

Opportunities in Apprenticeship Education and the Skilled Trades

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CASS TAVE Trades & Technologies Insights Summit

May 14, 2024

Alberta




Apprenticeship
and Industry
Training

Agenda

- Apprenticeship & the Economy
- What is Apprenticeship?
- Education Credentials
- Pathways Beyond Apprenticeship
- How You Can Help


Leadership Qualities

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Modelling
Commitment
to Professional
Learning

SLQS 2




Leading a
Learning
Community

LQS 4



Understanding
and Responding
to the Larger
Societal Context

LQS 9



Modelling
Commitment
to Professional
Learning

LQS 2

Apprenticeship and the Economy

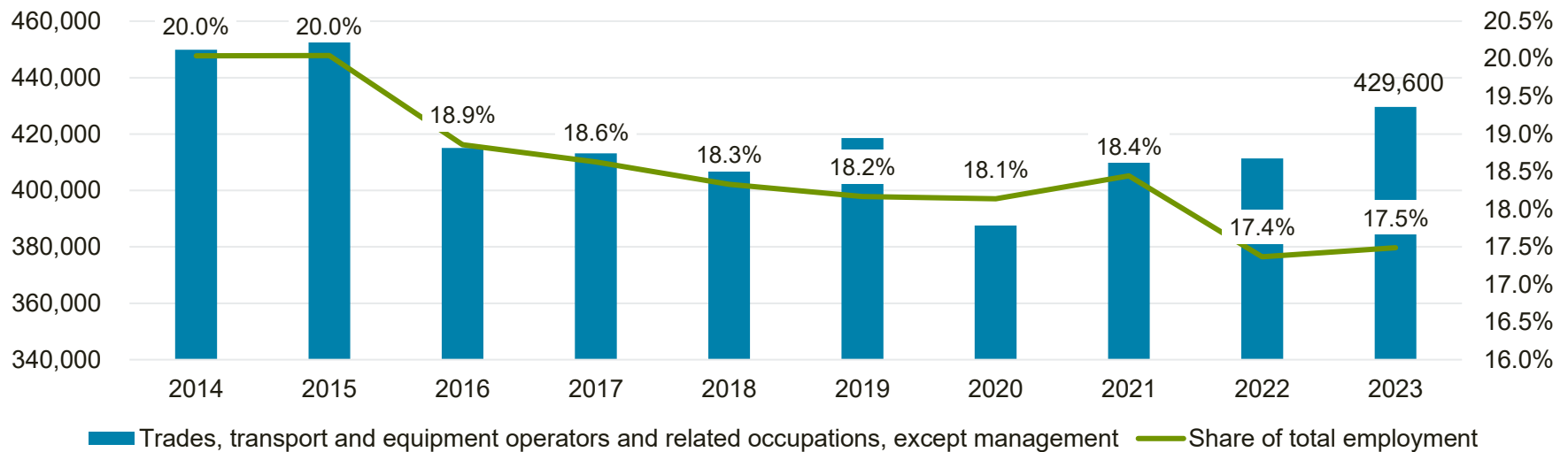
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Trades and the Labour Market

More than 1 in 6 Albertans work in a trades, transport or related occupation, and the share of skilled trades has remained relatively stable since 2016.

