

**Electrical Articulation  
Minutes**

June 5 and 6, 9:00 am, 2024  
Noth Island College

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Meeting ID: 234 149 071 609

Passcode: 9nRC6p

In Person attendees: Amie Schellenberg – TRU, Mike Mann – KPU, Ron Murray – KPU, Jason Moore- KPU, Nathan Chapin – BCIT, Clarence Burlock BCIT, Shane Dalager – VIU, Todd Leskie – OC, Myles Andrew – UFV, Ben Lovely – TRU, Carmen DeGoey – Camosun, AJ Wearmouth – Selkirk, Jeremiah Williamson – OC, Cameron Thiessen - Coast Mountain College, David Johns – NIC, Trevor Petr – NIC

Online attendees: Baldev Pooni – SLP, Michael Finch - TRU, Mike Turley - TRU

Regrets: Northern Lights College, College of the Rockies, College of New Caledonia

Minute Takers: Geoff Marr/ Laurie Mossop – NIC admin support.

Meeting Chaired by Nathan Chapin and co-Chaired by Jeremiah Williamson

A thank you to NIC and all members who assisted in organizing this year's meeting.

**1. Call to Order, Introductions, and Etiquette**

Modified agenda to show Festo representatives in exchange for Siemens rep.

Motion to accept modified agenda.

1<sup>st</sup> by Shane Dalager, 2<sup>nd</sup> Ben Lovely

Motion carried unanimously.

Ten schools present for voting, one vote per institution. Persons identified as voting representative.

**2. Institutional Reports**

Reports submitted ahead of time – see attached reports.

### **3. Challenges and Successes in Training**

Cost of living, transportation, more accommodations requests which creates extra workload for faculty and supporting department members.

Results for Level 3 SLE are underperforming – with low pass rates across the province.

### **4. Festo Didactic – Greg James (Canadian Sales Manager) and Benoit**

#### **Maisonneuve**

The introduction of the Electro product. A basic, stand-alone learning system for teaching electronics/ electricity, which will be ready for a 2025 fall launch. It has data acquisition and the instruments – self-sufficient unit. Launching an EV charging station trainer in 2025.

### **5. Managing Accessibility/Accommodations/Next Generation**

Discussion about accommodation policy by Skilled Trades BC. There is inconsistent application of policy among invigilators at different institutions. Skilled Trades BC is providing accommodations to all students without any prior assessment. This is causing some Institutions unable to meet the demand of these requests.

Discussion about the fact that students can register for apprenticeship level training back-to-back. Institutions are required to confirm hours and manage this. Discussion about ESL students being unable to pass the exams. An English assessment required for apprenticeships would assist in supporting these students.

Discussion about approaching SkilledTrades BC for funding to hire more invigilators due to their accommodation policy.

Some Institutions have applied for funding that has allowed for three extra days to the training days for level 4 IP prep.

Lunch

### **6. Code Presentation by Ark Tsisserev**

An engaging presentation on key changes to the 2024 Canadian Electrical Code Part 1. A thank you to Ark for his time and expertise.

## **7. 2024 CEC Part 1**

Discussion about new revised Table D3.

## **8. Curriculum Sub-Committee Update – Myles Andrews**

- A report was submitted ahead of time.

Has been collaborating at Open School. The past error reports that had been logged into BC Trades Modules website have been lost.

Discussion regarding the errors in current Provincial student resource binders.

Described the challenges working with Skilled Trades BC to update current binder's vs alternate options.

The committee has been working with Chris at Cengage to update the BC Electrical Code and Applied Prints books.

Thursday June 6, 2024, 9:00am start

## **9. IP Results and Skilled Trades BC Discussion**

Challenges for IP candidates: not enough invigilators means that exams are written on different days and times.

The re-write process is unclear with the SLE for candidates.

Most Institutions have to time restrictions on entering grades, rewrites, or delayed writes will impact grade entry.

Clarification required on the policy by Skilled Trades BC required for eligibility on writing the SLE.

## **10. Skilled Trades Presentation Jason Leber, Manager Program Standards; Vern Weber, Program Development Officer; Tawni Wilkins, Apprenticeship Advisor**

- A report from Skilled Trades BC was submitted ahead of time.

There is a review of the SLE's that are implemented for apprenticeship training. There is an accommodation process for apprentices.

The foundation program outlines are being designed.

Online red seal exams are now available. All IP exams are available on the national platform. Currently in development in BC – anticipate winter/ spring 2025. At this point institutions may choose to use paper exams.

The Challenge pathway was discussed.

Acknowledgement of receiving the letter of concern specific to the challenge process issued 2023. The process is to provide letters to BCATTA for review before sending to Skilled Trades. Skilled Trades BC is not going ahead with having practical assessments for level challengers. To date no one has challenged level 3. The articulation committee has concerns about learning resources. The articulation committee is requesting the same copyright to use learning resources from the BC Publications that TRU has. Skilled Trades BC indicated that this option would be explored.

Discussion about adding training days to levels 2 and 3. Due to increase course content and days missed to stats.

Some institutions will remove a student from the exam list if they have not passed the technical training portion. SkilledTrades defaults to allowing students to write since they do not know what their in-class mark is. The new policy will provide a time limit for re-writing exams.

Request invigilators following a standard policy, example: permitting students to use the washroom. Jason will talk to the assessments team about this.

Discussion about correlating the time given for SLEs to the number of questions. SkilledTrades is looking at this in part of the SLE review.

Lunch

## **11. Terry Becker – Presentation on Electrical Safety**

An engaging presentation on electrical safety and arc flash awareness. He would like to partner with the training providers on developing a student resource for each level of the apprenticeship program related to electrical safety.

Thank you, Terry.

## **12. System Liaison Person (SLP) Report (Baldev)**

- Report submitted ahead of time.

Baldev presented a broad scope of what is happening provincial for training apprentices.

No more Women in Trades funding

Working towards a greater focus and a greater uptake of dual-credit programs

38% of our workforce needs to come from immigration otherwise we will face massive shortages according to the 2021 Provincial Labour Report.

## **13. Minutes**

Minutes from the meeting will be distributed by email and accepted 30 days after being distributed or 30 days following any changes. Then will be sent to BCCAT as a record.

