Pre-Employment
Plan of Training
Powerline Technician

Government of Newfoundland and Labrador
Department of Immigration, Population Growth and Skills
Apprenticeship and Trades Certification Division

October 2022

PLAN OF TRAINING

Pre-Employment

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Approved by:

Chairperson, Provincial Apprenticeship and Certification Board

Date: Oct. 20, 2022

Preface

This curriculum standard is based upon the 2019 edition of the Red Seal Occupational Standard (RSOS) for the Powerline Technician trade. It describes the curriculum content for the Powerline Technician Pre-employment training program.

Acknowledgements

The Provincial Trade Advisory Committee (PTAC), industry representatives, instructors and apprenticeship staff provided valuable input to the development of this provincial plan of training. Without their dedication to quality apprenticeship training, this document could not have been produced.

We offer a sincere thank you to the following:

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Document Status	Date Approved	Mandatory Implementation Dates	Comments
Updated	October 2022	September 2023 – Pre-employment	PE POT is updated to align with the 2021 RSOS, National Harmonization sequencing and 2022 AACS
		September 2024 – Level 2	
		September 2025 – Level 3	
		September 2026 – Level 4	

Detailed List of Pre-employment Changes:

- Addition of 2 new units to Pre-employment from AACS L1:
  - PTN-140 - Introduction to Live-Lines – 12 hours
  - PTN-165 - Communication Lines – 9 hours
- Removal of 1 unit from Pre-employment to AACS L2:
  - OL1821 - Street Lighting Systems – 25 hours
- Change of hours for 1 Pre-employment unit:
  - OL1602 – Traffic Control – from 4 hours to 8 hours
- Updated 1 Related Suite course:
  - AM1000 Intro to Essential Skills changed to AM1001 Intro to Skills for Success
- Additional pre-requisites added to OL1130 and OL1835 for clarity
- Added the AACS unit numbers that correspond with provincial POT unit numbers
- Updated Department name and web address
- Updated Class Call Table with hour changes for AACS advanced levels

Additional Note:

- No changes to Pre-employment **total** hours

Table of Contents

A. RSOS Comparison Chart

A Red Seal Occupational Standard (RSOS) comparison chart is located in the Atlantic Apprenticeship Curriculum Standard (AACS).

B. Program Structure

For each and every course, a formal assessment is required for which 70% is the pass mark. A mark of 70% must be attained in both the theory examination and the practical project assignment, where applicable as documented on an official transcript.

The order of course delivery within each level can be determined by the training institution, as long as pre-requisite conditions are satisfied.

Upon completion of a Pre-employment program, individuals may be required to complete other certifications (employer or job site specific) in order to gain employment.

A Pre-employment student who becomes an apprentice will also be required to complete Level 2, 3 and 4 in the Atlantic Apprenticeship Curriculum Standard (AACS).

Pre-Employment				
Course No.	**AACS No.**	**Course Name**	**Hours**	**Pre-Requisite(s)**
TS1510	-	Occupational Health and Safety	6	None
TS1520	-	WHMIS	6	None
TS1530	-	Standard First Aid	14	None
OL1631	PLT-100	Safety	14	None
OL1681	PLT-110	Tools and Equipment	40	OL1631
OL1851		Rigging, Hoisting and Lifting	30	OL1631
OL1250	PLT-120	Access Equipment	6	OL1631
OL1691		Pole Climbing	30	OL1631
OL1641		On- and Off-road Equipment	10	OL1631
OL1771		Aerial Devices and Hydraulics	30	OL1631
OL1602	PLT-115	Traffic Control	8	None

Pre-Employment				
Course No.	AACS No.	Course Name	Hours	Pre-Requisite(s)
OL1130	PLT-130	Power and Energy	6	OL1180 OL1190 OL1240
ER1140	PLT-125	DC Theory	30	None
ER1151		Series and Parallel DC Circuits	45	ER1140
OL1180	PLT-130	AC Theory	6	ER1151
OL1190	PLT-135	AC Circuits	24	OL1180
OL1240	PLT-135	Series and Parallel Circuits	10	OL1180
OL1791	PLT-105	Grounding and Bonding	30	OL1631 OL1180
OL1721	PLT-180 PLT-185	Conductors and Cables	30	None
PTN-165	PLT-165	Communication Lines	9	OL1721 OL1741 OL1791
OL1741	PLT-175	Sagging Conductors	10	OL1791 OL1721
OL1714	PLT-130 PLT-135	Single-Phase Circuits	10	OL1180 OL1791
OL1701	PLT-115	Drawings, Schematics and Specifications	15	None
OL1170		Job Planning	6	OL1701
OL1715	PLT-170	Distribution Lines	30	OL1714
OL1725	PLT-150 PLT-155	Overhead Distribution Structures	240	OL1691 OL1851 OL1701 OL1715
OL1835	PLT-135	Overhead Distribution Systems	30	OL1725 ER1151 OL1180 OL1190 OL1240

Pre-Employment				
Course No.	AACS No.	Course Name	Hours	Pre-Requisite(s)
OL1140	PLT-135	Inductance and Capacitance	10	OL1180
OL1811	PLT-160	Transformers	30	OL1190
OL1150	-	Transmission Systems	5	OL1190 ER1151
OL1781	PLT-150 PLT-155	Transmission Structures	5	OL1150
OL1160		Steel Structure Climbing	6	OL1150
OL1751	-	Tree Trimming	6	OL1631 OL1681
PTN-140	PLT-140	Introduction to Live-Line Methods	12	OL1631 OL1681 OL1791
AM1001	-	Introduction to Skills for Success	9	None
AP1102	-	Introduction to Apprenticeship	12	None
*AM1101	-	Math Essentials	42	None
AM1271	-	Powerline Technician Math Fundamentals	42	AM1101
CM2161	PLT-145	Communication Essentials	36	None
SD1761		Workplace Essentials	24	None
MC1062	-	Computer Essentials	15	None
OT1161	-	Workplace Exposure	60	None
Total Pre-Employment Hours			1039	

Required Work Experience

*A student who can meet the mathematics requirement through an ACUPLACER® test may be exempted from AM1101 - Math Essentials. Please check with your training institution.

** **All entrants must have a valid Class 05 license prior to entry into the Powerline Technician program.**

Pre-Employment

TS1510 Occupational Health and Safety

Learning Outcomes:

- Demonstrate knowledge of identifying how to prevent accidents and illnesses.
- Demonstrate knowledge of improving health and safety conditions in the workplace.

Duration: 6 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Interpret the Occupational Health and Safety Act laws and regulations.
   i. explain the scope of the Act
      - application of the Act
      - Federal/Provincial jurisdictions
      - Canada Labour Code
      - rules and regulations
      - private home application
      - conformity of the Crown by the Act

2. Explain responsibilities under the Act & Regulations.
   i. duties of employer, owner, contractors, sub-contractors, employees, and suppliers

3. Explain the purpose of joint health and safety committees.
   i. formation of committee
   ii. functions of committee
   iii. legislated rights
   iv. health and safety representation
   v. reporting endangerment to health
   vi. appropriate remedial action
   vii. investigation of endangerment
   viii. committee recommendation
   ix. employer's responsibility in taking remedial action

4. Examine right to refuse dangerous work.
   i. reasonable grounds for refusal
   ii. reporting endangerment to health
   iii. appropriate remedial action
   iv. investigation of endangerment

v. committee recommendation
vi. employer's responsibility to take appropriate remedial action
vii. action taken when employee does not have reasonable grounds for refusing dangerous work
viii. employee's rights
ix. assigning another employee to perform duties
x. temporary reassignment of employee to perform other duties
xi. collective agreement influences
xii. wages and benefits

5. State examples of work situations where one might refuse work.

6. Describe discriminatory action.
   i. definition
   ii. filing a complaint procedure
   iii. allocated period of time a complaint can be filed with the Commission
   iv. duties of an arbitrator under the Labour Relations Act
   v. order in writing inclusion
   vi. report to commission Allocated period of time to request Arbitrator to deal with the matter of the request
   vii. notice of application
   viii. failure to comply with the terms of an order
   ix. order filed in the court

7. Explain duties of commission officers.
   i. powers and duties of officers
   ii. procedure for examinations and inspections
   iii. orders given by officers orally or in writing
   iv. specifications of an order given by an officer to owner of the place of employment, employer, contractor, sub-contractor, employee, or supplier
   v. service of an order
   vi. prohibition of persons towards an officer in the exercise of his/her power or duties
   vii. rescinding of an order
   viii. posting a copy of the order
   ix. illegal removal of an order

8. Interpret appeals of others.
   i. allocated period of time for appeal of an order
   ii. person who may appeal order
   iii. action taken by Commission when person involved does not comply with the order
   iv. enforcement of the order
   v. notice of application
   vi. rules of court

9. Explain the process for reporting of accidents.
    i. application of act
    ii. report procedure
    iii. reporting notification of injury
    iv. reporting accidental explosion or exposure
    v. posting of act and regulations

Practical Requirements:

1. Conduct an interview with someone in your occupation on two or more aspects of the act and report results.

2. Conduct a safety inspection of shop area.

TS1520 Workplace Hazardous Materials Information System (WHMIS)

Learning Outcomes:

- Demonstrate knowledge of interpreting and applying the Workplace Hazardous Materials Information System (WHMIS) Regulation under the Occupational Health and Safety Act.

