



Keele University

CENTRAL SCIENCE
LABORATORIES

**New state-of-the-art science
building**





Project Name:

Central Science Laboratories at
Keele University

Start Date: July 2019

Completion Date: August 2019

Approximate Value: £275,000



Expanding scientific education and research

Keele University's Central Science Laboratories (CSL) is a new, four-floor, state-of-the-art building, for both postgraduate and undergraduate students.

Part of a £45m investment by Keele University into its science facilities, it includes open plan teaching and research laboratories alongside student social learning spaces to

create an environment that meets the educational needs of its students and grow its research capabilities.

Inside the CSL building are new chemistry and pharmacy wet laboratories and flexible dry laboratories for courses in geography, geology, environment, forensic sciences and life sciences; laboratories for physics and

astrophysics; and IT labs for subjects including mathematics and computer science.

There are also breakout social learning spaces, open plan teaching and research areas, and IT rooms – with the critical aim to bring together practical teaching and group working among undergraduate and postgraduate students.

“These new facilities provide excellent learning spaces and state-of-the-art equipment for our students, giving them access to some of the best laboratories and science teaching environments in the country”

Professor Jonathan Wastling

Pro Vice-Chancellor and Executive Dean of the Faculty of Natural Sciences

Keele University

Building-wide content distribution and a blueprint for the future

The £250K audiovisual contract awarded to Pure AV required the provision of a configurable solution to work alongside the flexible set-up of the learning spaces, with high-quality sound and visual reproduction and an easy to understand interface.

A system which could be expanded at a later stage and also distribute HD signals to any endpoint was essential and a critical factor in the decision to implement a solution utilising AV over IP.

The installation covers a number of open learning spaces over four floors.

Large-format displays are located in each learning space for the delivery of learning content.

All displays are run via Wyrestorm video over IP, each display has its own IP receiver allowing for flexibility as to what content each screen displays.

Every floor comprises of different teaching zones, each of which has a teaching point, a digital microphone and ceiling speakers. IR Induction Loop transmitters ensure the space is as accessible as possible for all users.

The completed solution allows for zones to be used individually or combined with others, depending on the required capacity.

A 'main' AV point with a 10" Extron touch panel allows users to configure the zones as they want to use them. These AV points also comprise an AV rack which houses Extron Amplifiers, Extron DMP64 DSPs and Microphone Receivers.

“Keele has always adopted an innovative approach to teaching science both in the lecture theatre and in the laboratory.

The new CSL brings together over ten core science disciplines and will support both our existing high-class teaching but also as importantly allow us to develop our teaching methods through effective use of technology and working across disciplines.

The AV capability is core to this pioneering mission and, like the laboratories themselves, is leading the way for the UK Higher Education sector”

Paul Cartwright

Faculty Business Manager
Faculty of Natural Sciences
Keele University



Signage to support communication and wayfinding

Throughout the building, there are 20 flexible teaching locations and 90 screens, each of which receives content from an AV over IP receiver.

The screens in the main learning spaces are specified as professional displays, and when not in active teaching mode, the inbuilt media players are utilised to provide a simple wayfinding solution to assist both the staff and students.

Additional AV items in the building include a four-screen video wall in the main entrance and seven digital signage screens installed across the four floors.

The use of Extron Global scripter facilitated the programming of the system to deliver the required control. This, combined with the use of AV over IP provided the flexibility and simple management the University required.

The flexibility of the AV system has been an important design feature, and by keeping the control simple, allows academics the freedom to apply different teaching approaches, in turn enabling students to benefit from a variety of learning delivery styles.

Feedback from academic users

highlights the ease of use of the system. The simple, self-explanatory button controllers are straightforward to use, and the flexibility of the learning spaces create the opportunity to apply different approaches to learning content delivery.

The first large-scale AV over IP installation at the University, it has set a precedent for future projects.

“As with other projects, Pure AV clearly knew what they were doing and offered valuable advice to enhance out initial ideas”.

Paul Cartwright

Faculty Business Manager
Faculty of Natural Sciences



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