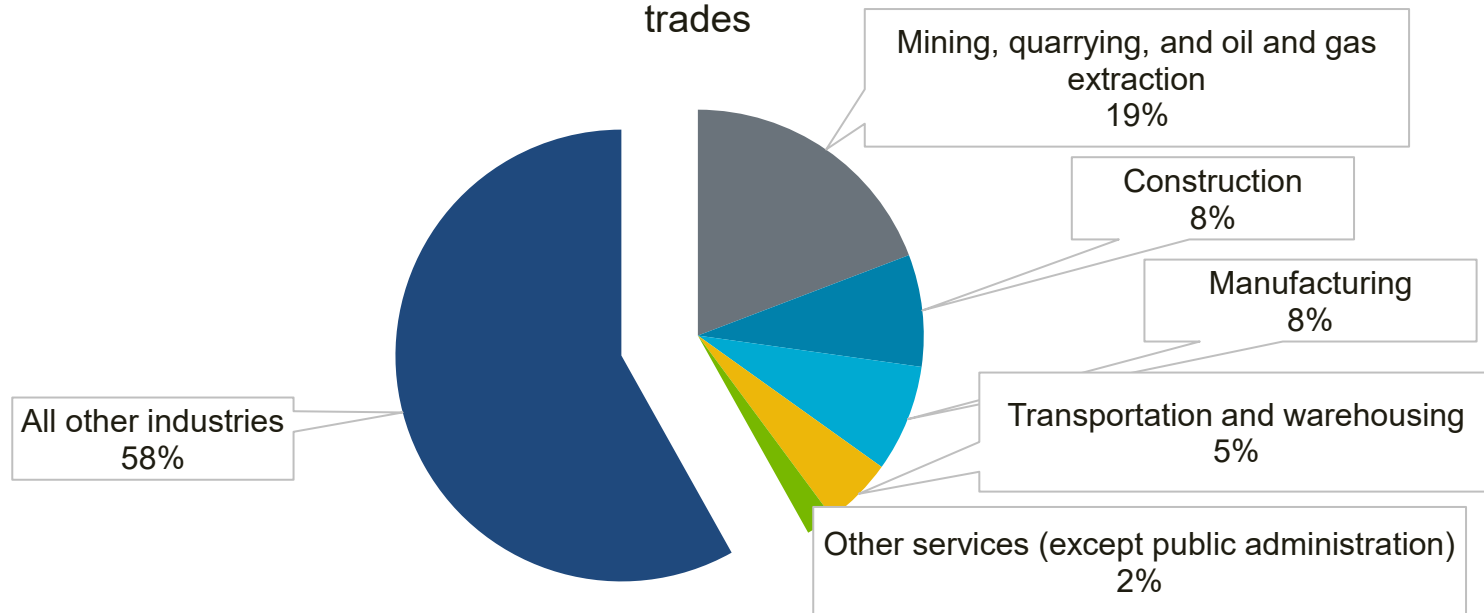
Share of total employment for trades, transport and equipment operators, and related occupations, 2014 to 2023



Source: Statistics Canada, Labour Force Survey, 2014 to 2023 Annual Average

The top 5 industries with the highest share of skilled trades contributed to 42% of Alberta's GDP in 2023.

Share of GDP (basic prices) by industry, top five industries employing skilled trades



Statistics Canada. Table 36-10-0402-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories (x 1,000,000)

Competitive Wages

Occupation group (National Occupation Classification 2021)	Canada	All Provinces (excluding Alberta)	Alberta	Alberta's Wage Premium
Total, All occupations	\$ 33.55	\$ 31.04	\$ 34.93	12.5%
Middle management occupations in trades and transportation (NOC 70)	\$ 51.61	\$ 46.10	\$ 55.78	21.0%
Technical trades and transportation officers and controllers (NOC 72)	\$ 35.93	\$ 33.88	\$ 39.09	15.4%
General trades (NOC 73)	\$ 28.38	\$ 26.84	\$ 30.37	13.2%
Mail and message distribution, other transport equipment operators and related maintenance workers (NOC 74)	\$ 27.36	\$ 26.48	\$ 27.64	4.4%
Helpers and labourers and other transport drivers, operators and labourers (NOC 75)	\$ 24.02	\$ 22.60	\$ 24.50	8.4%

