

**Program Review**

# **Final Report and Action Plan**

**Electrician Programs**

*Foundation and Apprenticeship Harmonized*



Trades and Technical Programs  
North Island College  
June 2024

**Submitted to**  
**Cheryl O'Connell, Dean**  
**Trades and Technical Programs**

**North Island College**  
1685 S Dogwood St  
Campbell River, British Columbia

## Table of Contents

Preamble.....	4
A. Summary .....	4
B. Background .....	5
C. Program Overview .....	6
Program Structure.....	6
D. Summary of Strengths and Challenges .....	9
Identified Strengths of the Electrician Program .....	9
Gaps and Weaknesses of the Program .....	9
E. Summary of Key Findings from the External Reviewers .....	10
F. Program Response to External Reviewers' Recommendations .....	11
G. Indigenization of Teaching and Learning Experiences .....	16

## Preamble

As we continue working through the process of program review and renewal we are guided by the college's overarching, interwoven strategic plans, **BUILD 2026**, **Widening Our Doorways**, and **Working Together – the NIC Indigenization Plan**. The recommendations put forth (and the action items detailed in the accompanying Action Plan) align with commitments articulated in the guiding documents and are part of our continued effort to meet the needs of our diverse community of learners.

## A. Summary

The Construction Electrician program engaged in the program review process. The outcome of this document is an action plan that details the upcoming work to enhance the program.

## B. Background

In accordance with North Island College's Policy 3-11, the department undertook the program review process. This final report synthesizes recommendations and next steps from the department's self-study and the external review report.

The self-study was completed in May 2024 and submitted to the dean Trades and Technical Programs, Cheryl O'Connell. Survey data from current students, alumni, and faculty were included to support the conclusions and recommendations shared in the self-study.

The external review visit was conducted on June 3 + 4, 2024

The external review team consisted of:

- Jack Moes, Dean, Trades and Technology, College of the Rockies
- Nathan Chapin, Instructor, Electrical Trades Program, British Columbia Institute of Technology
- Jeremiah Williamson, Electrical Instructor, Okanagan College
- Matt Wheatley, Instructor, Heavy Mechanical Trades Programs, North Island College

The external review team, in fulfillment of its responsibilities, met with:

- Vice-President Academic: Tony Bellavia
- Dean, Trades and Technical Programs, Cheryl O'Connell
- Faculty
- Students

This final report is based on the program self-study, the external review report, and responses from program faculty.

## C. Program Overview

### Mission

Our mission is to prepare students during their apprenticeship to be successful in the electrician trade and make a positive impact in the industries that rely on their skill and ingenuity.

### Vision

To be an accessible, high quality, and advanced training option for students on Vancouver Island and throughout British Columbia.

### Purpose

The purpose of the electrician programs at North Island College is to deliver the technical training as outlined by *SkilledTradesBC* and prepare students for success in the trade through providing the most current and comprehensive training for becoming competent problem solvers and successful trades persons.

### Program Structure

The electrician offerings at North Island College are comprised of a foundation level and four levels of apprenticeship training during which time students develop their skills and qualifications in the electrical trade while working toward their Interprovincial (Red Seal) designation.

North Island College offers a Foundations Certificate and all four levels of apprenticeship training in line with the criteria set by *SkilledTradesBC* at our Campbell River Campus and extends enrollment rotationally every two years at our Port Alberni Campus.

Applicants must be *SkilledTradesBC* registered apprentices to enter the apprentice pathway. Apprentices enrolling in technical training must take their training in sequential order: levels 1, 2, 3 and 4. Apprentices must complete all levels of technical training to be eligible to write the Interprovincial (Red Seal) examination: [Link](#)

Applicants entering the Electrician Foundation level can learn essential workplace skills in addition to earning the Level 1 training credit and work-based training hours towards the Interprovincial certification when registered as an apprentice.

