# Career Development Manitoba

Qualification Recognition, Alternative Careers, and Training Options

# Career Development Manitoba

# What Roles do Engineers in Canada Perform?

## Engineer Job Duties

NOC website

- **Industrial engineers**

help companies to be more efficient. They test how companies achieve their goals, and then think of better ways to do this work.

- **Electrical engineers**

design and develop electrical parts, equipment, and systems. They work with the electrical energy in phones, power generators, and much more.

- **Electronics engineers**

design and develop electronic parts and systems. They make devices for the consumer, military, medical, and industrial industries.

## Engineer Job Duties

NOC website

- **Civil engineers**

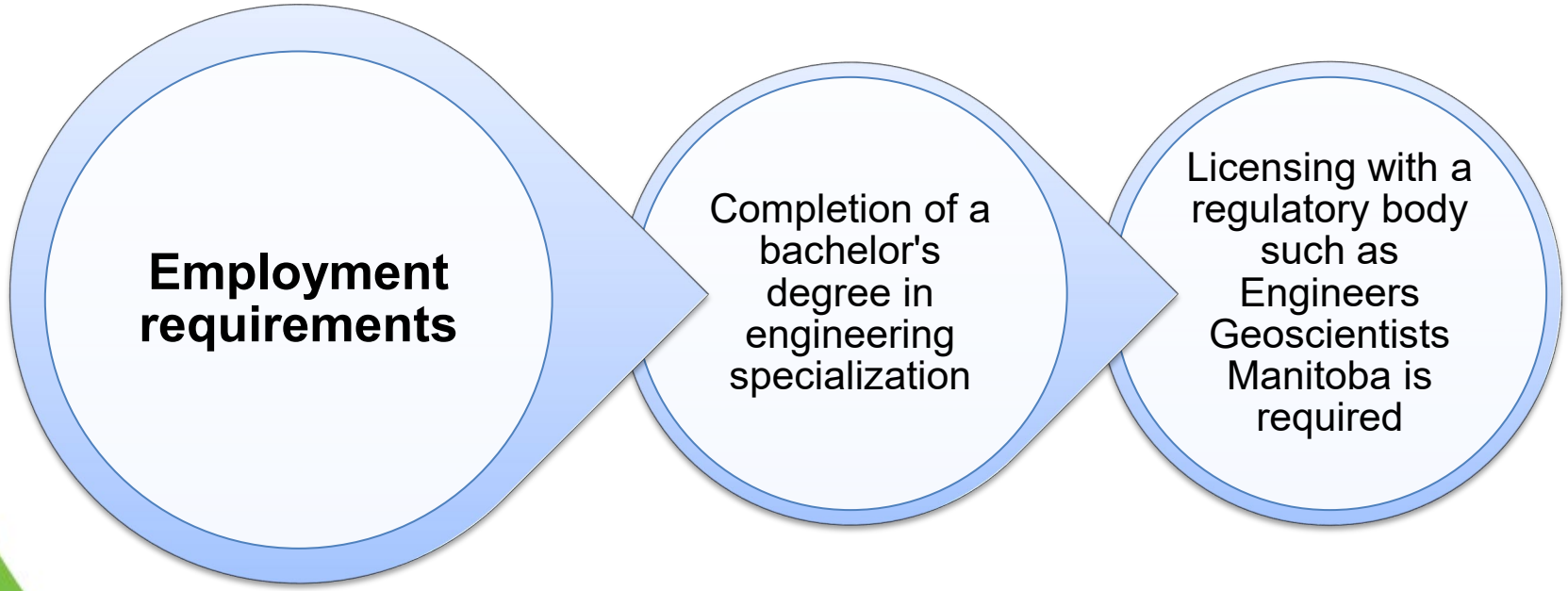
plan, design, and oversee the construction of buildings and other structures such as bridges, dams, roads, railways, sewers.

- **Power engineers**

maintain heating and cooling systems (HVAC). They know how to start, stop, and maintain these complex power systems.

- **Mechanical engineers**

design and create machines and mechanical systems. They use science to solve real-world problems.


