

HP GAMING GARAGE TRAINER MANUAL



1. Objectives of the training	Page 02
2. Roles and Responsibilities of the trainer	Page 03
3. Soft Skills & Hardware Knowledge	Page 05
4. Making Self Paced Learning Fun & Staying on Track	Page 07
5. Understanding the Course Material	Page 09
6. Additional Training material, Tools and resources	Page 12
7. Industry Examples of Global Events	Page 22

OBJECTIVES



- Equip the trainer with an understanding of the course material, the esports industry and its potential.
- Educate the trainer on the key components of the course, its importance and possible future applications.
- Provide the trainer with the tools necessary to keep learners engaged, foster discussions and answer questions.
- Familiarize the trainer with external resource material.

ROLES AND RESPONSIBILITIES OF THE TRAINER

FOR THE INSTRUCTOR:

Learner Guidance and Support:

- Providing clear instructions and guidelines for learners to navigate the self-paced learning environment.
- Offering orientation sessions or onboarding materials to familiarize learners with the platform and tools.
- Addressing learner queries and concerns.
- Guiding learners on managing their progress.
- Monitoring learner progress throughout the self-paced learning journey.
- Assisting when learners may be struggling or require additional support.
- Encouraging learners to share insights, questions, and experiences with their peers.
- Sharing additional tools and resources to help learners understand the course content.

Continuous Improvement:

- Collecting learner feedback through surveys to improve the self-paced learning experience.
- Staying updated with emerging trends, technologies, and best practices in self-paced learning.



Technology and Learning Platform Management:

- Familiarizing oneself with the technology platform used for self-paced learning.
- Troubleshooting technical issues or glitches that learners may encounter during their learning journey.
- Collaborating with the technical support team to ensure a smooth learning experience.
- Exploring and adopting new technologies or tools to enhance the self-paced learning environment.

Motivational Support:

- Providing motivational messages, encouragement, and inspiration to learners throughout their self-paced learning experience.
- Recognizing and celebrating learners' achievements or milestones to foster a sense of accomplishment and motivation.
- Sharing success stories or testimonials of learners who have excelled in self-paced learning.



SOFT SKILLS & HARDWARE KNOWLEDGE

SOFT SKILLS:

- Effective verbal and written communication to articulate ideas and concepts clearly.
- Active listening skills to understand learners' needs, questions, and concerns.
- Ability to establish rapport and build relationships with learners.
- Empathy and understanding to create a supportive and inclusive learning environment.
- Effective time management skills to keep training sessions on track and adhere to schedules.
- Self-awareness and regulation of one's emotions to maintain a calm and positive demeanor during training.
- Empathy and understanding of learners' emotions and challenges, offering support and encouragement.
- Problem-solving skills to address challenges or obstacles that learners may encounter during the training process.
- Creative thinking to develop innovative and engaging learning experiences.
- Supportive and cooperative attitude to foster teamwork and collaboration among learners.
- Commitment to personal and professional development to stay updated with industry trends, emerging technologies, and best practices in training.



HARDWARE & SOFTWARE KNOWLEDGE:

- Familiarity with gaming PCs and consoles commonly used in esports, including their specifications, performance capabilities, and compatibility with different games.
- Understanding the importance of hardware components such as processors, graphics cards, RAM, storage devices, and cooling systems in optimizing gaming performance.
- Knowledge of different gaming peripherals such as keyboards, mice, monitors, and controllers, including their features and impact on gameplay.
- Understanding the fundamentals of networking, including concepts like routers, switches, LAN, and WAN connections.
- Knowledge of different internet connection types (e.g., Ethernet, Wi-Fi) and their impact on online gaming performance, latency, and stability.
- Familiarity with concepts like ping, latency, and bandwidth, and their significance in online multiplayer gaming.
- Awareness of streaming equipment and setups commonly used by esports streamers, including capture cards, microphones, webcams, lighting, and green screens.
- Knowledge of streaming platforms and software for streaming gameplay.
- Understanding the features and functions of gaming peripherals, including gaming keyboards, mice, headsets, and controllers.
- Basic troubleshooting skills to identify and resolve common hardware issues that may occur during esports training or events.
- Knowledge of routine hardware maintenance practices, such as cleaning, dusting, and ensuring proper airflow to prevent overheating.
- Awareness of common software and driver updates required for optimal hardware performance.
- Awareness of Game Design Software, Project Management Software, Streaming Software to guide users.



