



The Barrett Centre for Technology Innovation (Barrett CTI) received LEED-Platinum certification in April 2021. The 93,000 square-foot facility was created to spearhead a new model of education, one that omits traditional classrooms for cutting-edge technology zones, interactive demonstration areas, and open-concept gathering spaces. The dynamic Barrett CTI is central among Humber’s campuses, creating a new community hub for students, staff, faculty, industry partners and community members to gather, create and innovate.

Sustainability was an integral part of the design and construction of the Barrett CTI. The facility prioritized passive strategies and extensive energy conservation measures, including high-performance building envelope, natural ventilation to supplement mechanical cooling and a 700 KW-DC solar installation on an adjacent building resulting in net-zero energy. The building boasts floor-to-ceiling windows in the atrium, illuminating the spectacular space with an abundance of natural light and views of the surrounding community while maintaining an average window to wall ratio of less than 40 per cent. Using a conserve-first approach, the building was designed to operate with an annual energy use intensity (EUI) of less than 100kWh/m². The Barrett CTI is also designed to integrate with Humber’s low carbon District Energy System, which will further reduce EUI and greenhouse gas (GHG) emissions upon completion.

The Barrett CTI was designed to enrich the lives of students, staff, faculty and the surrounding community. The unique cantilevered structure, colourful interior and accessible rooftop courtyard differ from standard LEED projects which tend to result in box-like, bland forms. Occupants’ health and wellbeing will benefit from enhanced air quality, ample daylight and the use of natural, non-toxic materials with long lifespans. As an educational institution, thoughtful design pieces were implemented, including sheer panels that showcase the buildings’ interior elements, optimized to function as teaching tools for students and the community.

As one of the largest net-zero buildings in Canada, the Barrett CTI is a shining example of Humber’s leadership in sustainable campuses. The world-class technologies used to design and construct the facility, along with the technologies situated inside the building, provide an opportunity for students to immerse themselves in future-focused experiential learning opportunities, mending the gap between education and real-world scenarios.



Photos left and right: Scott Norsworthy



Photo: Humber College

Platinum Rating Achieved

Sustainable Sites	21/26
Water Efficiency	7/10
Energy & Atmosphere	26/35
Materials & Resources	7/14
Indoor Environmental Quality	11/15
Innovation in Operations	5/6
Regional Priority	4/4
Project Totals	81/110

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