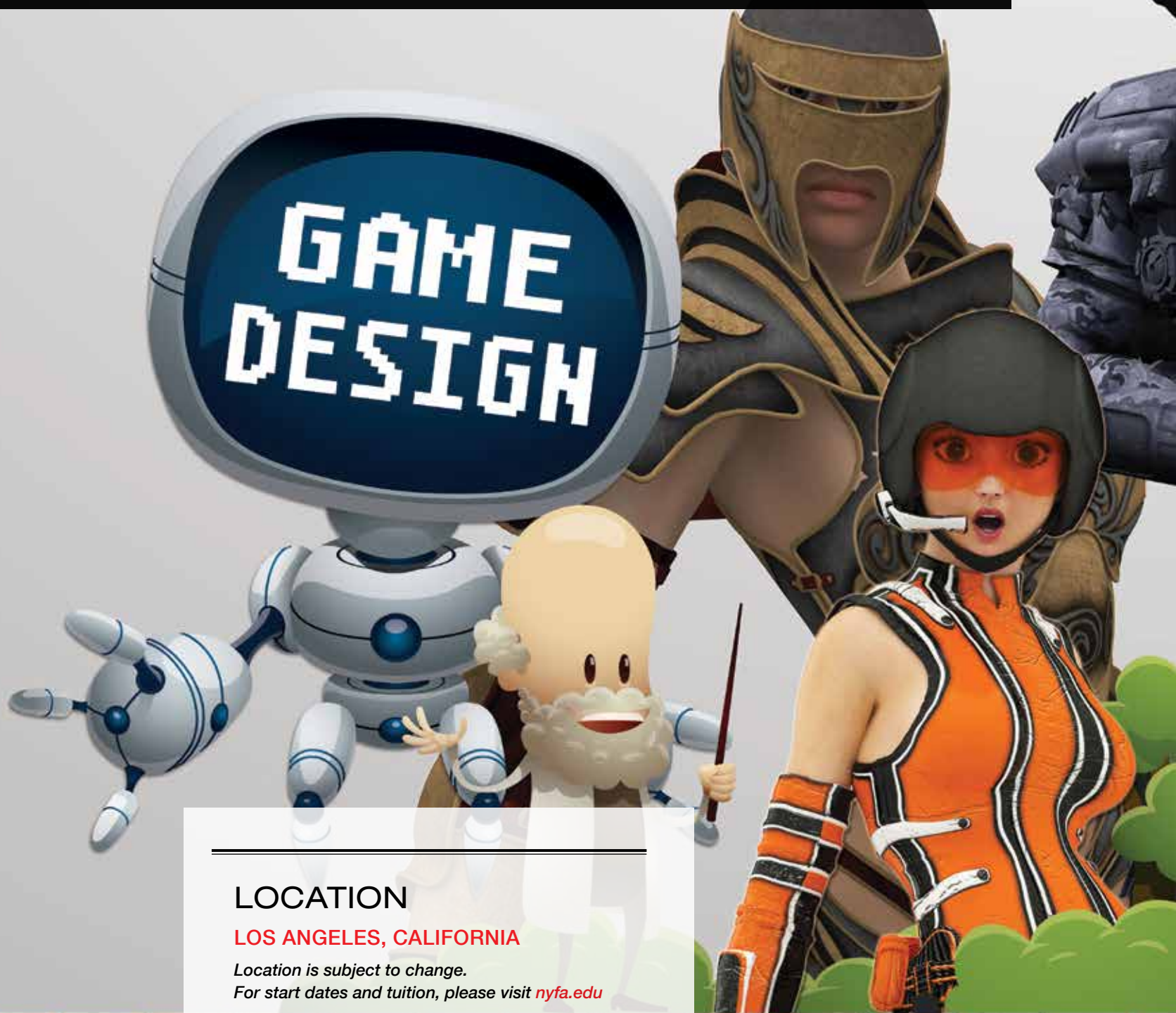Three or Four-Year Degree Program

# BACHELOR OF FINE ARTS
# *in* GAME DESIGN

*Students have the option of completing in three or four years, depending on the number of terms they take each year.*

## LOCATION

**LOS ANGELES, CALIFORNIA**

*Location is subject to change.
For start dates and tuition, please visit nyfa.edu*

# OVERVIEW

The video game industry is now one of the most lucrative sectors of the entertainment industry, with video game sales now outpacing movie box office sales on an annual basis and continuing to grow at a near exponential rate. 58% of Americans play video games, and the demand for new and different games is ravenous. New games are released every day and consumers are quick to determine which will have success and which won't.