FOR THE LEARNER: MAKING SELF PACED LEARNING FUN & STAYING ON TRACK

INSTRUCTIONAL GUIDELINES



1. Set Clear Learning Goals:

- Identify your learning objectives and what you aim to achieve through the learning experience.
- Establish a realistic timeline to complete the learning activities and assignments.

2. Create a Structured Learning Plan:

- Develop a schedule or learning plan
- Allocate dedicated study time in your calendar to ensure regular and consistent progress.
- Set aside distractions in your learning environment that promote focus and concentration.

3. Understand the Learning Resources and Materials:

- Read through the instructions and guidelines to understand the expectations and requirements.
- Identify additional resources, such as textbooks, articles, or online references, to deepen your understanding of the subject matter. You can also speak to your trainer for this.

4. Practice Time Management:

- Break down the learning activities into smaller tasks and allocate time for each task.
- Prioritize tasks based on their importance and deadlines.
- Use productivity techniques, such as the Pomodoro Technique, to maintain focus and manage your time effectively.

5. Engage Actively with the Learning Material:

- Take comprehensive notes while studying to reinforce your understanding and retention of key concepts.
- Engage with the learning material actively by asking questions, reflecting on the content, and making connections to real-world examples.
- Pause and review sections that are challenging or require further clarification.

6. Seek Support and Clarification:

- Utilize available support channels, such as discussion forums, email, or chat platforms, to ask questions and seek clarification from trainers or fellow learners.
- Participate in virtual meetups, study groups, or peer-to-peer discussions to foster collaboration and share insights.
- Seek feedback from trainers or utilize answer keys or model solutions.

6. Stay Motivated and Manage Challenges:

- Set small rewards or incentives for achieving milestones or completing challenging tasks.
- Seek inspiration from success stories or testimonials of individuals who have excelled in the same field or subject matter.

USING THE EDX TOOL

- edX forums are great place to find more information and learn more about specific courses from the community.
- edX FAQ page assists the user in knowing more about the platform & its additional features alongside support the user with the needs that they might have on the platform.



UNDERSTANDING THE COURSE MATERIAL

Course 1 - Introduction to Competitive Gaming & Esports Events

This course is all about the world of Electronic sports (Esports) or competitive gaming that has been growing rapidly in popularity to become a multibillion-dollar industry. Esports management prepares students for supportive aspects of this exciting sector. From managing esports teams, organising events to marketing, content creation & more, there are many ways to get involved and build a rewarding career in this field.



Course 2 - Game Design

Game Design is the process of conceptualization, development, and implementation of all the elements that make up an entire game. It includes gameplay, art, sound, level design, game balance, playtesting and storytelling. The field of game design has grown significantly in recent years, as video games have become a major form of entertainment with an estimated 3 billion users worldwide. This course will enable you to learn the basics and will give you a starting point to know more about Game Design.



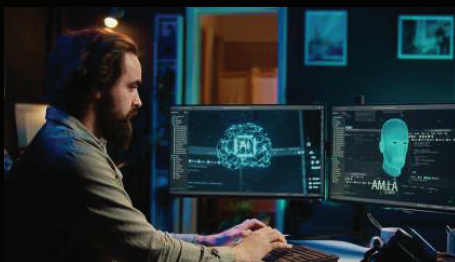
Course 3 - Game Development

Game programming involves coding and testing video games. Using programming languages, tools, and techniques; you can build the game of your dreams by yourself or with talented individuals in a team. With the game industry continuing to expand at an unprecedented pace, game programming offers diverse career opportunities, including, development, testing, audio engineering, graphics programming, and AI programming.



Course 4 - Generative AI Mastery

Generative AI is transforming game development, enabling more immersive and interactive experiences. This course covers AI's role in narrative, concept art, texturing, modeling, and animation. Gain hands-on skills to enhance creativity and efficiency, crucial for modern developers. Create stunning visuals, lifelike characters, and captivating stories with AI.



Course 5 - CryptoGuard: Securing the Future of Game Development with Blockchain

Learn to integrate blockchain technologies and cybersecurity into game development leveraging tools like Unreal Engine 5.4, Solidity and Epic Online Services, to build the next generation of secure, decentralized games. This hands-on course covers creating tokens, NFTs, smart contracts and anti-cheat systems, while also addressing account security, data privacy and fraud prevention. You'll gain practical Web3 skills through real-world tools and code examples from industry experts.



