



VR DEVELOPMENT WITH UNITY

# Academy of VR

Online Unity Course | 10 weeks | Part Time

[academyofvr.com/course](http://academyofvr.com/course)

## Course Overview

The 10-week VR Development with Unity course is focused on equipping you with the skills that apply directly to professional virtual reality development.

Students learn how to create VR apps using C#, Unity and the industry standards of VR design. Students will create a personal VR project as a portfolio piece or project for a client. Instructors will always be professionals working in the virtual and augmented reality industry committed to helping you learn to build VR apps. Students leave this course prepared to create their own VR apps from the ground up.

## Weekly Outline

The course meets **twice weekly for 10 weeks**:

1. Online Class (3 hours)
2. Personal VR Project (1 hour)

In section 2, the course dedicates a separate focus on your own project. Students will have a one on one session together with the instructors focused on solving specific problems and building a personal VR app. At the end of the course, there is a 2 week period for finalizing your VR project and connecting with job opportunities in the VR industry.

## Course Goals

By the end of the course, you will be able to:

- Create your own VR idea from scratch in Unity
- Design for different VR platforms
- Manage production of VR projects
- Effectively design apps around the benefits of VR
- Be able to collaborate on Unity VR team projects
- Connect to a powerful network in the VR and AR industry

## Prep Course

Perfect for learning programming or Unity fundamentals! Set yourself up for success with our 2-weeks of guided Unity tutorials completed from anywhere at your own pace. The first step in creating virtual reality apps, is laying the foundations in Unity and C#. The prep course will introduce basic features and get you comfortable with the tools you'll be using throughout the course. Ready to get started? Email support@academyofvr.com and we'll send you the list of introductory tutorials!

## Course Prereqs

**This is a beginner friendly course, no previous experience is required.** Students who have no programming experience can take the **New to Coding Stream**. We will provide additional course preparation material to learn the fundamentals of programming and C#.

All students with programming experience, may take the **Developer Stream**.

## About Us

From humble beginnings on an Oculus DK1, collectively a small team of instructors from the virtual and augmented reality industry formed Academy of VR. Since our inception, Academy of VR has taught more than 20 local courses and over 500 people how to begin building VR apps in Unity. We have helped students kickstart start VR projects, helped companies design internal applications and inspired people to begin in this exciting industry. The VR Development with Unity course takes Academy of VR's curriculum and makes it accessible to students across the world. We're looking forward to seeing what you create!

# Class 1: Intro to VR Development with Unity

## CONCEPTS:

- Getting started in Unity
- Basic Unity and scripting knowledge
- Structure of Unity files and workflow
- Unity layout and navigation
- Course resources
- Unity's resources
- Overview of the VR AR industry

## OUTLINE:

- Course welcome
- Unity file structure and project setup
- UI (3D navigation, layout and windows)
- Introduction to scripting in Unity
- Creating a 1st and 3rd person camera
- Creating a character controller
- Introduction to the student community
- Unity's resources

# Class 2: Interactive VR Elements and User Input

## CONCEPTS:

- Introduction to C# programming
- C# Syntax
- Working with 3D objects
- Using prefabs, parenting and colliders

## OUTLINE:

- Learning C# programming
- Using C# in Unity
- Using prefabs
- Parenting objects
- Using colliders
- Unity Challenge: Target shooting game

# Class 3: Mobile VR

## CONCEPTS:

- Mobile VR project setup
- Core Mobile VR controller mechanics
- Controller interaction, input and selection
- Designing for Mobile VR
- Personal project introduction

## OUTLINE:

- Intro to Google VR tools and Oculus SDK
- Setting camera and controller input
- Input and selections with your Mobile VR controller
- Create a design document for your personal VR project

## Class 4: Intro to Vive and Oculus

### CONCEPTS:

- Vive and Oculus project setup
- Using the Vive and Oculus controllers
- Interaction, input and selection
- Create your first Vive or Oculus app

### OUTLINE:

- Intro to SteamVR and the Oculus SDK
- Set camera, play area and controller input
- Making selections with the controller
- Grabbing, moving and throwing 3D objects
- Building scenes for the Vive and Oculus

## Class 5: UI/UX in VR

### CONCEPTS:

- User interface (UI) in VR
- Changing the look of the controllers
- Understanding event triggers
- Navigating scenes in Unity
- Lighting for high VR performance

### OUTLINE:

- Intro to UI in VR
- Replacing the controller with a 3D object
- Creating a menu system
- Detecting menu clicks and button presses
- Highlighting interactive elements
- Unity Challenge: Create a 3D menu system

## Class 6: Movement and Advanced Interaction

### CONCEPTS:

- Core VR movement mechanics
- Advanced interaction mechanics
- Practice using mobile VR controllers
- Practice using the Vive and Oculus controllers
- Designing for the Vive and Oculus

### OUTLINE:

- Creating teleportation
- Creating way-points
- Creating constant movement
- Creating VR buttons, levers and triggers
- Design Presentation: Designing for room-scale VR