Employment requirements
Completion of a bachelor's degree in engineering specialization
Licensing with a regulatory body such as Engineers Geoscientists Manitoba is required

# Internationally-Educated Engineers

If you wish to practice engineering or geoscience in Manitoba, you will be legally required to become registered with Engineers Geoscientists Manitoba.

This means that you may not take responsibility or call yourself professional engineer or geoscientist until you have become licensed by EGM.

# New Registration Process at EngGeoMB

**Step 1:** Language Requirement
https://www.enggeomb.ca/LanguageRequirements.html

**Step 2**: Academic Assessment - to determine eligibility and readiness for professional registration:
https://www.wes.org/evaluations-and-fees/education/credential-evaluation-requirements-engineers-geoscientists-manitoba/

*WES ICAP Course-by-Course* or
*ICAP Document-by-Document* – if the degree programs are accredited by a signatory country under the Washington Accord

***Note**:* Applicants with Canadian Post-Graduate Degrees - may not need to obtain a WES ICAP credential evaluation if you have completed a post-graduate degree (Masters or Ph.D.) in engineering or geoscience from a Canadian university

Academic Assessment Applicants: The ABC Test will be activated once applicant gains access to the online profile. This test is a required component of the intern application process, as well as the specified scope of practice license.

**Step 3**: Confirmatory Program (if required) – for intern applicants who do not meet the academic qualification criteria for enrollment in the intern program will be assigned the Confirmatory Program to confirm the level and quality of academic education.
https://www.enggeomb.ca/ConfirmatoryProgram.html

Intern Enrollment – for applicants who meet the academic qualification criteria, can be admitted as an intern. Once enrolled, must complete the Competency-Based Assessment Process**.**

The Confirmatory Program can be completed in four ways:
https://www.enggeomb.ca/ConfirmatoryProgram.html

1) Pass Accreditation Exams
2) Confirmatory Exams
3) University-Level Post-graduate Degree – A university-level post-graduate diploma, master's or PhD degree in the same discipline as the bachelor's degree that contains sufficient technical content (determined through academic assessment process)
4) Work Experience Reporting – A submission of technical competencies through the Competency Based Assessment system if an applicant has more than 4 years of engineering or geoscience experience in the same discipline as the undergraduate education that shows the application of engineering or geoscience principles

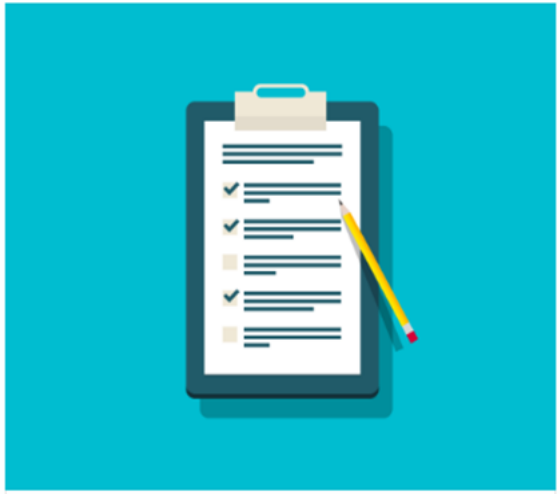
**Step 4**: Competency-Based Assessment
https://www.enggeomb.ca/CBA.html
C*onfirmatory Program* – when this program is successfully completed, applicant will be declared as academically qualified and enrolled as an engineering or geoscience intern and invited to start the Competency-Based Assessment

If the Confirmatory Program  is not completed or missing one or more years of study, applicant may be eligible to pursue Specified Scope of Practice License

*Intern Enrollment* – complete the Competency-Based Assessment process and must pass the National Practice Exam to be eligible for professional registration
*An Engineering or Geoscience intern applicant* means a person who acquires their professional engineering or professional geoscience designation by enrolling with the Association as an engineering or geoscience intern and whose name is entered on the Association's register as an engineering or geoscience intern.

