



Educator Resource Kit

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GDC 2024

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Welcome to your Epic Games Educator Resource Kit

Here, you'll find helpful links and additional learning material that accompany the presentations from our GDC 2024 Educator Summit. We've also assembled a selection of essential resources including free Marketplace content, tutorials, blogs, and guides that should make it easier to bring Unreal Engine into your classroom.

Unreal Engine documentation and system requirements

- ② [Unreal Engine installation instructions](#)
- ② [Secondary Educators installation guide](#)
- ② [Unreal Engine 5 system requirements](#)

Course Resources



Welcome & State of Industry & Education

Author: Julie Lottering

[Presentation Link](#)

Talk Summary:

In this talk, we explore industry trends impacting education and how to better prepare students. Discover new resources and program changes aimed at supporting professors and students alike. Don't miss this opportunity to gain valuable insights and tools for enhancing student success.

Additional Resources and Links:

- [Academic Partner Program](#)
- [Fab Marketplace](#)
- [Unreal Editor for Fortnite \(UEFN\)](#)
- [Engagement Payout for UEFN](#)
- [Composing with Fortnite Patchwork](#)
- [Unreal Academy](#)
- [Authorized Training Centers](#)
- [Authorized Instructors](#)
- [ArtStation School Directory](#)

UE Companion Guide: Getting started with UE5 using Epic Games resources and tools



Author: Tabitha Graves

 [Presentation Link](#)

Talk Summary:

A brief overview of Unreal Engine resources for the developer community. We discuss the benefits of using Unreal Engine for smaller teams and tools for getting started. Learn more about UEFN, how to navigate the Epic Games ecosystem, and hear success stories from other Unreal Engine developers.

Additional Resources and Links:

- [Cropout Sample Project](#)
- [Lyra Starter Game](#)
- [BeginPlay\(\) Learning Path](#)
- [Learning Programming with Verse](#)
- [Epic First Run Program](#)
- [Epic Developer Community](#)
- [Epic MegaGrants](#)
- [Studio Inkyfox: Omno](#)
- [Spiral House Ltd: Alan Wake Flashback](#)

Outside the syllabus - X things graduates should know in Unreal Engine

Author: Chris Murphy



 [Presentation Link](#)

Talk Summary:

In this presentation, Chris Murphy delves into key strategies to propel your students ahead of the competition and into impactful roles within the industry. Learn about profiling techniques, design optimizations, and innovative applications of tools being taught in Unreal Engine, now recognized as industry standards across all levels.

Additional Resources and Links:

- [Gameplay Tags Documentation](#)
- [Gameplay Ability System](#)
- [Balancing Blueprints and C++](#)
- [Intro to Niagara](#)
- [Niagara Fluids Fundamentals](#)
- [Niagara Fluids Reference Guide](#)
- [Fluid Simulation](#)
- [Niagara Emitter Settings](#)
- [Render Targets](#)
- [Decal Materials](#)
- [Niagara Editor UI Reference](#)
- [Deform Category](#)
- [Blend Material Functions](#)
- [Dot Product](#)
- [Control Rig](#)
- [Fundamentals of Sequencer](#)
- [Dynamic Binding in Sequencer](#)
- [IK Rig](#)
- [Scriptable Tools & Editor Mode Reference](#)
- [Scripted Actions](#)
- [Customizing Keyboard Shortcuts](#)
- [Data Validation Plugin](#)
- [Allar - UE5 Style Guide](#)
- [Performance, Profiling and Debugging](#)

Game Connectivity—Polishing Your Bells and Whistles

Author: Christen and Christopher Main

 [Presentation Link](#)

Talk Summary:

In this talk, we discuss game connectivity. The feel-good impact of a sledgehammer hitting the ground. The dopamine hit of a huge level-up effect. That burst of energy when a legendary loot drop hits the floor with that special sound. The adventure of clicking the "New Game" button as you enter a fresh new world to explore. These seemingly small but impactful features for your game can make all the difference.

Additional Resources and Links:

- [UEFN Boba Shop](#)
- [Common UI](#)
- [From Miniguns to Music](#)
- [UEFN: In-Game User Interfaces](#)
- [UEFN: Customizing UI Widgets](#)
- [The Right Tool for the Right Job - Vertical Third: Massive Gameplay Framework | Inside Unreal](#)
- [Vertical Third Website](#)
- [Vertical Third YouTube](#)

Additional Resources:

- ④ [Moving from student to 3D artist](#)
- ④ [FAQs for UE Educators](#)





Skillbuilding and Career Guides:

① UE Career Resource Guide:

This guide offers recommendations for showcasing your work, career advice, and valuable tips and tricks for Unreal Engine artists. You'll also find guidance on building portfolios, demo reels, and online presence, and gain insights into job opportunities, industry trends, and networking strategies. Stay updated with the latest techniques, access curated learning resources to enhance your skills, and unlock your creative potential in your Unreal Engine career.

② Creator's Field Guide to Emerging Careers in Interactive 3D:

We're experiencing a major shift in the way we work and communicate. We've moved from text and images to video—and now to a world where interactive 3D content is the norm. Far from being used purely for entertainment, interactive 3D is helping to simulate the real world in a meaningful way. This field guide on Emerging Careers and Skills in Interactive 3D is a roadmap for students, administrators, educators, and job seekers that covers the entry-level Unreal Engine skills needed to join this new workforce.

