

AST ARTICULATION MEETING 2023

Location: Hybrid: SE02-213 Town Square C / Via Zoom

Date: Tuesday, June 13, 2023

Time: 8:30am – 3:00pm

Facilitator: BCIT Burnaby Campus

Agenda Items

1. Introductions/Welcome from Dale Baumel (Chair)

Round table introductions. Refer to the sign-in sheet for attendance and Zoom participants.

Institutional Greeting – Mubasher Faruki. Land acknowledgment. Welcome to BCIT Burnaby Campus. Institute overview of Burnaby campus. Housekeeping and safety items.

New members/regrets.

2. Approval of Agenda and Any Additional Items

Motion to approve agenda and second. Approved by Patrick Jones and seconded by Mike Howells.

3. Approval of Previous Minutes of the Articulation Committee meeting of June 9th-10th, 2022 at College of the Rockies.

Motion to approve previous minutes and second. Approved by Alex Romashenko. Mike Howells seconded.

4. Business Arising from Previous Minutes

- Decide on a standardized passing grade to be eligible to write SLE.
- ITA to provide stats on the trend of people entering the AST program pre and post harmonization.
- ITA offered to do a webinar on how they construct exams.

5. SLP report Mubasher Faruki

- **Change of name:** CofQ (Certificate of Qualifications) to SLE (Standardized Level Exam). From communications with SkilledTradesBC, the understanding is that it is equivalent, and currently, the only change is the name. The weighing is 20% as discussed in the previous meeting.

- **EV emerging technology** – Red seal certification for all trades. Upscaling and rescaling of existing red seal technicians to ensure that we are up to speed with new technologies. These changes are reflected in the curriculum and at this point is up to each college to manage it as they see fit. Fuel source exploration and other types of emissions. The institutes across the province are aiming to tap into funding from the provincial and federal government, which is being focused on clean transportation. EVs fit this umbrella, ADAS, autonomous driving and the question of fuel cells as a clean source. The general aim is to keep our current and new students up to speed with information around clean transportation and zero-emission vehicles.
- **Funding:** In regards to applying for funding, at BCIT there is a department whose expertise is to source and liaise with the different institutions and apply for funding. One particular case was applying for funding with C2R2. This is one of the benefits that you can obtain by being a member of the C2R2 (Canadian Colleges for a Resilient Recovery) <https://resilientcolleges.ca/>. The EV application was straightforward, and the outcome was that we were able to offer the EV course for free.
- **Stay connected:** Mubasher has suggested that the group stays connected via email for future funding program information. Dale has agreed to funnel any information coming from Mubasher (et al) to all members.
- **Skilled trades certification (STC):** The estimated time of rollout is 2024. Roll out mandatory implementation dates on AST – Skill certification for next year. Apprenticeship training and red seal SkilledTradesBC has been partially funding the programs.
- **Apprentice registration system:** At an administration level, there are conversations across Canada, and they are working on a more cohesive and standardized way of dealing with the waitlist which is becoming frustrating for the apprentices.
- **Microcredentials** are becoming fundamental for our training. Funding is available. It's a way of keeping up with new technologies. It is encouraged that this topic is further explored.
- **EV training certification:** A number of third-party institutions were approached to certify the EV Program. It was CSA who provided a group that will be certifying anyone that is doing EV training and BCIT is being used as a model as a test pilot. CSA potentially will be the leading entity that can certify the EV training moving forward. Exams will be part of the certification process. They are very familiar with our procedures and knowledgeable about the teaching methods and processes that we use.

6. Changes to the Federal RSOS Document, Russ Hunter

- **Discussion on Changes:** Russ has delivered two documents, and shared a presentation.
- **RSOS Workshop update. Sep 19 – Oct 7, 2022. Zoom.** Ontario is the host province at the RSOS. 1. Revision of the 2016 RSOS: (two days of revisions) website. 2.

Addressed provinces “Red Flags”: the committee will address each red flag. 3. Harmonization.

