

BREWING EDUCATION

- Megan Cole -

The craft beer industry's best brewers aren't just creators of some amazing beer, they're scientists!

The science and technique that go into brewing an award-winning product are often forgotten, but with Canadian brewing programs gaining popularity, and new academic-based courses (like Langley, BC's Kwantlen Polytechnic University's diploma in brewing and brewery operations) being offered across the country, the focus of the craft beer industry is on quality, from what's in a keg to who's making it.

While there is a perception that brewing is a time-honoured tradition, with the knowledge and craft being passed from experienced brewer to newcomer, the growing craft beer industry has created a need for educated employees who can bring knowledge and passion to a brewery creating high quality products.

"There is a real need in the industry to have people with some kind of training, because when a brewery is growing, especially growing really fast, you just can't afford to have bad beer, because that will ruin your growth so fast; faster than anything else," says Mike Kelly, head brewer at Nelson Brewing Company in Nelson, BC.

Kelly, like many experienced and acclaimed brewers in Canada, began his career learning from others. After working at a you-brew in Vancouver in 1993, he got a job at the Whistler Brewing Company and began to learn the world of professional brewing while on the job. Without a strong science background though (Kelly has a degree in political science), he felt his knowledge was lacking and decided to take chemistry, organic chemistry and biology through the University of Waterloo, while also taking some brewing courses through the University of California Davis.

Even though Kelly now has an internationally recognized diploma in brewing from the Institute of Brewing and Distilling, he continues to learn and gain knowledge.

"Formal education is no substitute for experience," says Kelly. "You really do need the experience, but you also need to be on a learning curve where you are constantly learning, and open to learning. Brewers can be very traditional and get stuck in their ways very easily. If something works we stick with that, and perhaps overlook things that might work better."

The development of programs like Kwantlen's, which combines a strong foundation of science with hands-on experience where students will brew and analyze their own beer, is important in providing educated and passionate brewers and brewery staff for a growing industry.

"Education doesn't necessarily make you a good brewer, but it gives you the tools to grow as a brewer," says Kelly. "It's just like anything else, you need those tools to grow in your industry and in your career, and it makes it more interesting if you know what is going on."

BREWING BEER MAY SEEM TRENDY AND FUN, BUT THE SCIENCE BEHIND THE POPULAR PRODUCT CAN BE COMPLICATED...

Having all the brewery staff on the same page is an important part of why David Rudge, president and brewmaster at Half Pints Brewing in Winnipeg, Manitoba, invests in promising staff. They are allowed to take courses through the American Brewers Guild, while working at the brewery.

Rudge, like Kelly, didn't have any formal education when he started brewing beer. With an interest in the craft, he began making beer at home, but when his hobby grew into a potential career, Rudge decided to go to school.

"The whole reason I went was to solidify what I knew, and learn what I didn't know about how to translate home brewing to professional brewing," he says. "Then once I had my education it made it a lot easier to get my foot in the door sending out resumes."

With students starting to come out of brewing programs at colleges like Niagara, Rudge has begun seeing eager future brewers come to him looking to gain experience on the job, and his goal is to make sure when they finish their time at Half Pints, they have touched and learned every part of his brewery.

While Rudge sees education as an asset to his brewery and the industry overall, he has concerns about whether the growth in the craft beer industry both in Canada and the United States can meet the influx of knowledgeable and qualified brewers and brewery staff.

"The problem is there aren't enough breweries in Canada yet to justify graduating all these people," says Rudge. "A lot of these people are coming out of school and having nowhere to use their actual craft. It has been the same throughout the States as well. The number of people graduating from the programs down there like the American Brewers Guild and UC Davis equals more than the number of the people that are getting out of the industry every single year."

Despite Rudge's worries about job creation in the craft beer industry, Dominic Bernard and Alek Egi, instructors