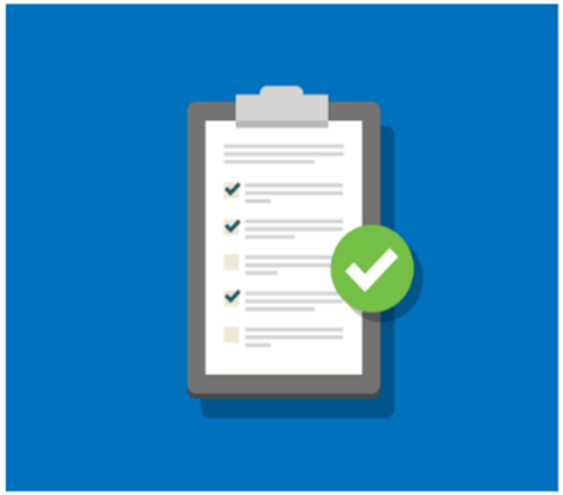
# Engineering and Geoscience Competency Assessment

This system is for professional registration or licensure applicants to record their progress in meeting the competency requirements for engineering or geoscience experience and have it validated and assessed.



## Applicants

Applicants complete a competency self-assessment using examples drawn from work experience to demonstrate their level of achievement of each competency.



## Validators

Validators review the applicant's competency self-assessment and provide validation and competence level ratings for the examples that the applicant has assigned to them. They also provide overall feedback on the applicant's readiness for professional registration or licensure.

## Assessors

Assessors review the applicant's competency self-assessment and validator feedback and determine for each competency whether the example provided represents sufficient evidence that it has been met at the required level. They also provide a recommendation on the applicant's readiness for professional registration or licensure.

## Supervised Work Experience for (EITs)

As an INTERN, you must complete:

- 4 years of eligible work experience (min)
- 48 hours of professional development
- 48 hours of volunteer service
- Pass the national professional practice exam
- 3 professional references (after 36 months)
- Obtain employment under the supervision of a professional engineer or geoscientist registered with EGM.

**Those who do not have a direct P.Eng. or P.Geo. supervisor will be required to find a mentor who is registered to sign off their progress reports.**

**Step 5:** National Professional Practice Exam – based on professionalism, law, and ethics. Applicant must pass this exam to be eligible for registration as a P.Eng. or P. Geo. in Canada

https://www.enggeomb.ca/PPE.html

To be eligible to write the NPPE you must belong to one of these categories of registration:

- Intern (EIT/GIT)
- Specified Scope of Practice Applicant
- US Temporary License

Once you pass the National Professional Practice Exam, continue the licensing process: You are one step closer to becoming licensed. Work with your provincial association to complete the remaining requirements for your P.Eng. or P.Geo. license

Do not use the professional titles P.Eng. or P.Geo until you have been officially granted your professional license

Your provincial/territorial regulator (EGM) will send a decision letter with the results and will also outline the next steps for your specific application process