## **14. Co-Chair Election**

In 2020 we passed a motion to create a process of having a chair and co-chair. It was done to create some consistency and accountability with regards to representation to Skilled Trades as well as to create a mentorship model. Here's how it works: after 1 year as co-chair, the co-chair moves into the chair position and a new co-chair are elected.

AJ nominates Trevor and Clarence seconds. Mike nominates Nathan and seconded by Carmen. Nathan respectfully declines but Trevor accepts.

Carried unanimously – Welcome Trevor to the position of co-Chair.

## **15. Next Years Host Institution**

Carmen (Camosun College) will ask Dean and BCIT has agreed to be second option.

## **16. Adjournment**

Trevor Petr moved that the meeting be adjourned, seconded by AJ Wearmouth  
Carried unanimously.

# Report for Electrician Articulation Committee Meeting

## Skilled Trades BC

### 1. Overview

This report is intended to provide the Articulation Committee with information pertaining to their programs, such as updates to Program Outlines, harmonization, transition plans, and exam statistics.

We in Program Standards want to continue to build ongoing communication and collaboration with our partners in training delivery. The best way to do this is to have regular contact between SkilledTradesBC's Program Standards team and the Chair, Co-chair, and System Liaison Person (SLP) of the Articulation Committee to address concerns as they come up throughout the year.

Any issues or concerns that arise from the Articulation Committee Meeting or throughout the year can be directed to the Committee Chair and SLP to bring forward to the Manager of Program Standards.

### 2. Apprenticeship Numbers

#### Legend

**Reporting/active** = an apprentice for whom activity has been logged in the SkilledTradesBC Portal System **within the last 18 months**, e.g., course marks uploaded, or work-based hours reported

**Non-reporting/inactive** = an apprentice for whom **no** activity has been logged in DA within the last 18 months

**TT**= technical training (in-school)

**0TT** = apprentices who have a sponsor and have registered with SkilledTradesBC, but have not achieved any level of technical training

**1TT/2TT/3TT/4TT** = the highest level that an apprentice has achieved

### CONSTRUCTION ELECTRICIAN APPRENTICESHIP NUMBERS

Pre harmonized program	0TT	1TT	2TT	3TT	4TT	Total
Reporting:	0	0	0	0	211	211
Non-reporting:	0	0	0	0	355	355
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>566</b>	<b>566</b>

Data is as of April 1, 2024

Harmonized program	0TT	1TT	2TT	3TT	4TT	Total
Reporting:	3088	2236	1803	1235	854	9216
Non-reporting:	2008	1049	520	266	118	3961

<b>Total:</b>	<b>5096</b>	<b>3285</b>	<b>2323</b>	<b>1501</b>	<b>972</b>	<b>13117</b>
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Data is as of April 1, 2024

## HARMONIZATION NUMBERS BY REGION

Regional numbers are based on an apprentice's address, not the school they attend. For a definition of College Regions, see *Appendix A*.

	REGION			0TT	1TT	2TT	3TT	4TT	Total
1	North			343	212	191	111	54	911
2	South East Interior			810	540	433	240	172	2195
3	Island			739	533	347	260	240	2119
4	Lower Mainland			3066	1918	1303	855	494	7636
	??			81	32	17	12	6	148
	Other			57	50	32	23	6	168
	<b>Total</b>			<b>5096</b>	<b>3285</b>	<b>2323</b>	<b>1501</b>	<b>972</b>	<b>13177</b>

## INDUSTRIAL ELECTRICIAN APPRENTICESHIP NUMBERS

Harmonized program	0TT	1TT	2TT	3TT	4TT	Total
Reporting:	155	85	88	87	0	415
Non-reporting:	84	32	18	37	0	171
<b>Total:</b>	<b>239</b>	<b>117</b>	<b>106</b>	<b>124</b>	<b>0</b>	<b>586</b>

Data is as of April 1, 2024

## HARMONIZATION NUMBERS BY REGION

Regional numbers are based on apprentice's address, not the school they attend. For a definition of College Regions, see *Appendix A*.

	REGION			0TT	1TT	2TT	3TT	4TT	Total
1	North			39	23	14	22	2	100
2	South East Interior			56	17	43	26	5	157
3	Island			13	10	6	16	2	47

4	Lower Mainland			121	55	42	52	11	281
	??			4	0	1	4	0	9
	Other			6	2	0	4	0	12
	<b>Total</b>			<b>239</b>	<b>117</b>	<b>106</b>	<b>124</b>	<b>20</b>	<b>606</b>

### 3. Electrician Exams

#### EXAM STATISTICS INTERPRETATION

When reviewing the statistics, the following should be considered:

<b>Pass Rate</b>	The percentage of candidates who passed the exam
<b>Average Exam Mark</b>	The mean final exam percentage of the total group
<b>GAC Average</b>	The mean percentage scored on each General Area of Competency by the total group
<b>Standardized Level Exams (SLE)</b>	<ul style="list-style-type: none"> <li>• BC-only exam (developed and written in BC, content based on the Program Outline)</li> <li>• Unless stated otherwise, all statistics are of first-time writes, for those writing with a class</li> <li>• Challenger results are not included in these stats</li> </ul>
<b>Interprovincial Standard Exam (IPSE)</b>	<ul style="list-style-type: none"> <li>• National Pass Rate includes apprentice <b>and</b> challenger writes for all jurisdictions</li> </ul>
<b>Number of Writes</b>	<p>The validity of the statistics increases with the number of writes (i.e. when there is a larger sample size). Therefore, if an exam has a low number of writes (fewer than 100), the statistics alone cannot be used to determine the quality of the exam. This is because outliers (very low or high marks) will skew the results of the group with lower number of writes.</p> <p>To determine exam quality, statistics must be analyzed in context with other factors including: student feedback on the exam, attributes of the student cohort, and extenuating circumstances.</p>



This is especially important when comparing statistics across periods of time or for different groups. For example, a pass rate of 61% on 250 writes is not comparable with a pass rate of 34% on 50 writes.