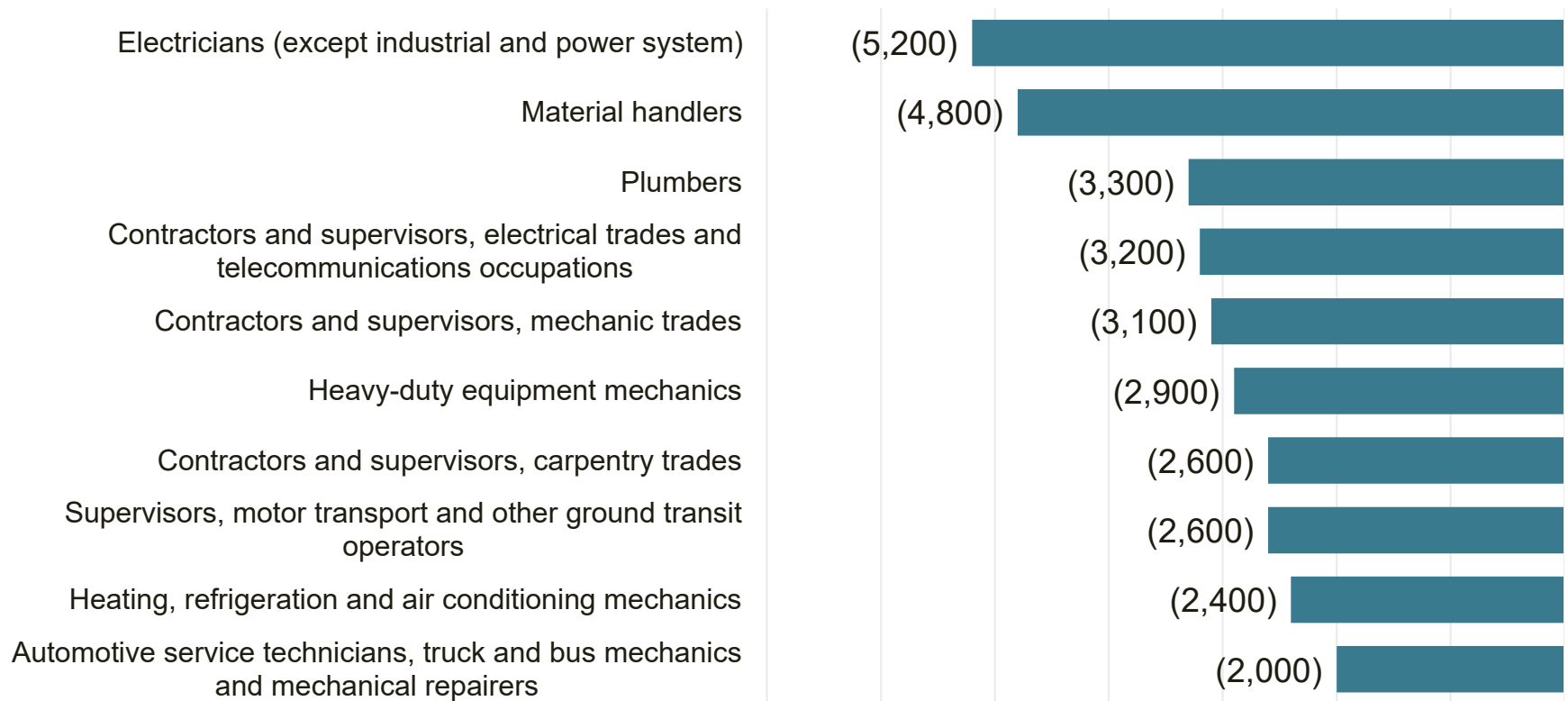
Source: Statistics Canada, Labour Force Survey, 2023 annual average, employees (Jobs, Economy and Trade custom tabulation)

Looming Skills Gap

- 1 in 3 job vacancies during Q4 2023 were in trades, transport and equipment operators and related occupation.
 - Total vacancies: 77,500
 - Trades vacancies: 22,255
- Net job openings are forecasted to exceed net job seekers annually for the next decade.
 - 2024: 31,600 job openings for 23,300 job seekers
 - 2025: 32,700 job openings for 23,000 job seekers
- Projecting cumulative shortage of 40,000 workers in trades by 2033.

Top 10 Trades: Labour Shortages

Cumulative labour shortage by 2033



Source: Alberta Jobs, Economy and Trade, Alberta Occupational Outlook, 2023-2033

- Skilled trades represent a significant portion of Alberta's workforce.
- They contribute substantially to Alberta's GDP.
- Skilled trades occupations are in high demand across various industries, including construction, transportation and warehousing, manufacturing and mining, oil and gas extraction.
- On average, skilled trades offer competitive wages.
- Alberta's skilled trades workforce is aging, with a significant portion nearing.
 - This trend, coupled with a lack of younger replacements, is projected to create a skills gap in several key occupations.

What is Apprenticeship?

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Adina – Student Example

- - Academically driven and highly focused.
 - Excelled in advanced-level high school sciences and math.
 - Favorite class was Career Education--Mechanics, a departure from her expected path.
 - Friends and high school mentors urged her to explore STEM career options.
 - Family is adamant about focusing solely on academics and university.
 - Adina's desire to continue with the skilled trades challenges family and social expectations.

We'll hear more about her journey later...

What is Apprenticeship?

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Alberta offers 47 Apprenticeship Education Programs, ranging in length from 1 to 4 years.