Duration: 6 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Define WHMIS safety.
   - i. rational and key elements
   - ii. history and development of WHMIS
   - iii. WHMIS legislation
   - iv. WHMIS implementation program
   - v. definitions of legal and technical terms

2. Examine hazard identification and ingredient disclosure.
   - i. prohibited, restricted and controlled products
   - ii. classification and the application of WHMIS information requirements
   - iii. responsibilities for classification
     - the supplier
     - the employer
     - the worker - Classification: rules and criteria
     - information on classification
     - classes, divisions and subdivision in WHMIS
     - general rules for classification
     - class A - compressed gases
     - class B - flammable and combustible materials
     - class C - oxidizing material
     - class D - poisonous and infectious material
     - class E - corrosive material
     - class F - dangerously reactive material

iv. products excluded from the application of WHMIS legislation
- consumer products
- explosives
- cosmetics, drugs, foods and devices
- pest control products
- radioactive prescribed substances
- wood or products made of wood
- manufactured articles
- tobacco or products of tobacco
- hazardous wastes
- products handled or transported pursuant to the Transportation of Dangerous Goods (TDG) Act

v. comparison of classification systems - WHMIS and TDG
vi. general comparison of classification categories
vii. detailed comparison of classified criteria

3. Explain labeling and other forms of warning.
   i. definition of a WHMIS label
      - supplier label
      - workplace label
      - other means of identification
   ii. responsibility for labels
      - supplier responsibility
      - employer responsibility
      - worker responsibility
   iii. introduce label content, design and location
      - supplier labels
      - workplace labels
      - other means of identification

4. Introduce material safety data sheets (MSDS).
   i. definition of a material safety data sheet
   ii. purpose of the data sheet
   iii. responsibility for the production and availability of data sheets
      - supplier responsibility
      - employer responsibility
      - workers responsibility

Practical Requirements:

1. Locate WHMIS label and interpret the information displayed.

2. Locate a MSDS sheet for a product used in the workplace and determine what personal protective equipment and other precautions are required when handling this product.

TS1530 Standard First Aid

Learning Outcomes:

- Demonstrate knowledge of recognizing situations requiring emergency action.
- Demonstrate knowledge of making appropriate decisions concerning first aid.

Duration: 14 Hours

Pre-Requisite(s): None

Practical Requirements:

1. Complete a **St. John Ambulance or Canadian Red Cross** Standard First Aid Certificate course.

OL1631 Safety

Learning Outcomes:

- Demonstrate knowledge of safety equipment, their applications, maintenance and procedures for use.
- Demonstrate knowledge of safe work practices.
- Demonstrate knowledge of regulatory requirements pertaining to safety.

Duration: 14 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Identify types of personal protective equipment (PPE) and clothing and describe their applications and limitations.

2. Describe the procedures used to care for and maintain PPE.

3. Identify hazards and describe safe work practices.
   - i. personal
   - ii. workplace
     - biohazards (used needles)
     - energy state awareness (electrical and mechanical)
       - arc flash awareness
       - isolation and de-energizing procedures
       - equi-potential grounding and bonding
       - lockout / tag out
       - confined space awareness
       - rescue procedures
     - fire
     - heights
       - fall prevention and arrest
         - OH&S Regulations Part X – Section 139
       - rescue procedures
     - chemical / gas / radiation
     - asbestos
   - iii. environmental
     - discharge/spills

4. Identify and describe workplace safety and health regulations.
   i. federal
      - Material Safety Data Sheets (MSDS)
      - Workplace Hazardous Material Information System (WHMIS)
      - Transportation of Dangerous Goods (TDG)
   ii. provincial/territorial
      - Occupational Health and Safety (OH&S)
   iii. municipal

Practical Requirements:

1. Inspect and perform air test on rubber gloves.

OL1681 Tools and Equipment

Learning Outcomes:

- Demonstrate knowledge of tools and equipment, their applications, maintenance and procedures for use.

Duration: 40 Hours

Pre-Requisite(s): OL1631

Objectives and Content:

1. Identify types of hand tools and describe their applications and procedures for use.

2. Describe the procedures used to inspect and maintain hand tools.

3. Identify types of power tools and describe their applications and procedures for use.
   i. electric
      - corded
      - cordless
   ii. hydraulic
   iii. pneumatic
   iv. gas powered
   v. powder actuated

4. Describe the procedures used to inspect and maintain power tools.

5. Identify types of basic electrical measuring and test equipment and describe their general applications.

6. Describe the procedures used to inspect and maintain electrical measuring and test equipment.

7. Identify types of specialty live-line tools (FRP) and cover up equipment (rubber and rigid).

Practical Requirements:

1. Safely use basic hand tools.

2. Safely use basic power tools.

3. Safely use electrical measuring and test equipment.

4. Inspect and perform basic maintenance and care of specialty live-line tools (FRP) and cover up equipment (rubber and rigid).

5. Perform basic cuts with a chainsaw.

OL1250 Access Equipment

Learning Outcomes:

- Demonstrate knowledge of ladders, their applications, limitations and procedures for use.

Duration: 6 Hours

Pre-Requisite(s): OL1631

Objectives and Content:

1. Define terminology associated with ladders.

2. Identify hazards and describe safe work practices pertaining to ladders.
   i. fall prevention and arrest (set up, secure and stability of ladder)
   ii. fiberglass versus steel ladders around energized conductors

3. Identify codes and regulations pertaining to ladders.

4. Identify types of ladders and describe their characteristics and applications.
   i. extension
   ii. step

5. Describe the procedures used to erect and remove ladders.

6. Describe the procedures used to inspect, maintain, transport and store ladders.

Practical Requirements:

1. Safely set up and climb ladders.

OL1691 Pole Climbing

Learning Outcomes:

- Demonstrate knowledge of pole climbing, its applications, limitations and procedures for use.
- Demonstrate knowledge of pole climbing equipment, its applications, limitations and procedures for use.

Duration: 30 Hours

Pre-Requisite(s): OL1631

Objectives and Content:

1. Define terminology associated with pole climbing and equipment.

2. Identify hazards and describe safe work practices pertaining to pole climbing and equipment.
   i. fall prevention and arrest

3. Describe the procedures used to perform pole top rescues.

4. Identify codes and regulations pertaining to pole climbing equipment.
   i. training and certification requirements

5. Identify types of pole climbing equipment and describe their characteristics and applications.

6. Identify pole climbing equipment components and describe their characteristics and applications.
   i. spurs
   ii. belts
   iii. pole straps

7. Describe the procedures used to climb using climbing equipment.

8. Describe the procedures used to inspect, maintain and store climbing equipment and components.

Practical Requirements:

1. Climb poles using safe climbing practices.

2. Perform pole cut out test.

3. Perform pole top rescue.

OL1851 Rigging, Hoisting and Lifting

Learning Outcomes:

- Demonstrate knowledge of rigging, hoisting and lifting equipment, their applications, limitations and procedures for use.
- Demonstrate knowledge of basic rigging, hoisting and lifting techniques.

Duration: 30 Hours

Pre-Requisite(s): OL1631

Objectives and Content:

1. Define terminology associated with rigging, hoisting and lifting.

2. Identify hazards and describe safe work practices pertaining to rigging, hoisting and lifting.

3. Identify codes and regulations pertaining to rigging, hoisting and lifting.
   i. training and certification requirements

4. Interpret information pertaining to rigging, hoisting and lifting found on drawings and specifications.

5. Identify types of rigging, hoisting and lifting equipment and accessories and describe their applications and procedures for use.
   i. slings
   ii. wire/conductor grips
   iii. shackles
   iv. ropes
   v. cables
   vi. levers
   vii. pullers
   viii. block and tackles
   ix. chain jack, cable jack
   x. winches

6. Identify types of knots, hitches, splices and bends and describe their applications and the procedures used to tie them.

7. Describe the considerations when rigging, hoisting and lifting material/equipment.
   i. load characteristics
   ii. equipment and accessories
      - mechanical advantage
   iii. anchor points
   iv. sling angles

8. Describe the procedures used when rigging, hoisting and lifting material/equipment.

Practical Requirements:

1. Calculate the mechanical advantage of various blocks, sheaves and ropes.

2. Tie various knots, splices and hitches used in rigging.

OL1771 Aerial Devices and Hydraulics

Learning Outcomes:

- Demonstrate knowledge of aerial devices, their applications and operation.
- Demonstrate knowledge of basic hydraulic principles.
- Demonstrate knowledge of hydraulic equipment components, their applications and operation.

Duration: 30 Hours

Pre-Requisite(s): OL1631

Objectives and Content:

1. Define terminology associated with aerial devices.

2. Identify types of aerial devices and describe their applications.
   i. material handling
   ii. personnel lift
   iii. radial boom derricks

3. Identify hazards and describe safe work practices pertaining to aerial devices.
   i. working load limits (WLL) and safe working loads (SWL)
   ii. use of outriggers

4. Describe the procedures used to perform bucket evacuations and rescues.

5. Interpret codes, standards and regulations pertaining to aerial devices.
   i. training, certification and licensing requirements

6. Interpret information pertaining to aerial devices and hydraulic equipment found on drawings and specifications.

7. Identify tools and equipment relating to aerial devices and describe their applications and procedures for use.

8. Identify aerial device components and describe their functions.

9. Explain basic hydraulic principles and their applications relating to aerial devices.

10. Identify hydraulic equipment components and describe their purpose and operation.
    i. hydraulic cylinders
    ii. hydraulic valves
    iii. hydraulic hoses
    iv. hydraulic reservoirs

11. Describe the procedures used to ensure the work area is safe for operating aerial devices.
    i. supervision
    ii. securing work area
    iii. communication
        - hand signals (awareness of)
        - electronic communications
        - audible/visual

12. Describe the procedures used to operate aerial devices.

Practical Requirements:

1. Set up and operate various types of aerial devices.

2. Perform daily operational checks on hydraulic aerial devices and radial boom derrick vehicles.

OL1641 On- and Off-road Equipment

Learning Outcomes:

- Demonstrate knowledge of on- and off-road equipment, their applications, maintenance and operating procedures.