- Red Seal Occupational Standard – AST. Certification for all provinces. Changes as follow:
 - A.1-03: Implements specific safety protocols for hybrid and electric vehicles. Current: The task already exists in the current Provincial Outline. Line M: D&R hybrid and EV. Identify high-voltage components. Describe hybrid and EV.
 - A.2-04: Uses electronic service tools and systems for diagnostics and programming. Line G in the current provincial outline.
 - A.2-05: Uses documentation and technical information.
 - C.11-03: Repairs system circuitry and components.
 - D.12-05/D.13-05: D&R Transfer cases. BC Provincial Flag: Line H Provincial outline: Diagnoses and repair mechanical transfer cases in HL3. Describe mechanical transfer cases. Line H Diagnoses and repair mechanical transfer cases only. Moved out of L3 and back to L4.
 - E.14-01/E.14-02: Diagnose basic wiring and electrical systems.
 - E.17-07/15-07 D&R ADAS System Components: Added to “Instrumentation and Displays” Rear back up camera* Front parking (grill) Side cameras (surround view). Current: I5 Diagnose and repair instrumentation, entertainment systems and displays.
 - F.18-04/19.04 ADAS Steering Suspension and Braking: Forward facing windshield camera. Front radar, front lidar, BS radar. Side rear-facing cameras Ultrasonic parking sensors. Systems overview: Adaptive cruise control, forward collision warning. Automatic Emergency Braking. Lane Departure, blind spot detection. Rear cross traffic. (L3) Sensor Operation, Inspections, Sensor Calibration: aiming, static, dynamic. (L4).
 - H.22-03/H.23-02: D&S High Voltage Batteries: Diagnose HV battery codes. Individual Battery modules. Service: Remanufactured batteries. Remove and install battery modules.
 - H.22-04/H.23-04 D&R Hybrid and EV HVAC: Heating and cooling systems Air flow management. Heat pump systems.
- RSOS Website: <https://www.red-seal.ca/eng/w.2lc.4m.2.shtml>
- Skilled trades certification Red seal:
 - https://www.red-seal.ca/_conf/assets/custom/docms/ast_rsos2016_eng.pdf
- Self-assessment before review in level 4: The online assessment was run through and completed by all members. Discussion on the number of questions on the exams and the understanding of each topic.
 - <https://www.red-seal.ca/eng/resources/selfexamlist.shtml>

- **Timeline for Roll-out: Estimated 6 months. Limited amount of teaching resources to incorporate ADAS. To be discussed with SkilledTradesBC. Date of the meeting and potential roll-out.**

7. CDX Presentation, Dirk Meyer

- **Changes in switching programs. Upgraded the main book: Fundamental of Automotive Technology. New 3D animations. Hardcopy and online products. \$150.00 2 weeks to ship. The online version is more popular with students.**
- **Light Duty Hybrid and EV. Hardcopy and online version. 10 chapters. Instructor resources are included.**
- **Resources of new links will be rolled out for December 2023. Old links on LMS won't work after that date. New instructor site: abc.cdlearning.ca. CDX will assist with the transition.**
- **A discussion of licensing was addressed as there are two pay models. Institute paid and Student paid. The cost of the institution cost is being discussed. The instructors are able to add the links to their content, but when the students click on the links, they will need to access the site with their credentials.**
- **CDX resources: website, blog, AT series animations (additional EV animations coming soon), task sheets and support. An email will be sent to the members with all of this information.**
- **Master CDX site: demo/preview site with all resources.**
- **Customized textbook and/or digital possibility has been discussed, especially for level 4.**

***** Break for lunch 12:00 pm *****

8. Consulab, Dave Gratton

Introduction of Consulab: 50+ years in the industry. Launching of new colours, products and website. Presentation of the new website.

- **New Products. Hybrid:**
 - **Connector trainer**
 - **ADAS with sensors.**
 - **EV Tesla Model 3 trainer and simulator, the delivery of the product is 2-3 months. The cost of this product could be lowered by providing a Tesla Model 3 for Consulab to customize it as a training tool.**
 - **Electromagnetism trainer.**

Consulab has partnered with CAMPE <https://www.campe.ca/>

Skills Canada Nationals in Quebec City. An event of great magnitude is being proposed, including a tour of Consulab facilities. Dates to be announced.

9. Student Engagement and Mental Health, John White

- **Group Discussion:**

Open discussion regarding new students with noticeable mental distress. Student services are being offered mental awareness and aids in various institutes and different capacities.

An observation was made that is more commonly seen in high schools that the expectations are very low regarding responsibilities.

Social and early educations seem to be connected to these factors. Absenteeism, mental distress, anxiety. It is challenging to manage consequences without being apathetic to their mental state.

Discussion on how the COVID-19 Pandemic affected that generation.

The group has shared best practices regarding this topic:

- A program that promotes excitement for the trade and provides support to their needs. They have softened some lines of their guidelines.
- A program in which the instructors can recommend a student to reach out and receive assistance and support. Mental health academics is being recognized and tried to deal with at an institutional level.
- An approach of reinforcing accountability.
- An approach where the student has the right to fail. There are resources which can assist students. A lot of them recognize that are not ready to work in the industry but they are encouraged to complete their program, as they could become ready in the near future.
- Include a questionnaire at the beginning of the program asking key questions that will allow the student to share some history or potential obstacles in completing the program, i.e.: IEP, financial concerns, etc.
- Including this topic in the orientation might help with the transition from high school, and help them understand the expectations of the program.