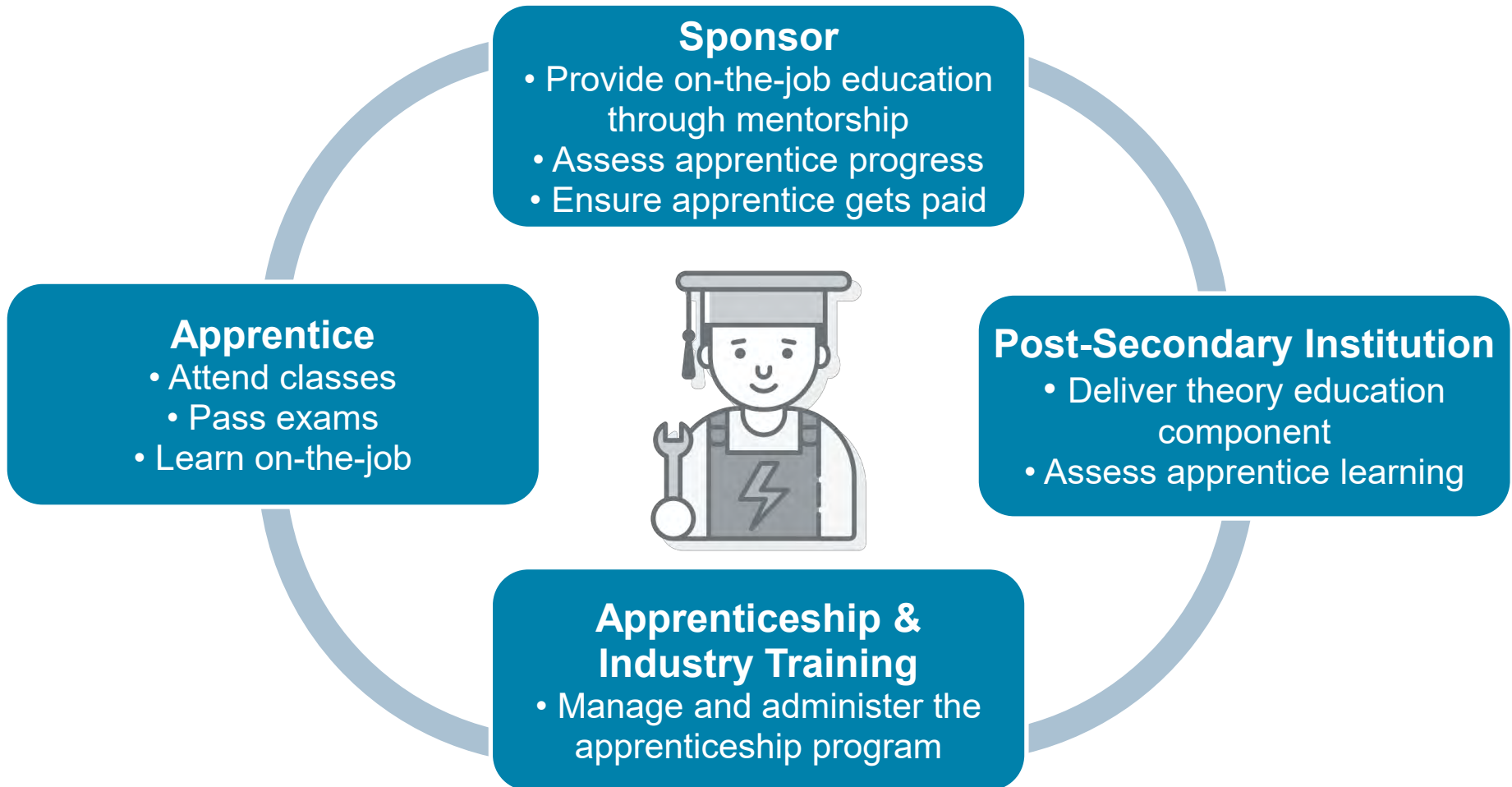
80%
on-the-job

20%
at a college or
polytechnic
institute

Earn a post-
secondary credential
and qualify for
journeyman
certification.

Apprenticeships are a Partnership

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Apprenticeship and K-12 Competencies

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- K-12 system competencies are carried into the post-secondary system and continually developed.
- Apprenticeship is post-secondary education for the real world that leverages and further develops core competencies.