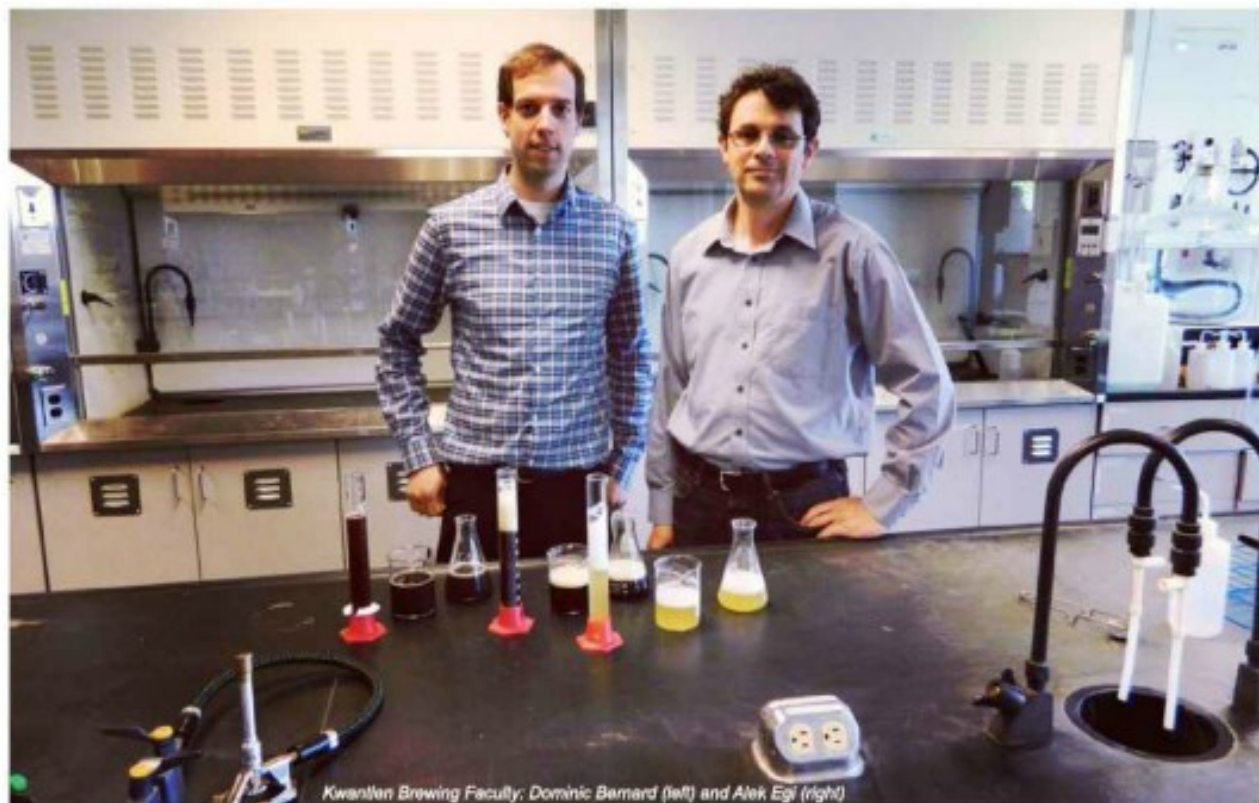
at Kwantlen Polytechnic's new diploma program, say that while they can't see into the future, brewers they consulted feel that the craft beer industry is strong and continuing to grow, and needs educated staff.

Bernard and Egi have worked with brewers to develop a curriculum and courses that not only gives students the fundamentals in science they need, but unlike other programs, they are creating a pilot brewery to allow students to actually brew beer.

"The approach for this program is to give people the foundation in science so they understand brewing but also give them a lot of hands-on work in the brewery so when they do enter the work force they have actually touched the controls of a brewery before and have the sciences," he says.

This balance of academia and applied learning is what is setting Canadian brewing programs apart, and what is allowing future Canadian brewers to have the knowledge they need to fill positions in a quickly growing industry.

A product that has an ancient history rooted in tradition has quickly moved into a future where craft beer isn't just a novelty artisan product anymore, it is a modern industry supporting families and communities. *-MC*



Kwantlen Brewing Faculty: Dominic Bernard (left) and Alek Egi (right)

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A LOOK INSIDE

KWANTLEN'S BREW U

Brewing beer may seem trendy and fun, but the science behind the popular product can be complicated, which is why Kwantlen Polytechnic University's new diploma in brewing and brewery operations will include organic chemistry and biology courses.

"They are going to have a brewing chemistry course where they go through specific analysis that someone can do on beer, and we will have a microbiology course," says Dominic Bernard, one of the program's instructors. "The way the program is scheduled, there will be a very good balance between practice and theory."

Construction of the brewing instructional laboratory is happening at the university's Langley campus.

"With the pilot brewing facility we will have here, it will give students a lot of flexibility and opportunity to really learn different things and try different materials and brewing techniques," says Alek Egi, another instructor with the program.

Students will also have the opportunity to learn from experienced instructors like Egi, Bernard, Nick Fengler, head brewer for Dead Frog Brewing, and other brewers.



- Brewing equipment to be donated by Newlands Systems

