

# A Foundational Journey into Virtual Production

In the rapidly evolving field of virtual production, effective colour management is critical to achieving high-quality results on LED volumes. Whether you're calibrating for a live audience or ensuring accurate in-camera rendering for live views or post-production, understanding and managing the colour pipeline is essential. This course is designed to equip educationalists with the foundational knowledge and practical skills needed to embark on their virtual production journey with confidence.

## Course Overview:

This course offers a comprehensive introduction to the principles and practices of colour management in virtual production, with a specific focus on LED volumes. Participants will explore the crucial relationship between on-set lighting, LED volume displays, and in-camera colour balance, all of which are vital for creating footage that can be seamlessly integrated into post-production workflows.

By the end of the course, participants will have a solid understanding of colour theory, the tools used for colour management, and the steps required to calibrate an LED volume. While this course is not designed to create colour management experts, it will provide participants with the essential building blocks to develop their expertise through practical application and further learning.

## Part 1: Understanding the Mechanics of Colour

The first part of the course introduces participants to the fundamental concepts of colour and the technologies used to measure and control it.

- **colour Spaces: What They Are and Why They Matter**  
An exploration of different colour spaces and their roles in virtual production.
- **The Concept of Neutral: Understanding White**  
A deep dive into how white balance affects overall colour accuracy.
- **Metamerism: How Light Alters the Perception of colour**  
Understanding how different light sources can change the appearance of colours on physical objects.
- **The Importance of Curves in Colour Management**  
Learning about the role of gamma curves and colour grading in achieving desired visual results.
- **Tools of the Trade: Measuring and Transforming Colour**  
An overview of the essential tools and technologies used in colour management,

including spectrometers, colourimeters, and LUTs.

## **Part 2: Practical Application of LED Volume Calibration**

In the second part of the course, participants will apply the concepts learned in Part 1 to the real-world task of calibrating an LED volume for accurate in-camera results.

- **Creating a Colour Profile for the LED Volume**  
Step-by-step guidance on measuring the LED volume to generate an accurate colour profile.
- **Matching On-Set Lighting with LED Volume Displays**  
Techniques for adjusting the LED volume to ensure consistency between on-set lighting and the camera's output.
- **Validation: Ensuring Accuracy in the Final Output**  
Methods for validating that the calibrated LED volume produces the correct colours as seen through the camera, ensuring the footage is ready for post-production.

## **Hands-on Learning in a Real-World Environment**

To enhance the learning experience, the course will be delivered in your new Volume studio space. This allows participants to engage directly with the tools and techniques in the same environment where they will be applying their skills, ensuring that the knowledge gained is immediately relevant and practical.

## **Conclusion: Building a Foundation for Expertise**

Participants will leave the course with a solid foundation in colour management, equipped with the knowledge to calibrate LED volumes effectively. This course will enable participants to take the first steps toward mastering virtual production colour management, setting the stage for continued learning and professional growth.

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The course has been designed by ColorQ and Media Engineers for delivery to the facility staff in a single day at the facility using the new LED volume studio. It can additionally be delivered to students at additional cost, part two could be presented as demonstration without the hands-on practical experience for a larger audience.

The public cost for the course is £2,000, with the hands-on experience tailored for up to 8 participants.