UEFN:

Talks

- [**UEFN: Making the Jump from Blueprints to Verse**](#)

This immersive session dives deep into harnessing the immense potential of UEFN and Epic's cutting-edge Verse programming language. This session is specifically tailored for Unreal Engine users who are familiar with Blueprints or C++ and are eager to bring their skills to the dynamic UEFN ecosystem.

Tutorials & Guides

- [**UEFN Virtual Exhibit - Educator Guide:**](#)

UEFN is growing every day with new and interesting ways for educators to bring it into their classrooms. In this guide, our partners at Cleverlike share how they set up a virtual exhibit for students to move through and learn about important works of art.

- [**Delivery Fuss UEFN Tutorial**](#)

Delivery Fuss tutorial showcases the complete process of creating this game from start to finish, using many of the features that the UEFN environment provides.

- [**Complete UEFN Map Publishing Guide | Create and Launch Your Fortnite Map in Unreal Engine**](#)

Publish a UEFN map within the Fortnite ecosystem in under eight minutes with this lightning-fast tutorial.

Documentation

- [**Composing with Fortnite Patchwork**](#)

Patchwork is a suite of devices for Fortnite Creative and UEFN that enable you to create and manipulate music and visuals. Start jamming and making music with Fortnite Patchwork!

Islands & Samples

- **Sample Project and Feature Example Templates for UEFN**

Templates designed to help you learn more about workflows while demonstrating design concepts. These are starting points for your own project, or a hands-on way to quickly learn how to implement one or more features in UEFN or Verse.

- **Patchwork x Yacht Heist**

Learn to make a dynamic and adaptive soundtrack for a single player stealth game using this template or dive right into the game and see how the team from Epic put together this experience.

- **Patchwork Music Gallery**

Walk through a virtual art gallery as you learn the ins and outs of patchwork, how to link simple devices together, and, by the end of the experience, start a jam session with you and your friends and colleagues. This is a fantastic first step for onboarding onto the new feature.

Unreal Engine:

Talks

- [**Procedural Content Generation Tools in UE5: Overview and Roadmap**](#)

The new Procedural Content Generation tools are growing every day in UE5. In this talk they look at where we are and where we're going with the future of this exciting new design method.

- [**Against the Trend: Using Realistic Engine for Stylized Games**](#)

Join Exalted Studio's Artistic Director and CEO as he unfolds how he has used Unreal Engine 5 to create a distinctive, stylized game, Big Helmet Heroes, which stands in contrast to the current trend of hyper-realistic games. Florian de Gesincourt will take you through the evolution of the Big Helmet Heroes IP, from the first mobile game with its technical restrictions to the recent production for PC and consoles.

- [**Maximizing Your Game's Performance in Unreal Engine**](#)

Everyone on your team should be able to gauge the performance impact of their work. In this session, Unreal Engine Evangelist Ari Arnbjörnsson uses the new built-in tools of Unreal Engine 5 to find nasty performance traps and bugs he deliberately planted in his demo project before the presentation.

Tutorials & Guides

- [**Unreal Engine Essentials for Games | Onboarding Collection**](#)

Unreal Engine can be a massive beast to tackle, but our onboarding collection takes you through all the ins and outs to get you up to speed quickly so you can start integrating it into your class structure without worry.

- [**Your First Hour in Unreal Engine 5.2**](#)

In this course from Epic Online Learning, we cover the high-level basics of Unreal Engine 5.2. Learn to create new projects using project templates and add custom or premade assets with the Content Browser. Easily add Actors to levels and modify their properties with the Details panel; gain control of environmental lighting and effects with Lighting Actors; and create Blueprint Actors and use the Blueprint Editor to control them. Finally, learn how to package your projects for playtesting and sharing.

- **[Chaos Destruction Learning Path](#)**

The Chaos Destruction system is a collection of tools that can be used to achieve cinematic-quality levels of destruction in real time. In addition to great-looking visuals, the system is optimized for performance, and grants artists and designers more control over content creation and the fracturing process by using an intuitive non-linear workflow and a new asset type called Geometry Collections. This learning Path will help you understand the fundamentals of the Chaos Destruction system through video tutorials and examples.

Documentation

- **[Unreal Engine for Unity Developers](#)**

This official documentation shows the differences in vernacular and setup between Unreal Engine and Unity. With this, anyone can find everything they need to get comfortable and start developing like a pro.

- **[Using Nanite with Landscapes](#)**

One of the big new features with 5.3, your Landscapes can now be optimized with Nanite! Learn what you need to do to enable this new feature and pass on the computation savings to your students!

- **[Source Control & Remote Team Collaboration](#)**

In this session, we'll discuss how to implement and leverage the various Source Control applications for use in UE5. We will focus more specifically on leveraging source control for remote teams and best practices for ensuring compliance and security.

- **[Epic Education Guide to Version Control](#)**

This is a guide to using version control with the Epic ecosystem (Unreal Editor, Twinmotion, etc.) for secondary and post-secondary education faculty and staff. It does not purport to be a complete guide as individual needs vary from course to course, institution to institution. Instead, this document will present the different options and strategies available and provide reference to technical documentation for the install and setup of those options.

Samples

- **[Electric Dreams Environment](#)**

Released for GDC 2023, this environment shows off some newer features like the PCG graph, Substrate, Lumen, and Nanite. This is still a wonderful project to dissect and, with changes being made to the underlying systems being made with each engine version, it's a great thing to revisit to see what's been improved to streamline workflows.

Social:

- ↗ [Unreal Slackers](#)
- ↗ [Unreal Educator Community](#)
- ↗ [Unreal Facebook Group](#)
- ↗ [Unreal Engine YouTube](#)
- ↗ [UEFN Community](#)



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