# Professional Licensure Contacts

**General Enquiries**
204-474-2736
Toll-free:1-866-227-9600

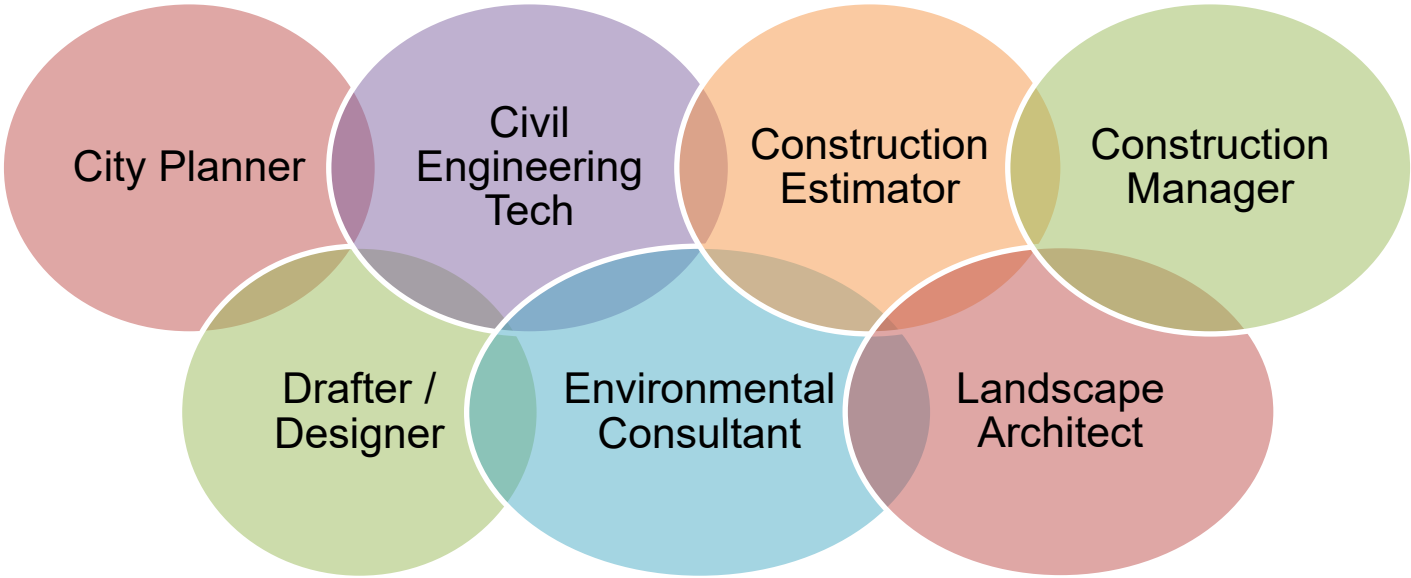
**Engineers Geoscientists Manitoba**
870 Pembina Highway
Winnipeg, MB. R3M 2M7
Email: info@EngGeoMB.ca

