Game Design 1A: Introduction Course Syllabus

What you will learn in this course

Game Design 1A: Introduction

Are you a gamer? Do you enjoy playing video games or coding? Does the idea of creating and designing your own virtual world excite you? If so, this is the course for you! Tap into your creative and technical skills as you learn about the many aspects involved with designing video games. You will learn about video game software and hardware, various gaming platforms, necessary technical skills, troubleshooting and internet safety techniques, and even the history of gaming. And to top it all off, you'll even have the opportunity to create your very own plan for a 2D video game! Turn your hobby into a potential career and go from simply being a player in a virtual world to actually creating one!

Unit 1: From Tut to Mario: A History of Gaming

Have you ever wondered what it would be like to create your very own video game? Well, this unit is going to equip you with everything you need to know in order to start that process! We'll begin with some important history to help you get a feel for the games that have succeeded and those that were big-time flops. You'll explore gaming's "family tree" as you learn about the different generations of games. Finally, prepare to become an expert on the common characteristics that all game systems share, as well as what sets some apart from the competition.

Are you game? Then, let's get started!

What will you learn in this unit?

- Describe the technological developments that contributed to the video game industry
- Identify and evaluate the attributes of memorable (and forgettable!) games
- Research, compare, and categorize different game platforms and game hardware
- Strategically start planning your own video game

Unit 2: What's in a Game?

Video games can put you in the driver's seat of a rally car or send you into a mythical mountain to overcome a dark wizard and steal a dragon's treasure. You might even have to mimic certain rhythms or dance steps to emerge victorious. But no matter what type of video game is at the top of your most-played list, it is sure to make use of four critical elements to create the unique blend of fun and challenge that keeps you coming back for more. Learn these elements and how they can be combined to form a totally addictive and engaging video game.

What will you learn in this unit?

- Define what a game is and name the four main components of a game
- Identify the three player perspectives and describe advantages and disadvantages of each
- Give examples of how specific game mechanics can help form player immersion
- Use what you have learned so far to continue developing your own video game

Unit 3: Game Pieces

In big gaming studios, the processes and tasks that go into making a video game require different skills and would be broken up among many people; a game design team can range in size from just one to hundreds of people. While you'll be doing pretty much everything yourself in this course, understanding all the roles and tasks involved will serve as a useful roadmap when designing and building your own game and considering a career in this field. It will also help you find where your strengths will shine best in the real world! Which game piece will *you* be?

What will you learn in this unit?

- Analyze a game idea through the proper filters to determine whether it is a feasible idea
- Define the various roles on a game development team
- Explain the game design process, from concept to finished game
- List software commonly used in game development

Unit 4: Let's Talk Shop About Game Mechanics!

Grab your tool belt and gear up to add a whole slew of brand-new gaming tools to your inventory! It's time to get serious about what your game's going to look like. What approach will you take? How often will you iterate? And what about your mechanics? There is so much to consider when designing a video game, and it all continues here in pre-production. Pretty soon, you're going to have the know-how to answer those questions and many more. So, grab your toolbox, start your engine, and get ready…get set…here we GO!

What will you learn in this unit?

- Differentiate between player-centric and designer-centric game design
- Explain the different phases of an iterative approach to game development
- Define the details of key game mechanics such as movement, rampability, inventory, and randomness

Game Design 1A Midterm Exam

- Review information acquired and mastered from this course up to this point.
- Take a course exam based on material from the first four units in this course (Note: You will be able to open this exam only one time.)

Unit 5: Developing a Game Design Document

While getting your game mechanics down pat is the most important task of pre-production, creating a blueprint of your game development process is the most important deliverable. This blueprint, better known as a Game Design Document (GDD), describes your video game from the ground up. It covers everything from the subject, style, nature, functionality, gameplay, mechanics, characters, plot, environment design, and user interface design to the narrative devices of your game. Yes, that's a whole lot of information in one document! But the great thing about the GDD is that it is flexible. The document exists as your working catch-all for your plans and hopes for your game and, being a living document, can change as you adapt your design and your ideas during the design process. Learning how to create a meaningful and effective GDD, whether working alone or as part of a team, is essential to conveying a clear image of the intended game concept and final product.

What will you learn in this unit?

- Explain the steps a game design team moves through from idea, to concept, to game design document
- Identify the main elements in a game design document and which game design team member would be best suited to help give input into that part of the GDD
- Create your own game design document

Unit 6: Narratology: Storytelling in Games

Now that your game mechanics have been tried and tested, it is time to write a game story around them. The age-old skill of storytelling plays a very central role in creating a video game! In fact, in games, storytelling involves much more than coming up with an interesting character and developing a plot. You have to create an entire parallel universe, from its laws of gravity all the way down to its look and feel. Let's examine the elements of a good story, and prepare you to complete these crucial sections of your GDD.

What will you learn in this unit?

- Describe the progression of the Hero's Journey structure and give examples of this structure at use in video games
- Design a game character using Jungian archetypes
- Explain the various delivery methods for conveying story in games
- Contrast the different uses for storyboarding in the video game design industry

Unit 7: The Business of Video Game Design

You might think game design is nothing but fun and games, but the business side of gaming is as serious and cut throat as any other industry, with its own unique ethical and legal considerations. Ignore these issues at your peril! It's certainly not much fun putting your blood, sweat, and tears into building a fabulous game, only to get into hot water having accidentally infringed upon someone else's intellectual property or being called out by the media because your game has contributed to absenteeism or other negative behaviors! You'll also have to develop special

skills, such as social media marketing, to find new users and make your game go viral! #gamesusedtobefun #seriouslygaming #Adulting101

What will you learn in this unit?

- Make justifiable decisions following an ethical decision-making process
- Outline the legal matters which relate to game development and design
- Explain the various kinds of companies and organizations which operate in the game industry space
- Decide which form of marketing and producing works best for your situation

Unit 8: Let's Make a Game!

Time to roll up those sleeves and move into the development phase. Imagine you were the first person to ever create a video game, say a hunting game like the Nintendo classic, *Duck Hunt*. You would have to write computer code to mimic the laws of gravity, momentum, elasticity, and who knows what else! To make things a lot quicker (and cheaper), developers build their games in existing game engines that have a lot of tools and data already built in. You are going to learn to work with Unity software, one of the most popular game engines, to create the basic elements of your game prototype.

What will you learn in this unit?

- Understand how video games apply physics concepts, such as friction, drag, and collision
- Explain the evolution of computer programming languages through their generations
- Describe the basic components and advantages of object-oriented programming
- Identify the different components in a simple script
- Program your first object in Unity

Game Design 1A Final Exam

- Review information acquired and mastered from this course up to this point.
- Take a course exam based on material from units five to eight in this course – the last four units. (Note: You will be able to open this exam only one time.)