

Power Engineer (4th Class)
Program Structure - Nova Scotia Apprenticeship Program

The courses listed below are required technical training in the Nova Scotia Power Engineer (Fourth Class) Apprenticeship Program.

Nova Scotia Course No.	Nova Scotia Course Name	Covers Content of SOPEEC Recommended Study Units	Prepares for SOPEEC Examination Papers
MENT-700	Mentoring I – see page 2	N/A	N/A
MENT-701	Mentoring II – see page 4	N/A	N/A
PEFC-1813 (course 1)	Math, Applied Mechanics, Thermodynamics and Legislation	Mathematics	A
		Elementary Mechanics and Dynamics	
		Elementary Chemistry and Thermodynamics	
		Industrial Legislation, Codes and Standards	
PEFC-1814 (course 2)	Safety, Environmental Control, and Welding	Power Plant / Heating Plant Safety	
		Environment	
		Material and Welding	
PEFC-1815 (course 3)	Fluid Handling, Electro-Technology and Instrumentation	Piping and Valves	
		Electricity	
		Energy Plant Instrumentation and Controls	
PEFC-1816 (course 4)	Communications, Boiler Design and Boiler Systems	Plant Communication	
		Boilers	
		Boiler Systems	
PEFC-1817 (course 5)	Lubrication, Pumps, and Boiler Safety Devices	Lubrication	
		Pumps and Compressors	
		Boiler Safety Devices	
PEFC-1818 (course 6)	Plant Operation, Plant Maintenance and Water Treatment	Power Plant/Heater Plant Maintenance	
		Water Treatment	
PEFC-1819 (course 7)	Prime Movers, Auxiliary Systems and Refrigeration	Prime Movers and Engines	
		Auxiliary Building Systems	
		Refrigeration	
PEFC-1820 (course 8)	HVAC Fundamentals, Environmental Systems and Plant Configurations	Heating Ventilation and Air Conditioning	
		Heating and Cooling Systems	
		Types of Plants	

MENT-700 Mentoring I

Learning Outcomes:

- Demonstrate knowledge of effective communication practices as a learner.
- Demonstrate knowledge of strategies for learning skills in the workplace.

Red Seal Occupational Standard Reference:

- 3.01 Uses communication techniques
- 3.02 Uses Mentoring Techniques

Suggested Hours:

6 hours

Learning Objectives:

1. Describe the importance of one's own individual experiences.
2. Identify behaviours that demonstrate positive learning experiences.
3. Identify the benefits of workplace mentoring for the apprentice, mentor, and employer.
4. Identify the partners involved in apprenticeship training.
5. Describe the shared responsibilities for workplace learning in apprenticeship.
6. Identify different learning needs and strategies to address challenges or barriers in the workplace.
 - i) learning disabilities
 - ii) language
 - iii) underrepresentation
7. Identify the components that create a positive and inclusive workplace culture.
 - i) workplace characteristics
 - ii) individual behaviours
8. Identify various learning styles and determine one's own learning preferences.
9. Explain how learning preferences impact learning new skills.
10. Identify different learning strategies to meet individual learning needs.
11. Describe the importance of adapting to a variety of teaching and learning methods in the workplace.

12. Identify techniques for effective communication as a learner.

- i) verbal and non-verbal
- ii) active listening

13. Identify and describe personal responsibilities and attitudes that contribute to on-the-job success.

- i) self advocating
- ii) asking questions
- iii) accepting constructive feedback
- iv) working safely
- v) employing time management techniques and being punctual

MENT-701 MENTORING II

Learning Outcomes:

- Demonstrate knowledge of effective communication practices as a mentor.
- Demonstrate knowledge of strategies for teaching workplace skills.

Red Seal Occupational Standard Reference:

- 3.01 Uses communication techniques
- 3.02 Uses Mentoring Techniques

Suggested Hours:

6 hours

Learning Objectives:

1. Identify the different roles played by a workplace mentor.
2. Identify strategies to create a supportive learning environment.
3. Identify techniques for effective communication as a mentor.
 - i) constructive feedback
 - ii) active listening
 - iii) leading meetings and one-on-one sessions
4. Describe the steps in teaching a skill.
 - i) identifying the point of lesson
 - ii) linking the lesson
 - iii) demonstrating the skill
 - iv) providing practice
 - v) giving feedback
 - vi) assessing skill and progress
5. Identify strategies to assist in teaching a skill while meeting individual learning needs.
 - i) principles of instruction
 - ii) coaching skills
6. Explain how to adjust a lesson for various situations.