Inventing Future Technologies Inc.—IFTech for short—is a start-up from Oshawa, ON, who had been developing ARAIG, a wireless, multi-sensory, multi-directional, immersive wearable suit for gaming and simulation training industries. Incorporating a number of devices, ARAIG provides a 7.1 surround sounds system, vibration, pressure, and resistance feedback for wearers, adding a new level of immersion beyond sound and graphics—basically allowing users to “feel” what’s happening in the virtual world.

The possibilities for such a product doesn’t end with gaming. Even the Canadian military have expressed interest in the product as a hyper-realistic way to train and simulate combat.

“The idea is that you can finally feel what it’s like to be within any virtual environment,” says Brodie Stanfield, co-CEO and founder of IFTech Inc. “For gamers, you really feel what’s happening—whether that’s a voice to your left or a hand on your shoulder. For training and simulation, it means being as close to the real thing without the danger or risk.”

When they came to George Brown, IFTech founders and father/son team, Michael and Brodie Stanfield had a proof-of-concept model, having worked with Durham College on the vest’s electronics, while their online community advised on the look and feel. What they needed next was much more tactile.

“You only have so much expertise,” Stanfield says. “We knew we could get so far on our own, but that next step getting actual [fashion and design] experts to hone in on issues, finalize the design specs and fill in the gaps.”

Two Fashion Studies students, Holden Vetro and Savannah Allmin, were recruited to undertake the design challenge of making the ARAIG vest washable, breathable and per specific aesthetic requirements. They were supervised by principal investigator and faculty member Zoran Dobric.

“Our research started with sizing and fit, fabrics and materials, supplier and contractor availability,” says Dobric. “Next stage was product development design, pattern making, then making the actual samples, [along with] a spec package.”

“The research process was excellent—every week, we were excited for the next step,” Stanfield says. “The research was open and collaborative—we brought our vision, the researchers brought their expertise. We ended up learning so much.”

This type of research is a growing field for the college. “Wearable technology has quickly evolved from impractical and futuristic runway collaborations toward the commercial production of garments with smart textiles, micro sensors for bio feedback and other embedded technologies,” says Marilyn McNeil-Morin, Chair of the School of Fashion Studies. “Over the past decade this field has exploded, [resulting in a wide variety of] technology at more affordable consumer price points.”

“IFTech is a great example of the next level of wearable technology,” adds Dobric, for the diversity of market uses it represents. “It can be implemented in both entertainment and gaming industries, as well as simulation and training.”

The result? After many iterations and pattern prototypes, IFTech now have product specifications, and have begun the search for a manufacturer. The company also recently won the Durham region of the Spark Ignite Competition, taking home a prize of $25,000.

What’s next for the company? “Just showing the world what we’ve got,” Stanfield says.