# Class 7: Building an Interactive Application

## CONCEPTS:

- Bring movement, interaction and UI systems together
- Advanced input from the VR headset and controllers
- Optimizing your VR app

## OUTLINE:

- Combining interactive elements
- Physics based interaction
- Input through raycasting
- Optimizing assets for VR
- Common performance problems
- Unity Challenge: Build an interactive app like Job Simulator

# Class 8: Augmented Reality Development

## CONCEPTS:

- Augmented reality for iPhone and Android
- Intro to Apple's ARKit
- Intro to Microsoft Hololens
- Version control with Unity
- Understand VR project management
- Incorporating user feedback

## OUTLINE:

- Intro to augmented reality development
- Version control with Unity
- Setting up tests for user feedback
- Unity Challenge: Finish Job Simulator interactive app

# Class 9: Animation, Effects and VR Audio

## CONCEPTS:

- Exploring animation and effects in Unity
- Exploring lighting and rendering in Unity
- Effectively using audio in VR
- Bonus development tools and resources

## OUTLINE:

- Using animation and effects in Unity
- Using 3D sound in Unity
- Useful tools in SteamVR, the Oculus and Google SDK and additional resources
- Unity Challenge: Build an architecture app

# Class 10: Publishing Your VR App

## CONCEPTS:

- Publishing VR apps that perform consistently at 90fps (desktop) or 60fps (mobile)
- Using testing methods
- Building for different platforms
- Publishing and monetizing your app
- VR Resources going forward

## OUTLINE:

- Publishing apps in Unity
- Monetization strategies
- Next steps and valuable resources
- Help from instructors solving bugs and problems in your personal project
- Unity Challenge: Finish architecture app

# Weeks 11-12: Personal Projects

It doesn't stop there! Building on the coding concepts and technologies learned in the first 10 weeks, the focus shifts to refining and completing your own personal project. Finish the course section by submitting your project for feedback to instructors, peers and our VR community. You'll also have a chance to test other's projects from the class.

# Special: Guest Presentation

Each cohort will have 3 guest speakers from the VR industry! Professionals from different organizations will share their experience working on commercial releases for large companies and VR studios, independent contracts or self-publishing original content on platforms like Steam.

# VR Headset & Laptop Loans Available

Need a VR headset or laptop for the course? We've got you covered. To loan hardware for the course email support@academyofvr.com with the subject "VR Hardware Loan"



**Google Cardboard:** Free with course



**Google Daydream:** Available



**Samsung GearVR:** Available



**HTC Vive:** Available



**Oculus Rift:** Available



**MSI VR Ready Laptop:** Available



## Our Community

We have an online community of over 200 VR and AR developers. The community is open to helping you solve technical problems and collaborate to propel your VR and AR projects forward!

 **200+**

## Start Dates

Visit [academyofvr.com/course](http://academyofvr.com/course) for the start dates of the next cohort.

## Industry Mentorship

Job searches for VR developers were up over 800% in 2016. We believe VR and AR technology is set to become the next computing platform. Hundreds of new consumer and business apps will become part of our work, play and everyday life. We have an industry mentorship program, if your goal is to make a career transition into the VR or AR industry, we can help you get there!

## Course Requirements

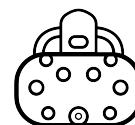
**Mac or Windows.** You **do not** need a VR headset for the course. Beginner friendly, no previous experience required.



## How to Enroll

To reserve your spot for the course, visit [academyofvr.com/course](http://academyofvr.com/course) and select your time zone (eastern or pacific). Place a \$75 deposit through Eventbrite to officially enroll in the course.

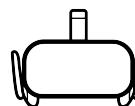
## Supported Tech



Vive



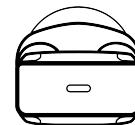
Cardboard  
& Daydream



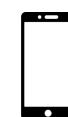
Oculus



Gear VR



PSVR



Augmented  
Reality



Microsoft  
HoloLens



ARKit



iPhone



Android

## Course Price

The course price is **\$2500**. Payment plans are available, contact us for information.



## New to Coding Stream

Interested in learning how to code? The VR Development with Unity course will introduce you to C# coding in an intuitive and visual way. Each week our instructors will help you understand the fundamentals of creating an interactive experience and by the end of the program you'll be creating your own VR apps.

## Developer Stream

If you have programming experience you're going to be diving into the code from day 1. You'll begin building VR apps quickly and meet a community of other developers. We'll focus on specific problems to solve and provide you with the pieces of C# that can help. Ultimately, you'll understand the structure of how C# works with Unity on a very deep level.

## Contact Us

Contact us at [support@academyofvr.com](mailto:support@academyofvr.com) or visit our website [academyofvr.com](http://academyofvr.com).

## About our Courses

Courses taught with ❤️ from Vancouver, BC  
Facebook: [@Academy\\_of\\_VR](https://facebook.com/academyofvirtualreality)  
Twitter: [@Academy\\_of\\_VR](https://twitter.com/academy_of_vr)

# Academy of VR

Enroll at

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Want to get in touch?

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