Next time you press an elevator button to take you to the top floor, take a closer look. That button, with its integrated circuitry, might have been designed by George Brown College (GBC) students. Right Angle Metal Fabricators manufactures elevator fixtures, including the panel which contains the elevator’s control buttons. Looking to expand its market share, the company wanted to manufacture the whole control package—not just the panel, but the complete elevator control button assembly.

George Brown’s leading-edge technology, including a 3D printer and circuit-board fabrication technology, supplied the resources Right Angle needed to realize its concept. Right Angle partnered with George Brown College to design and build a novel prototype button-circuit combination to be integrated into Right Angle’s existing and custom elevator control panels.

Professor Paul O’Brien explains the design-development process: “Our students worked through iterations and produced functioning models using our 3D printer. Students created the designs and ProE files so that the switches can be injection molded.”

The major challenges are to ensure that the finished design is affordable, reliable and accounts for possible damages. “The design has to be able to withstand harsh and abusive use,” says O’Brien. GBC’s finished prototype met these challenges, as well as the tight regulations governing transportation devices.

As a result of the collaboration, Right Angle now has a design—prototyped and tested at GBC—which can be used to manufacture its switches.