## EXAM STATISTICS

Electrician Common Core Level 1			
Year	2021*	2022	2023
Number of Writes	101	414	593
Pass Rate	57%	47%	49%
Average Exam Mark	72%	69%	69%
BC Apprentice Average per GAC A – Apply Circuit Concepts	72%	69%	69%
BC Apprentice Average per GAC AA – Install and Maintain Communication Systems	50%	51%	54%
BC Apprentice Average per GAC B – Perform Safety-Related Functions	75%	71%	68%
BC Apprentice Average per GAC C – Use Tools and Equipment	65%	57%	68%
BC Apprentice Average per GAC D – Organize Work	87%	85%	85%
BC Apprentice Average per GAC G – Use Communication and Mentoring Techniques	93%	90%	94%
BC Apprentice Average per GAC H – Install and Maintain Consumer/Supply Services & Metering Equipment	80%	78%	77%
BC Apprentice Average per GAC I –	69%	65%	61%

<b>Install and Maintain Protection Devices</b>			
<b>BC Apprentice Average per GAC J</b> – <b>Install and Maintain Low Voltage Distribution Systems</b>	64%	68%	68%
<b>BC Apprentice Average per GAC L</b> – <b>Install and Maintain Bonding, Grounding and Ground Fault Detection Systems</b>	78%	73%	79%
<b>BC Apprentice Average per GAC Q</b> – <b>Install and Maintain Raceways, Cables and Enclosures</b>	70%	65%	61%
<b>BC Apprentice Average per GAC R</b> – <b>Install and Maintain Branch Circuitry</b>	57%	56%	59%

\* SLEs were waived until September 2021 due to COVID-19

<b>Electrician Common Core Level 2</b>			
<b>Year</b>	<b>2021*</b>	<b>2022</b>	<b>2023</b>
<b>Number of Writes</b>	285	827	1136
<b>Pass Rate</b>	41%	45%	54%
<b>Average Exam Mark</b>	66%	67%	70%
<b>BC Apprentice Average per GAC A – Apply Circuit Concepts</b>	69%	68%	69%
<b>BC Apprentice Average per GAC D – Organize Work</b>	88%	88%	87%
<b>BC Apprentice Average per GAC H – Install and Maintain Consumer/Supply Services &amp; Metering Equipment</b>	78%	82%	83%
<b>BC Apprentice Average per GAC I – Install and Maintain Protection Devices</b>	85%	86%	87%

<b>BC Apprentice Average per GAC L – Install and Maintain Bonding, Grounding and Ground Fault Detection Systems</b>	73%	73%	79%
<b>BC Apprentice Average per GAC N – Install and Maintain Renewable Energy Generating &amp; Storage Systems</b>	73%	75%	82%
<b>BC Apprentice Average per GAC P – Install and Maintain Transformers</b>	57%	61%	65%
<b>BC Apprentice Average per GAC Q – Install and Maintain Raceways, Cables and Enclosures</b>	61%	61%	64%
<b>BC Apprentice Average per GAC R – Install and Maintain Branch Circuitry</b>	51%	52%	58%
<b>BC Apprentice Average per GAC S – Install and Maintain Heating, Ventilating and Air Conditioning (HVAC) Systems</b>	47%	48%	54%
<b>BC Apprentice Average per GAC T – Install and Maintain Exit and Emergency Lighting Systems</b>	64%	67%	69%
<b>BC Apprentice Average per GAC U – Install and Maintain Cathodic Protection Systems</b>	60%	61%	56%
<b>BC Apprentice Average per GAC V – Install and Maintain Motor Starters and Controls</b>	63%	68%	72%

\* SLEs were waived until September 2021 due to COVID-19

<b>Electrician Common Core Level 3</b>	
<b>Year</b>	<b>2023*</b>
<b>Number of Writes</b>	264
<b>Pass Rate</b>	15%
<b>Average Exam Mark</b>	59%

<p><b>BC Apprentice Average per GAC A</b> – <b>Apply Circuit Concepts</b></p>	62%
<p><b>BC Apprentice Average per GAC C</b> – <b>Use Tools and Equipment</b></p>	45%
<p><b>BC Apprentice Average per GAC D</b> – <b>Organize Work</b></p>	77%
<p><b>BC Apprentice Average per GAC H</b> – <b>Install and Maintain Consumer/Supply Services &amp; Metering Equipment</b></p>	66%
<p><b>BC Apprentice Average per GAC J</b> – <b>Install and Maintain Low Voltage Distribution Systems</b></p>	57%
<p><b>BC Apprentice Average per GAC L</b> – <b>Install and Maintain Bonding, Grounding &amp; Ground Fault Detection Systems</b></p>	40%
<p><b>BC Apprentice Average per GAC M</b> – <b>Install and Maintain Power Generation Systems</b></p>	54%
<p><b>BC Apprentice Average per GAC P – Install and Maintain Transformers</b></p>	59%
<p><b>BC Apprentice Average per GAC R – Install and Maintain Branch Circuitry</b></p>	59%
<p><b>BC Apprentice Average per GAC V</b> – <b>Install and Maintain Motor Starters &amp; Controls</b></p>	58%
<p><b>BC Apprentice Average per GAC W – Install and Maintain Drives</b></p>	40%

<b>BC Apprentice Average per GAC Y – Install and Maintain Motors</b>	<b>58%</b>
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\*first writes took place in October 2023

### RED SEAL

A new Construction Electrician Red Seal IP exam was released and activated in BC on **August 15, 2023**. The new exam is based on the 2021 RSOS and is compliant with both the 2021 CEC, Part 1 and the 2018 CEC, Part 1.

Also, SkilledTradesBC has earmarked funding to cover the cost of an additional 2 training days that Training Providers can tack on to Construction Electrician Level 4 intakes, in order to help prepare apprentices to write the IP Exam. Please reach out to Gwyn MacGregor in Training Investment for more information re: STC refreshers and funding additional intakes.

