

# Automotive Service Technician

## Transition Plan

## Table of Contents

Abbreviations .....	3
Harmonization Overview .....	4
Transition Planning Process .....	5
Training Providers .....	6
Transition Plan .....	7
Pathways for Current Apprentices.....	8
Work-Based Training Hours (WBT) .....	9
Exams .....	10
Appendix A: Training Provider Schedules .....	11
Appendix B: Details of Gaps.....	15
Appendix C: Transition Map.....	18

## Abbreviations

<b>AST</b>	Automotive Service Technician
<b>CCDA</b>	Canadian Council of Directors of Apprenticeship
<b>CL</b>	Current level (2015)
<b>ER</b>	Employer sponsor
<b>FDN</b>	Foundation program
<b>HL</b>	Harmonized level (Sept 2017)
<b>NOA</b>	Red Seal National Occupational Analysis
<b>RSOS</b>	Red Seal Occupational Standard; replaces NOA
<b>SLE</b>	Standardized Level Exam
<b>TP</b>	Training provider
<b>TT</b>	Technical training
<b>TW</b>	Trade worker
<b>WBT</b>	Work-based training

## Harmonization Overview

The Canadian Council of Directors of Apprenticeship (CCDA) is responsible for the Red Seal Program, which develops common interprovincial standards and examinations. The CCDA is undertaking the Harmonization Initiative in 30 Red Seal trades by 2020. British Columbia is an active participant in this initiative.

The goal is to substantively align apprenticeship systems across Canada by making apprenticeship training requirements more consistent in the Red Seal trades.

### Harmonization Priorities

1. Use of Red Seal trade name
2. Consistent total training hours (in-school and on-the-job)
3. Same number of training levels
4. Consistent sequencing of training content, including use of most recent Red Seal Occupational Standard (RSOS).

### HARMONIZATION: What's changing for

AST	Changing in BC?	What will it be?
<b>TRADE NAME</b>	<b>YES</b>	<b>Automotive Service Technician*</b>
<b>NUMBER OF TRAINING LEVELS</b>	<b>NO</b>	<b>4</b>
<b>TOTAL HOURS</b> Technical + work-based training	<b>YES</b>	<b>7200 hours</b> Increased by 420
<b>TRAINING SEQUENCE</b> order of subjects taught	<b>YES</b>	<b>Some changes to sequence</b>

\* BC will maintain the progressive credential model (i.e. a Certificate of Qualification at each of the 4 levels), but the final certificate will be called Automotive Service Technician, not Automotive Service Technician (AST 4).

## Transition Planning Process

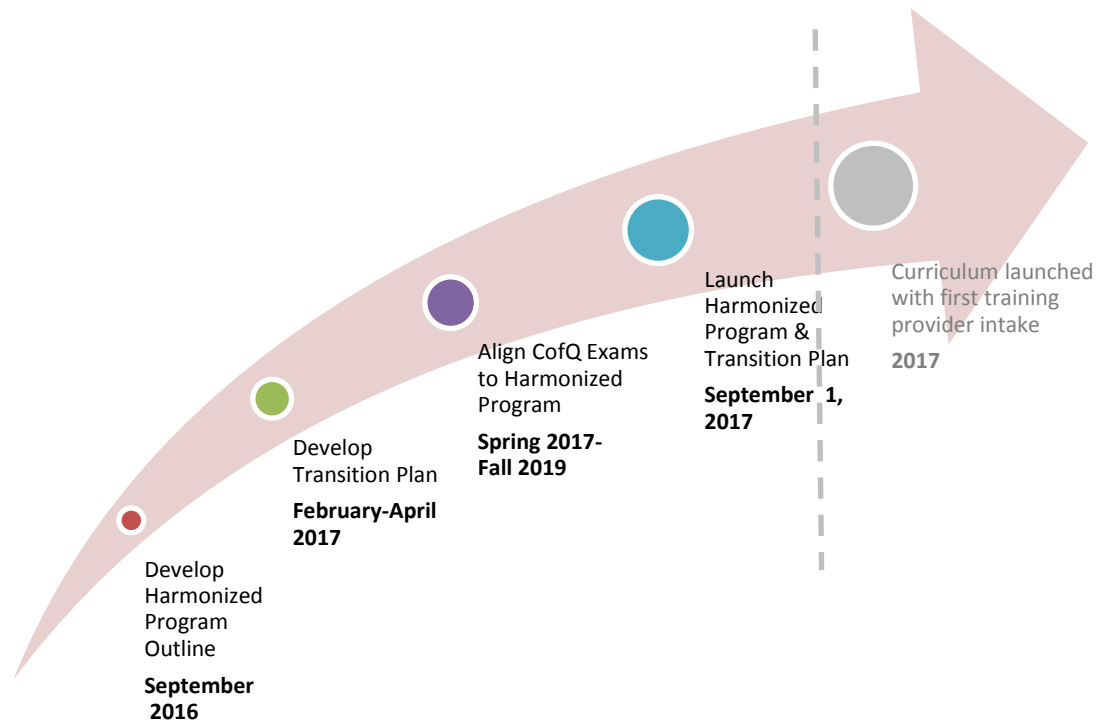
The re-sequencing of the Automotive Service Technician (AST) program through the Harmonization Initiative has resulted in significant changes to the sequencing of technical training.