Duration: 10 Hours

Pre-Requisite(s): OL1631

Objectives and Content:

1. Define terminology associated with on- and off-road equipment.

2. Identify types of on- and off-road equipment and describe their characteristics and applications.
   - i. bucket trucks
     - material handling
     - personnel lift
   - ii. radial boom derricks
   - iii. off-road track machines
   - iv. hydro-vacuum excavators
   - v. all-terrain vehicles

3. Identify hazards and describe safe work practices pertaining to on- and off-road equipment.

4. Interpret codes, standards and regulations pertaining to on- and off-road equipment.
   - i. training, certification and licensing requirements
     - Air Brake Endorsement 9

5. Interpret information pertaining to on- and off-road equipment found in specifications.
   - i. load charts
   - ii. working load limits (WLL)/ safe working loads (SWL)

6. Identify tools and equipment relating to on- and off-road equipment and describe their applications and procedures for use.

7. Identify on- and off-road equipment components and accessories and describe their characteristics and applications.

8. Describe the procedures used to inspect and maintain on- and off-road equipment.

9. Describe the procedures used to operate on- and off-road equipment.

Practical Requirements:

None.

OL1602 Traffic Control

Learning Outcomes:

- Demonstrate knowledge of traffic control equipment, their applications, maintenance and procedures for use.
- Demonstrate knowledge of traffic control techniques and procedures.

Duration: 8 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Define terminology associated with traffic control.

2. Identify hazards and describe safe work practices pertaining to traffic control.

3. Interpret codes, standards and regulations pertaining to traffic control.
   i. highway safety legislation

4. Identify tools and equipment relating to traffic control and describe their applications and procedures for use.

5. Identify the techniques used to control traffic.

6. Describe the procedures used to control traffic.

Practical Requirements:

None.

OL1130 Power and Energy

Learning Outcomes:

- Demonstrate knowledge of power and energy, their characteristics and associated principles.
- Demonstrate knowledge of units of measure and symbols relating power and energy.
- Demonstrate knowledge of the instruments and procedures used to measure power and energy.

Duration: 6 Hours

Pre-Requisite(s): OL1180, OL1190, OL1240

Objectives and Content:

1. Define terminology associated with power and energy.

2. Explain mechanical power and energy.
   i. force
   ii. work
   iii. power
   iv. horsepower
   v. energy

3. Explain electrical power and energy.
   i. watt
   ii. kilowatt
   iii. kilowatt hour

4. Explain principles of efficiency.

5. Identify units of measure and symbols pertaining to power and energy.

6. Identify instruments used for measuring power and energy and describe their applications and procedures for use.

Practical Requirements:

1. Perform calculations to determine power and energy related values.

2. Use test instruments to verify calculations.

ER1140 DC Theory

Learning Outcomes:

- Demonstrate knowledge of direct current (DC) electricity, its characteristics and associated principles.
- Demonstrate knowledge of Ohm's law.
- Demonstrate knowledge of units of measure and symbols relating to DC electricity.
- Demonstrate knowledge of the instruments and procedures used to measure electricity.

Duration: 30 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Identify hazards and describe safe work practices pertaining to DC electricity.

2. Describe the atomic structure of matter.
   - i. electron theory
     - matter
     - atoms
     - electric charge
     - protons, electrons, neutron
   - ii. static electricity and electrostatics
     - positive and negative charge
     - electrostatic field
     - transferring static electricity
       - conduction
       - induction
   - iii. discharging static charges
     - electrons in motion
     - causes of current
     - conductors, semi-conductors, insulators
     - electron current flow
     - conventional current flow

3. Identify electrical units of measure and symbols.
   i. absolute electrical units
      - current
      - voltage
      - resistance
   ii. prefixes for absolute units

4. Identify different forms of energy and describe the effects of dynamic electricity.
   i. different forms of energy to produce electricity
      - chemical action
      - piezoelectric effect
      - magnetism
      - heat
      - light and solar energy
      - friction
   ii. effects of dynamic electricity
      - heating effects
      - chemical effects
      - magnetic effects
      - psychological and physiological effects

5. Identify and analyze the components necessary for the assembly of an electric circuit.
   i. the electron path (conductors)
   ii. the load
   iii. the source
   iv. the control
   v. closed circuit
   vi. open circuit
   vii. short circuit

6. Identify and describe the three basic electrical properties.
   i. voltage
   ii. current
   iii. resistance

7. Explain Ohm’s Law.

8. Describe the following in relation to electricity.
   i. work
   ii. power
   iii. joules and coulombs
   iv. electrical power (watt)
   v. combination of the Power formulas and Ohm's Law
   vi. watts and horsepower
   vii. BTU
   viii. kilowatt hours
      - meter reading and cost

9. Identify measuring instruments and describe their applications and procedures for use.
   i. ammeter
   ii. voltmeter
   iii. ohmmeter
   iv. multimeter
   v. circuit tester
   vi. continuity tester
   vii. megger

Practical Requirements:

1. Compute values of electrical energy and power.

2. Use electrical measuring instruments.

3. Use instruments to troubleshoot DC components
   i. closed circuit
   ii. open circuit
   iii. short circuit

4. Ensure calibration of measuring instruments in accordance with manufacturing specifications.

5. Conduct megger test.

ER1151 Series and Parallel DC Circuits

Learning Outcomes:

- Demonstrate knowledge of series, parallel and complex DC circuits, their characteristics and operation.
- Demonstrate knowledge of the procedures used to troubleshoot DC circuits.
- Demonstrate knowledge of the procedures used to analyze and measure DC circuit values.

Duration: 45 Hours

Pre-Requisite(s): ER1140

Objectives and Content:

1. Describe the characteristics of a series circuit and calculate values.
   i. resistance
   ii. current
   iii. voltage
   iv. power
   v. open resistor
   vi. shorted resistor

2. Describe the characteristics of a parallel circuit and calculate values.
   i. resistance
   ii. current
   iii. voltage
   iv. power
   v. open resistor
   vi. shorted resistor

3. Identify hazards and describe safe practices pertaining to DC electricity.

4. Interpret information pertaining to DC circuits found on drawings and specifications.

5. Explain Kirchhoff’s Laws.
   i. current law
   ii. voltage law

6. Describe the characteristics of a combination circuit and calculate values.

7. Describe the procedures used to troubleshoot series, parallel and complex DC circuits.

Practical Requirements:

1. Analyze and measure amperage and voltage in series DC circuits.
2. Analyze and measure amperage and voltage in parallel DC circuits.
3. Analyze and measure amperage and voltage in combination DC circuits.
4. Analyze and measure resistance and/or continuity in basic DC circuits.
5. Analyze and measure power consumption in basic DC circuits.

OL1180 AC Theory

Learning Outcomes:

- Demonstrate knowledge of alternating current (AC) electricity, its characteristics and associated principles.
- Demonstrate knowledge of units of measure and symbols relating to AC electricity.
- Demonstrate knowledge of the instruments and procedures used to measure electricity.

Duration: 6 Hours

Pre-Requisite(s): ER1151

Objectives and Content:

1. Define terminology associated with AC electricity.

2. Explain alternating current (AC).

3. Identify types of components found in AC circuits and describe their characteristics and applications.
   i. resistors
   ii. inductors
   iii. capacitors

4. Identify units of measure and symbols pertaining to AC electricity.

5. Identify electrical properties and describe their relationship.
   i. magnetism
   ii. electromagnetism

6. Identify instruments used for measuring electricity and describe their applications and procedures for use.

7. Explain the generation of alternating current.

Practical Requirements:

None.

OL1190 AC Circuits

Learning Outcomes:

- Demonstrate knowledge of AC circuits, their characteristics and operation.
- Demonstrate knowledge of the procedures used to troubleshoot AC circuits.
- Demonstrate knowledge of the procedures used to analyze and measure AC circuit values.

Duration: 24 Hours

Pre-Requisite(s): OL1180

Objectives and Content:

1. Define terminology associated with AC circuits.

2. Explain the characteristics and operation of AC circuits.

3. Identify hazards and describe safe work practices pertaining to AC electricity.

4. Identify types of AC circuits and describe their characteristics and operation.
   i. series-parallel
   ii. combination

5. Interpret information pertaining to AC circuits found on drawings and specifications.

6. Perform calculations to analyze and measure AC circuit related values.
   i. voltage
   ii. current
   iii. impedance

7. Explain vector representation as it applies to analyzing AC circuits.

8. Describe the procedures used to troubleshoot AC circuits.

9. Use instruments to troubleshoot AC circuits.

Practical Requirements:

1. Perform calculations to determine electricity and power related values.

2. Use electrical instruments to troubleshoot series and parallel AC circuits.

OL1240 Series and Parallel Circuits

Learning Outcomes:

- Demonstrate knowledge of series, parallel and combination circuits, their characteristics and operation.

Duration: 10 Hours

Pre-Requisite(s): OL1180

Objectives and Content:

1. Define terminology associated with series and parallel circuits.
2. Identify hazards and describe safe work practices pertaining to series and parallel circuits.
3. Explain the characteristics and operation of series circuits.
4. Explain the characteristics and operation of parallel circuits.
5. Explain the characteristics and operation of combination circuits.
6. Describe the procedures used to troubleshoot series, parallel and combination circuits.

Practical Requirements:

1. Perform calculations to determine series, parallel and combination circuit related values.

OL1791 Grounding and Bonding

Learning Outcomes:

Demonstrate knowledge of grounding and bonding methods and equipment.
- Demonstrate knowledge of the procedures used to install, inspect and maintain grounding and bonding systems.