Engineers Geoscientists of Manitoba
www.enggeomb.ca

**Claudia Shymko**
**International Registration Program Coordinator**
**CShymko@EngGeoMB.ca**

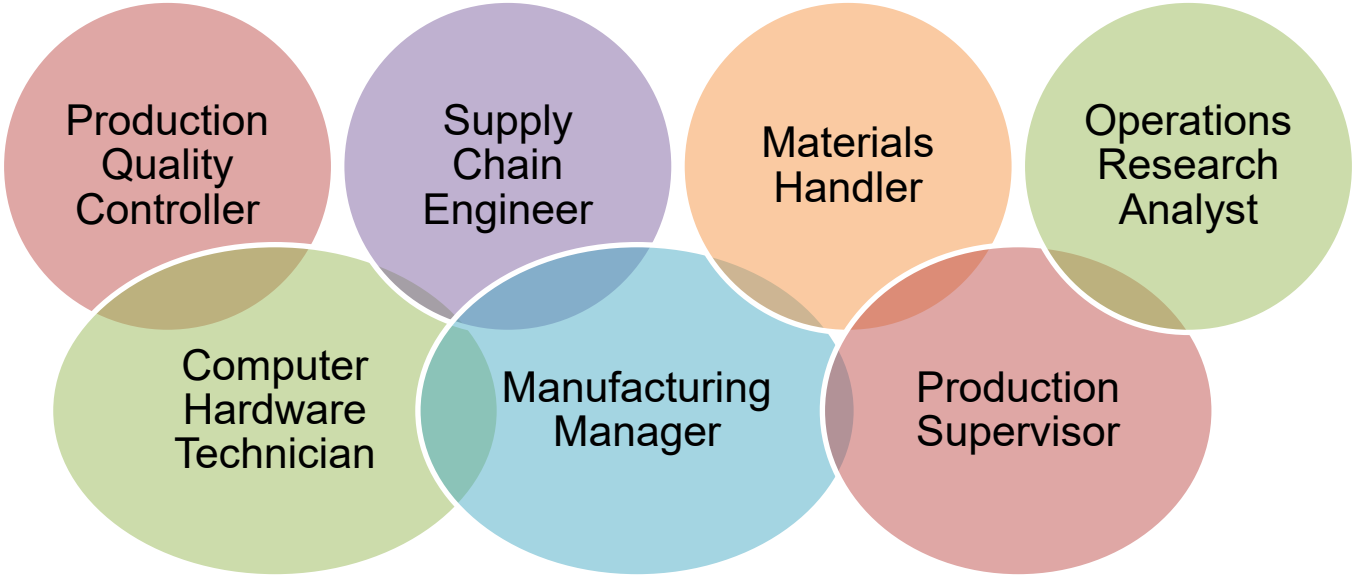
# Alternative Careers for Engineers

# Alternate Careers for Civil Engineers




For more information visit NOC website

# Alternate Careers for Industrial Engineers

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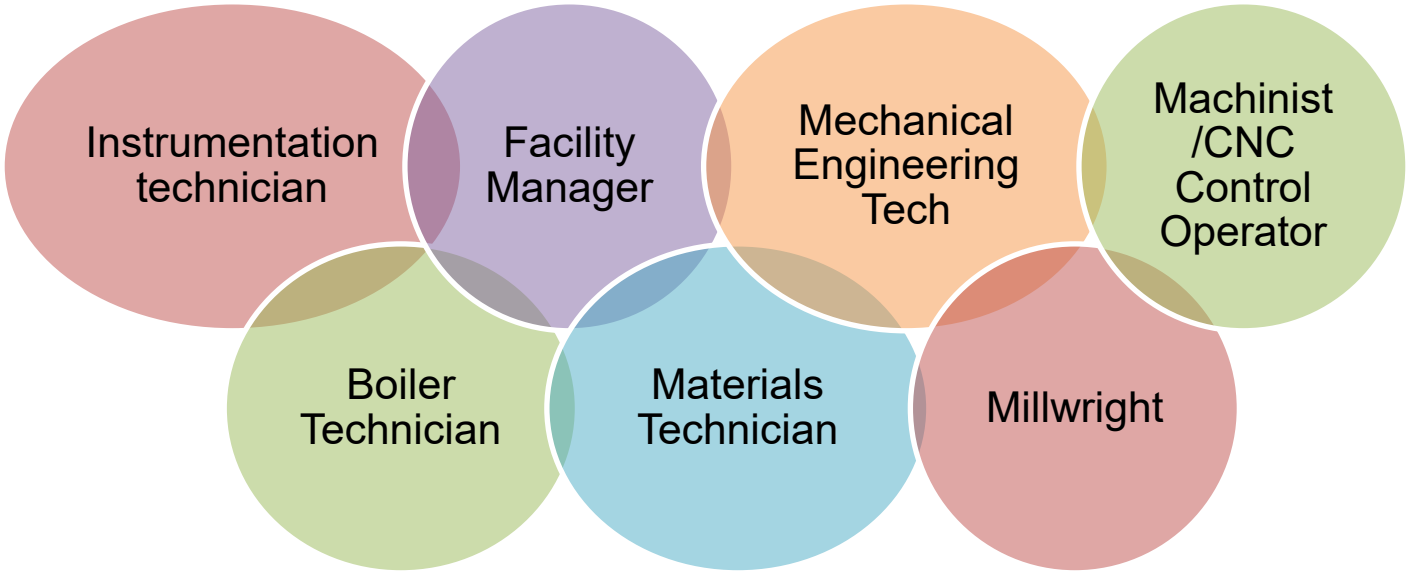
# Alternate Careers for Mechanical Engineers

