

**NORTHERN LIGHTS COLLEGE  
REGISTRAR'S OFFICE  
PROGRAM INFORMATION AND COMPLETION GUIDE**

**Program Name:** Power Engineering and Gas Processing  
**Credential/Certification:** Certificate in 4th Class Power Engineering and  
Certificate in Gas Process Operations  
**Date Submitted:** October 2017  
**Effective Date:** September 2017

**Program Contact:** Mark Heartt

**Dean:** Mark Heartt

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**Program Description:** The 10 month Power Engineering and Gas Processing Program takes learners through 4th Class Power Engineering, 160 hours of firing time on the NLC Boiler, and all four levels of Gas Process Operations (GPO) entry-level program. On completion students will qualify for the BC Safety Authority Provincial Examinations by successfully completing Parts A and B of the 4th Class Power Engineering component of the program.

The focus is to provide the learner with the practical skills needed to function effectively in the industry.

**Admission Requirements:**

Provide British Columbia secondary school transcripts or equivalent indicating successful completion of Grade 11 level that includes:

- Grade 11 English with C+ or higher, or Career and College Preparation ENGL040 (Advanced/Grade 11);
- Grade 11 Math (Pre-Calculus, Applications, or Principles) with C+ or higher, or Career and College Preparation MATH040 (Advanced/Grade 11); and
- Grade 11 Physics (or equivalent), with C+ or higher.

OR

Complete the following sections of the Canadian Adult Achievement Test (CAAT):

- Reading Comprehension: 12.0 grade equivalent or higher
- Number Operations: 12.0 grade equivalent or higher
- Problem Solving: 12.0 grade equivalent or higher
- Mechanical Reasoning: 51/70 (6th Stanine) or higher
- Trades Math Assessment: 70 per cent or higher

Dual Credit

- Grade 11 level completion that includes Grade 11 English, Grade 11 Math (Pre-Calculus), and Grade 11 Physics (or equivalent), all with C+ or higher.

All successful applicants must complete the Basic Math and Physical Sciences: Problems and Solutions Workbook (available at the Fort St John Campus Bookstores) prior to the start of classes. Students will demonstrate their competency and understanding of the material in a test to be conducted prior to or at the start of the program. Students will be referred for additional tutoring if their test results are below average.

Post-Admission Requirements:

After being accepted into the program but before the add/drop date students will be required to provide proof of the following certifications:

- Workplace Hazardous Materials Information System (WHMIS).
- Occupational First Aid - Level 1
- H2S Alive
- Electronic General Safety Orientation (eGSO)

\* All certificates must be valid for the term of the Program. Failure to provide proof may result in immediate dismissal from the program.

**Length of Program:** (weeks and total hours)

1180 hours - Approximately 38 weeks

**Program Intake:** (start/finish dates) Please refer to the Trades and Apprenticeship intake schedule.

**Available Seats:** 16

**Application Deadline:** All completed applications must be received one month prior to the start of the program. Completed applications received after this date will be reviewed based on seat availability.

**Career Prospects:** Opportunities exist in the local and regional industry for Power Engineers. Above average salaries are offered, as well as excellent working environments.

Entry Level Power Engineers work in a wide range of plant environments including power generation, chemical, petrochemical, pulp/paper/wood product, manufacturing, and food and beverage processing. They work in the utility plants of universities, hospitals, office buildings, and shopping malls, and at large-scale refrigeration and other industrial facilities.

Entry-level job functions can include operating product loading and storage systems; raw-water, demineralization and wastewater treatment systems; compressed gas and instrument-air systems; and cooling water systems. Job functions in smaller facilities will include greater and more varied systems responsibilities, but on smaller-capacity equipment.

**Affiliations/Partnerships:**

Southern Alberta Institute of Technology (SAIT)  
BC Safety Authority  
Pan Global

**Location:**

Northern Lights College Fort St. John Campus

**Additional Requirements/Supplies:** (fees, supplies, materials)

Footwear having CSA safety-toe protection, cold weather Personal Protective Equipment (PPE). The program will provide the following: Hardhat, hearing protection, safety glasses and fire retardant coveralls.

Textbooks

Students are required to sign and adhere to the Trades and Apprenticeship Safety and Attendance Rules and Regulatory Practices for Students Policy.

**Eligibility for Canada Student Loans:** (Yes or No)

Yes

**Required Minimum Grade:** (overall and/or minimum within a course)

50% for POPR 011, POPR 012, POPR 013 and POPR 014.

70% for POPR 200, POPR 201 and POPR 208.

PASS for POPR 302

**Residency Requirement:** (percentage of courses which must be taken at NLC)  
100% or permission of Dean

**Required Courses:** (list courses required to complete credential  
and total hours for each course)

POPR 011 Gas Process Operations Level A (95 hours)

POPR 012 Gas Process Operations Level B (95 hours)

POPR 013 Gas Process Operations Level C (95 hours)

POPR 014 Gas Process Operations Level D (95 hours)

POPR 200 Power Engineering and Gas Processing Part A (240 hours)

POPR 201 Power Engineering and Gas Processing Part B (240 hours)

POPR 208 Laboratory in Power Engineering and Gas Processing (160 hours)

POPR 302 Work Practicum (160 hours)