<b>Construction Electrician IPSE – aligned to 2015 RSOS</b>								
	<b>2016<sup>1</sup></b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>BC Apprentice Number of Writes</b>	255	942	1044	1167	1136	1055	989	822
<b>BC Apprentice Pass Rate</b>	82%	79%	77%	77%	64%	60%	71%	79%
<b>Summary National Pass Rate<sup>2</sup></b>	61%	52%	54%	52%	50%	50%	53%	55%
<b>BC Apprentice Average Exam Mark</b>	78%	76%	76%	75%	72%	71%	74%	77%
<b>BC Apprentice Average per MWA A</b> <b>Performs Common Occupational Skills</b>	79%	78%	79%	82%	80%	80%	83%	85%
<b>BC Apprentice Average per MWA B</b> <b>Installs, Services &amp; Maintains Generating, Distribution &amp; Service Systems</b>	83%	78%	77%	72%	72%	67%	71%	75%

<b>BC Apprentice Average per MWA C</b> Installs, Services & Maintains Wiring Systems	77%	79%	76%	77%	74%	75%	78%	80%
<b>BC Apprentice Average per MWA D</b> Installs, Services & Maintains Motors & Control Systems	67%	69%	73%	73%	66%	63%	66%	69%
<b>BC Apprentice Average per MWA E</b> Installs, Services & Maintains Signalling & Communication Systems	82%	78%	77%	77%	73%	75%	79%	81%

<sup>1</sup> 2016 statistics are limited to writes of exams aligned to 2015 RSOS

<sup>2</sup>Summary National Pass Rate includes apprentices and challenger writes for all jurisdictions

BC apprentice statistics are for first time writes for those writing with a class

Industrial Electrician IPSE – aligned to 2016 RSOS						
Year	2018 B <sup>1</sup>	2019	2020	2021	2022	2023
<b>BC Apprentice Number of Writes</b>	19	42	39	35	40	33
<b>BC Apprentice Average Exam Mark</b>	73%	74%	74%	74%	75%	73%
<b>BC Apprentice Pass Rate</b>	58%	69%	67%	77%	74%	79%
<b>Summary National Pass Rate<sup>2</sup></b>	32%	41%	45%	42%	47%	48%
<b>BC Apprentice Average per MWA A – Performs Common Occupational Skills</b>	78%	82%	79%	88%	87%	82%
<b>BC Apprentice Average per MWA B – Installs &amp; Maintains Generating, Distribution &amp; Service Systems</b>	77%	77%	78%	75%	74%	70%
<b>BC Apprentice Average per MWA C – Installs &amp; Maintains Wiring Systems</b>	70%	72%	73%	70%	72%	73%

<b>BC Apprentice Average per MWA D – Installs &amp; Maintains Rotating &amp; Non-Rotating Equipment &amp; Control Systems</b>	64%	69%	67%	71%	74%	74%
<b>BC Apprentice Average per MWA E – Installs &amp; Maintains Signalling &amp; Communication Systems</b>	62%	65%	62%	59%	58%	65%
<b>BC Apprentice Average per MWA F – Installs &amp; Maintains Process Control Systems</b>	79%	79%	78%	78%	76%	76%

<sup>1</sup> **2018 B statistics** are limited to writes of exams aligned to 2016 RSOS

<sup>2</sup> **Summary National Pass Rate** includes apprentices and challenger writes for all jurisdictions

**BC apprentice statistics** are for first time writes for those writing with a class

## Appendix A: College Regions

### REGIONS

1. NORTH
2. SOUTH EAST INTERIOR
3. ISLAND
4. LOWER MAINLAND

COLLEGE REGION	Abbrev.	Region
<b>Camosun</b> (Victoria, Sooke, Sidney, Brentwood Bay, Galiano)	CM	3
<b>Capilano</b> (West Vancouver, North Vancouver, Whistler, Bowen Island)	CP	4
<b>Douglas</b> (Burnaby, Coquitlam, Maple Ridge, New Westminster, Anmore)	DG	4
<b>Fraser Valley</b> (Abbotsford, Chilliwack, Hope, Mission, Yale)	FV	4
<b>Kwantlen</b> (Delta, Langley, Richmond, Surrey, White Rock, Aldergrove)	KW	4
<b>New Caledonia</b> (Burns Lake, Mackenzie, Prince George, Vanderhoof)	NC	1
<b>North Island</b> (Campbell River, Comox, Courtenay, Port Alberni, Tofino)	NI	3
<b>Northern Lights</b> (Dawson Creek, Fort St John, Tumbler Ridge, Taylor)	NL	1
<b>Northwest</b> (Terrace, Smithers, Prince Rupert, Houston, Aiyansh, Kitimat)	NW	1

<b>Okanagan</b> (Kelowna, Penticton, Salmon Arm, Vernon, Oliver, Osoyoos)	OK	2
<b>Rockies</b> (Cranbrook, Creston, Fernie, Golden, Invermere)	RK	2
<b>Selkirk</b> (Nelson, Castlegar, Trail, Kaslo, Grand Forks, Robson, Rossland)	SL	2
<b>Thompson Rivers</b> (Kamloops, Williams Lake, Merritt, Lytton, Clinton)	TR	2
<b>Vancouver</b>	VC	4
<b>Vancouver Island</b> (Nanaimo, Gabriola, Parksville, Nanoose Bay, Duncan)	VI	3
<b>Undefined</b> (out-of-province = AB, ON, SK, YT)	unde	OTHER
Not mapped to a college region	??	??



SLP Update to EAC

June 5-6, 2024

Venue: North Island College

Highlights from BCATTA meeting notes

Debrief on May 15 TTBC Presidents' meeting

- **Presentation of TTBC pre-2025 Budget Submission**

Going to submit a request for additional seats, additional funding per seat and additional capital  
Unlikely, there will be additional funding.

Frustration was expressed that the Ministry stopped supplying capital funds without notification.

It is next to impossible to keep up with technology advancements when we don't have the funds to stay current and train our students on current equipment

Need faculty, equipment, and space to train skilled trades workers.

The whole model is built around work-integrated learning.

Outdated equipment does not encourage retention.

- **Possible TTBC priorities for next year**

Further enhancing relationships with employers

Building additional pathways for trades graduates

Continued work on improving retention/completion rates

Continued work on Letter of Agreement (LOA) refresh

GR campaign – common key messages, data, etc. for all PSIs.

**Debrief on SkilledTradesBC LOA**

1. SkilledTradesBC wants to do a funding allocation reset  
Averages of what you have used over the past couple of years is the starting point for the upcoming year
2. PSIs want more flexibility in internal reallocations.
3. SkilledTradesBC wants faster data sharing.
4. Both want to move away from seat utilization as an accountability metric.

Tentative plan is to bring a revised LOA (with revised allocations) to BCATTA the week of September 30 for approval.

