

Sustainable by Design: How UWE's School of Engineering is Built for the Future

With a wide variety of plant life across its campuses and a total usage of renewable energy since 2016, UWE has a lot to be proud of in its sustainability efforts. The School of Engineering is the latest, and perhaps most impressive feat.



From the outside the industrial-meets-modern design is clearly visible.

Perpendicular walls and pillars with a rusty orange tone surround a black, glass-clad centre, creating a feeling of past merging with future.

Inside, a modern art vibe takes over. Plastic ammonites hang from the ceiling by futuristic steel coils. Earth tones, wood, and carpet give a certain warmth to the foyer. Posters calling attention to humanity's journey "from the Stone Age to the Space Age" hang proudly from copper pipe frames.

The School of Engineering has the science to back up its promises of sustainability and has won multiple British Construction Industry Awards. The need for electric lighting is lessened by the natural light let in by the glass roof of the central atrium. Windows

automatically open and close in reaction to temperature. Rather than old-fashioned air conditioning, a fancy negative pressure ventilation fan system sucks the hot air out when needed.

At the heart of the building is a hub designed for group study. This, along with a wealth of other features, was designed with student collaboration in mind. UWE holds discussion and working together very highly, and that's just one of the many reasons why this new building works so well.

Arguably the most exciting part is the Digital Engineering area, which focuses on preparing engineers of the future for the modern industrial revolution, Industry 4.0. With a million-pound government grant behind it, the technology is impressive, to say the least. Simulators, both on screen and in virtual reality, allow students to work with prototypes interactively and without waste. 3D printed plastic components produce minimal wastage and maximum results, especially when the assembly lines putting them together are automatic and have computer simulated virtual twins. The cyberphysical lab factories are modular, so hardware can be upgraded to fit technological innovation. On top of this, the technicians that instruct students are from both academia and industry, giving the best of qualification and experience that Bristol has to offer.

This technology isn't just open to engineering students, either. Societies often make use of the simulators, and creative students love to use the virtual reality cave to create collaborative work, which just goes to show how widely applicable the benefits of this step into the future is.

For us as a species to progress into the future that we dream of, adaptability is key. What's clear from the new School of Engineering building is that UWE understands that. This

building, crafted with sustainability in mind from the aesthetic to the science, acting as a collaborative space for the next generation of engineers, is the perfect stepping stone from the modern age to the space age.