



PROGRAM SYLLABUS

# VR Developer Foundations

8-Week Live Online Course

# Program Overview

XR Terra is a Unity Certified training partner. Unity training partners are approved based on their expertise, focus on quality education, and commitment to providing the highest level of training available.



**AUTHORIZED  
Training  
Partner**



## VR Developer Foundations

**8-WEEK PROGRAM**

This 8 week learning journey with live instruction and course support, will get you started with everything you need to build Unity Projects in XR. The course will cover a formal introduction to C# programming alongside group activities and projects designed to engage you in your learning experience. You will learn the essential components of Unity's framework, Industry standards for version control, Visual Studio code editor, navigating developer documentation, working with assets, and structuring your projects for XR. After completing this course, you will be well prepared to take XR Terra's Industry Bootcamps for Augmented and Virtual Reality.





# Program Structure

This 8-week course includes live instruction twice a week with group exercises and co-working sessions.

## COURSE EXPECTATIONS

- › 1-3 hour live instruction + 1 optional 2 hour workshop weekly
- › 1-2 hours of self-study per week

Office hours are held each week and posted by the course facilitator

Discussion forums for questions to instructors and student services advisors

Continued alumni support and regular workshops post course completion

## Grading

This is a Pass / Fail program. In order to pass this program you must complete the following:

- › Attend live sessions; maximum of 2 excused absences during the program
- › Complete all assignments and group exercises
- › Complete all projects in a timely manner following the guidelines



## Student Learning Outcomes

- Familiarity with industry standard version control and GitHub for Unity
- Understanding of basic programming concepts and C#
- Confidence navigating the essential components of the Unity framework
- Knowledge of how to problem solve and study like a Unity and C# developer
- Experience creating Unity projects and bringing them into virtual reality

## A Career in XR

After completion of the VR Developer Foundations, you will get access to join XR Terra's Alumni and future Industry Hackathons.

XR Terra's Industry bootcamps prepare you with the portfolio & skills need to join the competitive XR Industry & Jobs Market.



After successful completion of the course, students will be awarded a digital certificate from XR Terra and a digital badge to share on LinkedIn.



# Program Prerequisites

- This course is open to beginners and assumes limited or no programming experience.
- Students with a background in business or technology such as Developers, Product Managers, Operation Managers are also encouraged to take this course to help establish an understanding and appreciation for XR.



## Materials and Supplies

### REQUIRED HARDWARE

- Mac or PC with Internet Connectivity
- Oculus Quest (Suggested)
- Scroll Wheel Mouse (Suggested)
- Webcam



# Program Schedule

8-WEEK PROGRAM

This is the perfect foundational course for Unity and C# scripting. Through collaborative in-class experiences and short exercises you'll learn key Unity development concepts. In 8 weeks you'll create custom scripts, learn about prefabs, trigger animations, and use coroutines to execute code over time. By the end you'll be comfortable writing scripts and have a solid VR portfolio piece.

## VR Foundations Developer

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- WEEK 1 + 2** Introduction to the Unity 3D engine. Construct your own character out of primitive objects and materials. Write a C# script and trigger custom functions.
- Intro to objects, transforms, and hierarchy
  - How to apply colors and textures to an object using Materials
  - Intro to C# and custom components
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- WEEK 3 + 4** Make your very first VR Scene, with locomotion and grab interactions. Learn about Unity's collision and trigger detection, and instantiate prefabs through code.
- Use the XR Interaction Toolkit to set up locomotion in VR
  - Learn how to create, edit, and instantiate Prefabs
  - Use Unity's physics system to detect collisions and triggers
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- WEEK 5 + 6** Explore more advanced coding techniques, such as coroutines and loops that allow you to run code over time. Discuss the advantages of the Singleton script architecture, which in combination with lists and arrays enables management of prefabs through code.
- Begin the VR Fabricator, the final project that allows the user to customize an object before grabbing it to bring into the scene
  - Implement a button that destroys all spawned objects over a short period of time
  - Use Joint components and a procedural skybox material to create a VR Slider that changes the time of day
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- WEEK 7 + 8** Create custom animations from within Unity, and trigger them through code. Set up hands that animate when you press buttons on the VR controller. Present the VR Fabricator you made!
- Hand models that animate from controller inputs by listening to Input Action events
  - Learn to record your VR experience for your portfolio or demos
  - Present your VR Fabricator to your peers







For questions, please email [admissions@xrterra.com](mailto:admissions@xrterra.com)

# XR TERRA