The group has also shared their concerns:

- Softening the standards puts them in a delicate situation with the industry and their employers.

Other highlights:

- The instructor role is being broadened to mentors, instructors, guides, etc. It's important for the role to be redefined.
- Mental health has become one of the priority topics, globally. Institutes are mandated to accommodate any student providing accessibility to the program as much as their budget can allow it.

John White has thanked the members for sharing their points of view and any resources regarding this topic are appreciated.

Open discussion:

Dale has suggested that moving forward the next meetings should include a group social activity. The members agreed.

Meeting adjourned at 2:07 pm

Action Items

Include “best practices” in the agenda for future meetings.

Owner(s)

Articulation group

Deadline

Location: Hybrid: SE02-213 Town Square C/Zoom
Date: Wednesday, June 14, 2023
Time: 8:30am – 3:00pm
Facilitator: BCIT Burnaby Campus

10. SkilledTradesBC, Kathryn Rockwell (on behalf of Thomas Brisco) and Jason Leber (Manager of Assessments)



AST - Report to
Articulation Committee

- **Introductions.** Kathryn is presenting on behalf of Thomas Rizco, the current program development officer for AST.
- **Re-launching of SkilledTradesBC website:** <https://skilledtradesbc.ca/>
- **STC (Skilled Trades Certification) from the SkilledTradesBC website:** Trade workers working in the electrical, mechanical and automotive STC trades need to either be a registered apprentice or a certified journeyperson. There are two phases to standardize this certification: (1) Phase I includes 7 trades: Electrical trades: Construction Electrician, Industrial Electrician and Powerline Technician. And Mechanical trades: Refrigeration, AC Mechanic, Gasfitter A & B, Steamfitter/Pipefitter, and Sheet Metal Worker. (2) AST is part of Phase II, which includes Heavy Duty Equipment Technician, Automotive Service Technician and Auto Body and Collision Technician. More details on the website: <https://skilledtradesbc.ca/skilledtradescertification>
- **Implementation of STC:** For the first seven trades the implementation process started on Dec. 1st, 2022. Each trade has a one-year transition period, allowing the workers to get certification through level challenger and trade qualifier pathway or register as an apprentice. Businesses should register apprentices and make any adjustments as needed.

For the first seven trades, the process started on Dec. 1st, 2022. when they officially became active under the one year of Education and Awareness. They had one year, until Dec. 1st, 2023 to get informed, get their trade workers registered as apprentices or trade skills challenges completed, etc. The AST trade will be transitioned to Skilled Trades Certification (STC) after the first phase of trades and more information regarding timelines will be available once the first phase has been implemented. They are working with the government to expand the skilled trades population in the industry.

- **Red Seal refresher courses:** There was a call to post-secondaries to propose refresher courses for different trades. The proposals go onto BC bid. Some refresher courses for other trades have already been offered. The proposal includes the pitch for the industry, and what suits the needs. There is no stipulation from SkilledTradesBC on the refresher courses.

At the moment, it is not clear what the funding framework will look like, but it is the understanding that there will be some funding provided.

- **Sense of demand:** A concern was shared on the demand for technical training. This is a concern among the training providers, but there is an estimation that there will be interest in taking the technical training certification.
- **Transition to Harmonized (2017) Program.** SkilledTradesBC has requested that if the group comes across an individual that completed their training in the Current Program, and missed out of gap training, , ask them to contact their AA (Apprentice Advisor) to work with them.
- **AST Apprenticeship numbers report.** Reported equals that the individuals have been active in the last 18 months. SkilledTradesBC does not deregister people unless they or their employer deregister themselves. Level 4 (4TT) is considerably low, as is not uncommon for an apprentice to finish Level 4, and pass the IP, but not yet complete the mandatory hours.
- **AST Exams weighting chart:** The exam weighting chart is now called an Exam Breakdown. The difference includes: (1) it provides exam breakdown by competency and general area of competency. (2) shows the number of questions instead of the percentage per section.

A request from the group has been placed regarding a breakdown of the exam grades by competency, as well. SkilledTradesBC will look into this, as this is not offered at this time.

- **SLE exam discussion:** Currently, the Foundation program does not need to write the SLE exam to complete level 1. The foundation program provides credit for level 1, so they don't need to write the SLE exam. In comparison to a block release model, like AST, to complete level 1, they will need to write the SLE exam.

