

4th Class Power Engineering (PE)

For: High school students in grades 11-12

Where: Select areas of Alberta.

The 4th Class Power Engineering Program provides an opportunity for suitably qualified and motivated students to enroll in a power engineering technical training program while attending high school.

Power Engineers are responsible for the safe operation and maintenance of heating and power plants in Alberta's industrial sites and building complexes. They ensure that pressure equipment such as boilers, turbines, generators, internal combustion engines, pumps, compressors and pressure vessels are working safely and at maximum efficiency.

Through successful completion of both theoretical and practical training components, students acquire the knowledge, skills and experience required for certification as a 4th Class Power Engineer while in high school or shortly thereafter.

Theoretical coursework consists of:

- Online technical training scheduled and delivered over two years by Northern Lakes College (NLC) and available to students in grade 11 and 12, or
- Online technical training scheduled and delivered over three years by either Keyano College or NAIT and available to students in grade 10, 11 and 12.

The online technical training delivered by each post-secondary leads to 21 – 25 high school credits in provincially approved dual credit PEN courses. Additional to the online technical training, the program provides the added potential for a paid summer internship with industry in each year of the program. The internships lead to high school credit in Work Experience.

CAREERS pre-screens student applicants for summer internships based on their academic records, attendance, application and attitude. We suggest possible matches, and the employer interviews the



students and chooses the best fit for their company. After the hiring process, the student completes a paid summer internship of about six weeks duration in each summer of the program.

Certification of power engineers in the province is administered by the Alberta Boiler Association (ABSA). ABSA administers four levels of certification: 5th, 4th, 3rd, 2nd and 1st Class.

ABSA qualifiers for CAREERS students to become certified as a 4th Class Power Engineer are:

- Successfully completing an approved post-secondary 4th Class Power Engineering training course (i.e., one of the post-secondary training programs noted above);
- Obtaining an accumulated total of 960 hours of operating experience (steam time) in a power plant or pressure plant that has an operating capacity satisfactory to ABSA (i.e., may be acquired through summer internship operating experience) and
- Successfully writing the ABSA 4th Class certification exams (i.e., Part A and Part B).

Many 4th Class graduates of the CAREERS PE program have gone on to upgrade their certification status with ABSA to a 3rd, 2nd and even 1st Class designation.