



WELCOME TO THE MAIN EVENT:  
**SKILLED TRADE  
CAREER  
PREPARATION  
AT GEORGIAN  
COLLEGE**

That retirement cabin on a lake starts with a successful welding training program, students with a strong desire to be there, and a variety of equipment brands on which students hone their skills.

There are educational paths to take following high school, but school systems, parents and society often funnel students into two broad categories: four-year college or vocational training. However, the skilled trades are not a dumping ground for students who don't want to pursue white collar careers.

“Georgian College has been conducting workshops with local high schools and guidance counselors to bring awareness of the many career paths that the skilled trades offer and the education requirements for anyone entering into the skilled trades.,” says Peter Greenlaw, a welding professor at Georgian College, Midland, Ontario, since 2013. “High school students that choose to pursue a career in the skilled trades are still required to perform at a high academic level in order to be successful.”

Greenlaw says that guidance counselors often don't realize what is involved in a welding program or the long-term career possibilities that the skilled trades offer. Open houses and workshops expose high school counselors and teachers to welding and help them understand that welding is more than a “backup” to a professional career.

“What we're trying to do is show people that the skilled trades are a rewarding first-choice career,” says Greenlaw. “This is a career choice and a pathway to some pretty darn interesting ways of making a living.”

Recognizing that the dream of some skilled trades people is to run their own business, the school offers an Entrepreneurial Exploration elective course.

“From my own experience as a fab shop owner, I push them to take the entrepreneurial course so they can explore those options,” says Greenlaw. After graduating college and working as a welder for six years, Greenlaw was laid off. Like many welders, he already had a weekend side hustle with his own equipment. From that small customer base, he grew and ran his own small fabrication shop for 35 years.

“I just concentrated on my business. I realized I really liked being my own boss and didn't look back,” says Greenlaw. “Ask any self-employed person, and you'll hear the same thing. You'll work hard, sometimes for little pay, but the career is very rewarding.”

## INDUSTRIAL STRENGTH

The Midland and Owen Sound campuses of Georgian College offer a one-year “Welding Techniques” program that prepares students for Level 1 Welder (456A) and Metal Fabricator (437A) common core and Level 2 weldership apprentice programs (as defined by the Ontario Ministry of Training, Colleges and Universities). In addition to learning oxyfuel and plasma cutting, carbon arc gouging, brazing and fusion welding, SMAW, GTAW, GMAW, MCAW and FCAW, students take layout and fabrication, blueprint reading, metallurgy, and trade calculations.

When Greenlaw arrived at the college, one brand of equipment dominated the training facility. Under his guidance, the shop now features equipment from four different manufacturers. The latest addition features an inverter rack with five ESAB Warrior® 500i CC/CV multi-process welders paired with RobustFeed PRO wire feeders.

“It’s important to expose students to different brands and the different terminologies used by equipment manufacturers,” says Greenlaw. “For example, some manufacturers talk about Stick arc adjustments as creating a crisp arc or a soft arc, while others talk about adjustable arc force control or dig. There’s different terminology for the same thing on every machine. I want the students to be able to walk into their first job interview and have the confidence that they can turn on any brand of machine and make it run.”

“ESAB designed the Warrior/RobustFeed PRO around simplicity and high performance in general manufacturing applications,” says Jeff Chittim, a product manager with ESAB. “The controls are organized so that anyone with a small degree of experience can walk up to the system and intuitively understand its operation.”

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*Georgian College students train on the machines that they will find in heavy industry, such as ESAB's Warrior 500i CC/CV power source.*

As an example, he cites the Stick electrode controls. One control knob tailors Stick arc characteristics (technically the volt/amp curve) to match the electrode type (basic, cellulosic or rutile). A second knob provides arc force adjustment. Lower arc force values create a softer arc for welding with electrodes like a 7018, while higher arc force values create a crisper arc with more penetration, which is desirable for applications like pipe welding with a 6010 electrode.

“Warrior 500i is a good choice for training facilities because it covers all the standard CV welding processes, has a DC Live TIG output, and has excellent gouging performance,” says Chittim.

Greenlaw selected the Warrior 500i/RobustFeed Pro combination because of its impressive handling of the larger diameter solid and cored wires found in Ontario’s heavy manufacturing facilities.

“We need to train students on GMAW with .045-in. solid wire and FCAW wires up to .052, so we needed a powerful system,” says Greenlaw. “When students leave Georgian College, they will have experience on the equipment actually used by industry, not just smaller machines like you’d find in a garage.”