HARDWARE & TOOLS

Hardware required for Game Design & Development:

The hardware required for game design and development can vary depending on the complexity of the games being developed and the specific tools and software used. However, here are some general hardware requirements:

1. **Computer:** A powerful desktop or laptop computer is essential for game design and development. Look for a system with a fast processor (e.g., AMD Ryzen 7), ample RAM (at least 16GB), and a dedicated graphics card (e.g., AMD Radeon).



2. **Display:** A high-resolution monitor or multiple monitors can enhance your productivity and allow for better visual representation of your game. Consider a display with a resolution of 1920x1080 or higher.



3. **Input Devices:** A keyboard and mouse are the primary input devices for game design and development. For certain tasks, such as 3D modeling or sculpting, a graphics tablet with a stylus can be beneficial.



4. **Storage:** Adequate storage is crucial for storing project files, assets, and game builds. Opt for a fast and spacious solid-state drive (SSD) for improved loading times and performance.

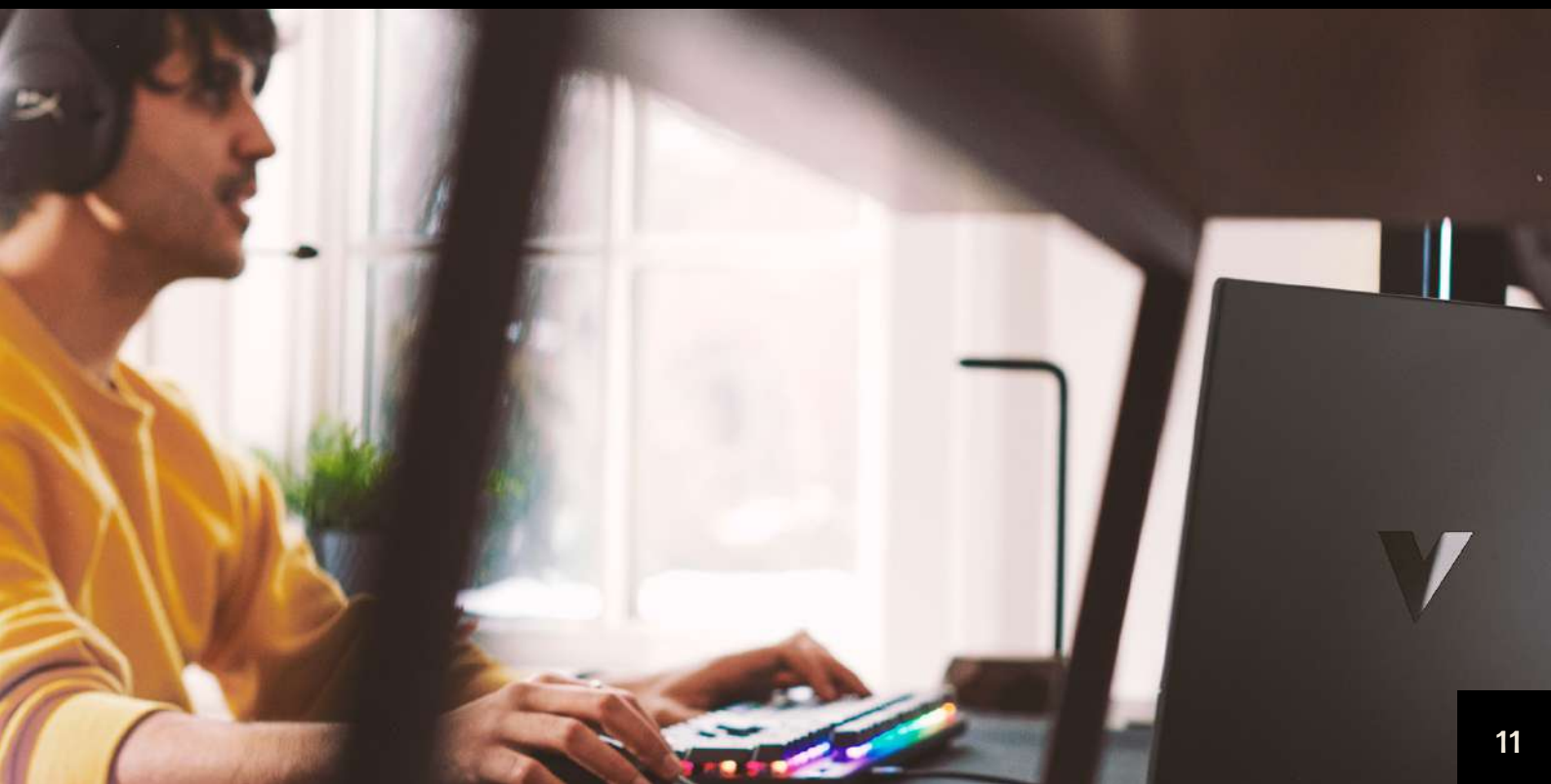


5. **Graphics Tablet (optional):** For artists and designers, a graphics tablet can be useful for creating digital art, illustrations, and textures. Wacom is a popular brand that offers a range of graphics tablets.

6. **Virtual Reality (VR) Headset (optional):** If you plan to develop VR games or experiences, you may need a VR headset compatible with the platform you're targeting.

7. **Audio Equipment:** Depending on your game development needs, you may require audio equipment such as high-quality headphones, speakers, or microphones for sound design, music composition, or voice recording.

Remember to check the specific hardware requirements for the game engines and software tools you plan to use, as they may have additional recommendations or minimum system specifications.



DISCOVER ESPORTS MANAGEMENT TOOLS AND RESOURCES

Esports Broadcast Production – Software And Hardware Tools

Broadcast production in esports typically involves a combination of software and hardware tools to capture, produce, and broadcast live gaming events. Here are some commonly used tools in esports broadcast production:

Software Tools:

1. **OBS Studio: Open Broadcaster Software (OBS)** Studio is a popular free and open-source software used for video recording and live streaming. It allows capturing gameplay footage, overlaying graphics, managing multiple sources, and encoding streams for broadcasting. Website: <https://obsproject.com/> (This tool is free to use).