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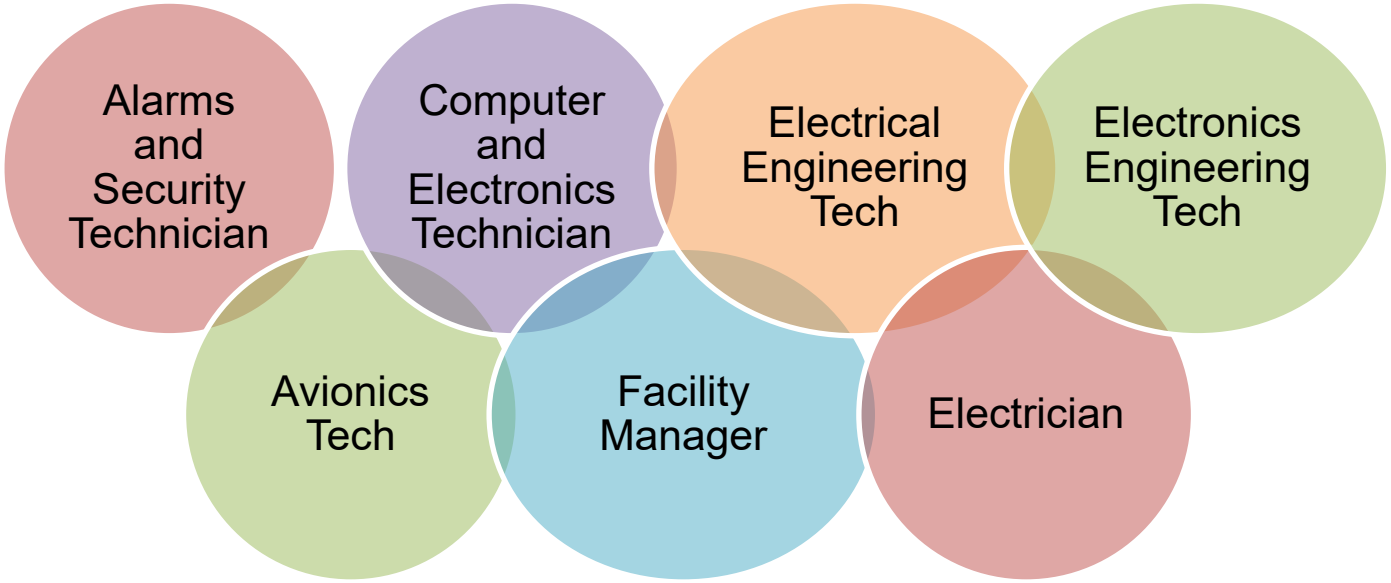
# Alternate Careers for Electrical Engineers

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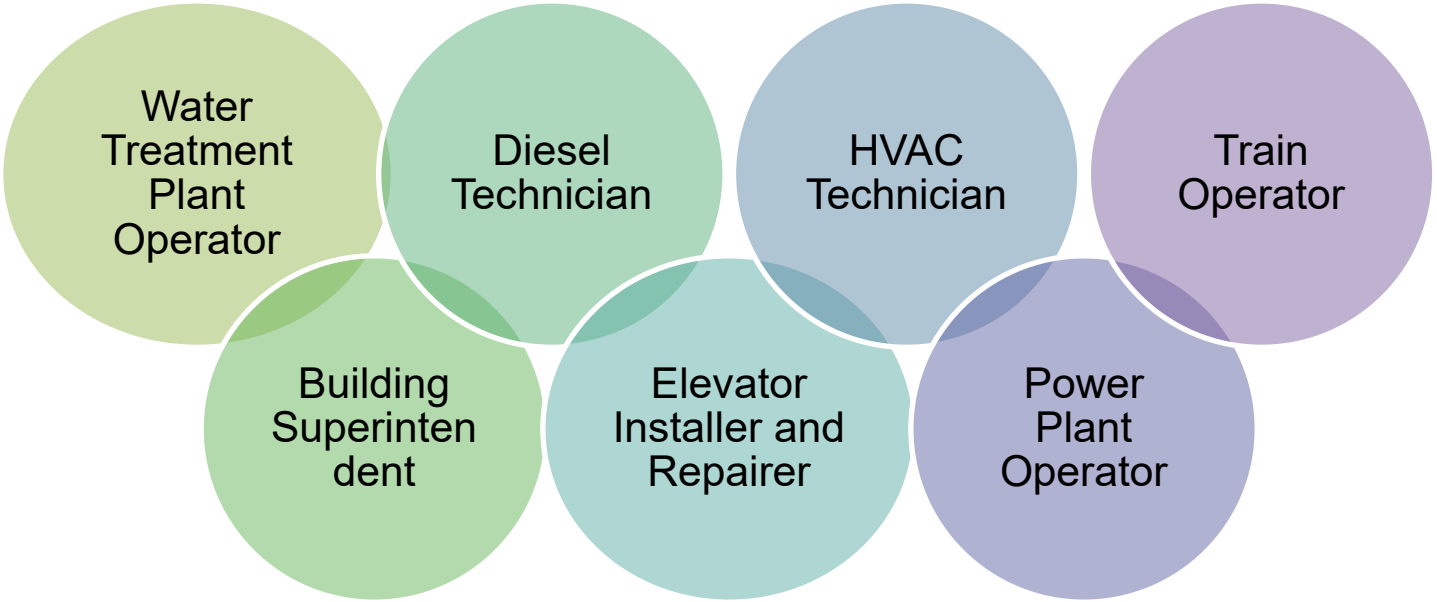
# Alternate Careers for Power Engineers