Entrance requirements for the Foundation level are found here: [Link](#)

## Program Delivery

Instructors employ teaching pedagogies that focus on practical skills, hands on experience and real-world application. Multiple classrooms are used for instruction. There is one lecture room for each instructor and three lab rooms.

Instructors use various educational technologies such as Drawboard, Kaltura video, Kaltura Virtual Classroom and Brightspace. The number of cohorts or sections an instructor teaches differs from one year to the next depending on direction from SkilledTradesBC.

## Apprenticeship Levels

Details about the apprenticeship levels are found on [this webpage](#).

- ELH - 100 Electrician Apprenticeship Common Core-Level 1 Harmonized
- ELH - 200 Electrician Apprenticeship Common Core-Level 2 Harmonized
- ELH - 201 Electrician Apprenticeship Harmonized - Gap Training A
- ELH - 300 Electrician Apprenticeship Common Core Level 3 Harmonized
- ELH - 301 Electrician Apprenticeship Harmonized - Gap Training B
- ELH - 400 Electrician Apprenticeship Common Core Level 4 Harmonized
- ELH - 401 Electrician Apprenticeship Harmonized - Gap Training C

## NOTE

**Gap training (ELH-201)** is designed for Electrician Apprentices who are transitioning into Electrician Apprenticeship Common Core Level 2 Harmonized from non-Harmonized Electrician Apprenticeship Level 1 or Electrician Foundation non-Harmonized.

**Gap training (ELH – 301)** is designed for Electrician Apprentices who are transitioning into Electrician Apprenticeship Common Core Level 3 Harmonized from non-Harmonized Electrician Apprenticeship Level 2.

**Gap training (ELH-401)** is designed for Electrician Apprentices who are transitioning into Electrician Apprenticeship Common Core Level 4 Harmonized from non-Harmonized Electrician Apprenticeship Level 3.

## Foundation Harmonized Certificate

The following courses are part of the foundation certificate. Details are all found on [this page](#):

- EFH - 100 Electrician Common Core-Level 1 Harmonized
- EFH - 101 Safety, Basic Trade Tools, Fasteners and Fittings
- EFH - 102 Electrician Codes, Plans & Specifications
- EFH - 103 Applied Mathematics and Sciences for the Electrician Trade
- EFH - 104 Applied Wiring Methods
- EFH - 105 Workplace and Employment Skills

The program also requires students not having current, valid First Aid and WHMIS certification to take these courses to meet program requirements. Separate fees are charged for First Aid and WHMIS.

- WSF - 019 Orientation to WHMIS Online
- FAC - 020 Emergency First Aid with CPR Level C

Based on availability of placements with industry, trades Foundation students may have an opportunity to participate in optional Work Experience: WXT 100 Trades Work Experience

In this program, students may participate in field trips to industry specific locations.



## D. Summary of Strengths and Challenges

### Identified Strengths of the Electrician Program

- Faculty are a key program strength.
- NIC offers all four levels of training for the program.
- Current students have meaningful learning experiences and former students go on to achieve success in the community and convey that the program did a good job in preparing them for the workforce.
- The program and its faculty are successful in providing students with electrical knowledge and skill development resulting in gainful employment.

### Gaps and Weaknesses of the Program

- Faculty acknowledge insufficient time for curriculum development and challenges keeping student resources current on the three-year rotation of the Electrician code.
- Faculty would like access to a laptop cart to take to the classroom.

## E. Summary of Key Findings from the External Reviewers

The external review team felt the quality of the instruction in the North Island College Construction Electrician programs was very good and in alignment with SkilledTradesBC curriculum expectations.

