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### Introducing SAIT School for Advanced Digital Technology.

Our new hub for future-proof learning embraces the technological transformation that's shaping tomorrow's careers. Hands-on training for the digital world.

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## Constructing the future

How digital technology is changing the way we learn and work in construction

Nearly every sector in Calgary has felt the effects of COVID-19. The construction industry is no exception. Companies are enforcing physical distancing, investing in personal protective equipment and taking the time needed to safely complete jobs.

But those working in the virtual side of construction are adapting seamlessly to the “new normal.” Building information modeling (BIM) — which involves creating 3D models of buildings — and virtual design construction (VDC) are two areas proving particularly resilient during a time of more digital and remote work.

Instructors at SAIT believe that to better prepare tomorrow's trades workers, this technology should be reflected in the classroom — and they're taking the steps to make it happen.

A better way of teaching the trades

Pipetrades instructor Fred Bretzke and his colleagues believe the future of teaching construction is digital.

Traditional construction labs give students hands-on experience as they construct a 10-foot by 10-foot segment of a house using real materials, but limited space means it's harder to see the bigger picture. Incorporating 3D modeling and AR software into the learning experience enables students to produce to-scale miniature and virtual models of residential and commercial properties before they do the real thing.

“This kind of technology builds more comprehensive understanding for the student,” says Bretzke, who in addition to teaching at SAIT works in the industry.

With 3D modeling, classes can see how the plumbing for a whole house comes together using G.I. Joe-sized fittings made from the correct materials. Creating an AR holographic overlay using special glasses brings the model to life in an interactive way.

“Using AR, students can create a building and then virtually step inside and walk through it,” says Bretzke.

The biggest advantage of a more digital classroom? The same technology is being used in industry, on real jobsites. Construction projects use AR overlays as a way of checking for accuracy and sharing data between trades. Introducing students to both concepts early on will give them a clear advantage as they enter the workforce.

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“I'm already incorporating this technology into my teaching and students love it,” says Bretzke. “They want to see more of it.”

This fall, Bretzke plans to continue familiarizing students with 3D and AR capabilities through both in-class and online learning opportunities.

*Across the construction industry — and beyond — the world has changed, but SAIT is one step ahead. A SAIT education equips students with the mindset to lead and with the skills — technical and human — to create, to evolve, to make a difference. Learn more about how we're preparing students for future-proofed careers at: [sait.ca/future-proof](https://sait.ca/future-proof).*



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