Furthermore, with advances in technology, the very nature of video games is constantly evolving; video games have made the trip from the arcade to the home console and are now accessible anywhere there is internet or a smart phone.

Just as the number of players and games available continues to grow, the video game industry is constantly expanding, offering those wishing to break into the industry many opportunities to do so, from education and software companies to game development studios.

New York Film Academy's BFA in Game Design program was created to shape the next generation of video game professionals through an immersion in the technical, aesthetic, and business demands of the craft. With so many games flooding the market, students learn what is essential to creating superior games that people want to play.

Over the course of eight semesters, students devote their time and passion to an intensive, hands-on program in which they devote two-thirds of their time to honing their skills as game designers and the remaining third receiving a comprehensive education in the liberal arts and science, with a focus on the Arts and Humanities and Social and Natural Sciences.

## CHRIS SWAIN
### Chair of Game Design Department

An industry leader for over twenty years, Swain co-founded the Electronic Arts Game Innovation Lab at USC. He has led over twenty award-winning games and products for companies that include Microsoft, Disney, Sony, Acclaim, BBC, Activision, and many more. He is an in-demand speaker and writer on the game industry and innovation.
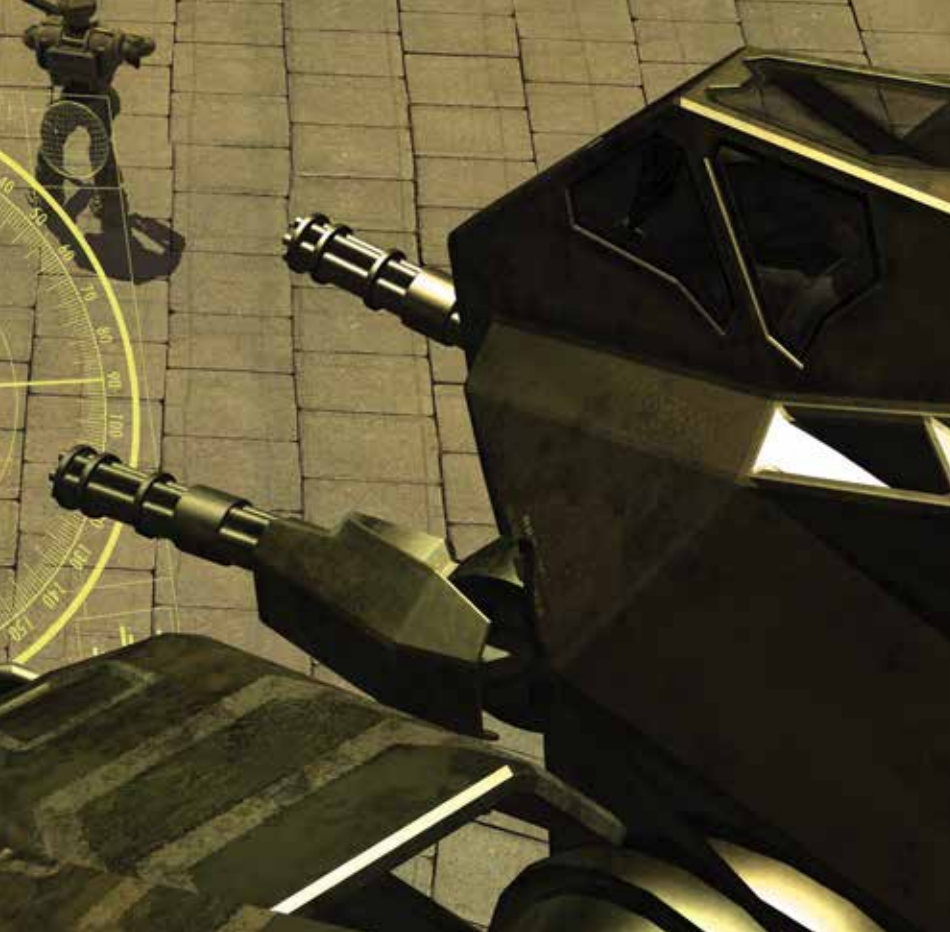
**Central to our game design education is the New York Film Academy's philosophy of learning by doing; from day one students find themselves working on the software and equipment that they will be using throughout their program. The curriculum is designed to teach aspiring game designers the essential skills needed to create different styles of games on a variety of platforms through a combination of hands-on workshops, seminars, lectures, and our one-of-a-kind Game Studio.**