**Graduation Ceremonies for Trades Students**

All PSIs are doing different things and getting various levels of engagement.

Acknowledgment of the Red Seal might get more traction, but that's not attached to the institution but instead to SkilledTradesBC.

Possible trades marketing campaign

- New webpage
- Social media postings and maintenance
- Proposal to cost share between TTBC and BCATTA

STBC gave an update of the system numbers.

STBC provided an update on:

#### Program Standards

- Discussion of the next trades, which will go through harmonization
- RSOS = Red Seal Occupational Standard
- They are creating a Foundation Program Outline for all programs, with a Foundation program being delivered
- Updating instructor requirements on all program outlines
- Implementing online Red Seal exams – hoping for Spring 2025
- They are open to applications for STC Refresher funding requests

#### System Liaison Person

- Discussion regarding the appropriate process for addressing articulation committee concerns to SkilledTradesBC

Discussion about appropriate communication flow between groups

#### **Process flow:**

The articulation committee will bring concerns to BCATTA for discussion via the SLP. If BCATTA supports the concerns, the SLP will work with SkilledTradesBC on them.

#### Trades-UP Website

Eric Fry presented an update on TradeUpBC and encouraged everyone to check out the new site. Content has been added, and it was noted that they are looking at cross-platform linkages with TTBC. There is no reporting requirement associated with TradeUpBC, and instead, it is being seen as a free marketing campaign for those who are interested.

#### Dual Credit Working Group

Ken Armour notes the VPA's have committed to being more engaged.  
Ken has worked with PSI's VP of Finance to determine the actual direct costs of trades training. This work is ongoing.

## **BCIT – Clarence Burlock**

BCIT continues to be extremely busy. For the Term 2024 to 2025 we are delivering over 100 classes comprised of Apprenticeship, Foundation and Security Technician classes. We currently have 45 full time Instructors to deliver the training. Student load is still placing an increasing demand on lab equipment, and we are continually updating our labs to address this issue. In addition to the full-time programs BCIT also offers many Part time studies and Industry service courses including.

ACIM (Automated Controls Installation and Maintenance)

REESIM (Renewable Energy Systems Installation and Maintenance)

High Voltage

FSR Code classes

Couple of upcoming projects that we will be working on:

Adding two more remote campuses for foundation and year 1. One will be in Vancouver (Gladstone), and one will be in Surrey (Tamanawis). Vancouver MOAs are signed and ready to go for our first intake in October and Surrey MOA is in progress with the first class in February.

Creating an industrial foundation program that can ladder into a degree and the

We also will be building a 10000-sf addition to our building designated an automation lab



- 5 Foundation and 33 apprenticeship (including 1 Prison delivery) **base** Training Plan classes for Fiscal 2022-23 (increased base by 2)
- Above Base (additional intakes)
  - o 1 Foundation
  - o 4 High School Dual Credit Apprenticeship
  - o 2 sessions of TASK – Trades and Skills Knowledge (high school trades sampler)
  - o 2 sessions of WITT – Women in Trades Training
  - o 2 sessions of IPTT – Indigenous Peoples in Trades Training
  - o South Island Partnership (SIP) – 32 dedicated seats in apprenticeship and Foundation classes
- Camosun has 14 fulltime continuing Instructors and 6 term instructors
- Our department has a Chair - Carmen deGoey, and a Program leader for the Foundation Program – Justin Smith
- We have one Lab Technician, Luigi Micco who is a Red Seal Certified Electrician, builds/updates/maintains equipment and supports students and Instructors. Lui takes care of the main purchasing needs of the Department and works closely with the Chair on Budget. We also have one term Lab Technician who fills in and helps builds new lab stations etc.
- Camosun offers special projects: (SIP) South Island Partnership, (WITT) Women in Trades Training, (TASK) Trades and Skills Knowledge, ACE-It high school apprenticeship, and (IPTT) Indigenous Peoples in Trades Training.
- We deliver apprenticeship at some of the penitentiaries through (TD) Trades Development. We ran one intake in the fall and plan on delivering 2 cohorts in the next fiscal.
- Current challenges are:
  - **Student Resources** – not up to date and out of order. Adding additional costs to the students and extra work for Instructors/Department to sort through the levels for correct curriculum in the ITA Binders.
  - **Cost of living and inflation** driving food costs up is extremely difficult for apprentices
  - **Foundation seats are currently softening due to deferrals:**
    - o it's too expensive for student loans and the cost of living to be enrolled in a full-time program
    - o Commercial/Residential industry is very busy – lots of people going straight into employment instead of taking Foundation Program
  - **Apprenticeship Courses** – students deferring due to how busy Industry is – some employers asking apprentices to defer
  - **Employment Insurance Issues** – students not qualifying or not seeing funding until week 7 or 8 of the intake. Students finding out their EI claim is denied in week 7 or 8.
  - **Continued... Mental health** of students, faculty and staff. Classroom management challenges, due to mental health issues. Accessibility resource center seeing greater number of students than ever and growing

- **Extremely low success rates Standard Level Exams**
  - Low level pass rates for students scoring 70% – 75% (In School Grade)
- **Managing illness and absences** of students, Faculty and staff. Providing alternate strategies to keep the classes on schedule and supports in place for the students. Make up exams for students and Instructor coverage have been challenging.
- Camosun enrollments are back to normal and demand for apprenticeship is high in Victoria BC for Construction Electrician; **student feedback** is that the majority were more successful and prefer face to face learning.
- We officially Implemented the Cengage Customs (Mullin Textbooks, Residential, Commercial & Industrial) in every level of training to try to improve Canadian Electrical Code resources for our students. Purpose: to fill the gap of missing content in the harmonized binders and to try to better prepare students for their Standard Level Exams (SLE) and Red Seal. Most of the Instructors are using them and have been a tremendous resource based on current CSA Standards.
- Custom Cengage 2024 curriculum development has started
- Curriculum Development for Departmental exams, worksheets and workbooks has started for the 2024 CEC
- Parts of the Foundation Program is blended with remote classroom sessions (in the first 5 weeks only) however the majority is face to face delivery.
- Apprenticeship courses are all 100% face to face delivery.