Duration: 30 Hours

Pre-Requisite(s): OL1631, OL1180

Objectives and Content:

1. Define terminology associated with grounding and bonding.

2. Identify hazards and describe safe work practices pertaining to grounding and bonding.

3. Interpret codes, standards and regulations pertaining to grounding and bonding.

4. Interpret information pertaining to grounding and bonding found on drawings and specifications.

5. Identify tools and equipment relating to grounding and bonding and describe their applications and procedures for use.

6. Identify methods of grounding and bonding.

7. Describe the theory for equi-potential grounding and bonding.

8. Identify grounding and bonding conductors (jumpers), equipment and components and describe their characteristics and applications.

9. Identify the considerations and requirements for selecting grounding and bonding conductors (jumpers), methods, equipment and components.

10. Describe the procedures used to install grounding and bonding systems.

11. Describe the procedures used to inspect and maintain grounding and bonding systems.

Practical Requirements:

1. Install system grounds.

2. Install safety grounding “EPZ” for working on various structures.

3. Install vehicle grounding.

OL1721 Conductors and Cables

Learning Outcomes:

- Demonstrate knowledge of conductors and cables and their associated components.
- Demonstrate knowledge of methods of cable protection and their applications.
- Demonstrate knowledge of the procedures used to mechanically protect and support cables.

Duration: 30 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Define terminology associated with conductors and cables.

2. Identify hazards and describe safe work practices pertaining to conductors and cables.

3. Interpret utility standards pertaining to conductors and cables.

4. Interpret information pertaining to conductors and cables found on drawings and specifications.

5. Identify tools and equipment relating to conductors and cables and describe their applications and procedures for use.

6. Identify types of conductors and cables and describe their characteristics and applications.
   i. overhead
   ii. underground
   iii. marine
   iv. transmission

7. Identify conductor and cable components and accessories and describe their characteristics and applications.
   i. conductor connections
      - factors concerning conductor connections
      - contact resistance
      - creep
      - surface oxide
      - corrosion

- thermal effects

ii. splices
- importance
- types of splices
- full tension splices
- jumper splices (non-tension)
- repair splices (non-tension)
- service lead splices
- types of sleeves
- automatic tension splice
- one piece sleeve
- two piece sleeve

iii. types of conductor vibration control equipment
- aerolian
- galloping

8. Identify methods of cable protection and describe their characteristics and applications.
   i. mechanical
   ii. electrical

9. Describe the procedures used to provide mechanical protection and support for cables.

10. Identify the considerations and requirements for selecting conductors and cables and their associated components and accessories.

Practical Requirements:

1. Select and use compression tools to complete a splice and connections.

2. Select and use explosive actuated tools to complete a splice and connections.

PTN-165 Communication Lines

Learning Outcomes:

- Demonstrate knowledge of communication lines and their operating principles.
- Demonstrate knowledge of the procedures used to transfer communication lines.

Duration: 9 Hours

Pre-Requisite(s): OL1721, OL1741, OL1791

Objectives and Content:

1. Define terminology associated with communication lines.

2. Identify hazards and describe safe work practices related to transferring communication lines.

3. Interpret codes, standards and regulations related to communication lines.

4. Identify tools and equipment relating to transferring communication lines and describe their applications and procedures for use.
   i. drills
   ii. wrenches
   iii. rigging equipment

5. Identify types of communication lines and describe their applications.
   i. Fibre
   ii. Coaxial
   iii. telephone

6. Describe the procedures used to transfer communication lines.

Practical Objectives:

1. Lash the cable to strand.

OL1741 Sagging Conductors

Learning Outcomes:

- Demonstrate knowledge of the effects of sagging on conductors.
- Demonstrate knowledge of the procedures used to sag conductors.

Duration: 10 Hours

Pre-Requisite(s): OL1791, OL1721

Objectives and Content:

1. Define terminology associated with sagging conductors.

2. Identify hazards and describe safe work practices pertaining to sagging conductors.

3. Interpret codes, standards and regulations pertaining to sagging conductors.

4. Interpret information and perform calculations pertaining to sagging conductors found on drawings and specifications.
   i. sag charts
   ii. weights and tensions

5. Identify tools and equipment relating to sagging conductors and describe their applications and procedures for use.

6. Explain the effects of sagging on conductors.

7. Identify types and sizes of conductors and describe their characteristics and applications.

8. Identify the considerations and requirements for selecting dead-ends for conductors.

9. Describe the procedures used to sag conductors.

Practical Requirements:

1. String, sag and tension primary conductors.

OL1714 Single-Phase Circuits

Learning Outcomes:

- Demonstrate knowledge of single-phase circuits, their characteristics and operation.
- Demonstrate knowledge of electromagnetic induction, its characteristics and applications.

Duration: 10 Hours

Pre-Requisite(s): OL1180, OL1791

Objectives and Content:

1. Define terminology associated with single-phase circuits.

2. Identify hazards and describe safe work practices pertaining to single-phase circuits.

3. Identify units of measure and symbols pertaining to single-phase circuits.

4. Identify the components of single-phase circuits and describe their applications and operation.

5. Explain electromagnetic induction and its effect on a circuit.
   i. self -induction
   ii. mutual induction

Practical Requirements:

1. Perform calculations pertaining to single-phase circuits.

OL1701 Drawings, Schematics and Specifications

Learning Outcomes:

- Demonstrate knowledge of drawings, schematics and specifications and their applications.
- Demonstrate knowledge of interpreting and extracting information from drawings, basic schematics and specifications.

Duration: 15 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Define terminology associated with drawings, schematics and specifications.

2. Identify types of drawings and describe their applications.
   i. electrical
   ii. construction standards

3. Interpret and extract information from drawings.
   i. symbols and abbreviations

4. Interpret and extract information from basic schematics and specifications.

Practical Requirements:

None.

OL1715 Distribution Lines

Learning Outcomes:

- Demonstrate knowledge of primary and secondary distribution lines, their applications and operation.
- Demonstrate knowledge of primary and secondary distribution line components, their applications and operation.
- Demonstrate knowledge of the procedures used to install, inspect, maintain, repair, troubleshoot and test distribution lines.

Duration: 30 Hours

Pre-Requisite(s): OL1714

Objectives and Content:

1. Define terminology associated with distribution lines.

2. Identify hazards and describe safe work practices pertaining to distribution lines.

3. Interpret codes, standards and regulations pertaining to distribution lines.

4. Interpret information pertaining to distribution lines found on drawings and specifications.

5. Identify tools and equipment relating to distribution lines and describe their applications and procedures for use.

6. Explain the principles of electrical distribution.

7. Identify types of electrical distribution systems and describe their characteristics and applications.

8. Identify distribution line components and describe their purpose and operation.

9. Describe the procedures used to install primary and secondary lines and their components.
   i. conventional stringing (slack)
   ii. non-conventional stringing (tension)

10. Describe the procedures used to inspect and maintain primary and secondary distribution lines and their components.

11. Describe the procedures used to troubleshoot primary and secondary distribution lines.

12. Describe the procedures used to repair and test primary and secondary distribution lines and their components.

13. Describe basic distribution line design theory.

14. Identify basic electrical design requirements of primary and secondary distribution lines.

Practical Requirements:

None.

OL1725 Overhead Distribution Structures

Learning Outcomes:

- Demonstrate knowledge of distribution structures, their components and applications.
- Demonstrate knowledge of electrical distribution principles.
- Demonstrate knowledge of the procedures used to install and remove distribution structures, their components and accessories.
- Demonstrate knowledge of the procedures used to inspect, maintain, repair and test distribution structures.

Duration: 240 Hours

Pre-Requisite(s): OL1691, OL1851, OL1701, OL1715

Objectives and Content:

1. Define terminology associated with distribution structures.

2. Identify hazards and describe safe work practices pertaining to distribution structures.

3. Interpret codes, standards and regulations pertaining to distribution structures.

4. Interpret information pertaining to distribution structures found on drawings and specifications.

5. Identify tools and equipment relating to distribution structures and describe their applications and procedures for use.

6. Identify types of distribution structures and describe their characteristics and applications.
   i. single pole (with conductors only)
   ii. tangent
   iii. angle
   iv. dead-end
   v. take-off (or tap)
   vi. joint use construction
   vii. self-supporting poles
      - wood
      - steel
      - fiberglass
      - concrete
      - laminate

7. Identify distribution structure components and accessories and describe their characteristics and applications.

8. Identify types of distribution system components.
   i. pole mounted transformers
   ii. single-phase and three-phase switching points
   iii. capacitor banks
   iv. regulator banks
   v. reclosers
   vi. sectionalizers

9. Describe the procedures used to install and remove distribution structures, their components and accessories.

10. Describe the procedures used to repair and test distribution structures, their components and accessories.

11. Describe the procedures used to inspect and maintain distribution structures, their components and accessories.

Practical Requirements:

1. Install poles, anchors and guys.

2. Frame poles as per common utility standards.

3. String and sag primary conductors.

4. Install transformers and secondary conductors.

5. Install customer services.

6. Troubleshoot overhead distribution systems.

OL1835 Overhead Distribution Systems

Learning Outcomes:

- Demonstrate knowledge of overhead systems, their characteristics and applications.
- Demonstrate knowledge of overhead system construction principles.
- Demonstrate knowledge of the procedures used to install, connect, inspect, maintain, repair, troubleshoot and test overhead system components and accessories.