The RobustFeed’s PreciDrive wire drive system features a 4-wheel drive system that delivers positive arc starts and stops without backlash or play in the gears. Large diameter drive rolls offer more gripping area and provide more pushing force without deforming soft FCAW wires.

“Starting and stopping are where most weld defects occur, and good starting and stopping performance helps eliminate a lot of problems,” says Chittim. “The RobustFeed’s drive motor has the torque required for large wires and the speed necessary for small wires,” he adds.

**THERE ARE MANY GOOD OPTIONS FOR WELDING HELMETS IN THE INDUSTRY, AND IN MY OPINION, THE SENTINEL A60 IS ONE OF THEM.**

### CLARITY AND CONSISTENCY

As part of quarterly sales promotion for purchasing a Warrior welding system, Greenlaw had the option to select a welding cart to organize the power source and feeder or a Sentinel™ A60 automatic helmet, and he is “clearly” happy with choosing the Sentinel.

There are many good options for welding helmets in the industry, and in my opinion, the Sentinel A60 is one of them. says Greenlaw. “With the Sentinel A60, I can read a book with the helmet down. I am so impressed with its clarity.”

For the students, the college selected the Swarm A20 as of one their welding helmet choices. It has an externally adjustable shade range from 9–13 and an external grind setting for attention to finishing work without having to lift the hood.

Along with ESAB welders and PPE, Greenlaw also introduced Georgian College students to ESAB’s OK 55.00 7018-1 H4R electrodes. “I find they start easily, with a very consistent, high quality flux,” says Greenlaw.

Consistency is important, especially after running into performance issues with another manufacturer.



*“With the Sentinel A60, I can read a book with the helmet down. I am so impressed with its clarity,” says welding professor Peter Greenlaw.*



*ESAB’s OK 55.00 7018-1H4R electrodes are regarded by Canadian welding professionals as one of the industry’s premiere electrodes because they start easily and burn consistently.*

### SCHOOL SUPPORT

Elena Yakovleva, who is responsible for ESAB’s North America MarCom & Marketing Strategies, notes that ESAB’s Future Fabricators program for aspiring welders and fabricators provides tools, equipment, scholarships, training and educational materials to technical and trade education programs from high schools to four-year welding engineering programs across North America.

“The program provides exclusive offerings to empower schools and recent graduates to access premium ESAB products at exceptional prices,” says Yakovleva. “The Canadian Welding Bureau Foundation estimates a welder shortage exceeding 75,000. By supporting future fabricators, we are preparing the next generation workforce for diverse skilled trade careers that are in high demand.”



**“THE IGNITING BRIGHT FUTURES PROGRAM ADDRESSES THAT PROBLEM, AND WE MADE SOME GREAT CONNECTIONS WITH THE HIGH SCHOOL TEACHERS.”**

*The RobustFeed PRO wire feeder fits in compact spaces, offers the portability and protection of an enclosed system and superior feeding performance.*

## IGNITING THE FUTURE

To enhance the college’s welding program, Greenlaw worked with the College Boréal, Skilled Trades Ontario and the Canadian Welding Bureau Foundation, on the Igniting Bright Futures program, which enables the college to reach shop class teachers. If the teachers participate in a 30-hour workshop on SMAW and GMAW, they can earn a CWB fillet ticket.

“Some high schools don’t have welding equipment, but they do have a shop class where they work on cars or small engines,” notes Greenlaw. “However, if the teacher has no prior knowledge of welding, how does he or she instill an interest in welding in their students? The Igniting Bright Futures program addresses that problem, and we made some great connections with the high school teachers.”

In addition, Georgian College hosts a “women in trades” event that includes hands-on activities for the trades they offer. The school’s Welding Techniques program participates with an augmented reality welding experience and a real GMAW activity. The event ends with a panel of female guest speakers from different trade unions.

“We had a guest speaker from the Boilermaker Union who was apprenticing as an Ironworker,” says Greenlaw. “I did a story about it and posted it to social media. Parents wanted to know why their high school wasn’t involved. One parent took the idea to their daughter’s high school, and they’re joining us for an upcoming event.”

Unfortunately, according to Greenlaw, parents are often reluctant to support their children in pursuit of a skilled trades career.

Support from high school guidance counselors is important; however, parents supporting their child in a skilled trades career is paramount.

Greenlaw’s career path shows there are many paths to success within the skilled trades.

“I concentrated on my business, paid my mortgage, raised two kids comfortably and worked my tail off,” says Greenlaw. “Welding gave me a rewarding career and a little retirement cabin on a lake.”



*The Warrior features an intuitive color-coded interface (blue for Stick, green for MIG or flux cored) that links processes to their associated controls, such as arc force and inductance.*

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