



Aura™



LEADING DENTISTRY SCHOOL EXPANDS REACH WITH TECHNOLOGY

As well as augmenting the experience of students attending in-person at their Bloomsbury premises thanks to its cutting-edge teaching facilities, the Eastman Dental Institute has been able to quickly expand into the online global delivery of its post-graduate courses.



Innovative connected
clinical workstations



Expanded online
teaching capability



Video conferencing
technology



BUSINESS CHALLENGE

The Eastman Dental Institute (EDI) at University College London is a global leader for postgraduate dentistry and a world-class research centre. The Institute moved into new premises at the Rockefeller Building, a Victorian property in Bloomsbury, which was significantly reconfigured and refurbished to provide a home for new teaching labs, surgeries, meeting rooms and a post-graduate resource centre.

The EDI's facilities stretched across four floors in the Listed building; this status meant that knocking down walls to create open spaces was not possible, so the brief was to use

technology as an enabler, connecting people and content in real time, between rooms and across floors.

The needs of three discrete groups were paramount. The space had to enhance students' learning and research with cutting-edge tech and design. Teaching staff needed to be able to teach multiple post grads from one central point, with enough real-time oversight to observe and guide each of them individually. Finally, the professional staff required office space and meeting facilities designed for modern, collaborative working practices.

SOLUTION

Key to this project was the set-up of the laboratories on the fourth floor, where most of the teaching and learning takes place.

For students, there are 71 individual clinical workstations with a workbench and a mannequin head to mimic real-life practice. Each is fitted with an overhead dental microscope and Marshall Electronics 4K live camera and HP 24" FHD monitor – students can also connect their own laptop either manually or wirelessly, and switch between their own monitor and the information being shown on the lecturer's display using a Crestron push button controller (although this can be overridden by the master control). These workstations enable every student to receive bespoke guidance and demonstrations, along with the option to record their work.

The lecturer's station has a display with a camera, to allow practical demonstrations. A Crestron TSW-1060-B-S touch panel enables them to control what is shown on every monitor in the room. A key feature of the Crestron NVX AV over IP solution is that it not only allows flexible switching between different visual and audio systems within the same room, but also between different rooms and across multiple floors.

This flexibility has really enhanced the teaching within the Institute, as lecturers on the fourth floor can speak directly to the dentists who are actively working on patients on the second floor via a Dante audio over IP Beyerdynamic Unite AP4 microphone system. The dentist in the surgery can stream a live visual feed to all 71 students at once with almost zero latency, giving them real life, engaging experiences without any disruption to the patient. The visual is taken using a GoPro Hero 5, converted for microscope mounting and an overhead PTZ camera.

For professional staff, conference equipment has been added to meeting rooms located on the second and third floors, comprising NEC UHD displays, Huddly IQ cameras, and Crestron Smart sound bars. Laptops can connect to the displays via HDMI, display port and also wirelessly via Crestron Air Media. The camera connection is simply connected via USB through a Crestron flip top table with flip top cable cubby allowing BYOD (bring your own device) easy connectivity. The system is controlled using a Crestron MPC3-201-B push button controller mounted to the meeting room table.



The new facilities allowed us to seamlessly transfer to online teaching in many subject areas. Indeed, we have been able to advance our educational strategy by several years in a matter of months, as we are now able to provide teaching in 4K around the globe. This has been aided by the software and hardware being intuitive and easy to use, a major bonus for staff and students with perhaps a limited appreciation of contemporary technologies.



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