For more information visit NOC website

## Training Options for Engineers

Red River College Polytech

- Civil Technician Certificate
- Civil Engineering Technology
- Geomatics Technology Diploma

# Training Options for Engineers

## Red River College Polytech

- Structural Engineering Diploma
- Architectural/Engineering Technology Diploma

# Training Options for Engineers

## Red River College Polytech

- Construction Management
- Design Drafting Technician Advanced diploma program
- Drafting/CAD Certificate program
- -Advanced Manufacturing (post-graduate diploma)

# Training Options for Engineers

## Winnipeg Construction Association

Online Courses

- Communications, Negotiation and Conflict Resolution
- Construction Project Management
- Construction Law
- Canadian Construction Contract Essentials
- Introduction to Construction Estimating
- Construction Industry Ethics
- Working in a Respectful and Inclusive Workplace
- Pipeline Construction Safety Training
- First Line Supervisor Training
- Introduction to Understanding Systemic Racism

# Training Options for Engineers

## Red River College Polytech

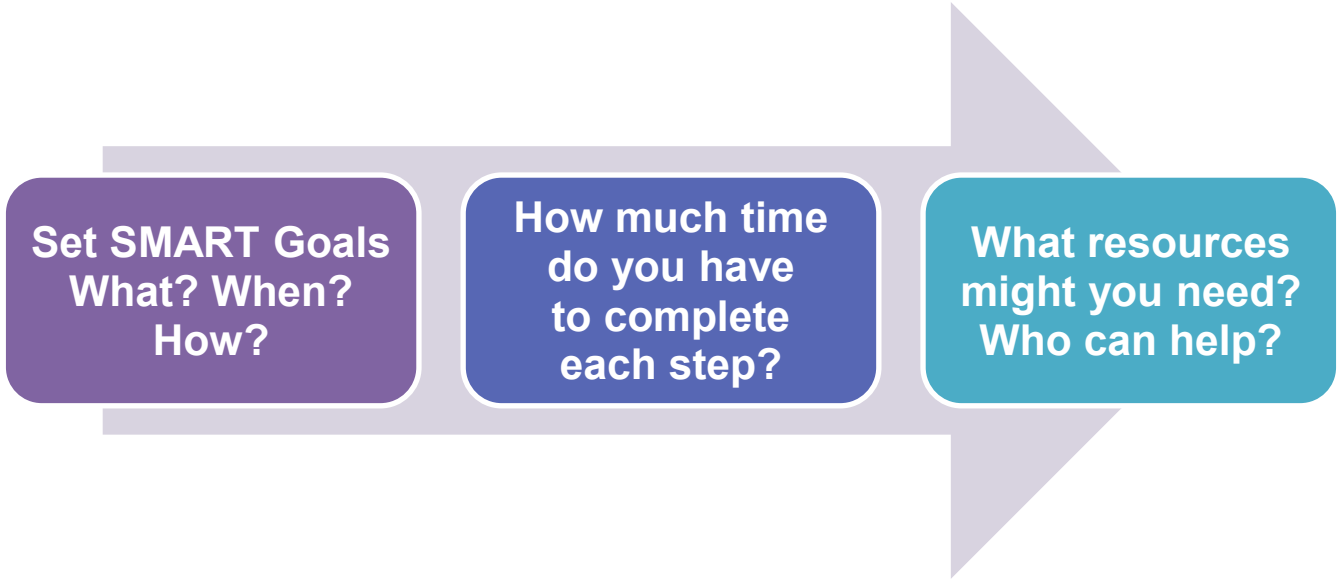
- Aerospace Manufacturing
- Aircraft Maintenance Engineer Diploma
- Apprentice Aircraft Maintenance Journeyperson
- Red River College / Apprenticeship Manitoba
- Aerospace Manufacturing

