

POWER ENGINEERING

**2-YEAR
DIPLOMA**

Keep industry running smoothly with the essential skills for a challenging career in power engineering. If you want a career and not just a job, then this is the program for you.

Why choose a career in Power Engineering?

- 1 Ready to go**
If you are self-motivated, responsible and enjoy a technical challenge, the Power Engineering program is for you. This program prepares you to write the certification examinations for 4th Class and 3rd Class Power Engineering.
- 2 Dial up hands-on learning**
In this two-year diploma program, you will learn to operate and maintain equipment found in industrial plants, as well as learn the mathematics, mechanics, combustion, thermodynamics and instrumentation needed for this career. Hands-on experience is gained through placements with local industry.
- 3 Full steam ahead**
As a power engineer, you will be responsible for the operation and maintenance of power and process plants. This includes the safe and efficient operation of industrial equipment such as steam engines, air compressors, boilers and turbines.
- 4 A bright future**
Power engineers are in high demand in Manitoba. Your career could see you working in various industries, including chemical manufacturing, food processing and electrical generation. You may work in buildings or institutional complexes like hospitals, government agencies, school divisions, regional health authorities and manufacturing plants—anywhere that maintains complex mechanical systems.

FULL-TIME TIMELINE:

SEPTEMBER Year 1 fall term begins	OCT - MAY Work placement	JANUARY Winter term begins	SEPTEMBER Year 2 fall term begins	OCT - MAY Work placement	JANUARY Winter term begins	JUNE Graduation
---	------------------------------------	--------------------------------------	---	------------------------------------	--------------------------------------	---------------------------

Program delivery options:



North Hill Campus

CAREER OPPORTUNITIES

Graduates find employment opportunities in various industries, including chemical manufacturing, food processing, electrical generation, manufacturing plants and building complexes such as hospitals and schools.

ADMISSION REQUIREMENTS

- A complete Manitoba Grade 12 or equivalent
- English 40G/40S or equivalent
- Pre-Calculus or Applied Mathematics 40S or equivalent
- Physics 30S or Chemistry 30S or equivalent

English is the language of instruction at Assiniboine. All applicants educated outside of Canada or in a country not on the test exempt list are expected to meet the English language proficiency requirement. See assiniboine.net/elp for more information.

TECHNOLOGY REQUIREMENTS

Programs at Assiniboine have certain technology requirements. Students require access to computer devices at home and may be required to bring these on campus when instructed. Refer to assiniboine.net/tech for more detailed information about the requirements for this program.

UNIQUE LEARNING EXPERIENCES

- Emphasis on practical, applied learning
- Industry-based practicums
- Hands-on learning in industry during the majority of the program

GRADUATION REQUIREMENTS

To graduate with a Power Engineering diploma, students must successfully complete 120 academic credits and 12 practical credits. To graduate with a Power Engineering certificate, students must successfully complete 60 academic credits and 6 practical credits.

The minimum passing grade for each course is indicated on the course outline.

CONNECTIONS

Graduates may write the Standardized Power Engineering Examinations. Candidates who pass these examinations receive a Standardized Certificate, which makes them eligible to work as power engineers in all Canadian provinces and territories except Quebec.

Assiniboine has a number of agreements with other colleges, universities and professional organizations, making it possible for students to apply credit taken at Assiniboine to programs at other institutions. For up-to date information on agreements, visit assiniboine.net/registrar or the program page.

NEXT STEPS

Apply now! Visit assiniboine.net/applynow. For more information on this program, visit assiniboine.net/powerengineering.

PROGRAM FEES (DOMESTIC ONLY)

Tuition, fees and Students' Association fees total approximately **\$5,040** for year one and **\$5,140** for year two.

Estimated cost for books and supplies is **\$3,160** for year one and **\$1,930** for year two.

All fees are estimated and subject to change without notice.

COURSES 2021-22

NUMBER	COURSE TITLE	CREDITS
YEAR ONE		
DRFT-0005	Blueprint Reading (PE)	3
ENGR-0030	Boilers and Materials	6
ENGR-0046	Combustion and Maintenance 1	3
ENGR-0047	Combustion and Maintenance 2	3
COMM-0045	Communications	3
ELEC-0025	Electrical (PE)	6
SCIE-0036	Engineering Chemistry	3
ENGR-0018	Engines (PE)	3
ENGR-0031	Heating Boilers and Systems	3
ENGR-0048	Instrumentation and Controls 1	3
ENGR-0049	Instrumentation and Controls 2	3
MATH-0050	Mathematics (PE)	3
MECH-0083	Mechanics (PE)	3
PRAC-0193	Practicum - POWER	6
ENGR-0019	Refrigeration (PE)	6
WRKP-0016	Safety and Environment	6
ENGR-0050	Thermal and HVAC Studies 1	1.5
ENGR-0051	Thermal and HVAC Studies 2	1.5
YEAR TWO		
MATH-XXXX	Advanced Mathematics	4.5
MECH-XXXX	Advanced Mechanics	6
ENGR-XXXX	Advanced Thermodynamics	6
ENGR-XXXX	Boiler Design	6
ENGR-XXXX	Boiler Systems and Operation	3
ENGR-XXXX	Boiler Water Treatment	1.5
ENGR-XXXX	Codes and Combustion	1.5
ENGR-XXXX	Compressor Principles	1.5
ELEC-XXXX	Electrical (PE) 2	6
ENGR-XXXX	Fuel-Powered Equipment	3
WRKP-XXXX	Industrial Safety	1.5
SCIE-XXXX	Industrial Science	4.5
ENGR-XXXX	Instrumentation and Controls 3	3
ENGR-XXXX	Piping Design	1.5
ENGR-XXXX	Pump Systems	1.5
ENGR-XXXX	Refrigeration and Heating	3
PRAC-XXXX	Practicum - PWRNG	6
ENGR-XXXX	Steam Turbines	3
ENGR-XXXX	Wastewater Treatment	1.5
WELD-XXXX	Welding and Pressure Vessels	1.5

Note: Timelines, applicable industry experience, and teaching methodology will depend on program delivery choice; program information sheets subject to change without notice. Visit assiniboine.net for the most up-to-date information.

0820