Current Improvements and growth:

- Technical Safety BC & City of Victoria Inspection Branch – classroom visits with students (all levels)
- Tech Talk for all levels (including Foundation) mid June – Top 10 Non-Compliances of Electrical Services (up to 150 students) trial run
- Hydro pole/transformer and full service in shop
- Strut labs
- Thermal imaging lab/demo Federal Pioneer breakers
- PAC growth

**Thank you** to the Articulation Chair, Nathan Chapin and Co Chair Jeremiah Williamson, for your hard work and dedication, your contributions are very much appreciated.

**Thank you** to all the members of the Curriculum Sub Committee for your continued work and dedication.

**Carmen deGoey | Red Seal | FSR B | Chair**

Electrical | School of Trades & Technology

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**CAMOSUN COLLEGE | Victoria, BC | [camosun.ca](http://camosun.ca)**

## Electrical Institutional Report for Coast Mountain College

This last year has seen steady enrollment and continued growth in our Electrical Department.

We are pleased to have successfully hired a third full time Instructor to satisfy workload requirements.

Since last year, our department has run the following:

- 2 - Foundation classes
- 1 - Level 1 Apprenticeship class
- 2 - Level 2 Apprenticeship class
- 1 - Level 3 Apprenticeship class
- 1 - Level 4 Apprenticeship class

We currently have 3 full time instructors and are currently looking to fill a term posting subject to enrollment.

The economy in the north coast is still positive. Continued investments in mining and port projects are keeping housing and commercial work drivers in employment. Projects such as LNG (Kitimat) and the new Hospital (Terrace) are slowly coming to completion and having reductions in workforce. Fewer students coming out of Foundation classes are walking straight into jobs of preference immediately after class completion.

There continues to be opportunities for our apprentices to find work when willing to travel and accommodate to required locations.

Cameron Thiessen, RSE FSR B

Electrical Instructor

Coast Mountain College

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## **KPU Articulation Institutional Report 2023 (April 1, 2023 – March 31, 2024)**

We currently have 13 full-time instructors, and four part-time instructors.

We ran our standard 18 apprenticeship classes and six foundation classes (one at Howe Sound Secondary). In addition to our electrical program, we offered one second year mechatronics program.

We have started working with the EJTC to provide some courses as needed and had our first successful intake with them this spring and just received confirmation on two more intakes.

Our administration has been working diligently to further the Youth Train in Trades program offerings and has begun partnering with private schools and home school programs.

Currently we are continuing to develop labs for Nurse Call Systems, PLC's, Traffic Light Controls, and Fire Alarm as well we will be starting the process of updating all content and assessment material to be in line with the new 2024 Canadian Electrical Codebook.

Our shop renovations project has final drawings now approved which will support growth within our department and phase one of the development is set to begin in fall.

Lastly, we had two students from the Mechatronics program compete and win at Skills Canada Provincials and move on to compete at Skills Canada Nationals in Ontario.

Mike Mann

Instructor/Chair Electrical

## **NIC Institutional report – 2024**

Last year North Island College put through eleven apprenticeship and three foundations classes, with one occurring in Port Alberni. We are teaching the bulk of our course as face to face, as well as a few blended classes.

Like everyone else we struggle with outdated resources, and we are looking forward to future options.

North Island College currently has five faculty members - Dave Johns, David Apperson, Brent DiGiuseppe, Trevor Petr and we borrowed Cory Batch from the automation program this year doing a mix of apprenticeship and foundations course, we also recently hired a new technician to work on updating, designing, and maintaining our equipment.

This year we got selected to do a program review, along with our Heavy-duty mechanic counterparts. I would like to thank Jeremiah, and Nathan, as they volunteered to assist as our outside campus auditors. This is a yearlong process where a large volume of time was dedicated to reviewing all aspects of our content delivery, physical resources, digital learning resources. In addition to this we looked at ways that we could improve our programming. The process is almost complete, our report should be finalized by the end of summer.

We sent four electrical foundations students to Peru to work on a Solar installation project in the early part of 2024. We were able to tie that experience into the workplace component of our foundations course. They roughed it, living in tents, in austere conditions, the students reported back that it was amazing experience.

We also sent an instructor (Trevor) to Tanzania during the first few weeks of May, to facilitate the design of an off-grid solar PV course. This was the start of a collaborative effort with two regional schools, one near Arusha, and one on the coast in the Kilwa region. The project involved designing the course outline, developing outcomes, objectives and learning tasks. We even started diving into assessment options. It was an amazing experience to see that our African counter parts have so many similarities within there normal 3-year curriculum when compared to what we teach in our BC curriculum. This collaborative effort is now moving online to continue the development process.



That is our report, I hope everyone enjoys the few days that you have in Campbell River, glad to host, and have a great summer.



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*North Island College is honoured to acknowledge the traditional territories of the combined 35 First Nations of the Nuuchahnulth, Kwakwaka'wakw and Coast Salish traditions, on whose traditional and unceded territories the College's campuses are situated.*

## OC Institutional Report to the Electrical Articulation Committee (June 2024)

### 2023-2024 Intakes:

Electrical courses offered at OC this year were as follows:

Foundation (ELTT): 5 intakes (2 in Kelowna, 1 at each of our 3 satellite locations)

Apprenticeship: 17 classes

Level 1 Apprentice: 4 classes

Level 2 Apprentice: 5 classes (one double-intake in the winter session)

Level 3 Apprentice: 4 classes

Level 4 Apprentice: 4 classes

Pass rates of Level 4 students are high at 85%. Foundation pass rates are 100%. While slightly improved from last year, SLE success continues to be significantly lower than hoped and does not appear to reflect institutional scoring.

### Staffing:

At the beginning of the year, we were 4 full-time and 3 non-regular (term) instructors, with one more FTE on extended leave. As of January, we had regularized 1 term appointment at 100% and had brought on an additional non-regular instructor. Current staffing stands at 5 FTEs and 2 term appointments with nobody on extended leave.

Teambuilding continues to be a focus of our group. With the downsizing of our staff over the past two years, general maintenance of the program and associated documents has been difficult to keep up with. Two more double intakes of Level 2 are currently scheduled, and waitlists are full for ELTT and Apprenticeship into Spring of 2025. At this time, we have no posting for employees; however, we will very likely be looking to conduct interviews for additional non-regular instructors in the fall.

