



## UNC Eshelman School of Pharmacy Extends AV Reach with Extron FOX Series Fiber Optic System

“Extron system commissioning engineers were very helpful in coming out to certify the switching and checking everything for us so the system was ready in time for the returning students.”

**Jim Stephens**  
Senior Systems Consultant  
Whitlock

The University of North Carolina's UNC Eshelman School of Pharmacy offers one of the top Doctor of Pharmacy, or PharmD, programs in the U.S. As a premier research and health sciences education facility, UNC recognizes the need to provide students with an exceptional learning experience. “Technology has shaped the way we teach, learn, work, and conduct business,” says Bob Blouin, Dean of the UNC Eshelman School of Pharmacy. “Through technology, we are able to engage students in the classroom as well as partners across the state and beyond to foster high-quality and meaningful interactions in real time.”

### Tight Timeline

The AV system needed to be upgraded and expanded to support and combine the best of traditional teaching methods with the latest technological advancements. A primary concern for the upgrade was to ensure high definition/high resolution content could be transmitted over significant distances. Additionally, to avoid disrupting the learning process, the new system had to be installed during the short 2011 summer break and fully functional before classes resumed in August.

To achieve these goals, Thorburn Associates Inc. designed a fiber optic system with Extron products for UNC. Fiber was selected because of the distances involved, space limitations, and signal immunity needs. AV and control signals needed to pass through existing conduit with other signals, including audio runs, microphone cabling, and additional signal types; multiple signals transmitted over a single fiber cable address this issue. For integration, Whitlock was selected to install this innovative application. According to Jim Stephens, Senior Systems Consultant at Whitlock, “Time was the number one crunch.”



**Extron® Electronics**  
INTERFACING, SWITCHING AND CONTROL

## Exceptional AV for Educating Tomorrow's Pharmacists

The campus-wide AV system ensures reliable transmission of high resolution content, leveraging UNC's high-level faculty at the Chapel Hill campus to successfully extend the PharmD program to students in remote locations. Extron FOX Series fiber optic products were the optimal choice for reliable, high performance signal distribution at Chapel Hill. When asked why the campus system was designed around an Extron solution, Associate Principal at Thorburn Associates, Derek Meares, explained, "We picked Extron because of the quality of the equipment and the support we get. We've always had really good design support, and know we can get help and follow-up from Extron. I'm not always so confident with some other manufacturers."

Whitlock installers, working in teams in order to meet the tight two-month deadline, retrofitted the main facility with an armored fiber optic infrastructure, and updated specific classrooms for digital and high-definition transmissions. The system is designed around a modular Extron FOX Matrix 320x fiber optic matrix switcher with FOX I/O 1616 MM 16x16 multimode fiber optic boards. Open slots on the matrix switcher allow for future system expansion up to a maximum size of 320x320. This layout allows management and monitoring of the connected rooms from a single workstation within the Tech Core area.

A video teleconferencing system is used to link the main campus at Chapel Hill with the two additional PharmD campuses in North Carolina: one in Elizabeth City and another in Asheville. The system is connected to the FOX Matrix switching system at the Chapel Hill campus to allow access from connected classrooms, auditoriums, and lecture halls. This solution provides UNC Chapel Hill with an all-digital switching and routing system for a wide variety of digital and analog devices.

## Supported Technologies

Individual classrooms and other areas can be linked to the FOX Matrix 320x. The fiber system enables reliable, high performance



**UNC Chapel Hill Tech Core: Single workstation allows AV system monitoring and control for connected locations.**

switching and distribution of various signals, including live and pre-recorded lectures, presentation data, HDCP-encrypted content, and subject matter from respected health organizations.

Extron FOX Series transmitters and receivers support a wide range of video formats and resolutions to allow the devices at the main campus to interface with the new fiber optic backbone. The system supports existing and new sources, including lecture-capture devices for recording class sessions, PTZ cameras, document cameras, PCs and interactive pen displays, DVD and Blu-ray Disc players, and connections for laptops and equipment brought in by guest lecturers.

## System Commissioning Ensured Pixel-Perfect Transmission

During the system commissioning process, engineers from Thorburn Associates, Whitlock, and Extron ensured that EDID communication, HDCP support, and scaler settings were properly configured for maximum flexibility and interoperability between devices. In addition to on-site commissioning services, Extron provided training to the integrator for insertion loss testing, which ensures optimal performance of the cabling infrastructure comprised of fiber optic cables, connectors, couplers, and splices, such as at Chapel Hill. "Extron system commissioning engineers were very helpful in coming out to certify the switching and checking everything for us so the system was ready in time for the returning students," says Stephens.

## AV Fiber Solution Spans Campus

The FOX Matrix 320x, FOX Series extenders, and fiber optic backbone at Chapel Hill ensure that the university can use existing equipment while also providing a flexible and expandable solution for the future.



**Classroom at Chapel Hill linked to the FOX Matrix 320x**

### Worldwide Sales Offices

Anaheim • Raleigh • Silicon Valley • Dallas • Chicago • New York • Washington, DC • Toronto • Mexico City • Paris • London • Frankfurt  
Amersfoort • Moscow • Dubai • Johannesburg • New Delhi • Bangalore • Singapore • Seoul • Shanghai • Beijing • Tokyo

#### UNITED STATES

+800.633.9876  
Inside USA/Canada

#### EUROPE

+800.3987.6673  
Inside Europe

#### ASIA

+800.7339.8766  
Inside Asia

#### MIDDLE EAST

+971.4.2991800