At the core of the NYFA Game Program is the Game Studio course, which is repeated multiple times in each program. In this course, students lead their own game studio with 1-4 classmates. Student studios build a functioning digital game in one semester with mentorship and hands-on coding from a professional game programmer or instructor. Inclusion of a professional programmer on student teams is unique to NYFA. The programmer both codes as part of the student team as well as educates the team members on how to code and how to manage workflow using Agile software development.

## WHAT YOU WILL LEARN

Upon completing the BFA Game Design degree students will demonstrate the following skills:

- Deliver digital games using industry standard tools/methods.
- Prototyping, playtesting, iteration, presentation, and collaboration across a range of game types.
- Code games hands on.
- Deliver art assets and animation for games.
- Master the ability to work effectively in a high pressure creative environment.

## WHAT YOU WILL ACHIEVE

The BFA Game Design Program requires successful completion of the following (partial list).

### SEMESTER ONE AND TWO

- 2 collaboratively created digital games posted online.
- 3-D Art Portfolio.
- Graphic Design Portfolio.
- Satisfactory Participation in Playcentric Design, Intro to Game Coding with Unity and C# I, Publishing Video Games.

### SEMESTER THREE AND FOUR

- 2 collaboratively created digital games posted online.
- Level Design Portfolio and Github code portfolio.
- Satisfactory participation in History of Video Games and Games as Art course.

### SEMESTER FIVE AND SIX

- 2 collaboratively created digital games posted online.
- Narrative Design Portfolio.
- Satisfactory participation in Business of Video Games course + one elective.

### SEMESTER SEVEN AND EIGHT

- Delivery of a Collaborative Thesis project.
- 2 collaboratively created digital games posted online.
- Narrative Design Portfolio.
- Satisfactory participation in Marketing Video Games course + one elective.

*Please Note: curriculum and projects are subject to change and may vary depending on location. Students should consult the most recently published campus catalog for the most up to date course information.*

In addition, students follow the Playcentric Design methodology, which was developed by NYFA's faculty of award-winning instructors as the most effective way to teach game design. Students will complete the following three steps while designing games:

- Understand Fundamental Theory: See how to deconstruct any game experience into Formal, Dramatic, and Dynamic systems and learn how the three interrelate.
- Learn Core Development Process: Acquire the skills of game prototyping, playtesting, iteration, presentation, and collaboration. These are timeless skills that can be applied to the full range of existing game types—mobile, browser-based, console, free-to-play, social, location-aware, multiplayer, etc.—and also to new game types in the future.
- Practice, Practice, Practice: All students will prototype multiple games hands-on, regardless of technical skills. Class assignments are designed to provide great additions to a student's demo reel. In addition, everyone gets lots of experience critiquing and analyzing games via playtesting with fellow students.

Students have the option to complete the program in an accelerated three-year program. Otherwise, students can choose to undertake the BFA program in the traditional four-year framework with summer breaks. By completing the program in three years, students get a jump start on their career and can start making industry connections right after graduation.

The BFA in Game Design program is offered exclusively at the Academy's Los Angeles campus. **QUALIFIED STUDENTS HAVE THE OPTION OF COMPLETING COURSE WORK AT THE NEW YORK FILM ACADEMY IN NEW YORK CITY IN A ONE-YEAR NON-DEGREE PROGRAM AND THEN APPLYING THEIR COURSE WORK TO BE ACCEPTED FOR ADVANCED STANDING IN THE BFA GAME DESIGN DEGREE PROGRAM.**

# COURSE DESCRIPTIONS

## YEAR ONE OVERVIEW

Students gain a foundation of knowledge that they can use throughout a career in games. Students work collaboratively to create working software with support from an instructor who assists them with hands-on coding. They are also exposed to additional facets of games through courses in Narrative Design, Game Coding, and 3D Art. The following courses comprise the game design portion of the curriculum; the required Liberal Arts and Sciences classes are listed at the end of the BFA and BA section of the brochure.