Outside the Electrical department, however, there have been a great number of changes which have impacted our department both directly and indirectly.

We have not had a full-time Tool Room Attendant for the better part of this last year. This has caused additional work on instructors to manage the maintenance of equipment and materials, as well as training fill-in Attendants, when they were available. Instructional staff has little to no input on the selection and appointment of Tool Room Attendants. In May it was announced that we have hired an Attendant at 100%; this support will greatly help the department and we look forward to a return to full support staffing in the coming year.

In August, the Chair of our Construction Trades Department retired, and a new Chair from OC's Carpentry department was elected. We have already built a strong working

relationship with the new Chair; despite unfamiliarity with our program, he is willing to listen to our suggestions and our department feels well-supported once again in this regard.

In the Spring, our Associate Dean of Trades left OC and the new appointment was an in-house instructor from OC's Collision Repair department. It has been nice to have someone in this position with recent Instructional experience.

The Dean of Trades at OC, Steven Speers has taken a leave. We welcome the Associate Dean who is currently acting as Interim Dean of Trades and another trades instructor from our Mechanical Building Trades department has stepped in to act as Interim Associate Dean. Once again, we are fortunate to have people in these administrative roles who can relate to and empathize with an instructional perspective.

On the Horizon:

*Housing:* Overall cost of living continues to be a barrier to attendance in the region; in particular, the relatively short-term duration of 10-week requirements makes it difficult for students outside the immediate locality to attend. This is further exacerbated by significant delays in EI funding for Apprenticeship students. Campus housing at KLO's Main Campus is very near to completion and will hopefully provide an affordable option for some Trades students by Fall 2024.

*Quigley:* For over a decade there has been an Introductory Electrical Program in Kelowna offered by BCIT in conjunction with the School District through one of the local high schools. In the fall, we were made aware that OC has absorbed this program. Currently, the original program remains intact and, even though the program offers Level 1 certification and instructs content from Level 2, it is not directly connected to the Construction Trades Portfolio. There is one full-time instructor in that program; we are hopeful that this merger will continue to support apprenticeship training in the Okanagan.

*IP Refresher:* There is currently a pilot project in development through OC's Continuing Studies department that will support students in an Electrical IP refresher. It is the hope of our Administration that this will be an online course, which is largely self-directed. No regular full-time instructors are currently involved directly with this project, but we have offered suggestions on texts and additional materials not currently being utilized in our Foundation or Apprenticeship programs. Ultimately, it is the position of our department that a program such as this would be most successful if it offered a fresh look at the content, rather than simply being a duplication of materials already seen by our students.

*Bookstore:* We have initiated some discussion with OC's Bookstore and Print Services Department on the topic of printing workbooks for sale to Electrical Students. It is our hope that Lab and Code workbooks can be sold to students as Course Packs and that some revenue from this could be returned to our department to support the maintenance and development of these same materials.

## Selkirk College

### Workload-

We employ 3 full time regularized instructors.

We teach 6 apprenticeship courses and 2 foundation courses annually.

We also had a YETS program run this year.

### Issues-

- Having the Voice Data Video section in level 1 goes beyond the scope of what a 1<sup>st</sup> year apprentice should be learning in class. They just don't have the required experience to fully comprehend the concepts and we find this is an area our students struggle with the most in level 1, in our opinion, it should go back into level 4.
- The lighting modules in level 1 (and 2) is still outdated, there is a small portion dedicated to LED lights and that is what is being installed in the field. More content on LED lights and low-voltage lighting systems in these sections is recommended.
- Students writing the 3<sup>rd</sup> year SLE are failing the exam when there is no apparent reason for it as their grades in school reflect their understanding for electrical theories and concepts. We believe there should be a thorough review of these exams.
- Invigilators for SLE and IP exams do not let students use the restroom after the 1<sup>st</sup> student finishes writing. This goes against a basic human right and needs to be addressed... especially if the 1<sup>st</sup> student finishes after an hour. Reviewing and changing current policies is recommended.
- Pass rates on the IP are still quite low. The disconnect between the exam and the program outline hasn't yet been fully identified within Skilled Trades BC and are reflected on the IP results.
- Outdated modules continue to be an issue for both students and instructors. Topics have been moved around and access to these modules is difficult.
- Students who have taken previous training in another province have (substantial) learning gaps. For example, a student taking level 2 in Alberta and level 3 in BC, would be missing transformers, electronics, lighting, etc. This issue is not currently addressed by STBC.

### Positives-

- Silver King campus student housing is complete and occupied by students
- Our regional STBC rep (Marlin Ratch) has been making regular in-person visits to our campus

**TRU Institutional Report, June 5, 2024**  
**Electrical Articulation**

1. TRU has **10 FT faculty** and **one Sessional Instructor** (Kamloops and WL)
  
2. Classes:
  - Foundation – **4** (increase of 1)
  - Level 1 – **5** (increase of 1)
  - Level 2 – **6** (same)
  - Level 3 – **5** (decrease of 1)
  - Level 4 – **5** (increase of 1)
  - Industrial Level 4 – **1** (same)  
(Roughly 450 students in total)
  
3. Sampler Programs
  - Norkam HS Construction Sampler (5 weeks) – **2**
  - Norkam HS Industrial Sampler (5 weeks) – **1**
  - WITT (1-2 weeks) – **2**
  - GETT and Try a Trade Days – **1 each**
  
4. Other courses taught by electrical faculty
  - Gas 2 – Roughly one week of electrical (mostly code)
  - Power Engineering – 2 weeks of Electrical theory
  - Water Treatment Program – 3 courses per year for levels 1&2 WTTTP (8wks)
  - Electrical for Refrigeration - none this year
  
5. Other
  - Mexico Field school – 2 faculty members and 6-12 students
  - Youth SHAD Summer camp, Tech Day, one day, RE focused
  - Building Maintenance Worker, remote delivery, elec components
  - BC Hydro/City of Kamloops Grant Project, High Performance Building
  - Campus Solarization Project (500MW in 2024, faculty led)

## UFV Institutional Report – 2024 EIAC

This past year the electrical department at UFV ran 11 apprenticeship classes. We also completed three foundations programs, including our regular partnership with UFV and the local school districts of Abbotsford, Chilliwack and Mission, (CTC/ACEIT). Some additional CE (continuing studies) courses were taught as well by some faculty, specifically offering online code update/renewal courses and FSR code classes, IP refresher courses, as well as courses at Ford Mountain.