2. **XSplit Broadcaster:** XSplit Broadcaster is a professional live streaming and recording software. It provides features like scene transitions, overlays, and chroma key for creating polished broadcasts. Website: <https://www.xsplit.com/> (This tool is limited in the free version and has a premium version, Special student pricing may be available upon request).
3. **vMix:** vMix is a comprehensive live production software that enables switching between multiple video sources, incorporating overlays, and managing audio. It supports live streaming and recording for esports events. Website: <https://www.vmix.com/> (This tool has a trial version for 14 days after which requires a paid subscription, Special student pricing may be available upon request).
4. **Wirecast:** Wirecast is a versatile live video production software used for capturing, producing, and streaming live events. It offers multi-camera support, graphics overlays, and real-time transitions. Website: <https://www.telestream.net/wirecast/> (This tool has a trial version after which requires a paid subscription, Special student pricing may be available upon request).



Hardware Tools:

1. **Video Capture Cards:** These devices connect to the gaming computer and capture the gameplay footage, allowing it to be used as a video source in broadcasting software.
2. **Camera Equipment:** Depending on the scale of the esports production, cameras may be used to capture shots of players, hosts, and commentators. This can include professional broadcast cameras, DSLRs, or webcams.
3. **Audio Equipment:** High-quality microphones and audio mixers are essential for capturing clear and balanced audio during esports broadcasts. This includes headsets or lavalier microphones for commentators and studio hosts.
4. **Video Switchers:** Video switchers allow the switching between different video sources during live broadcasts. They enable seamless transitions between gameplay footage, cameras, and other visual elements.
5. **Graphics and Display Systems:** Graphics systems and display servers are used to create and manage overlays, lower-thirds, scoreboards, and other graphical elements that enhance the visual presentation of the esports broadcast.



It's important to note that the specific tools and equipment used in esports broadcast production can vary depending on the production scale, budget, and the specific needs of the event. Professional esports production companies often employ specialized setups with advanced hardware and software configurations to deliver high-quality broadcasts.



