations by experts in the field. Prerequisite: Junior standing

Outcomes:
- Achieve proficiency in the essential professional practices of the field.
- Set long-range goals and plans.
- Examine financial, legal and business considerations.
- Discuss networking and marketing skills.
- Create verbal, written and visual presentations.
- Document work professionally; produce a polished resume, artist's statement, letterhead, business cards, web page/site and portfolio.
- Reach an understanding of personal process, methods and sources of inspiration as an artist.
- Discuss values as they pertain to the commercial environment.

ANIM 4010 Internship: Animation – 3 cr.
Internships provide an opportunity for students to gain practical experience in a particular career area and valuable on-the-job skills. Internships may be arranged by the Director of Career Services or initiated by students. All internships must be preapproved through the Career Services Office. For an internship to be approved, a mentor relationship and learning experience should exist beyond a simple employment opportunity. Three-credit internships require working 120 hours at the internship site and keeping a journal of hours and activities. Prerequisite: Professional Practice

ANIM 4020 Animation Collaboration – 3 cr.

Students in this class work in groups of four to realize several short-duration projects in conjunction with commercial clients. Student groups select story content and character designs from material provided by the client. Groups are responsible for weekly presentations and responses to the client producer, delivering a finished QuickTime file as the schedule demands. Coursework and assignments simulate a small studio production model and prepare students for the collaborative work environment of professional animation. Prerequisite: Introduction to Animation (students who have taken 3D Animation may use this course as internship credit)

Outcomes:

- Understand and execute the client's expectations
- Collaborate with small group of students on client project
- Demonstrate responsibility to schedule with one's tasks on project

ANIM 5010 Advanced Animation Seminar – 3 cr.
Advanced Animation Seminar is designed for students to develop individual or group projects in close conjunction with faculty guidance. Individual projects evolve through a detailed and continuous process of presentation, critique, and revision. In addition, a wide variety of animation is screened and discussed with regard to production issues, context, and story. All students are required to complete two minutes of animation. Prerequisites: Stop-Motion Animation, Character Animation, 3D Animation, Storyboard, successful Junior Review

Outcomes:

- Develop individual and/or group projects
- Examine projects through presentation, critique
- Generate a short animation

ANIM 5020 Advanced 3D Animation Seminar – 3 cr.
Advanced 3D Animation Seminar is a continuation of 3D Animation and 3D Modeling. Designed for students with a working knowledge of Maya software, this course includes classroom demonstrations of advanced Maya features. Students use the entire semester to create a short animated film using a character model they have built and rigged. Critiques cover technical considerations and concentrate on contextualizing student work and innovative storytelling. Prerequisites: 3D Animation, 3D Modeling

Outcomes:

- Build upon the technical experience in 3D Animation and 3D Modeling
- Employ additional 3D software tools
- Create short 3D animation

ANIM 5100 Senior Project: Animation – 6 cr.
During senior year, each media arts major is required to develop and complete a substantial body of work in his or her major. This course provides a forum for the critical evaluation of this work and curatorial guidance in preparation for the Commencement Exhibition. Course content includes critical readings, position paper, individual and group discussion, school presentation, and informational meetings. Prerequisites: Successful Junior Review, senior standing

Outcomes:

- Develop a substantial project in a field related to their major
- Generate work toward their BFA Commencement exhibition
- Expand their vocabulary and critical engagement across all majors in Media Arts (Animation/Film/Ph/WMM)
- Generate a position paper and artist statements supported the project