CRITICAL THINKING

PROBLEM SOLVING

MANAGING INFORMATION

CREATIVITY AND INNOVATION

COMMUNICATION

COLLABORATION

CULTURAL AND GLOBAL CITIZENSHIP

PERSONAL GROWTH AND WELL-BEING

Our focus is on increasing...



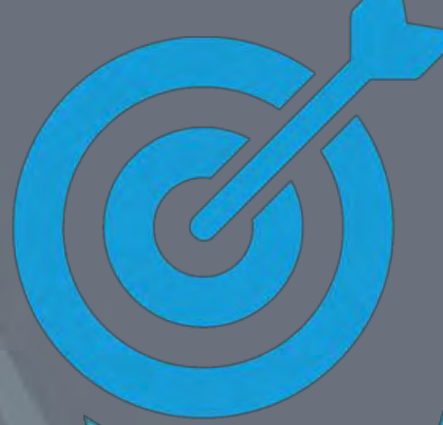
Awareness

Parity of Esteem

Accessibility

...for apprenticeship education and the skilled trades.

BIG NEWS



Education Credentials

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Education Credentials - Previously

- Historically, Alberta linked apprenticeship education and license to work in the skilled trades.

This was your education credential



This was also your license to work

- This certificate was not consistently recognized as an academic credential by post-secondary institutions.

- Since July 2022, apprenticeship program graduates have received education credentials **in addition** to journeyperson certificates.

Education Credential

- Confirms post-secondary learning achievement.
- Reflects the length and complexity of the program.

Journeyperson Certificate

- Authorizes unsupervised work in the full scope of the trade anywhere in Alberta.
- Is issued when someone meets Alberta's certification standards.

Apprenticeship Credentials

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Credential	Typical Duration
Certificate (Apprenticeship)	2-3 years
Diploma (Apprenticeship)	3-4 years
Advanced Diploma (Apprenticeship)	4 years

Education Credentials - Today



- Education credential
 - Certificate, Diploma or Advanced Diploma



- License to work
 - Journeyman Certificate

Post Secondary Education

Alberta Credential Framework (ACF) – At a Glance

Purpose

To foster post-secondary system coherence by naming and defining Alberta credentials in a comprehensive structure.

Background

A post-secondary credential framework across the province supports a high-quality college and university sector. A clearly defined structure of recognized credentials makes qualifications transparent for learners and enables flexibility and transferability between educational and occupational fields. The ACF's scope is ministry-approved post-secondary credentials and journeyman certificates within Alberta.

Key Considerations

The ACF facilitates learner pathways, promotes educational quality and credential recognition, and fosters system coordination and accountability. The framework is a compilation of the Canadian Degree Qualifications Framework integrated with other Alberta government endorsed post-secondary credentials.

Each credential is described using two main organizational categories: credential descriptors and credential standards. For degree level credentials, descriptors are drawn from the Canadian Degree Qualifications Framework.

The Alberta Credentials Framework enhances, reduces, and combines credentials in several ways:

- Post-basic certificates and diplomas, as well as applied degrees, are "retired" and replaced by other credentials.
- Several credentials have been renamed to clarify their level of study.
- Three types of certificates and university certificates have been harmonized and consolidated into one credential.
- A separate section has been created for apprenticeship credentials, and these have had credits assigned to them.

The Alberta Credentials Framework identifies 13 post-secondary credentials under the *Post-secondary Learning Act (PSLA)* and 3 credentials under the *Skilled Trades and Apprenticeship Education Act (STAEA)*.

Alberta Credential Framework (by level of study)

UNDERGRADUATE CREDENTIALS (PSLA)

Credential Name	Typical Duration	Standard Credits
Certificate	1 year or less	12-32
Post-Diploma Certificate	1 year or less	18-30
Post-Baccalaureate Certificate	8-15 months	24-36
Diploma	2-3 years	60-80
Bachelor's Degree	3-4 years	90-120

GRADUATE CREDENTIALS (PSLA)

Credential Name	Typical Duration	Standard Credits
Graduate Certificate	Up to 1 year (2-3 semesters)	12-36 (minimum 12)
Graduate Diploma	1-2 years	Minimum 18
Master's Degree	1-3 years (2-6 semesters)	Variable
Post-Master's Certificate	1 year or less	Minimum 12
Post-Master's Diploma	1-2 years	Minimum 18
Doctoral Degree	3-6 years	Variable
Post-Doctoral Certificate	1 year or less	Minimum 12
Post-Doctoral Diploma	1.5 years or less	Variable