LEARN MORE ABOUT GAME DESIGN AND PROGRAMMING

Online Tutorials:

1. Unity Learn: Unity's official learning platform offers tutorials, projects, and courses for beginners to advanced game developers. Explore their extensive library of resources covering various topics in game design and development. Website: <https://learn.unity.com> (This tool has a free / trial & paid plan, the paid plan has more features & additional support tools).
2. YouTube: Numerous game design and development channels offer tutorials, tips, and insights. The channels below provide valuable content for aspiring game developers and offer a wide range of content on game design and development. Feel free to explore their playlists and video archives to find more tutorials, insights, and tips based on your interests and learning needs.
 - a. Brackeys: <https://www.youtube.com/c/Brackeys>
 - b. Extra Credits: <https://www.youtube.com/@extracredits>
 - c. GDC (Game Developers Conference): <https://www.youtube.com/c/Gdconf>
 - d. Game Maker's Toolkit: <https://www.youtube.com/@GMTK>
 - e. Sebastian Lague: <https://www.youtube.com/c/SebastianLague>

Books, Publications and Articles:

1. Game Designer Liz England wrote a wonderful short essay to explain the Game Systems Design called The Door Problem. Read through it here: <https://lizengland.com/blog/2014/04/the-door-problem>
2. Collection of writings and lectures from Marc LeBlanc (co-author of the MDA Framework): algorithmancy.8kindsoffun.com
3. "The Art of Game Design: A Book of Lenses" by Jesse Schell: An influential book that covers game design principles and lenses to enhance creativity and problem-solving in game development. Website: <https://www.schellgames.com/art-of-game-design>
4. "Game Programming Patterns" by Robert Nystrom: Focuses on coding patterns and best practices for game development, helping you write more efficient and maintainable code. Website: <http://gameprogrammingpatterns.com>
5. "Level Up! The Guide to Great Video Game Design" by Scott Rogers: A comprehensive guide that covers various aspects of game design, including mechanics, storytelling, and player experience. Website: <https://www.wiley.com/en-us/Level+Up%21%3A+The+Guide+to+Great+Video+Game+Design%2C+2nd+Edition-p-9781118877166>

Online Communities and Forums:

1. Unity Forums: An active community where you can connect with fellow game developers, ask questions, and share knowledge. Website: <https://forum.unity.com>
2. Gamedev.net: A popular forum for game developers offering discussions, articles, tutorials, and a job board for the game development industry. Website: <https://www.gamedev.net>
3. Reddit's r/gamedev: A subreddit dedicated to game development, featuring discussions, resources, and feedback on game design and development topics. Website: <https://www.reddit.com/r/gamedev/>

These resources should provide you with a solid foundation in game design and development. Remember to practice and experiment with your own projects to gain practical experience and deepen your understanding of the craft.

EXPLORE GENERATIVE AI TOOLS IN GAME DEVELOPMENT

Generative AI - Tool Map

In the course - Generative AI Mastery: Revolutionizing Game Development, you'll use powerful tools like Unreal Engine, Unity 3D, and AI-driven software to create immersive games. We've provided access details, including free trials and alternatives, to help you get started. These tools are essential for enhancing your game development skills and bringing your ideas to life.

1. Unreal Engine: A powerful game engine known for creating high-quality 3D games and real-time experiences. Website: <https://unrealengine.com> (This tool is free to use)
2. Unity: A versatile game engine widely used for developing 2D and 3D games across platforms. Website: <https://unity.com> (This tool is free to use)
3. ChatGPT 4.0: An advanced AI chatbot designed for generating human-like text responses and creative content. Website: <https://chat.openai.com> (Free Trial with limited access, but still good enough to practice. Alternatively, use ChatGPT 3.5 which is the free version)
4. Midjourney: An AI tool for generating high-quality, imaginative visuals and art. Website: <https://imagine.art> (Paid monthly subscription required. Free of Charge alternative to MidJourney: <https://nijijourney.com>)
5. DeepArt.io: An AI-powered tool that transforms photos into artworks using different styles. Website: <https://www.artvy.ai/ai-tools/deepartio> (This tool has a free trial with limited access, but still good enough to practice)
6. Adobe Photoshop: A professional image editing software widely used for creating and enhancing images. Website: <https://www.adobe.com/products/photoshop> (This tool has a trial version for 7 days after which requires a paid subscription, special student pricing may be available upon request)
7. MetaSounds: A high-performance audio system for creating complex soundscapes in Unreal Engine. (No subscription needed here, it's part of Unreal Engine)
8. Rodin: An AI-powered tool that simplifies the creation of high-quality digital humans. Website: <https://hyperhuman.deemos.com> (This tool has a trial version for 7 days after which requires a paid subscription)
9. Genie: An AI tool for generating high-quality visuals and creative assets quickly. Website: <https://lumalabs.ai/genie> (This tool has a free trial with limited access, but still good enough to practice)
10. MetaHumans: A complete framework for creating highly realistic digital humans in Unreal Engine. (No subscription needed here, it's part of Unreal Engine)
11. Motion Matching: A technique for generating smooth and responsive character animations in real-time. (No subscription needed here)