Teaching spaces have continued to be an issue, as we do not have enough classrooms in our trades building in Chilliwack for all the courses we run. For apprenticeship, we are using classrooms off the Chilliwack trades campus and bringing students in for labs as needed. We have also put dedicated efforts into realigning our teaching schedules for apprenticeship and foundations classes to provide less overlap for Faculty workload. This last year additional motor control panels and components were re-introduced into the first-year workspace to meet STBC practical assessment requirements. Also of note was our foundations training program received a donation of 20 BC Hydro smart meters. The electrical smart meters have been reprogrammed to display electrical values under load for UFV here, but they're not connected to the radio network, so we don't have anyone monitoring them. The meters are used in our shops mock service's that are wired by each student and used to power their shop cubicles throughout their course time... (Big brother is watching!!).

Student success in classes and on the IP is still lower than peak years previous but continuing to rebound. In our observation, many students have also front-loaded their classroom hours too extensively during the covid period and now struggle to understand due to inadequate breadth of experience in the field and as well the classroom environment. SLE marks have varied across classes with no rhyme or reason and continue to be an unpopular part of the training model with most faculty and students. Some Faculty are allowing all students to write regardless of their class marks. i.e.... if it gives them hope or a chance at passing, they are allowed to write, no different as a final exam scenario.

UFV administrations are still struggling with inconsistent and inaccurate apprenticeship numbers when it comes to "student wait lists" for all levels of training. Our wait list numbers are not accurate and have not been for 20 years. Often when we start contacting students to fill classes, many have already completed or are currently enrolled in a class at other institutions, so find ourselves calling 40-60 people down the lists to fill a class.

The department currently consists of 5 permanent faculty members (*Myles Andrew, Cary Britton, Joel Feenstra, Brock Hartman, and Daniel Smythe*) and a continual 100% full time sessional instructor for the past 5 years (*Mike Dieleman*). External trade involvement for our faculty has consisted of Skills Canada Provincial setup/teardown, administrative, judging, and coaching by our faculty along with support of other faculty in neighbouring institutions (thank you Nathan C for our support and help!!). Daniel Smythe has also continued serving on the Board of Directors for Technical Safety BC.

Myles Andrew just finished his sabbatical release in October of 2023 and back into his role instructing. Daniel Smythe has been on a sabbatical since September of 2023 which will end this September 2024, at which point Joel Feenstra will be taking his sabbatical option.

Respectfully submitted,

Electrical Department (UFV)

# Vancouver Island University Institutional Report for 2023-2024

## Overview

The 2023-2024 training year at Vancouver Island University (VIU) continues to build on our strong foundation in apprenticeship and foundational training programs. This year, we are pleased to report the offering of 12 apprenticeship intakes and 3 foundation intakes, slightly increasing the level of course availability from the previous year. Our commitment to providing high-quality training remains steadfast, even as we adapt to new trends and demands in the industry.

## Training Program Highlights

### Apprenticeship Intakes

We offered 12 apprenticeship intakes for the 2023-2024 year. The demand for training remains high, and we continue to maintain waitlists for each level. Apprentices are increasingly opting to work longer before attending training, reflecting an uptick in projects across the Island.

### Foundation Intakes

Our foundation programs will include 3 intakes, mirroring the 2022-2023 schedule. These classes follow a traditional schedule with classroom instruction in the mornings and practical labs in the afternoons.

### Classroom and Lab Space

Classroom and lab space remains limited, which constrains our ability to expand the number of intakes.

Discussions are ongoing regarding the development of a new trades building dedicated to electrical classes, which would provide additional covered space for our foundations and commercial work.

## Instructional Methods

### Hybrid Learning Model

Apprenticeship classes continue to employ computer-based elements for assignments and exams this is then combined with the primary in-person lectures and face to face and supplemented with virtual instruction.

Classes meet in-person for four days a week, focusing on both classroom and practical lab work. The fifth day is dedicated to assignments and interactive online exercises with Digital Integration.



Our experience with online learning has significantly enhanced our ability to administer quizzes, worksheets, assignments and exams (done under supervision) digitally, reducing our reliance on paper-based testing.

Despite the digital shift, Level 4 students still undertake at least four sit-down invigilated exams to prepare adequately for the Interprovincial Exam (IPE).

## **Program Innovations and Partnerships**

### **Harmonized Classes**

We continue to offer harmonized classes across different levels: three foundation classes, two Level 1 class, four Level 2 classes, three Level 3 classes, and three Level 4 classes.

### **Partnerships and Additional Training**

We aim to re-establish our partnership with the National Electrical Trade Council (NETCO) for the Electric Vehicle Supply Equipment (EVSE) installation program.

Plans are in place to introduce additional Programmable Logic Controller (PLC) training for Red Seal Electricians, responding to industry demand and technological advancements.

### **Industry Engagement**

VIU remains committed to fostering long-term partnerships with industry stakeholders.

We continue to offer substantial bursaries, amounting to several million dollars annually, to support our students financially.

## **Challenges and Future Plans**

### **Instructor Recruitment**

As with previous years, we have found a couple of instructors that are engaged in shorter contracts as relief instructors and are actively seeking qualified individuals to fill these roles as needed.

Some of our courses are scheduled back-to-back to maximize resource utilization and meet demand.

### **Facilities Development**

Our vision for a new electrical building is progressing, albeit on a 7-year timeline. This facility will be pivotal in expanding our capacity and enhancing the learning environment for our students.

### **Program Adaptation**

The harmonization of the fourth-year construction electrician curriculum remains a challenge, as we await the final harmonized STBC binders and the potential BCIT binders.

We continue to adapt our programs to align with STBC changes and ensure our curriculum meets current standards and industry needs.

### Conclusion

The 2023-2024 training year at VIU is set to be another productive and transformative period. We remain dedicated to offering top-tier education and training for our apprentices and foundational students, while continuously improving our programs and facilities. Our ongoing partnerships with industry and our strategic plans for future expansion underscore our commitment to excellence in trades education.