We consulted with the 14 public post-secondary institutions that deliver the Automotive Service Technician program, and also considered the input of our internal partners. We evaluated a number of scenarios, and the transition plan outlined in this document was identified as the best option. We have also ensured that there are options for all current apprentices to complete their apprenticeship.

In all of our work on harmonization, we are guided by the following principles:

- Meet the needs of industry
- Minimize disadvantage to TWs, including those currently registered
- Minimize challenges for training providers in implementing the program

## Program Development and Transition Planning 2016-2017



### Training Providers

BC Institute of Technology  
Camosun College  
College of New Caledonia  
College of the Rockies  
Kwantlen Polytechnic University  
North Island College  
Northern Lights College

Northwest Community College  
Okanagan College  
Selkirk College  
Thompson Rivers University  
University of the Fraser Valley  
Vancouver Community College  
Vancouver Island University

**Note:** Not all institutions teach every level. See *Appendix A: Training Provider Schedules* for details.

# Transition Plan

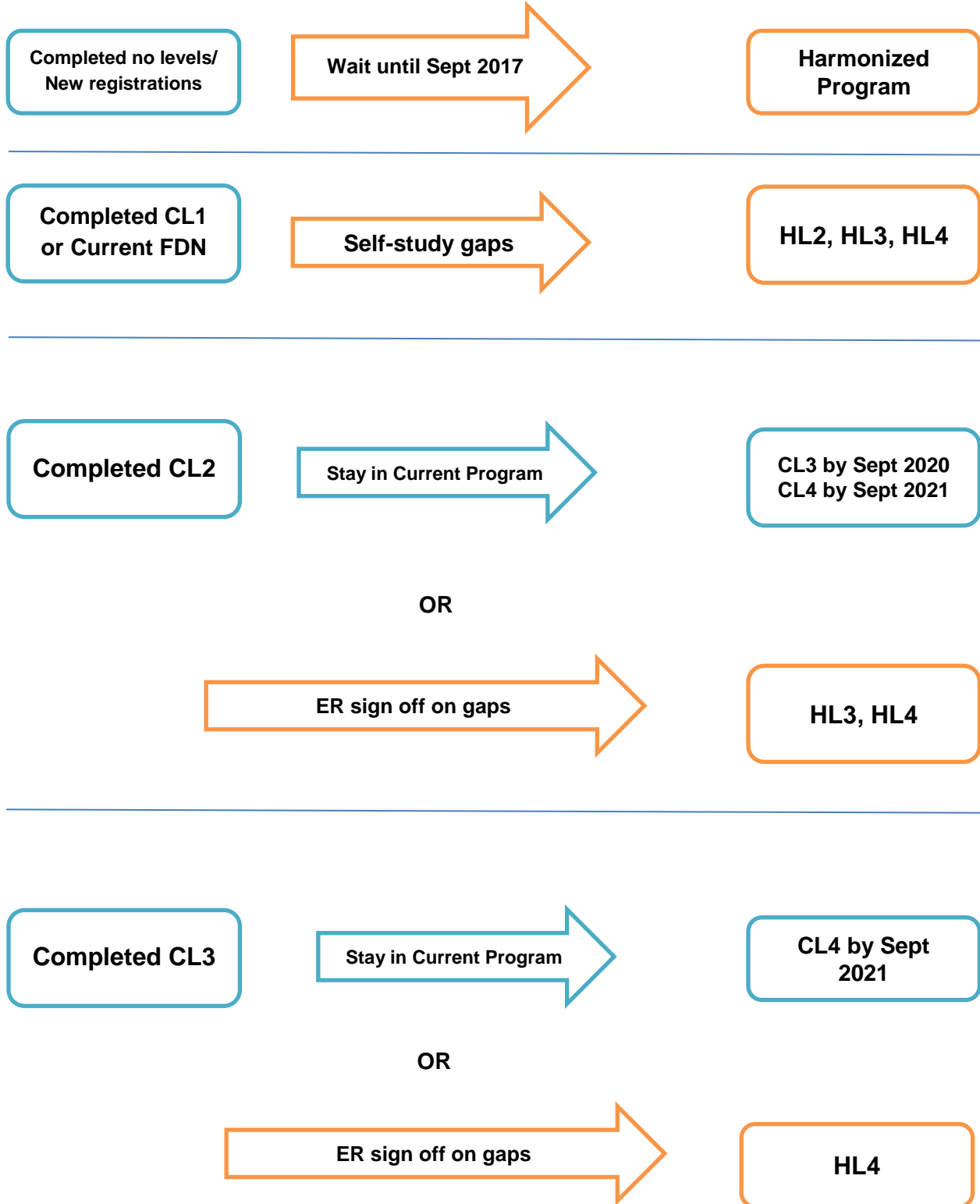
CL = Current Level  
HL = Harmonized Level