EXPLORE TOOLS IN BLOCKCHAIN AND CYBERSECURITY FOR GAME DEVELOPMENT

1. **Axie Infinity:** A blockchain-based play-to-earn game where players collect, breed, and battle digital creatures called Axies, earning cryptocurrency rewards. Website: <https://axieinfinity.com> (This platform is free to join, but gameplay requires purchasing Axies)
2. **Blueprints:** A visual scripting system in Unreal Engine that enables developers to build game logic without writing code. Website: <https://www.unrealengine.com/en-US/blueprint-visual-scripting> (This tool is free to use with Unreal Engine)
3. **C++:** A powerful programming language commonly used in game development, system programming, and performance-critical software. Website: <https://isocpp.org> (This tool is free to use with various compilers and IDEs)
4. **Epic Games:** A leading video game and software developer known for Unreal Engine, Fortnite, and the Epic Games Store. It also provides tools and services for developers through Epic Online Services. Website: <https://www.epic-games.com> (Most services are free to use; some games and assets may be paid)
5. **EOS (Epic Online Services):** A suite of cross-platform tools and services by Epic Games that enables developers to integrate features like matchmaking, achievements, leaderboards, and more into their games. Website: <https://dev.epicgames.com/en-US/services> (This tool is free to use)
6. **EOS Anti-Cheat:** A robust anti-cheat service developed by Epic Games, designed to detect and prevent cheating in multiplayer games across platforms. Website: <https://dev.epicgames.com/en-US/services/anti-cheat> (This tool is free to use)
7. **EOS Voice:** A real-time, cross-platform voice chat service provided by Epic Online Services, designed to integrate voice communication into multiplayer games. Website: <https://dev.epicgames.com/en-US/docs/voice> (This tool is free to use)
8. **Ganache:** A personal Ethereum blockchain used for developing and testing smart contracts locally, offering fast and safe testing. Website: <https://trufflesuite.com/ganache> (This tool is free to use)
9. **MetaMask:** A crypto wallet and browser extension that allows users to manage Ethereum accounts and interact with decentralized applications (dApps). Website: <https://metamask.io> (This tool is free to use)
10. **Polygon:** A Layer 2 scaling solution for Ethereum that offers faster and cheaper transactions, supporting dApps and smart contract deployment. Website: <https://polygon.technology> (This platform is free to use for developers and users, excluding gas fees)
11. **Revolut:** A financial technology app that offers banking services, cryptocurrency trading, and budgeting tools through a single platform. Website: <https://www.revolut.com> (This app is free with optional premium plans)
12. **Roblox:** An online platform that allows users to create and play games developed by other users using its proprietary game engine. Website: <https://www.roblox.com> (This tool is free to use with optional in-game purchases)
13. **Solidity:** A programming language used for writing smart contracts on Ethereum and other EVM-compatible blockchains. Website: <https://soliditylang.org> (This tool is free to use)
14. **Truffle:** A development framework for Ethereum that provides tools to build, test, and deploy smart contracts efficiently. Website: <https://trufflesuite.com/truffle> (This tool is free to use)
15. **Uniswap:** A decentralized exchange (DEX) built on Ethereum that enables peer-to-peer trading of cryptocurrencies through automated liquidity pools. Website: <https://uniswap.org> (This tool is free to use, excluding transaction fees on the blockchain)
16. **Unreal Engine:** A powerful game engine known for creating high-quality 3D games and real-time experiences. Website: <https://unrealengine.com> (This tool is free to use)

TOP GLOBAL UNIVERSITIES FOR GAME DESIGN AND DEVELOPMENT

The field of game design and development is constantly evolving, and there are several prestigious universities around the world that offer excellent programs in this area.