## SEMESTER ONE

### 2D GAME DESIGN

This is the first in a series of seven hands-on development courses wherein students collaboratively deliver a working game over the course of one semester.

The course uses the beginning technology of 2D – meaning all action takes place on a flat plane with only an X and Y axis. Examples of 2D games include: *Super Mario Brothers*, *Asteroids*, *Joust*, *Space Invaders*, *Braid*, and others.

Students conceive and build a 2D Game of their own design. Each student gets the experience of running her own game studio in collaboration with classmates. Industry standards such as Agile, Scrum, Confluence and JIRA expose students to state of the art production methods and enable teams to deliver software efficiently.

In all courses in this sequence students are supported by a technical instructor/mentor who assists with programming as an active member of their team.

Students take increasingly advanced variations of this course in this sequence so acquire more sophisticated skills each successive semester. At the end of the degree they will have a portfolio of working game projects posted online.

### GAME CODING WITH UNITY AND C#, I

The course accommodates students of all levels of existing experience with programming. It is taught by professional game programmers who organize students into Beginner, Intermediate, and Advanced groups based on experience level. Individualized instruction is given to each student to ensure that he/she finishes with hands-on ability as a programmer. The development platform used is Unity and C#. Unity allows you to build your game once and deploy at a click across all major console, mobile, and desktop platforms. Each student will complete the course with a Github portfolio of coding modules appropriate to their experience level.

### GAME STUDIO I

This is a companion to the 2-D Game Design class. It is the first in series of four hands-on studio companion courses.

Students work in teams to build their working digital game and receive individualized tutelage and direct coding support from their instructor. Students learn that they can produce working software – even with beginner skills in a short time. They sharpen their skills by practicing this process multiple times in the degree.

### PLAYCENTRIC DESIGN

This course provides a foundation of knowledge for understanding games as playable systems. Students learn the language of Playcentric Design and practice the craft of prototyping, playtesting, and iteration in an environment independent of computers. This is to provide the student with hard skills that can be used throughout a career in games—transcendent of changing technologies. At the end of the course, each student will have a portfolio of paper game prototypes.

### INTRODUCTION TO 3D ART

This course introduces students to Autodesk's Maya Animation, Visual Effects, and Compositing software, a robust application used throughout the video game industry for the creation of visual assets. Students learn how to optimize the Maya interface for enhanced productivity. They are introduced to polygon tools and taught polygonal modeling in a hands-on environment.

Students gain practical understanding of polygonal modeling for organic characters and hard surface models. Students will also learn the basics of UV mapping, nurbs modeling, texturing, and three-point lighting using D-map and raytrace shadows.

## SEMESTER TWO

### SYSTEMS LITERACY

This course builds upon the foundations established in the Playcentric Design course, and focuses on advanced study of system design and play mechanics. The course is workshop-focused, meaning a substantial portion of time is spent actively engaged in the paper prototyping process. Readings and lectures supplement discussions as we explore more sophisticated facets of the playable systems and user experience design.

### PUBLISHING VIDEO GAMES

This course provides the student with an understanding of the business of video games with a special focus on game publishing, deal structures, and product lifecycles. Students learn to see the world through the publisher's eyes and in the process gain insight in how to plan, budget, pitch, launch, and monetize games. Students leave the course with a practical and state-of-the-art understanding of the game business including perspective on mobile games, console games, browser games, free to play games, and other business paradigms.

### GAME CODING WITH UNITY AND C#, II

This course provides students of Intermediate and Advanced ability extended training with Unity and C#. Like, its precursor course, it is taught by professional game programmers who organize students into groups based on experience level. Individualized instruction and self-paced tutorials are given to each student to ensure that her hands-on skills with coding are improved and her Github portfolio site has additional modules and prototypes. Students will create at least one project that is deployed to three platforms e.g. console, mobile, and web browser.

### ART DIRECTION FOR GAME DEVELOPERS

This course examines the role of visual design in building games. The course exposes students to the craft of the Art Director via a combination of theory and practice. Students learn basic skill set presentation (art history, color theory, composition, typography, basic digital media skills). Students learn to think about projects in terms of the constraints of technology, client needs, and end-user experience. The course covers basic UX/UI concepts.

## SEMESTER THREE

### MOBILE GAME DESIGN

This is the second in the series courses wherein students collaboratively deliver a working game over the course of one semester.