Duration: 30 Hours

Pre-Requisite(s): OL1725, ER1151, OL1180, OL1190, OL1240

Objectives and Content:

1. Define terminology associated with overhead systems.

2. Identify hazards and describe safe work practices pertaining to overhead systems.

3. Interpret codes, standards and regulations pertaining to overhead systems.

4. Interpret information pertaining to overhead systems found on drawings and specifications.

5. Identify tools and equipment relating to overhead systems and describe their applications and procedures for use.

6. Identify types of overhead systems and describe their applications.

7. Identify components and accessories used in overhead systems and describe their characteristics and applications.
   i. transformers
   ii. reclosers
   iii. capacitors
   iv. conductors
   v. system grounds
   vi. voltage regulators

8. Explain the principles of overhead system construction.

9. Describe the operating procedures for overhead systems.

10. Describe the procedures used to install and connect overhead systems, their components and accessories.

11. Describe the procedures used to troubleshoot overhead systems, their components and accessories.

12. Describe the procedures used to inspect and maintain overhead systems, their components and accessories.

13. Describe the procedures used to repair and test overhead systems, their components and accessories.

Practical Requirements:

None.

OL1140 Inductance and Capacitance

Learning Outcomes:

- Demonstrate knowledge of inductance and capacitance, their characteristics and associated principles.
- Demonstrate knowledge of how inductance and capacitance are encountered on the job.

Duration: 10 Hours

Pre-Requisite(s): OL1180

Objectives and Content:

1. Define terminology associated with inductance and capacitance.

2. Identify hazards and describe safe work practices pertaining to inductance and capacitance.

3. Explain the principles of inductance and capacitance.

4. Describe the importance of inductance and capacitance in AC circuits.
   i. series circuits
   ii. parallel circuits
   iii. combination circuits

5. Identify the effects of inductance and capacitance on transmission and distribution lines.
   i. skin effect
   ii. mutual induction
   iii. capacitive reactance
   iv. conductor impedance
   v. inductive reactance

6. Explain the effects of resonance as it pertains to inductance and capacitance.

Practical Requirements:

None.

OL1811 Transformers

Learning Outcomes:

- Demonstrate knowledge of transformer operating principles.
- Demonstrate knowledge of transformer components, their applications and operation.
- Demonstrate knowledge of the procedures used to install and maintain transformers.
- Demonstrate knowledge of managing hazardous materials associated with transformers.

Duration: 30 Hours

Pre-Requisite(s): OL1190

Objectives and Content:

1. Define terminology associated with transformers.

2. Identify hazards and describe safe work practices pertaining to transformers.

3. Interpret codes, standards and regulations pertaining to transformers.

4. Interpret information pertaining to transformers found on nameplates, drawings and specifications.

5. Identify tools and equipment relating to transformers and describe their applications and procedures for use.

6. Identify types of transformers and describe their applications.

7. Identify transformer components and describe their purpose and operation.
   i. core
   ii. windings
   iii. oil
   iv. bushings
   v. gaskets
   vi. tank
   vii. cover
   viii. taps and tap changer
   ix. mounting brackets
   x. switches

8. Explain transformer operating principles and their applications.

9. Describe the procedures used for paralleling single-phase transformers.

10. Explain transformer fusing principles and their applications relating to single-phase transformation.

11. Describe the procedures used to install and maintain transformers.

12. Describe the procedures used to manage oils and other petroleum products pertaining to transformers.

Practical Requirements:

1. Perform transformer load calculations.

OL1150 Transmission Systems

Learning Outcomes:

- Demonstrate knowledge of transmission systems, their applications and operation.
- Demonstrate knowledge of electrical transmission principles.
- Demonstrate knowledge of procedures used in the grounding and bonding of transmission systems.

Duration: 5 Hours

Pre-Requisite(s): OL1190, ER1151

Objectives and Content:

1. Define terminology associated with transmission systems.

2. Identify hazards and describe safe work practices pertaining to transmission systems.

3. Interpret codes, standards and regulations pertaining to transmission systems.

4. Interpret information pertaining to transmission systems found on drawings and specifications.

5. Identify tools and equipment relating to transmission systems and describe their applications and procedures for use.

6. Identify types of transmission systems and describe their characteristics and applications.

7. Explain the principles of electrical transmission.

8. Identify transmission system components and describe their applications and operation.

9. Describe the procedures used to install transmission systems.
   i. tension stringing

10. Identify grounding and bonding requirements relating to transmission systems.

11. Describe the procedures used for temporary grounding and bonding of transmission systems.

12. Explain troubleshooting and repair procedures related to transmission systems.

Practical Requirements:

None.

OL1781 Transmission Structures

Learning Outcomes:

- Demonstrate knowledge of transmission structures, their components and applications.
- Demonstrate knowledge of the procedures used to inspect and maintain transmission structures.

Duration: 5 Hours

Pre-Requisite(s): OL1150

Objectives and Content:

1. Define terminology associated with transmission structures.

2. Identify hazards and describe safe work practices pertaining to transmission structures.

3. Interpret codes, standards and regulations pertaining to transmission structures.

4. Interpret information pertaining to transmission structures found on drawings and specifications.

5. Identify tools and equipment relating to transmission structures and describe their applications and procedures for use.

6. Identify types of transmission structures and describe their characteristics and applications.
   i. single pole
   ii. H – Frame
   iii. H – Frame with overhead ground wire
   iv. steel tower

7. Identify transmission structure components and accessories and describe their applications and operation.

8. Describe the procedures used to inspect and maintain transmission structures, their components and accessories.

Practical Requirements:

None.

OL1160 Steel Structure Climbing

Learning Outcomes:

- Demonstrate knowledge of steel structure climbing, steel structure climbing equipment, its applications, limitations and procedures for use.

Duration: 6 Hours

Pre-Requisite(s): OL1150

Objectives and Content:

1. Define terminology associated with steel structure climbing and equipment.

2. Identify hazards and describe safe work practices pertaining to steel structure climbing and equipment.
   i. fall prevention and arrest

3. Describe the procedures used to perform rescues on steel structures.

4. Identify codes and regulations pertaining to steel structure climbing equipment.
   i. training and certification requirements

5. Identify types of steel structure climbing equipment and describe their characteristics and applications.

6. Identify steel structure climbing equipment components and describe their characteristics and applications.
   i. tower harnesses
   ii. lanyards

7. Describe the procedures used to climb using climbing equipment.

8. Describe the procedures used to inspect, maintain and store climbing equipment and components.

Practical Requirements:

None.

OL1751 Tree Trimming

Learning Outcomes:

- Demonstrate knowledge of tree trimming equipment, their applications, maintenance and procedures for use.
- Demonstrate knowledge of the techniques and procedures used to trim trees.

Duration: 6 Hours

Pre-Requisite(s): OL1631, OL1681

Objectives and Content:

1. Define terminology associated with tree trimming.

2. Identify hazards and describe safe work practices pertaining to tree trimming.

3. Interpret guidelines, codes and regulations pertaining to tree trimming.

4. Identify tools and equipment relating to tree trimming and describe their applications and procedures for use.
   i. gas powered chain saws
   ii. hand saws
   iii. hydraulic saws
   iv. mechanical pruning equipment
   v. rigging

5. Identify the techniques used to trim trees.

6. Describe the procedures used to trim trees.

Practical Requirements:

None.

OL1170 Job Planning

Learning Outcomes:

- Demonstrate knowledge of the procedures used to plan and organize job tasks.

Duration: 6 Hours

Pre-Requisite(s): OL1701

Objectives and Content:

1. Identify sources of information relevant to planning job tasks.
   - i. documentation
     - standard operating procedures (SOPs)
   - ii. drawings
   - iii. related professionals
   - iv. clients

2. Identify codes and regulations pertaining to job planning.

3. Describe the considerations to plan and organize job tasks.
   - i. permits
   - ii. risk assessments (tailboard)
   - iii. personnel
   - iv. tools and equipment
   - v. materials and supplies
   - vi. scheduling/sequencing
   - vii. environmental

Practical Requirements:

None.

PTN-140 Introduction to Live-Line Methods

Learning Outcomes:

- Demonstrate knowledge of live-line work and its applications.
- Demonstrate knowledge of regulatory requirements pertaining to safety.
- Demonstrate knowledge of the principles of live-line work.
- Demonstrate knowledge of procedures to use cover-up.
- Demonstrate knowledge of the procedures used to perform live-line work.

Duration: 12 Hours

Pre-Requisite(s): OL1631, OL1681, OL1791

Objectives and Content:

1. Define terminology associated with live-line work and cover-up.

2. Identify hazards and describe safe work practices pertaining to live-line work and live-line work using cover-up.

3. Interpret jurisdictional codes, standards and regulations pertaining to live-line work and live-line work using cover-up.

4. Identify tools and equipment used for live-line work and cover-up and describe their applications and procedures for use.
   i. live-line work
      - FRP (hot sticks)
      - insulated aerial devices
      - rubber gloves
   ii. cover-up
      - Rigging
      - live-line tools
      - hose/stick bag
      - clothes pins

5. Identify line protection requirements relating to live-line work and cover-up.

6. Identify class and types of cover-up and describe their applications.
   i. line hose
   ii. solid blanket
   iii. split blanket
   iv. insulator hood
   v. hard covers

7. Identify types of live-line work and describe their applications.
   i. FRP tools (hot sticks)
   ii. rubber glove
   iii. bare hand

8. Describe principles of live-line work and live-line work using cover-up.

9. Describe the procedures used to perform live-line work and for cover-up.
   i. hold-offs
   ii. tailboard
   iii. limits of approach
   iv. work permits
   v. lockout and tagout

Practical Objectives:

1. Perform cleaning, maintenance and inspection of hot line tools and cover-up.

AM1001 Introduction to Skills for Success

Learning Outcomes:

- Demonstrate knowledge of the nine nationally recognized Skills for Success.
- Demonstrate knowledge of the Skills for Success / Essential Skills required for the learner's chosen trade.
- Demonstrate an awareness of Skills for Success / Essential Skills assessments.