Here are the top 10 universities known globally for their game design and development programs:

UNIVERSITY	COUNTRY	LINK
Massachusetts Institute of Technology (MIT)	United States	Game Lab: gamelab.mit.edu
University of Southern California (USC)	United States	Interactive Media & Games Division: https://games.usc.edu/
DigiPen Institute of Technology	United States, Canada, Singapore	Website: https://www.digipen.edu/
University of Utah	United States	Entertainment Arts and Engineering Program: https://games.utah.edu/
Rochester Institute of Technology (RIT)	United States	School of Interactive Games and Media: https://igm.rit.edu/
Carnegie Mellon University	United States	Entertainment Technology Center: https://www.etc.cmu.edu/
University of California, Santa Cruz (UCSC)	United States	Games and Playable Media Program: https://gpm.soe.ucsc.edu/
The Guildhall at Southern Methodist University	United States	Website: https://www.smu.edu/Guildhall
NHTV Breda University of Applied Sciences	Netherlands	International Game Architecture and Design: https://www.buas.nl/en/programs/international-game-architecture-and-design
Abertay University	Scotland	School of Design and Informatics: https://www.abertay.ac.uk/schools/school-of-design-and-informatics/

TOP UNIVERSITIES FOR GAME DESIGN AND DEVELOPMENT

The field of game design and development is constantly evolving, and there are several prestigious universities around the world that offer excellent programs in this area.

Here are the top 5 universities for game design and development in Saudi Arabia:

UNIVERSITY	COURSE OFFERED
King Abdullah University of Science and Technology (KAUST)	Offers a Computer Science program with a focus on game design and development.
King Saud University (KSU)	Offers a Bachelor's degree in Computer Science with a specialization in Game Development.
King Abdulaziz University (KAU)	Offers a Bachelor's degree in Computer Science with a concentration in Game Development.
Prince Sultan University (PSU)	Offers a Bachelor's degree in Software Engineering with a specialization in Game Development.
Imam Abdulrahman Bin Faisal University (IAU)	Offers a Bachelor's degree in Computer Science with a track in Game Development.

Here are the top 5 universities for game design and development in the United Arab Emirates:

UNIVERSITY	COURSE OFFERED
New York University Abu Dhabi (NYUAD)	Offers a Bachelor of Science in Computer Science with a specialization in Game Design.
American University of Sharjah (AUS)	Offers a Bachelor's degree in Computer Science with a concentration in Game Development.
Zayed University	Offers a Bachelor of Science in Multimedia Design with a focus on Game Development.
Abu Dhabi University (ADU)	Offers a Bachelor's degree in Software Engineering with a specialization in Game Development.
Khalifa University	Offers a Bachelor's degree in Computer Engineering with elective courses in Game Development.

Here are the top 5 universities for game design and development in Oman:

UNIVERSITY	COURSE OFFERED
Sultan Qaboos University (SQU)	Offers a Bachelor's degree in Computer Science with a specialization in Game Development.
Middle East College (MEC)	Offers a Bachelor's degree in Game Design and Development.
Majan College (University College)	Offers a Bachelor's degree in Software Engineering with elective courses in Game Development.
Modern College of Business and Science (MCBS)	Offers a Bachelor's degree in Computer Science with a specialization in Game Development.
Sohar University	Offers a Bachelor's degree in Computer Science with a concentration in Game Development.

Please note that this is not an exhaustive list, and there are other universities and institutions around the world that offer exceptional game design and development programs. It's recommended to visit the respective university websites to explore their curriculum, faculty, and admission requirements for more detailed information.



Which Game Engine Should I Start With?

The choice of game engine depends on several factors, including your goals, preferences, and project requirements. Here are some popular game engines to consider:

1. **Unity:** Unity is a widely used and beginner-friendly engine that supports 2D and 3D game development. It has a large community, extensive documentation, and supports multiple platforms. Unity is a good choice for beginners and versatile enough for professional projects. Website: <https://unity.com/> (This tool has a free / trial & paid plan, the paid plan has more features & additional support tools).
2. **Unreal Engine:** Unreal Engine is known for its stunning graphics and powerful capabilities. It is a robust engine suitable for high-end, AAA-quality games. Unreal Engine utilizes a visual scripting system called Blueprints, but it also supports programming with C++. It has a slightly steeper learning curve compared to Unity. Website: <https://www.unrealengine.com/> (This tool has a free / trial & paid plan, the paid plan has more features & additional support tools).
3. **Godot:** Godot is an open-source game engine that has gained popularity in recent years. It has a user-friendly interface, supports 2D and 3D development, and uses its own scripting language called GDScript. Godot is known for its lightweight nature and is a good choice for indie game developers. Website: <https://godotengine.org/> (This tool is free to use).
4. **GameMaker:** GameMaker is a beginner-friendly engine that focuses on 2D game development. It has a drag-and-drop visual scripting system, as well as its own programming language called GML (GameMaker Language). GameMaker is popular for creating 2D platformers, RPGs, and other 2D games. Website: <https://www.yoyogames.com/gamemaker> (This tool has a free & paid plan, the paid plan has more features & additional support tools).

Consider factors such as your familiarity with programming languages, the complexity of your project, the engine's features, community support, and the platforms you want to target when making your decision. It can also be beneficial to try out different engines to see which one suits your needs and workflow best.



Game Production Management Methods

Game production management involves various methods and frameworks to effectively plan, organize, and execute the development process. Here are some commonly used game production management methods:

1. **Waterfall Method:** The Waterfall method follows a sequential process, where each phase (such as design, development, testing) is completed before moving on to the next. It emphasizes thorough planning and documentation but can be less flexible to changes once a phase is completed.
 - a. Waterfall vs. Agile: <https://www.kolibrigames.com/blog/waterfall-vs-agile-workflows/>
2. **Agile Methodology:** Agile methodologies, such as Scrum and Kanban, prioritize flexibility, collaboration, and iterative development. Development occurs in short cycles called sprints, with regular feedback and adaptation based on stakeholder input. Agile methods allow for more adaptability to changing requirements and continuous improvement.
 - a. Scrum Guide: <https://www.scrumguides.org>
 - b. Kanban Method: <https://www.digite.com/kanban/what-is-kanban>
3. **Lean Development:** Lean development focuses on minimizing waste and maximizing value. It emphasizes efficient processes, reducing unnecessary work, and continuous improvement. Lean development aims to eliminate non-value-adding activities and streamline the production process.
 - a. Applying the Lean Methodology to Game Development: <https://www.linkedin.com/pulse/applying-lean-methodology-game-development-zafer-elcik/>
4. **Milestone-based Development:** Milestone-based development involves breaking the game development process into significant milestones, each representing a key deliverable or stage of completion. This approach helps track progress, set goals, and ensure that key objectives are met at various stages of production.
5. **Gantt Charts:** Gantt charts are visual tools used to schedule and manage tasks in game production. They provide a timeline view of the project, showing dependencies between tasks, resource allocation, and progress tracking. Gantt charts help teams understand the project timeline and manage their workload effectively.
 - a. What is a Gantt Chart: <https://www.teamgantt.com/what-is-a-gantt-chart>
6. **Production Management Software:** Utilizing specialized project management tools, such as JIRA, Trello, or Asana, can aid in organizing tasks, tracking progress, assigning responsibilities, and facilitating communication among team members. These software solutions provide a centralized platform for collaboration and task management.
 - a. JIRA: <https://www.atlassian.com/software/jira> (This tool has a free & paid plan, the paid plan has more features & additional support tools).
 - b. Trello: <https://trello.com/> (This tool has a free & paid plan, the paid plan has more features & additional support tools).
 - c. Asana: <https://asana.com/> (This tool has a free & paid plan, the paid plan has more features & additional support tools).

The choice of game production management method depends on factors like the project scope, team size, development timeline, and desired level of flexibility. Many game development teams adopt a hybrid approach, combining elements from different methods to suit their specific needs. Ultimately, effective game production management requires a balance between structure, flexibility, and efficient collaboration within the development team.

INDUSTRY EXAMPLES OF GLOBAL EVENTS

Dota 2 The International 2022 - Main Event - Final Day



Legends Never Die - Opening Ceremony | Finals |
2017 World Championship



Call of Duty League 2023 | Championship Weekend |
Grand Finals



Overwatch League Grand Finals 2022



World Finals Day 3! | Clash Royale League 2022



[EN] PMGC 2022 Grand Finals | Day 3 | PUBG MOBILE
Global Championship



Fortnite Champion Series 2023 | Major 2 |
N. America | Day 2





GAMERS HUB MEDIA EVENTS