Throughout this report, the external review team provides recommendations, insights, and suggestions for enhancement in areas such as:

- enhance the student learning experience with greater breadth and depth of instructional skills particularly in assessment and evaluation, writing and analyzing test questions, consistency in delivery format expectations across levels etc
- further engage in professional development through internal CTLI workshops and courses, department PD, Indigenous learning, department plans etc
- build stronger relationships and more frequent engagement with industry for work integrated learning, demos and talks, program advisory committee and job fair enhancements
- expand the impact of work experiences by considering ideas such as requiring work experience of all Foundations students
- develop enhancements for student supports in math/peer tutoring, further support for job finding

## F. Program Response to External Reviewers' Recommendations

This section outlines the recommendations made by the external review team and our department responses.

### THEME 1: Enhance Industry Connections

#### Recommendation 1: Add Work Integrated Learning Experiences to Foundations

- for example: 1X/week or every 2 weeks by compressing the instructional week into 4 onsite days, with one work experience day
- utilizing the work done by Matt Wheatley (Heavy Mechanical Trades) and building upon that with development of both industry and student materials for training and reflective activities
- connections back to enhancing NIC's Job Fair (more awareness of it for industry, better timing, more breadth of industry members present, better communication across all NIC and industry members)

#### Department Response:

- Faculty acknowledge that a WIL committee needs to be formed to review WIL across all trades and determine how to best move forward and enhance the opportunities
- Faculty appreciate the weekly WIL suggestion, however, feel that having 1 day per week of WIL is not conducive to their students optimal learning. The best fit for electrical would be 2 weeks at the end of the Foundation program
  - Continue to partner with Habitat for Humanity
  - Integration of students with real projects
  - Instructors should be on site with the students during the WIL, a coordinator would be required

#### Recommendation 2: Conduct More Field Trips

- plan to divide up local and beyond industry and manufacturers and build half day trips for each instructor to go out and build possible field trips
- consider activities (workbook, interview questions) that students could do while on field trips to connect new learning and make insightful applications to class work

#### Department Response:

- Instructors find it difficult to coordinate field trips because of lack of industry connections and the additional work required
- Instructors feel that field trips would be reasonable for Foundations but not Levels 1 to 4

### **Recommendation 3: More Demos and Talks at the College**

- while out talking to industry and manufacturers, also invite them into the College to give demos and talks to students possibly connecting with open houses, job fairs and other special events connecting with industry

#### **Department Response:**

- Instructors agree that having an external professional in the classroom would be a great opportunity for students to learn from a different voice, but logistically feel it may be difficult to fit into scheduling
- An alternative to outside speakers would be to pursue team teaching, however limited physical size of classrooms and available lab equipment will pose a barrier
- Could host industry professionals to contribute to NIC in the Bistro as a thank you

## **THEME 2: Instructional Enhancement**

### **Recommendation 1: Enhance Assessment Methods**

Instructors need to address the assessment methods and grading of students. From student input, there appear to be frequent inconsistencies with marks and answers of question bank answers that are not being corrected on a regular basis (Foundation course binder). There could also be better analysis of student grades. Students do like chance to write tests remotely.

- questions with frequent challenges could be better analyzed and decoded for errors
- more frequent oversight and enhancement of tests and exams to correct errors
- more training for instructors on how to write, decode, and analyze multiple choice questions
- instructors should compare students grades by line item to the SLE to ascertain better data on how learning is aligned to expectations
- possibly consider paper-based/in-person exams versus online exams to discourage cheating

#### **Department Response:**

- Instructors acknowledge that there is room for improvement in exam question enhancement and is an ongoing effort that they all contribute to

## **Recommendation 2: Refine Teaching Practices for Efficiencies and Effectiveness**

Students find the videos created by one instructor very helpful and love the YouTube channel. There is a very good emphasis on safety in the Foundation program. The alignment with theory and lab is very well done. There is real and current equipment in the lab. Instructors express need to find more time to do curriculum development. The external review team suggests other enhancements to teaching practices as shared below.