The foundation program, in the old model, did not require a CofQ, which is the same across the foundation programs in all of the other trades, although it would need to be achieved before proceeding to Level 2

Jason explained that from his understanding when you write a CofQ exam at the end of that you will obtain a qualification status which is also an exit point as a level 1 with a CofQ. That was under the progressive model. Now, we are under the SLE model, which is a blended model. There are no CofQ attached to this, instead, there are a number of hours, plus the technical training, plus the exam, which becomes the requirements for completion. The foundation is a comprehensive and fulsome program that without the work experience, the decision was made that there was no need for a SLE exam. Kathryn added the decision of taking the SLE exam was made for the apprenticeship program. The decision not to have an exam for

Foundation was made before the blended program, and this is standard across the trades.

- **High School programs** are being discussed as a wide variety of models are being released each year. Jason clarified that no Foundation program is considered an apprenticeship. It depends on the high school program, as some of the programs are block-release models and the release times vary as well.
- **Feedback requested:** Dale has opened the floor to members requesting feedback regarding the decision of the Foundation program to be exempt from writing the SLE exam. It was agreed that this should be kept as is, as it is standard across the board. All agree. It was also requested that the communication on the requirements for Foundation are clear and prompt, so that the students are well informed. Internally, the Foundation programs may contain exams, final exams and other tools of assessment to ensure that the content is being absorbed by the students. The program outline contains assessment guidelines with the framework of the weighting aligned with the percentage of theory and practical. The suggestion is to use the guidelines to know where the weighting should be in comparison to an apprenticeship level 1.
- **SLE exam discussion:** SLE exam is 20% worth. The SLE as a tool, is valuable information for the instructors and is a way for SkilledTradesBC to identify issues and work with the training provider, or the articulation committee to find solutions. . It is encouraged that the students take the SLE with an attitude of recognizing their opportunities for improvement and not being seen as an obstruction to go into the next level. Because the SLEs use the Red Seal exam development framework, the SLEs are also a chance for the students to practice writing exams that are similar to and under conditions similar to the IP. The student mark is a blended mark and it will need to include the exam mark as well.
- **Exam Statistics Interpretation:** Kathryn has shared the numbers for each level. The passing statistics show a consistent standard practice across the territories. There is a note for March 2020 to December 2022, as waivers were in place due to COVID-19 pandemic. This resulted in a low number of writes which were not considered accurate for measuring statistical significance and therefore not included.

The IPSE results are discussed and BC's results are considerably better in comparison to the national pass rate.

- **Changes to the RSOS:** A copy of the RSOS (Red Seal Occupational Standard) has been drafted in English. A timeline has been set up. The next review stage will be the Program Outline. Thomas will be working on setting up the Program Outline Workshop in Richmond. The duration of the workshop will be one week. There will be limited spots. The schools can send more than one person, but SkilledTradesBC has a budget for only 3-4 participants, and the schools will need to cover the costs for the extra participants. Thomas will work with Mubasher, the System Liaison Person, who will work with the Deans to identify participants. Thomas will then send an invitation suggesting some dates, between July and October, with the exception of August.

- **Introduction and background:** Jason Leber, Manager of Assessments, SkilledTradesBC. Former BCIT instructor.
- **Changes in the Level Exam Certification Process:** Process of a person working on a trade and entering into a skilled trades certified worker. Currently, anyone can write the exam certification. There is no pre-qualification, however, after writing the exams, this is of no use if they are not registered as an apprentice. The employer will need to sign them up as their apprentice sponsor. The credit will then be added to their technical training. This process exists but it is uncommonly used.

Under Skilled Trades Certification, the process is: If are already working on the trade and you are an apprentice, you have a sponsor and you want to challenge level 1, then you need your sponsor to write a letter, on company letter letterhead, and sign it supporting the apprentice to write the exam. The person who signs the form has to be in SkilledTradesBC database, and the name will need to match the information in the system.

Skilled Trades Certification, the process is slightly different: The requirements to be an apprentice or have a certification. People that are working in the trade have the experience but are not ready to write the Red Seal. That's where the "Challenge a level" program comes into place. Is not built for apprentices to jump and skip levels. They are finding a place to come into the system, but are not current apprentices.

High level, challenging the red seal certification, as a trade qualifier, SkilledTradeBC receives roughly 3,000 people annually across all trades. Most of them have 9,000+ hours of working experience.