Implementation Timelines	
Level 1/ Foundation/ Youth	September 1, 2017
Level 2	September 1, 2017
Level 3	September 1, 2018
Level 4	September 1, 2019

<b>Year 0</b> 16/17	CL1	CL2	CL3	CL4
<b>Year 1</b> 17/18	HL1	HL2	CL3	CL4
<b>Year 2</b> 18/19	HL1	HL2	HL3 CL3	CL4
<b>Year 3</b> 19/20	HL1	HL2	HL3 CL3	HL4 CL4
<b>Year 4</b> 20/21	HL1	HL2	HL3	HL4 CL4
<b>Year 5</b> 21/22	HL1	HL2	HL3	HL4

**\*No Gap Training\***

## Pathways for Current Apprentices



**Note:** See *Appendix B: Details of Gaps* for information on the competencies a current apprentice would be missing if transitioning to the harmonized program.



## Work-Based Training Hours (WBT)

The following changes to training time for AST will come into effect **September 1, 2017**:

- Increased technical training hours in order to accommodate content added to the Red Seal Occupational Standard (RSOS) (**increase of 30 hours at Level 2 and 30 hours at Level 4**)
- Increased work-based training (WBT) hours in order to align with the harmonized standard of 7,200 hours of total training (**increase of 360 hours**)

### Apprenticeship Pathway

Current Program	Hours
Technical Training	780
Level 1 = 210 hours	
Level 2 = 180 hours	
Level 3 = 210 hours	
Level 4 = 180 hours	
Work-based Training Hours	6,000
<b>Current Total Training Hours</b>	<b>6,780</b>

Harmonized Program	Hours
Technical Training	840
Level 1 = 210 hours	
<u>Level 2 = 210 hours</u>	
Level 3 = 210 hours	
<u>Level 4 = 210 hours</u>	
Work-based Training Hours	6,360
<b>Harmonized Total Training Hours</b>	<b>7,200</b>

### Challenge Pathway and Sign-off Authority

Current Program	Hours
Work-based Training Hours	6,000
ITA Formula for Calculating Challenge WBT	X 1.5
<b>Current Challenge WBT Hours</b>	<b>9,000</b>

Harmonized Program	Hours
Harmonized Work-based Training Hours	6,360
ITA Formula for Calculating Challenge WBT	X 1.5
<b>Harmonized Challenge WBT Hours</b>	<b>9,540</b>

**NOTE:** If an apprentice completes training in current program, the WBT hours for that program will apply. If they transition, they will have to complete the WBT hours for the harmonized program, but will be given a document assessment of 360 hours, so they won't experience it as increased WBT hours.

## Exams

### Exams for the Harmonized Program

ITA exams will be revised and aligned to the content of the harmonized Program Outline according to the schedule below. CofQ are not piloted, and so will be ready for first cohort of harmonized levels as follows:

<b>Exam</b>	<b>Exam Development</b>	<b>Exam Launch</b>
HL1 (CofQ)	Spring 2017	September 2017
HL2 (CofQ)	Spring 2017	September 2017
HL3 (CofQ)	Spring 2018	September 2018
HL4 (SLE)*	Spring 2019	November 2019

\*HL4 is an SLE, and so will be piloted and therefore, it will not be ready for the first cohort of HL4 students. Marks for this cohort will be based on in-class assessment only. HL4 students will write the IP, as usual.