The course uses the intermediate technology of Mobile devices – meaning the game is played on a handheld device such as an iPhone, Android phone, and PS Vita. Students can build 2D or 3D games. Examples of mobile games include: *Angry Birds*, *Clash of Clans*, *Doodle Jump*, and others.

Students conceive and build a Mobile Game of their own design. See details about this course sequence under 2-D Game Design above.

### GAME STUDIO II

This is a companion to the Mobile Game Design class. It is the second in the series of hands-on studio companion courses.

See details about this course sequence under Game Studio I on page 180.

### LEVEL DESIGN

In this class, students work on paper and with level editor tools from commercial games to create high quality play experiences within existing games. Students learn and practice scripting to optimize the play experience including pacing, save points, ratio of obstacles versus power ups, and other game play concepts.

### HISTORY OF VIDEO GAMES

This course focuses on the rich history of digital games starting with MIT's *Spacewar* from 1962 and showing how and why the medium transformed through the 1970s when *Pong* and Atari first had mass cultural impact—all the way through each successive era to today's world of connected consoles, smart phones, and Google Glass.

## YEAR TWO OVERVIEW

In the second year of the BFA Game Design program, students focus on playable system design and Agile development, while collaboratively developing original software.

## SEMESTER FOUR

### THE GREAT VIDEO GAMES

This course explores the concept of games as art, including opposing scholarly points of view. The artistic merits of commercial games is explored through case studies of seminal works. The nascent field of art games is explored via a survey of the field.

### 3D GAME DESIGN

This is the third in the series courses wherein students collaboratively deliver a working game over the course of one semester.

The course uses the intermediate technology of 3D – meaning action takes place in a three dimensional space and can present on the X, Y, and Z axes. Examples of 3D games include: *Battlezone*, *Deus Ex*, *The Sims*, *Grand Theft Auto V*, *Minecraft*, and others.

Students conceive and build a 3D Game of their own design. See details about this course sequence under 2-D Game Design above.

### GAME STUDIO III

This is a companion to the 3-D Game Design class. It is the third in the series of hands-on studio companion courses.

See details about this course sequence under Game Studio I on page 180.

## SEMESTER FIVE

### NARRATIVE DESIGN WORKSHOP

This course examines the critical elements that make strong story concepts and how they can be shaped to create the foundations of great games. Students will study design, narrative, game play, physical environment (world, gameplay spaces), and other key elements. Guest speakers will include veteran game designers and writers.

### MULTIPLAYER GAME DESIGN

This is the fourth in the series courses wherein students collaboratively deliver a working game over the course of one semester.

The course uses the advanced technology of networked multiplayer games – meaning action takes place among multiple players. Examples of 3D games include: *M.U.L.E.*, *Doom*, *Wii Sports*, *Madden series*, *World of Warcraft*, and *Call of Duty: Advanced Warfare*.

Students conceive and build a multiplayer Game of their own design. See details about this course sequence under 2-D Game Design above.

### GAME STUDIO IV

This is a companion to the Multiplayer Game Design class. It is the fourth in the series of hands-on studio companion courses.

See details about this course sequence under Game Studio I on page 180.

## SEMESTER SIX

### BUSINESS OF VIDEO GAMES

This course provides the students with an education in building a successful career in video games. The course educates the student about professional networking, portfolio presentation, roles in industry, career path from entry level to creative leader or business leader, and other hands-on knowledge pertinent to a professional game developer.

### FREE TO PLAY GAME DESIGN

This is the fifth in the series courses wherein students collaboratively deliver a working game over the course of one semester.

The course uses the advanced technology of free to play games – meaning entry to the game is free and players have the option of purchasing in-game items. Examples of Free to Play games include: *League of Legends*, *Hearthstone*, *Star Wars: The Old Republic*, *Super Crate Box*, and *Clash of Clans*.

Students conceive and build a multiplayer Game of their own design. See details about this course sequence under 2-D Game Design above.

See details about this course sequence under 2-D Game Design above.

### GAME STUDIO V

This is a companion to the Free to Play Game Design class. It is the fifth in the series of hands-on studio companion courses.

See details about this course sequence under Game Studio I on page 180.