## Career Planning Can Help You

- Enter the workforce
- Plan for education
- Deal with changing workplace demands
- Anticipate trends or changes
- Upgrade or maintain your skills
- Develop skills for managing your career

# Reflecting on Barriers and Strengths

# Setting Short and Long-term Goals



# Career and Education Plan

**Name and Client ID:** Kenny Jones (12345)

**Short Term Goal 1**
Alarms and Security Technician

**Short Term Goal 2**
Facility Manager

**Long Term Goal**
Electrical Engineer

**Achieving and Maintaining Long-Term Employment**

- Maintaining long term employment and Career Management – An ongoing process:
  a. Continuous learning – develop new skills or refine existing skills
  b. Professional development – take courses, attend workshops, read, network, volunteer
  c. Balancing work and life – reflect on values, priorities and life circumstance
- Other: Attend qualifications recognition & networking events at Manitoba Start

**Researching Post Secondary Training**

| | |
|---|---|
| • Research education and training options | Date: May 28, 2021 |
| • Identify post-secondary institution | Date: May 28, 2021 |
| • Verify admissions requirements | Date: May 28, 2021 |
| • Research funding options (Employment MB, SEED Recognition Counts, Student Aid, etc.) | Date: May 28, 2021 |
| • Other: Research alternative training options, CTTAM, IEEQ, RRC, and EGM | Date: May 28, 2021 |

**Qualification Recognition**

| | |
|---|---|
| • Research your regulated profession or trade | Date: Jun 11, 2021 |
| • Contact regulatory body | Date: Jun 11, 2021 |
| • Identify necessary requirements (language level, transcript, syllabus, etc.) | Date: Jun 11, 2021 |
| • Research Funding Options (Immigrant Access fund, Employment MB, SEED Recognition Counts, MB Student Aid, bursaries, financial institutions, etc.). | Date: Jun 11, 2021 |
| • Other: Connect with EGM; register for SEED Winnipeg Webinar on Manitoba Start website. | Date: Jun 18, 2021 |

**Skill Development**

| | |
|---|---|
| • Research job specific training (First Aid/CPR, fork lift, security guard license, etc.) | Date: May 3, 2021 |
| • Complete ASSESS assessments sent by facilitator/coach; consider computer training | Date: May 3, 2021 |
| • Consider volunteering (visit www.volunteermanitoba.ca ) | Date: May 3, 2021 |
| • Language assessment at WELARC | Date: May 10, 2021 |
| • Obtain Driver's license | Date: May 28, 2021 |
| • Other: Find volunteer opportunities in technical occupations; prepare for Manitoba drivers licensing | Date: May 10, 2021 |

**Job Search Preparation**

| | |
|---|---|
| • Complete Career Development Workshop at Manitoba Start | Date: Apr 30, 2021 |
| • Finalize marketing materials (resume, cover letter, references) | Date: May 7, 2021 |
| • Apply for Security Clearance Checks (criminal record check, child abuse registry, adult abuse registry, immunizations record) | Date: May 3, 2021 |
| • Other: | Date: May 3, 2021 |

Prepare a list of engineering, technical /manufacturing employers to apply after finalizing resume and cover letter with my career coach

# Thank you!

If you require additional information about qualification recognition, please contact your Career Coach.

If you are not currently a Manitoba Start client, register with us:

- Call front desk at 204-944-8833
- Visit in person
- Complete our online registration form to receive career development support.

Good luck with your career planning and work search!