## Appendix A: Training Provider Schedules

SCHEDULE LISTING for SEPT.17, 2017 IMPLEMENTATION DATE  
(Taken from Trades Training BC website February 23, 2017)

### Foundation

INSTITUTION	PROGRAM NAME	STARTS	ENDS	CAMPUS
Camosun College	Automotive Service Technician	Feb 27 2017	Sep 22 2017	Interurban
BCIT	Automotive Technician Foundation	May 01 2017	Dec 08 2017	BBY - Burnaby
BCIT	Automotive Service Technician - Ford Asset Option	May 08 2017	Dec 21 2018	BBY - Burnaby
VCC	Automotive Service Technician	May 08 2017	Dec 21 2017	Broadway Campus
VCC	Automotive Service Technician	May 08 2017	Dec 21 2017	Broadway Campus
Okanagan College	Auto Service Technician	May 29 2017	Dec 22 2017	1000 K.L.O. Rd. Kelowna, BC
BCIT	Automotive Technician Foundation	Jun 19 2017	Feb 09 2018	BBY - Burnaby
Camosun College	Automotive Service Technician	Aug 28 2017	Mar 29 2018	Interurban
Kwantlen Polytechnic	Automotive Service Technician	Sep 04 2017	Apr 13 2018	Cloverdale
BCIT	Automotive Technician Honda/Acura Foundation	Sep 05 2017	May 04 2018	BBY - Burnaby
College of the Rockies	Auto Service Technician (FDTN)	Sep 05 2017	Apr 12 2018	Main Campus
New Caledonia	Automotive Service Technician	Sep 05 2017	Apr 13 2018	Prince George - Main Campus

<b>INSTITUTION</b>	<b>PROGRAM NAME</b>	<b>STARTS</b>	<b>ENDS</b>	<b>CAMPUS</b>
North Island College	Auto Service Technician (Foundation)	Sep 05 2017	Apr 13 2018	Dogwood St
North Island College	Auto Service Technician (Foundation)	Sep 05 2017	Apr 06 2018	Port Alberni - Tebo
Northern Lights College	Automotive Service Technician Foundation	Sep 05 2017	Feb 02 2018	Fort St. John
Northwest Community Coll.	Automotive Service Technician Foundations	Sep 05 2017	Apr 13 2018	Terrace
Okanagan College	Auto Service Technician	Sep 05 2017	Apr 06 2018	1000 K.L.O. Rd. Kelowna, BC
Thompson Rivers	Automotive Service Technician	Sep 05 2017	Mar 23 2018	Kamloops
Univ. of the Fraser Valley	Automotive Service Technician	Sep 05 2017	May 11 2018	Trades and Technology Centre (CEP)
Van. Island University	Auto Service Technician	Sep 05 2017	Jun 21 2018	Nanaimo
Van. Island University	Auto Service Technician	Sep 05 2017	Jun 21 2018	Nanaimo
VCC	Automotive Service Technician	Sep 05 2017	Apr 27 2018	Broadway Campus
VCC	Automotive Service Technician	Sep 05 2017	Apr 27 2018	Broadway Campus
Van. Island University	Auto Service Technician	Sep 11 2017	Jun 28 2018	Powell River

## Level 1

INSTITUTION	PROGRAM NAME	STARTS	ENDS	CAMPUS
BCIT	Automotive Technician GM (ASEP)	Aug 21 2017	Oct 13 2017	Burnaby
VCC	Automotive Service Technician Apprenticeship/e-pprentice	Aug 21 2017	Dec 14 2017	Broadway Campus
VCC	Automotive Service Technician Apprenticeship/e-pprentice	Sep 5 2017	Jun 28 2017	Broadway Campus
VCC	Automotive Service Technician Apprenticeship/e-pprentice	Sep 5 2017	Jan 12 2018	Broadway Campus
BCIT	Automotive Technician	Sep 18 2017	Nov 3 2017	Burnaby
University of the Fraser Valley	Automotive Service Technician Apprenticeship Training	Sep 18 2017	Nov 3 2017	Trades and Technology Centre (CEP)

## Level 2

INSTITUTION	PROGRAM NAME	STARTS	ENDS	CAMPUS
BCIT	Automotive Technician	Aug 21 2017	Sep 29 2017	Burnaby
VCC	Automotive Service Technician Apprenticeship/ e-pprentice	Aug 21 2017	Dec 14 2017	Broadway Campus
VCC	Automotive Service Technician Apprenticeship/ e-pprentice	Sep 5 2017	Jan 12 2017	Broadway Campus
Kwantlen Polytechnic	Automotive Service Technician	Sep 11 2017	Oct 20 2017	Cloverdale
Okanagan College	Automotive Service Technician	Sep 18 2017	Oct 27 2017	1000 K.L.O. Rd. Kelowna, BC
VCC	Automotive Service Technician Apprenticeship	Sep 18 2017	Oct 27 2017	Broadway Campus