- expand teaching practices to lessen the use of PowerPoint slides used during classroom time and provide more variety and breadth in the learning experience
- consider team teaching – which means combining classes when appropriate for some topics for half a day - so the other instructor has time in office to do more preparation and planning
- master learning management system (Brightspace) courses should be created and then shared with other/new faculty and be available to all for efficiencies in sharing
- continue to finesse theory and application practices and resources

### **Department Response:**

- Instructors agree with these recommendations and feel that they can fit into their teaching practices

## **Recommendation 3: Explore and Evaluate Learning Resources**

In reference to the exploration to purchase Alberta resources. The external review team suggests the following.

- consider using alternative resources when developing content and lesson plans
- explore the Alberta learning modules (ILM) but also explore other resources, books, content that BC electrical instructors are also using (do a scan of what is currently being used in BC)
  - this requires annual attention to ensuring you have the best collection of resources, that the resources still meet the curriculum requirements etc.

### **Department Response:**

- Examination of content delivery is needed along with which resources to use

#### **Recommendation 4: Engage in More Professional Development Activities**

There are some areas where the department could explore enhancements to the overall learning experience while planning more activities for the instructors' professional learning. The external review team suggests compressing your instructional time into a four-day week and using the fifth day for work experience/experiential learning opportunities with industry, professional development time etc. In addition:

- create departmental professional development (PD) plan outlining the varied learning experiences and vocational training activities each instructor will be engaged in
- create and offer a Trades-specific Essentials of Teaching and Learning course from teaching and learning centre (CTLI) for enhancing trades instructor competencies in teaching and learning beyond the Provincial Instructor Diploma

#### **Department Response:**

- Instructors feel it would be difficult to compress their weeks into 4 days.
- Exploration of what other institutions are doing is needed to understand if a compressed week would impact quality student learning.
- Further to Recommendation 3, improved student resources would help enable the 4 day week.

#### **Recommendation 5**

The external review team suggests the department look at building a more comprehensive feedback plan to get more input for making evidence-informed decisions.

- more frequent feedback is needed beyond the BC Outcomes survey
- more details are required from STBC as to the Red Seal Pass Rate - because of the fluctuation over the years – would like data on those doing second attempts
- utilize an instructor course feedback survey via the NIC Course Feedback Service student survey
- add an exit/end of program survey for student (student experience survey) that focuses on the learning experience students just have had

#### **Department Response:**

- Instructors acknowledge and agree that exit surveys would be a valuable feedback mechanism.

## THEME 3: Student Supports

### Recommendation 1: Several Areas for Enhancement

Students are well supported by a very good collection of library resources including loaner laptops. Students did feel very prepared and confident in their learning. They expressed a need for a job board and were unaware of any job fairs that had been held.

A few areas for enhancement might include the following:

- add a Trades **specific tutoring service** such as: Math for Trades - could be offered weekly via Continuing Education and Training through an evening course
- **enhance the job fair** - to improve student attendance, change timing and improve awareness, increase the breadth of employers that participate
- more support is required for student job placements – for example via a NIC Electrician **jobs board** and ensure that industry is aware of this board → this communication would be via the PAC
  - **work experience** could bridge to ongoing employment as an apprentice
- **bookstore hours** could be expanded to better meet student needs

### Department Response:

- Instructors agree that access to the bookstore is a current barrier to students.
- Instructors identified that the job fair that did occur at NIC was forestry heavy and instructors were not given enough time to plan and get industry experts from the Electrical profession.
- There is a dedicated portal on the NIC WIL site for Trades jobs to be posted

## THEME 4: Making More Connections

There are many good connections and relationships happening at North Island College with departments, support areas and the instructors.

There are a few areas that could be further developed including the following:

- an increased infusion of trades instructors and their programs into the overall institutional culture so there is less of a divide between trades and academic programs
- improved communications between administration and instructors specifically around scheduling – this means work to inquire and seek clarification of understanding and planning activities
- instructors are encouraged to forge new and enhance existing partnerships with industry to address a need for continued growth and development

### Department Response:

- Instructors agree with all recommendations

## **G. Indigenization of Teaching and Learning Experiences**

See action plan.