APPRENTICESHIP CREDENTIALS (STAEA)

Credential Name	Typical Duration	Standard Credits
Certificate	2-3 years	30-59
Diploma	3-4 years	60-80
Advanced Diploma	4 years	Over 80

APPRENTICESHIP CREDENTIALS (STAEA)

Credential Name	Typical Duration	Standard Credits
Certificate	2-3 years	30-59
Diploma	3-4 years	60-80
Advanced Diploma	4 years	Over 80

Pathways Beyond Apprenticeship

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- Apprenticeship education is often misunderstood as an academic dead end, with few pathways to further education or career growth.
- As a result, educators, students and parents can overlook or are never introduced to apprenticeship education as an option.
- Apprenticeship is one form of work-integrated learning.

Apprenticeship is a Foundation

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- Apprenticeship is a foundation for a wide range of careers and further education.
- Skills learned in apprenticeships are foundational and transferable to various roles and industries.
- Apprenticeships instill a work ethic and problem-solving mindset valuable in any career.



Adina's Apprenticeship Opportunity

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Examples of learning opportunities through apprenticeship:

Critical Thinking and Problem Solving

- Face complex issues on job sites, strengthen your creative approach.
- Develop strong analytical and problem-solving skills through hands-on experience.

Managing Information

- Manage vast amounts of technical knowledge and apply it to diagnose and resolve real-world issues.

Communication, Collaboration and Personal Growth

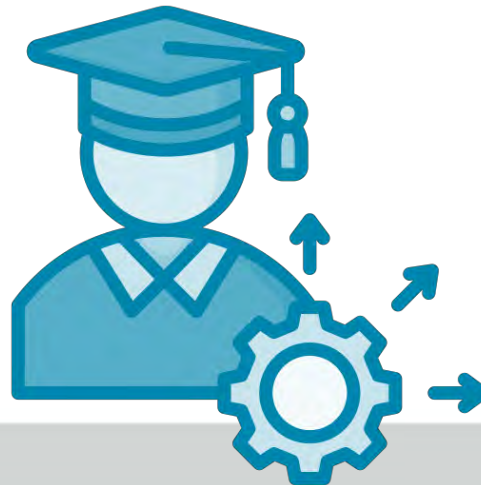
- Learn how to effectively communicate and collaborate to achieve goals

- **NAIT - Trades to Degrees**

Enter into the third year of a Bachelor of Business Administration degree

- **U of A - Bridge to Teacher**

Up to 30 credits granted towards Bachelor of Education degree



Potential Future Pathways

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Electrician Apprenticeship → Electrical Engineering Technologist

Steamfitter-Pipefitter Apprenticeship → Power Engineering Technologist

Heavy Equipment Technician Apprenticeship → Supply Chain Professional

Agricultural Equipment Technician Apprenticeship → Agri-sales & Customer Relations Specialist

Refrigeration and Air Conditioning Mechanic Apprenticeship → Mechanical Engineering Technologist

How You Can Help

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Get excited!

- Apprenticeship education can lead to numerous opportunities in life, which makes apprenticeship more attainable and desirable.
- CTS/CTF and work-integrated learning provides real-world skills and experience.
- It is possible to dispel myths about apprenticeship education and the skilled trades.
- Be aware that we are expanding the apprenticeship model outside the trades.

Get Involved – District Leaders

- Advocate to parents and students the opportunity of apprenticeship education.
- Continue to prioritize and promote the importance of Career Education in your districts.
- Engage with other neighboring districts to plan out career education professional development for your educators.
- Cultivate opportunities for all students to experience the skilled trades.
- Prioritize the building and/or maintenance of appropriate facilities for Career Education.
- Hire career education teachers and create opportunities for career education positions within your school.

Get Involved – All Educators

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- Continue to share your passion for career and technology studies opportunities.
- Promote the value of apprenticeship education and the skilled trades to students who may want to pursue this route but may be discouraged by parents or peers.
- Spread the word to other educators and influencers about the world of opportunity that apprenticeship education credentials are creating.
- Visit www.Tradesecrets.alberta.ca to get Resources for Teachers.
- Share our handout and presentation.
- Reach out to us! STAE.Act@gov.ab.ca



Thank you!



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Share your thoughts with us: STAE.Act@gov.ab.ca