## SEMESTER SIX ELECTIVES

### NARRATIVE THEORY

This course builds on the knowledge from Narrative Design Workshop I and delves deeper into core concepts. Works of scholars such as Henry Jenkins, Jesper Juul, and Gonzalo Frasca provide the student with an intellectual venture through advanced narrative theory supported by case studies. Examples include Emergent versus Embedded Narrative, Narratology versus Ludology, and the Neuroscience of Narratives.

### 3D ART & ANIMATION

This course builds on the knowledge from previous 3D courses and delves deeper into core concepts. Students learn about the cutting edge world of 3D research through seminal SIGGRAPH papers. The course is a mix of theory and hands on practice with case studies from seminal projects.

### OBJECT ORIENTED PROGRAMMING

This course educates the student on the principles of OOP. OOP is a model organized around objects as opposed to actions and data rather than logic. Students learn using the C++ programming language and learn that other, less popular object oriented languages, operate on the same core principles.

### IMPROVISATIONAL ACTING

Students learn by doing that improvisational acting helps them develop skills in team communication and collaboration. They also learn about problem solving, spontaneity, and listening skills through group performance.

## YEAR THREE OVERVIEW

The final semester of the BFA Game Design Program is focused on completing the Collaborative Thesis Project II, which includes a Game Design Wiki, written story materials, and polished working software.

## SEMESTER SEVEN

### MARKETING VIDEO GAMES

This class builds on the foundation of the course Publishing Video Games with a focus on marketing. Students learn how to market their NYFA game titles—whether 2D, 3D, multiplayer, mobile, or other. Students learn the business side of marketing, including how to make a marketing plan, calculate return on investment, develop data-driven reporting, conduct public relations, etc. Students learn about guerilla marketing techniques suitable to independent studios with no money, and about the marketing techniques of top publishers for AAA titles.

### COLLABORATIVE THESIS I

This is the sixth in the series courses wherein students collaboratively deliver a working game over the course of one semester.

The student has the advanced responsibility of choosing her own technology (in collaboration with teammates) for her BFA thesis project.

Students conceive and build a thesis-worthy digital game of their own design. This project is expected to be the student's most ambitious and polished work to date. Students have the option of spending two semesters on their thesis via this course and the Collaborative Thesis II course.

See details about this course sequence under 2-D Game Design above.

### GAME STUDIO VI

This is a companion to the Collaborative Thesis I class. It is the sixth in the series of hands-on studio companion courses.

See details about this course sequence under Game Studio I on page 180.

## SEMESTER SEVEN ELECTIVES

### 3D ART & ANIMATION

This course builds on the knowledge from previous 3D courses and delves deeper into core concepts. Students learn about the cutting edge world of 3D research through seminal SIGGRAPH papers. The course is a mix of theory and hands-on practice with case studies from seminal projects.

### IMPROVISATIONAL ACTING

Students learn by doing that improvisational acting helps them develop skills in team communication and collaboration. They also learn about problem solving, spontaneity, and listening skills through group performance.

### ADVANCED LEVEL DESIGN

This course builds on the knowledge from the previous Level Design course and delves deeper into core concepts. Student's work with level editors from the games *Minecraft*, *Little Big Planet*, and *Warcraft III* to make sophisticated play experiences. Students are required to make YouTube videos of game play as potential portfolio pieces.

### MOBILE GAME PROGRAMMING

Students learn about the iOS operating system and build a game app using for the Android operating system using the Android SDK and emulator. Assignments include the process of submitting to the Google Play store.

## SEMESTER EIGHT

### STORYBOARDING

This course teaches the student how to communicate stories and ideas effectively using visual storyboarding. Students learn storyboarding best practices and practice the craft. Case studies are presented from animation, motion graphics, and interactive media. Students get hands-on practice making storyboards for game concepts and formally test whether they communicate what the student intended to an audience. Students learn about rapid storyboarding using hand-drawn sketches as well as storyboarding software.

### COLLABORATIVE THESIS II

This is the seventh in the series courses wherein students collaboratively deliver a working game over the course of one semester.

The student has the option of iterating and polishing her work from the Collaborative Thesis I course. Or she can start new using knowledge gained from Collaborative Thesis I.

This project is the capstone of the students seven previous semesters of practice with the craft of game development.

See details about this course sequence under 2-D Game Design above.

### GAME STUDIO VII

This is a companion to the Collaborative Thesis II class. It is the seventh in the series of hands-on studio companion courses.

See details about this course sequence under Game Studio I on page 180.