



Career Operations

Northwest Community College



The mobile simulator unit provides on-site training for both the mining and civil construction industries. Plus it's great advertising for the school's Heavy Equipment program where ever it travels.

Brian Badge, Chair of Trade, at Northwest Community College in British Columbia is shaping careers in the heavy equipment industry.

Northwest Community College (NWCC) was established in 1975, has expanded to nine regional campus locations and is a recognized leader in Aboriginal education. One of the many programs offered at NWCC is the Heavy Equipment Operator Program. The curriculum that guides operator training consists of Heavy Equipment Operator Foundation and Heavy Equipment Operator Technician, which is the apprenticeship part of the program. The program serves both

the construction and mining industries. The curriculum consists of theoretical classroom training, simulator training and seat time on actual machines. Badge says that with "massive amounts of industry coming to town," there was a need for a heavy equipment training program. "We are experiencing an economic industrial boom in British Columbia's Northwest and expect this to continue over the next 10 to 15 years. Heavy Equipment Operators will be one of the most needed trades," states Badge.

In addition to several class modules, students receive a minimum of 30 hours of simulator training. In the apprenticeship program, students receive another 8 hours of

simulator training. Badge thinks the program is successful because the methods support multiple types of learning. Instructors love the simulators because they take some of the worry out of training when students learn on simulators between the classroom and actual machines vs. moving directly from the classroom to the machines.

The simulator training takes place in the classroom and in a mobile unit. The college designed a 32' trailer and outfitted it to carry the simulators on the road for training or to events. The trailer is heated and air conditioned so the temperature is always controlled. Currently there are six simulators inside the trailer; plus six more simulators in the classroom. Depending on the trailer's destination, instructors can swap out the simulators. For example, when traveling to a mine site, instructors take the mining simulators and leave the civil construction simulators in the classroom. The instructors love the ability to change around the configurations between the trailer and the classroom, depending on which sector they are training. Badge says, "Because we're starting to see major mines being proposed in our area of the province we'll be looking at additional mining equipment simulators. We can see value in expanding the mining

“Students love the simulators. We have typically found that students will come to class early to practice on the simulators.”

simulators in our mobile unit so we can train in the most remote areas.” Badge shares that the college decided to incorporate

simulators into the program because of the added value factor. “Students that come out of the program are better trained,” says Badge. Simulator training adds value in many different ways. The most simplistic is

that simulators add controls familiarization. When the students get into the seat of the actual machine, they are already competent on what the controls do. Badge confirms, “It totally speeds up the learning process to use the simulators because when [students] get on the actual machine they are not spending time trying to figure out what the controls do. Students already know which control to use to get the needed movement



Simulator training takes place in the classroom and on the road inside the mobile training unit. The travel trailer features six simulators that can be changed out for a mining or civil construction focus.

from the machine.” The simulator training also provides a safe atmosphere in a controlled environment with no distractions. “It’s a way for students to build confidence,” declares Badge. For recording and reporting the results of all simulator sessions, the instructors utilize SimU Campus™. The exclusive software contains benchmarks set by Caterpillar subject-matter experts and students strive to meet these benchmarks (unless changed by instructors). Badge acknowledges, “The benchmarks are pretty challenging, but not unattainable.” Safety is first and foremost in both programs. SimU Campus also allows instructors to test operators and identify any incorrect actions. Instructors address and correct these actions in a classroom setting before operators get on the actual machines and suffer a mishap.

Machine training (seat time) is done on a 40-acre outdoor lab setting where actual projects are completed by class members. For example, over the last three years, a motocross track has been built and just recently completed by students in the program. Going forward, a cross country ski site is planned. Hands-on projects are a way to incorporate task training with real-time production. Badge says, “Students must also learn to work with other operators on the worksite.” The machinery is outfitted with radios and the operators communicate with each other while completing tasks. “‘Stop, pull over, don’t move over...’ It is a very interactive setting,” says Badge.

What stands out in the NWCC Heavy Equipment Operator Program is the use of technology. While schools must teach the same standards across the board, NWCC differentiates itself with simulator training. The Heavy Equipment program is so popular that it fills up quickly. Students that come through the program range in age from 18 to 55. Mature students are not coming back to brush up on skills,

but instead are developing skills to change careers. Badge shares, “The reality is that heavy equipment operation is a well-paying career.” It doesn’t take a lot of time from start to finish for us to produce a competent, safe operator. Though it takes many years to become a really *good* operator, NWCC can ready a beginner operator through its program. “Students can enter the workforce after completing the curriculum and expect to get started in an entry-level position,” Badge adds.

“Another benefit to the simulators is that they are ‘green,’ meaning we are not burning any fossil fuels. We think it is important to be cognoscente of the environment and using the simulators is just one more way to address the issue.”

–Brian Badge,

Chair of Trade, Northwest Community College



Students in the program get seat time at the college’s 40-acre outdoor lab working on actual projects.

Badge says that some students enter the program with the intent of becoming heavy equipment operators but may discover some other career that they like and pursue instead. Badge sites a student that became certified in Traffic Control Flagging after being introduced to the job during the program. Others have discovered careers in occupational first aid through the foundation class taught during the program and end up becoming certified in the school's First Aid, Health & Safety program. The heavy equipment program has opened doors to other occupations by exposing students to the careers.



Students receive classroom and simulator training before moving onto training on actual machines. The program allows students to become familiar with the machine's controls and basic applications before getting behind the controls on the *real* machine.

In Canada, operator certification is highly recommended and very advantageous when seeking employment. Certain levels must be achieved and attained for certain pieces of equipment. Apprenticeship programs are offered through the college throughout the year and the accrediting body is the Industry Training Authority. Students that finish the school's program, but don't yet have the hours they need for equipment accreditation, can seek apprenticeship with companies so that they can keep building on their hours. "We've had some really good success stories of people that have taken part in the program because they wanted to change careers. They went through the foundations program, apprenticed, and then found jobs where they are making great money and have a whole new life," Badge declares.

RESOURCES

Northwest Community College; www.nwcc.bc.ca
Industry Training Authority; www.itabc.ca