Currently, there are only level challengers self-assessments for the seven first trades. Refer to: <https://skilledtradesbc.ca/level-challengers>

Before applying for the exam, they have to perform a self-assessment. <https://skilledtradesbc.ca/get-certified-skilled-trades-certification/self-assessment-forms>. The self-assessment does not track the individual. In order to be successful in challenging the exam, to be approved the score will need to be 65% or more. On the form, there are two important sections: if the person is not an apprentice, there will be a journey person who signs the form as a witness of them working in the trade and they have 1,800 hours working in the trade. If they are a current apprentice, this section should be completed by the sponsor, who signs that they have reviewed the self-assessment with the apprentice. There is no letter during this process, in this case, is the self-assessment and the form.

When writing the exam, if they don't pass, they will have to talk to the AA (Apprenticeship Advisor).

Currently, they have rolled out electrical and mechanical trades for phase 1. Phase 2 will include automotive and it is planned to be released in the Fall, of 2023.

International applications for challenging certification (Red-Seal) will be assessed with a different process. External verifiers are being consulted for the process of verifying the experience working hours. When this is approved and verified they can

challenge the exam. A technical interview with the applicant may take place if this is needed to verify knowledge.

De-activated program certifications may count towards the qualifier process.

11. Open discussion on any topic

- **AST Training Topics and Suggested Time Allocation:** It has been suggested to focus on the weight of Level 4. A discussion around line items and allocation of hours.

A proposal to move Networking to Level 4. The program is now harmonized and only minor changes are allowed. Networking is currently 10% in level 3. Level 4 in ADAS might only take a couple of extra hours. A suggestion is that different stations in the shops can be set up to accommodate networking and some ADAS to be taught simultaneously.

A reminder was mentioned that the large ADAS component is already federally set for level 3. And the instrumentation portion has been set up for level 4, as it does not require calibration, so there is no need for equipment.

A suggestion to remove some time from Automatic Transmission to accommodate Networking.

Different practices have been shared regarding how time is allocated.

The RSOS does not determine the allocation of time per level. That is up to the jurisdiction per province. The RSOS dictates what is taught on each level. To remain harmonized, it is recommended to avoid moving items from level to level.

Best practices are being shared regarding teaching manual transmissions and transaxles separately.

In level 2, there is a suggestion to reduce hours for H2 manual transmission and transaxles. It was also suggested to change “Diagnose” to “Describe”. Another option is to keep “Describe” and “Diagnose”.

Level 4 will need to be recalculated as EV will need more time. Line H3 Disassemble, inspect and re-assemble automatic transmission and transaxles, could be an option to reduce time.

- **EV Curriculum:** Regarding changes on level 4 for EV training. There will be time allocated to EV that will be added. The time, most likely, will be taken from Line H Automatic Transmissions and transaxles. If Networking ends up moving, that 10% will be cut out of Line H. In agreement as the other lines cannot be moved. Realistically, the only Line that would have any potential reduction would be Line H. Also rewording Line H3-03: Changing “Disassemble, inspect and re-assemble automatic transmissions and transaxles” to “Inspect and test”. This will allow to release some time.

12. 2024 Articulation Location for next meeting

Patrick Jones has proposed a venue, in Victoria. The proposed dates are the first or second week of June 2024 at Camosun College. All agreed.

Open floor:

- It was suggested that an organized group activity would be a good addition to the articulation meeting.
- Russ has mentioned that best practices and student issues and challenges should be standard items on the agenda moving forward. All agree.
- The group has recognized and thanked Dale for chairing and Eugene Eng for organizing.

Motion to adjourn the meeting, Alex approved and Eddie seconded. The meeting adjourned at 12:10 pm

Attendees June 13th:

Mubasher Faruki BCIT

Eugene Eng BCIT

Mike Howels BCIT

Russ Hunter BCIT

Ken Powell CNC

Patrick Jones CMTN

John White COTR

Eddie Kristensen NLC

Andrew Rose OC

Dirk Meyer CDX

Dave Gratton Consulab

Greg Wedel UFV

Alex Romashenko VCC

Ryan Lee VCC

Mike Coard VCC

Cateno Vasallo VCC

Gary Mui VCC

Dale Baumer VIU

Dean Cadieux VIU

Ron Depape VIU

Attendees June 14th:

Kathryn Rockwell ITA

Jason Leber ITA

Mike Howels BCIT

Russ Hunter BCIT

Ken Powell CNC

Patrick Jones CMTN

John White COTR

Eddie Kristensen NLC

Andrew Rose OC

Greg Wedel UFV

Alex Romashenko VCC

Ryan Lee VCC

Mike Coard VCC

Cateno Vasallo VCC

Gary Mui VCC

Dale Baumer VIU

Dean Cadieux VIU

Ron Depape VIU