Duration: 9 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Describe the new Skills for Success model and its relationship to the previous Essential Skills model[1].

2. Identify and describe the Skills for Success recognized by the Government of Canada through the Office of Skills for Success (OSS).
   i. adaptability
   ii. collaboration
   iii. communication
   iv. creativity and innovation
   v. digital
   vi. numeracy
   vii. problem solving
   viii. reading
   ix. writing

3. Identify the Skills for Success / Essential Skills, along with their complexity level, identified as necessary for the learner's trade.
   i. RSOS / NOA content[2]
   ii. OSS Essential Skills Profiles[3]
   iii. OSS tools and support for apprentices and tradespersons[4]

4. Describe the nature and purpose of Skills for Success assessment.
   i. self-assessment & formal assessment tools
   ii. indicators of deficiencies
   iii. suggestions for improvement

5. Describe the benefits of Skills for Success improvement.
   i. confidence at work

ii. employability
iii. success in apprenticeship
iv. wage & job advancement

Practical Requirements:

1. Complete a Skills for Success / Essential Skills self-assessment addressing numeracy, document use and reading. The apprentice will use the online Government of Canada Essential Skills Indicator[5] and Essential Skills Self-Assessment for the Trades[6] tools, or similar assessment tools as provided by the instructor.

2. Participate in a group discussion about the impact of gaps in Skills for Success / Essential Skills that may be revealed by the self-assessments completed, and the value of improving Skills for Success.

Students are graded complete or incomplete on this practical work, no grade is permitted for self-assessment performance. However, completion of the practical requirements is mandatory for completion of this unit.

Resources:

All footnotes are in the companion document, Resources for Introduction to Skills for Success, which is available online from Apprenticeship and Trades Certification.

AP1102 Introduction to Apprenticeship

Learning Outcomes:

- Demonstrate knowledge of how to become a registered apprentice.
- Demonstrate knowledge of the steps to complete an apprenticeship program.
- Demonstrate knowledge of various stakeholders in the apprenticeship process.
- Demonstrate knowledge of the Red Seal Program.

Duration: 12 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Define terminology associated with apprenticeship.
   i. apprentice
   ii. registered apprentice
   iii. trade qualifier
   iv. journeyperson
   v. certified journeyperson
   vi. Certificate of Apprenticeship
   vii. Certificate of Qualification
   viii. dual certification
   ix. compulsory trades

2. Explain the roles and responsibilities of those involved in the apprenticeship system in Newfoundland and Labrador.
   i. registered apprentice
   ii. training institution
   iii. employer
   iv. journeyperson
   v. mentor
   vi. Department of Immigration, Population Growth and Skills
      - Industrial Training section
      - Standards and Curriculum section
   vii. Provincial Trade Advisory Committees (PTAC)
   viii. Provincial Apprenticeship and Certification Board (PACB)

3. Describe the training components of an apprenticeship.
   - i. in-school
     - Pre-employment / Level 1
     - advanced levels
   - ii. workplace experience

4. Explain the steps in the registered apprenticeship process.
   - i. meet entrance requirements
     - education
     - employment
     - Recognition of Prior Learning (RPL) - if applicable
   - ii. complete the registration process
     - application
     - required documents
   - iii. complete the Memorandum of Understanding (MOU)
     - contract responsibilities
     - probation period
     - cancellation
   - iv. maintain Record of Occupational Progress (Logbook)
     - sign off skills
     - record hours
     - update Apprenticeship Program Officer (APO) on progress
   - v. class calls
     - hour requirements
     - EI eligibility
     - training schedule
   - vi. level examinations - if applicable
   - vii. progression schedule
     - apprenticeship level
     - wage rates
   - viii. certification examinations
     - Provincial
     - Interprovincial
       - written
       - practical - if applicable
   - ix. certification
     - Certificate of Apprenticeship
     - Certificate of Qualification
     - Provincial journeyperson - Blue Seal
     - Interprovincial journeyperson - Red Seal endorsement (RSE)

5. Identify the Conditions Governing Apprenticeship.

6. Discuss cancellation of apprenticeship.
   i. failure to notify of address change
   ii. extended periods of unemployment
   iii. lack of contact with an APO for an extended period
   iv. failure to respond to class calls
   v. declining of multiple class calls

7. Explain the Interprovincial Standards Red Seal program.
   i. designated Red Seal trades
   ii. Red Seal Occupational Standard (RSOS)
   iii. relationship of RSOS to IP examination
   iv. national qualification recognition and mobility

8. Identify the current financial incentives available to apprentices.
   i. Federal
   ii. Provincial

9. Explain the Provincial / Territorial Apprentice Mobility Guidelines.
   i. temporary mobility
   ii. permanent mobility

10. Describe Atlantic and National Harmonization initiatives.

Practical Requirements:

1. Use the Provincial Apprenticeship and Trades Certification website at www.gov.nl.ca/atcd.
   i. locate, download, and complete the Application for Apprenticeship and Memorandum of Understanding (MOU)
   ii. locate the address of the Industrial Training office closest to this campus
   iii. locate the training schedule and identify the start date of the next class call for this trade
   iv. locate and review the learning resources applicable to this trade
      - Study Guide
      - Exam Preparation Guide
      - Plan of Training

2. Use the Plan of Training applicable to this trade.
   i. locate the hours for the trade
      - total in-school
      - total required for certification
   ii. locate the number of levels
   iii. locate the courses in each level
   iv. locate the hours required for progression to a Level 2 apprentice and the wage percentage of that level

AM1101 Math Essentials

Note: It is recommended that AM1101 be delivered in the first semester of the Pre-employment program.

Learning Outcomes:

- Demonstrate knowledge of essential numeracy skills.
- Demonstrate knowledge of mathematics as a critical element of the trade environment.
- Demonstrate knowledge of mathematical principles in trade problem solving situations.
- Demonstrate the ability to solve simple mathematical word problems.

Duration: 42 Hours

Pre-Requisite(s): None

Objectives and Content:

Wherever possible, the instructor is expected to use trade specific examples to reinforce the course objectives.

1. Describe whole number operations.
   i. read, write, count, round off, add, subtract, multiply and divide whole numbers.

2. Describe the application of the order of operations in math problems.

3. Describe fraction and mixed number operations.
   i. read, write, add, subtract, multiply and divide fractions.

4. Describe decimal operations.
   i. read, write, round off, add, subtract, multiply and divide decimals.

5. Describe percentage/decimal/fraction conversion and comparison.
   i. convert between fractions, decimals and percentages.

6. Identify percentage operations.
   i. read and write percentages
   ii. calculate base, rates and percentages

7. Identify ratio and proportion operations.
   i. use a ratio comparing two quantities with the same units
   ii. use a proportion comparing two ratios

8. Describe the use of the imperial measurement system in math problems.
   i. identify units of measurement
      - length
      - mass
      - area
      - volume
      - capacity

9. Describe the use of the metric measurement system in math problems.
   i. identify units of measurement
      - length
      - mass
      - area
      - volume
      - capacity

10. Identify angles, lines and geometric shapes.
    i. use a protractor to measure angles
    ii. determine whether an angle is right, acute or obtuse
    iii. identify parallel, perpendicular, horizontal and vertical lines
    iv. identify types of triangles, quadrilaterals, and 3-dimensional shapes

11. Describe estimation strategies.
    i. estimate a linear measure using a referent
    ii. estimate length, area and volume of objects in metric and imperial systems

12. Describe problem solving that involves linear measurement using instruments such as rulers or tape measures, in the metric and imperial systems.

Practical Requirements:

1. To emphasize or further develop specific knowledge objectives, students will be required to complete practical demonstrations, which confirm proper application of mathematical theory to job skills.

AM1271 Powerline Technician Math Fundamentals

Learning Outcomes:

- Demonstrate knowledge of mathematical concepts in the performance of trade practices.
- Demonstrate knowledge of mathematics as a critical element of the trade environment.
- Solve mathematical word problems.
- Demonstrate knowledge of mathematical principles for the purposes of problem solving, job and materials estimation, measurement, calculation, system conversion, diagram interpretation and scale conversions, formulae calculations, and geometric applications.

Duration: 42 Hours

Pre-Requisite(s): AM1101

Objectives and Content:

The instructor is required to use trade specific examples to reinforce the course objectives.

1. Describe percent/decimal/fraction conversions and comparisons in trade specific situations.

2. Describe ratios and proportions as they relate to trade specific problems.

3. Describe the use of the Imperial and Metric measurement systems in trade specific applications.

4. Describe Imperial and Metric conversions in trade specific situations.
   i. convert between imperial and metric measurements
   ii. convert to another unit within the same measurement system

5. Describe how to manipulate formulas using cross multiplication, dividing throughout, elimination, and substitution to solve trade specific problems.
   i. right angle triangles
   ii. area
   iii. volume
   iv. perimeter
   v. density

6. Identify calculations involving geometry that are relevant to the trade.

i. angle calculations
ii. circle calculations

7. Identify math processes used to complete administrative trade tasks.
   i. material estimation
   ii. material costing
   iii. time and labour estimates
   iv. taxes and surcharges
   v. markup and projecting revenue

Practical Requirements:

1. To emphasize or further develop specific knowledge objectives, students will be asked to complete practical demonstrations, which confirm proper application of mathematical theory to job skills.

Note: This course is **Non-Transferable** to other trades programs, and **Not Eligible for Prior Learning Assessment**. Students completing training in this trade program are required to complete this math course. Apprentice transfers under Provincial / Territorial Mobility agreements may be exempt from this requirement.

