Built in 1975, the Claude Moore Health Sciences Library (HSL) is a hub for knowledge-sharing across the health sciences. As a 24-hour facility, this library is an ever-ready resource for students, faculty, staff, and healthcare practitioners.

The library and its dedicated staff have exhibited a commitment to sustainability leadership, including a UVA Green Workplace certification in 2018 and a previous energy efficiency retrofit in 2012. Building on these successful initiatives, the library collaborated with UVA’s Sustainability Services to undertake a Building Efficiency Program retrofit in 2019.

An assessment of the building’s program and systems suggested there was an opportunity to modernize aging equipment and controls. This included a direct digital controls (DDC) upgrade, equipment upgrades, new sensors, and new LED lighting fixtures. The library’s 24-hour study areas made this facility a prime candidate for a new, dynamic HVAC controls framework. The building’s lighting occupancy sensors and CO2 sensors were integrated into the HVAC system to provide responsive heating, cooling, and ventilation based on real-time occupancy. This allows the building to significantly reduce after-hours energy consumption.

The project reduced energy consumption by over 40% and introduced more than $100,000 in annual energy savings. System modernization also led to more comfortable and responsive spaces with fewer maintenance requirements.