CM2161 Communication Essentials

Learning Outcomes:

- Demonstrate knowledge of the importance of well-developed writing and oral communication skills in the workplace.
- Demonstrate knowledge of the principles of effective workplace writing.
- Demonstrate knowledge of the purpose of various types of workplace documentation and workplace meetings.
- Demonstrate knowledge of the importance of effective interpersonal skills in the workplace.
- Demonstrate knowledge of effective job search techniques

Duration: 36 Hours

Pre-Requisite(s): None

Objectives and Content:

Wherever possible, the instructor is expected to use trade specific examples to reinforce the course objectives.

1. Define communications terminology used in the trade.

2. Identify the principles of effective workplace writing.
   i. grammar, punctuation, mechanics
   ii. sentence and paragraph construction
   iii. tone, language, and word choice
   iv. the writing process
      - planning
      - writing
      - editing/revising

3. Identify sources of information used to communicate in the workplace.
   i. regulations
   ii. codes
   iii. OH&S requirements
   iv. prints, drawings and specifications
   v. company and client documentation

4. Identify types and purposes of informal workplace documents.
   i. reports
      - incident
      - process
      - progress
   ii. common trade specific forms
   iii. primary and secondary methods of information gathering
   iv. accuracy and completeness in reports and forms

5. Demonstrate an understanding of interpersonal communications in the workplace.
   i. recognize group dynamics
   ii. contribute information and expertise
   iii. individual learning styles
      - audible
      - visual
      - experiential
      - theoretical
   iv. recognize respectful and open communication
   v. accept and provide feedback
   vi. interpret non-verbal communication cues
      - body language
      - signals

6. Demonstrate an understanding of effective oral communication skills.
   i. listening
      - receiving, understanding, remembering, reflecting, evaluating, paraphrasing, and responding
   ii. speaking
      - using clear and proper words
      - tone, style, and vocabulary
      - brevity
   iii. common workplace oral communication situations
      - introducing self and others
      - telephone conversations
      - tool box/safety talks
      - face-to-face conversations
      - communicating with co-workers, supervisors, clients, and other trades people

7. Identify common practices related to workplace meetings.
   i. meeting formats
   ii. meeting preparation
   iii. agendas and minutes
   iv. roles, responsibilities, and etiquette of meeting participants

8. Identify acceptable workplace use of communication technologies.
   i. cell / smart phone etiquette
   ii. voice mail
   iii. e-mail
   iv. texting / messaging through social media
   v. teleconferencing / videoconferencing for meetings and interviews
   vi. social networking
   vii. other emerging technologies

9. Demonstrate an understanding of effective job search techniques.
   i. employment trends, opportunities, and sources of employment
   ii. job ads and the importance of fitting qualifications to job requirements
   iii. resumes
      - characteristics of effective resumes
      - types of resumes
      - principles of resume formatting
   iv. effective cover letters
   v. job interview process
      - pre-interview preparation
      - interview conduct
      - post-interview follow up

Practical Requirements:

1. Write a well-developed, coherent, unified paragraph.

2. Complete a trade-related form.

3. Prepare an agenda for a toolbox safety talk.

4. Participate in a simulated oral workplace communication situation.

5. Prepare a resume.

SD1761 Workplace Essentials

Note: It is recommended that SD1761 be delivered in the second half of Pre-employment training.

Learning Outcomes:

- Demonstrate knowledge of workplace requirements in the areas of personal responsibility, unions, workers compensation, workers' rights, and human rights.
- Demonstrate knowledge of quality customer service.

Duration: 24 Hours

Pre-Requisite(s): None

Objectives and Content:

Wherever possible, the instructor is expected to use trade specific examples to reinforce the course objectives.

1. Identify personal responsibilities and attitudes that contribute to on-the-job success.
   i. asking questions
   ii. working safely
   iii. accepting constructive feedback
   iv. time management & punctuality
   v. respect for authority
   vi. stewardship of materials, tools and properties

2. Define unions and identify their role in the workplace.
   i. purpose of unions
   ii. common union structure
   iii. unions in this trade

3. Demonstrate an understanding of the Worker's Compensation process.
   i. aims, objectives, and benefits of the Workplace Health, Safety and Compensation Commission
   ii. role of the workers advisor
   iii. internal review process

4. Demonstrate an understanding of worker's rights.
   i. labour standards
   ii. regulations, including:
      - hours of work & overtime
      - termination of employment
      - minimum wages & allowable deductions
      - statutory holidays, vacation time, and vacation pay

5. Demonstrate an understanding of human rights issues.
   i. awareness of the Human Rights Code and the role of the Human Rights Commission
   ii. categories of discrimination and strategies for prevention
      - direct
      - systemic
      - adverse effect
   iii. types of discrimination
      - race
      - ethnic origin
      - colour
      - religion
      - age
      - gender identify
      - sexual orientation
      - marital status
      - family status
      - disability
      - criminal conviction that has been pardoned
   iv. conduct that constitutes harassment and discrimination
      - objectionable conduct
      - comments or displays made either on a one-time or continuous basis that demeans, belittles, or causes personal humiliation or embarrassment to the recipient
   v. the value of diversity in the workplace
      - culture
      - gender identify
      - sexual orientation

6. Demonstrate an understanding of quality customer service.
    i. importance of quality service
    ii. barriers to quality service
        - physical and physiological
        - cultural
        - technological
    iii. customer needs & common methods for meeting them
    iv. characteristics & importance of a positive attitude
    v. interactions with challenging customers
    vi. addressing complaints and resolve conflict

Practical Requirements:

None.

MC1062 Computer Essentials

Learning Outcomes:

- Demonstrate knowledge of desktop/laptop and mobile computers and their operation.
- Demonstrate knowledge of word processing and spreadsheet software, internet browsers and their applications.
- Demonstrate knowledge of e-mail applications and procedures.
- Demonstrate an awareness of security issues related to computers.
- Demonstrate an awareness of online learning using computers.

Duration: 15 Hours

Pre-Requisite(s): None

Objectives and Content:

When possible, the instructor is expected to use trade specific examples to reinforce the course objectives.

1. Identify computer types used in the workplace, and the characteristics of each.
   i. desktop/laptop computers
   ii. tablets
   iii. smartphones

2. Identify common desktop and mobile operating systems.
   i. Windows
   ii. Mac OS
   iii. iOS
   iv. Android

3. Describe the use of Windows operating system software.
   i. start and end a program
   ii. use the help function
   iii. use the find function
   iv. maximize and minimize a window
   v. open and scroll through multiple windows
   vi. use the task bar
      - adjust desktop settings such as screen savers, screen resolution, and backgrounds
   vii. shut down a computer

4. Identify the skills necessary to perform file management commands.
   i. create folders
   ii. copy files and folders
   iii. move files and folders
   iv. rename files and folders
   v. delete files and folders

5. Describe the use of word processing software to create documents.
   i. enter & edit text
   ii. indent and tab text
   iii. change text attributes
      - bold
      - underline
      - font
   iv. change layout format
      - margins
      - alignment
      - line spacing
   v. spell check and proofread
   vi. save, close and reopen a document
   vii. print document

6. Describe the use of spreadsheet software to create documents.
   i. enter data in cells
   ii. format data in cells
   iii. create formulas to add, subtract, multiply and divide
   iv. save, close and reopen a spreadsheet
   v. print spreadsheet

7. Describe the use of the internet in the workplace.
   i. web browsers
   ii. search engines
   iii. security issues
   iv. personal responsibility for internet use at work

8. Describe the role of e-mail.
   i. e-mail etiquette
      - grammar and punctuation
      - privacy issues when sharing and forwarding e-mail
      - work appropriate content
      - awareness of employer policies

ii. managing e-mail
- using folders
- deleting, forwarding, replying

iii. adding attachments to e-mail
iv. view e-mail attachments
v. printing e-mail

9. Describe computer use for online learning.
i. online training
ii. level exams
iii. study guides
iv. practice exams

Practical Requirements:

1. Create, save and print a document using word processing software.

2. Create, save and print a document using spreadsheet software.

3. Send and receive an e-mail with an attachment.

OT1161 Workplace Exposure

Learning Outcomes:

- Demonstrate knowledge of theory and practical applications of trade skills, safe work practices, appropriate workplace behaviour, and time management through exposure to the trade in an authentic work environment.

NOTE: The pre-apprentice must be supervised at the workplace. Supervision staff must be appropriately qualified to undertake that role - preferably a certified Journeyperson for the trade.

Duration: 60 Hours

Pre-Requisite(s): None.

C. Conditions Governing Apprenticeship Training

1.0 General

The following general conditions apply to all apprenticeship training programs approved by the Provincial Apprenticeship and Certification Board (PACB) in accordance with the **Apprenticeship Training and Certification Act (1999)**. If an occupation requires additional conditions, these will be noted in the specific Plan of Training for the occupation. In no case should there be a conflict between these conditions and the additional requirements specified in a certain Plan of Training. All references to Memorandum of Understanding will also apply to Letter of Understanding (LOU) agreements.

2.0 Entrance Requirements

2.1 Entry into the occupation as an apprentice requires:

Indenturing into the occupation by an employer who agrees to provide the appropriate training and work experiences as outlined in the Plan of Training.

2.2 Notwithstanding the above, each candidate must have successfully completed a high school program or equivalent, and in addition may be required to have completed certain academic subjects as specified in a particular Plan of Training. Mature students, at the discretion of the Director of Apprenticeship and Trades Certification, may be registered. A mature student is defined as one who has reached the age of 19 and who can demonstrate the ability and the interest to complete the requirements for certification.

2.3 At the discretion of the Director of Apprenticeship and Trades Certification, credit toward the apprenticeship program may be awarded to an apprentice for previous work experience and/or training as validated through prior learning assessment.

2.4 An Application for Apprenticeship form must be duly completed along with a Memorandum of Understanding as applicable to be indentured into an Apprenticeship. The Memorandum of Understanding must contain signatures of an authorized employer representative, the apprentice and an official representing the Provincial Apprenticeship and Certification Board to be valid.

2.5 A new Memorandum of Understanding must be completed for each change in an employer during the apprenticeship term.

3.0 Probationary Period

The probationary period for each Memorandum of Understanding will be six months or 900 employment credit hours. Within that period the memorandum may be terminated by either party upon giving the other party and the PACB one week notice in writing.

4.0 Termination of a Memorandum of Understanding

After the probationary period referred to in Section 3.0, the Memorandum of Understanding may be terminated by the PACB by mutual consent of the parties involved, or cancelled by the PACB for proper and sufficient cause in the opinion of the PACB, such as that stated in Section14.

5.0 Apprenticeship Progression Schedule, Wage Rates and Advanced Training Criteria

Progression Schedule

Powerline Technician - 7200 Hours			
Apprenticeship Level And Wages			
Level	Wage Rate	Requirements for Progression to Next Level	Next Level
1	60%	▪ Completion of Pre-Employment / Level 1 training ▪ Registration as an apprentice ▪ Pass Level 1 exam* ▪ Minimum 1800 hours of combined relevant work experience and training	2nd Year
2	70%	▪ Completion of Level 2 training ▪ Pass Level 2 exam ▪ Minimum 3600 hours of combined relevant work experience and training	3rd Year
3	80%	▪ Completion of Level 3 training ▪ Pass Level 3 exam ▪ Minimum 5400 hours of combined relevant work experience and training	4th Year
4	90%	▪ Completion of Level 4 training ▪ Minimum 7200 hours of combined relevant work experience and training ▪ Pass Level 4 exam ▪ Sign-off of all workplace skills in apprentice logbook ▪ Pass certification exam	Journeyperson Certification

Wage Rates

- Rates are percentages of the prevailing journeyperson's wage rate in the place of employment of the apprentice.
- Rates must not be less than the wage rate established by the Labour Standards Act (1990), as now in force or as hereafter amended, or by other order, as amended from time to time replacing the first mentioned order.
- Rates must not be less than the wage rate established by any collective agreement, which may be in force at the apprentice's workplace.
- Employers are free to pay wage rates above the minimums specified.

Level Exams*

- This program may **not** currently contain level exams, in which case this requirement will be waived until such time as level exams are available.

Powerline Technician - 7200 Hours		
Class Calls (After Apprenticeship Registration)		
Call Level	Requirements for Class Call	Hours awarded for In-School Training
Direct Entry Level 1	▪ Minimum of 1800 hours of relevant work experience ▪ Prior Learning Assessment (PLA) at designated college (if applicable)	150
Level 2	▪ Minimum of 3000 hours of relevant work experience and training	210
Level 3	▪ Minimum of 5200 hours of relevant work experience and training	210
Level 4	▪ Minimum of 7000 hours of relevant work experience and training	240
Class Calls at Minimum Hours ▪ Class calls may not always occur at the minimum hours indicated. Some variation is permitted to allow for the availability of training resources and apprentices.		

6.0 Tools

Apprentices shall be required to obtain their own hand tools applicable for the designated occupation of registration or tools as specified by the PACB.

7.0 Periodic Examinations and Evaluation

7.1 Every apprentice shall submit to such occupational tests and examinations as the PACB shall direct. If after such occupational tests and examinations the apprentice is found to be making unsatisfactory progress, his/her apprenticeship level and rate of wage shall not be advanced as provided in Section 5 until his/her progress is satisfactory to the Director of Apprenticeship and Trades Certification and his/her date of completion shall be deferred accordingly. Persistent failure to pass required tests shall be a cause for revocation of his/her Memorandum of Understanding.

7.2 Upon receipt of reports of accelerated progress of the apprentice, the PACB may shorten the term of apprenticeship and advance the date of completion accordingly.

7.3 For each and every course, a formal assessment is required for which 70% is the pass mark. A mark of 70% must be attained in both the theory examination and

the practical project assignment, where applicable as documented on an official transcript.

7.4 Course credits may be granted through the use of a PACB approved matrix which identifies course equivalencies between designated trades and between current and historical Plans of Training for the same trade.

8.0 Granting of Certificates of Apprenticeship

Upon the successful completion of apprenticeship, the PACB shall issue a Certificate of Apprenticeship.

9.0 Hours of Work

Any hours employed in the performance of duties related to the designated occupation will be credited towards the completion of the term of apprenticeship. Appropriate documentation of these hours must be provided.

10.0 Copies of the Registration for Apprenticeship

The Director of Apprenticeship and Trades Certification shall provide copies of the Registration for Apprenticeship form to all signatories to the document.

11.0 Ratio of Apprentices to Journeypersons

Under normal practice, the ratio of apprentices to journeypersons shall not exceed two apprentices to every one journeyperson employed. Other ratio arrangements would be determined and approved by the PACB.

12.0 Relationship to a Collective Bargaining Agreement

Where applicable in Section 5 of these conditions, Collective Agreements take precedence.

13.0 Amendments to a Plan of Apprenticeship Training

A Plan of Training may be amended at any time by the PACB.

14.0 Employment, Re-Employment and Training Requirements

14.1 The Plan of Training requires apprentices to regularly attend their place of employment.

14.2 The Plan of Training requires apprentices to attend training for that occupation as prescribed by the PACB.

14.3 Failure to comply with Sections 14.1 and/or 14.2 will result in cancellation of the Memorandum of Understanding. Apprentices may have their MOUs reinstated by the PACB but would be subject to a commitment to complete the entire program as outlined in the General Conditions of Apprenticeship. Permanent cancellation in the said occupation is the result of non-compliance.

14.4 Cancellation of the Memorandum of Understanding to challenge journeyperson examinations, if unsuccessful, would require an apprentice to serve a time penalty of two (2) years before reinstatement as an apprentice or qualifying to receive a class call to training as a registered Trade Qualifier. Cancellation must be mutually agreed upon by the employer and the apprentice.

14.5 An employer shall ensure that each apprentice is under the direct supervision of an approved journeyperson supervisor who is located at the same worksite as the apprentice, and that the apprentice is able to communicate with the journeyperson with respect to the task, activity or function that is being supervised.

14.6 Under the Plan of Training the employer is required to keep each apprentice employed as long as work is available, and if the apprentice is laid off due to lack of work, to give first opportunity to be hired before another is hired.

14.7 The employer will permit each apprentice to attend training programs as prescribed by the PACB.

14.8 Apprentices who cannot acquire all the workplace skills at their place of employment will have to be evaluated in a simulated work environment at a PACB authorized training institution and have sign-off done by instructors to meet the requirements for certification.

15.0 Appeals to Decisions Based on Conditions Governing Apprenticeship Training

Persons wishing to appeal any decisions based on the above conditions must do so in writing to the Minister of Immigration, Population Growth and Skills within 30 days of the decision.

D. Requirements for Red Seal Endorsement

1. Evidence that the required work experiences outlined in this Plan of Training have been obtained. This evidence must be in a format clearly outlining the experiences and must be signed by an appropriate person or persons attesting that these experiences have been obtained to the level required.

2. Successful completion of all required courses in the program.

3. A combination of training from an approved training program and suitable work experience totaling 7200 hours.

   Or

   A total of 10,800 hours of suitable work experience.

4. Completion of a National Red Seal examination, to be set at a place and time determined by the Apprenticeship and Trades Certification Division.

E. Roles and Responsibilities of Stakeholders in the Apprenticeship Process

The apprenticeship process involves a number of stakeholders playing significant roles in the training of apprentices. This section outlines these roles and the responsibilities resulting from them.

The Apprentice:

- completes all required technical training courses as approved by the PACB.
- finds appropriate employment.
- completes all required work experiences in combination with the required hours.
- ensures work experiences are well documented.
- approaches apprenticeship training with an attitude and commitment that fosters the qualities necessary for a successful career as a qualified journeyperson.
- obtains the required hand tools as specified by the PACB for each period of training of the apprenticeship program.

The Employer:

- provides high quality work experiences in an environment conducive to learning.
- remunerates apprentices as set out in the Plan of Training or Collective Agreements.
- provides feedback to training institutions, Apprenticeship and Trades Certification Division and apprentices in an effort to establish a process of continuous quality improvement.
- where appropriate, releases apprentices for the purpose of returning to a training institution to complete the necessary technical courses.
- ensures work experiences of the apprentice are documented.
- ensures a certified journeyperson is currently on staff in the same trade area as the apprentice and whose certification is recognized by the NL Department of Immigration, Population Growth and Skills.

The Training Institution:

- provides a high quality learning environment.
- provides the necessary student support services that will enhance an apprentice's ability to be successful.
- participates with other stakeholders in the continual updating of programs.

The Apprenticeship and Trades Certification Division:

- establishes and maintains program advisory committees under the direction of the PACB.
- promotes apprenticeship training as a viable career option to prospective apprentices and other appropriate persons involved, such as career guidance counsellors, teachers, parents, etc.
- establishes and maintains a protocol with training institutions, employers and other appropriate stakeholders to ensure the quality of apprenticeship training programs.
- ensures all apprentices are appropriately registered and records are maintained as required.
- schedules all necessary technical training periods for apprentices to complete requirements for certification.
- administers level, provincial and interprovincial examinations.

The Provincial Apprenticeship and Certification Board:

- sets policies to ensure the provisions of the **Apprenticeship and Certification Act (1999)** are implemented.
- ensures advisory and examination committees are established and maintained.
- accredits institutions to deliver apprenticeship training programs.
- designates occupations for apprenticeship training and/or certification.