### Level 3

<b>INSTITUTION</b>	<b>PROGRAM NAME</b>	<b>STARTS</b>	<b>ENDS</b>	<b>CAMPUS</b>
VCC	Automotive Service Technician Apprenticeship/ e-pprentice	Aug 21 2017	Dec 14 2017	Broadway Campus
VCC	Automotive Service Technician Apprenticeship/ e-pprentice	Sep 5 2017	Jan 12 2017	Broadway Campus
Van Island University	Automotive Service Technician	Sep 12 2017	Oct 27 2017	Nanaimo
VCC	Automotive Service Technician Apprentice	Sep 18 2017	Nov 3 2017	Broadway Campus

### Level 4

<b>INSTITUTION</b>	<b>PROGRAM NAME</b>	<b>STARTS</b>	<b>ENDS</b>	<b>CAMPUS</b>
VCC	Automotive Service Technician Apprenticeship/ e-pprentice	Aug 21 2017	Dec 14 2017	Broadway Campus
VCC	Automotive Service Technician Apprenticeship/ e-pprentice	Sep 5 2017	Jan 12 2017	Broadway Campus
New Caledonia	Automotive Service Technician	Sep 18 2017	Oct 27 2017	Prince George – Main Campus

## Appendix B: Details of Gaps

### GAP A: CL1→HL2

#### Gap (Missing Content)

This table lists the content that a student will be **missing** if they have completed Current Level 1 (CL1) and then take Harmonized Level 2 (HL2).

	Competency	Objectives	Practical	Gap Hours
H1	Diagnose and repair drive shafts and axles	Service drive shafts and axle shafts	Assess driveline angles	12
M1	Implement specific safety protocols for hybrid and electric vehicles (EV)	Describe hybrid and electric vehicle safety	No	3
			<b>Total Gap Hours</b>	<b>15</b>

#### Overlap (Repeated Content)

This table lists the content that a student will be **repeating** if they have completed Current Level 1 (CL1) and then take Harmonized Level 2 (HL2).

	Competency	Overlap Hours
G6	Service anti-lock brake systems	14
I5	Describe electronic suspension systems	6
H5	Power steering	6
	<b>Total Overlap Hours</b>	<b>26</b>

## GAP B: CL2→HL3

### Gap (Missing Content)

This table lists the content that a student will be **missing** if they have completed Current Level 2 (CL2) and then take Harmonized Level 3 (HL3).

	Competency	Objectives	Practical	Gap Hours
H2	Diagnose and repair manual transmissions and transaxles	Service manual transmissions and transaxles	Inspect manual transmissions and transaxle components Calculate gear ratios	33
H4	Diagnose and repair clutches	Service clutch systems	No	8
H7	Diagnose and repair final drive assemblies	Service final drive (differentials) assemblies	Perform backlash measurement and adjustment	23
H1	Diagnose and repair drive shafts and axles	Service drive shafts and axle shafts	Assess driveline angles	12
			<b>Total Gap Hours</b>	<b>76</b>

### Overlap (Repeated Content)

This table lists the content that a student will be **repeating** if they have completed Current Level 2 (CL2) and then take Harmonized Level 3 (HL3).

	Competency	Overlap Hours
A5	Service electrical accessories	15
D3	Describe air induction and exhaust systems	3
	<b>Total Overlap Hours</b>	<b>18</b>



## Gap C: CL3→HL4

### Gap (Missing Content)

This table lists the content that a student will be **missing** if they have completed Current Level 3 (CL3) and then take Harmonized Level 4 (HL4).

	Competency	Objectives	Practical	Gap Hours
G2	Diagnose and repair networking systems	Service networking systems Service multiplexing systems Service module software	Perform a functional test on a multiplexing system Determine if there is an updated software version for a control module	12
H1	Diagnose and repair drive shafts and axles	Service drive shafts and axle shafts	Assess driveline angles	12
H2	Diagnose and repair manual transmissions and transaxles	Service manual transmissions and transaxles	Inspect manual transmissions and transaxle components Calculate gear ratios	33
H4	Diagnose and repair clutches	Service clutch systems	No	8
H7	Diagnose and repair final drive assemblies	Service final drive (differentials) assemblies	Perform backlash measurement and adjustment	23
			<b>Total Gap Hours</b>	<b>88</b>

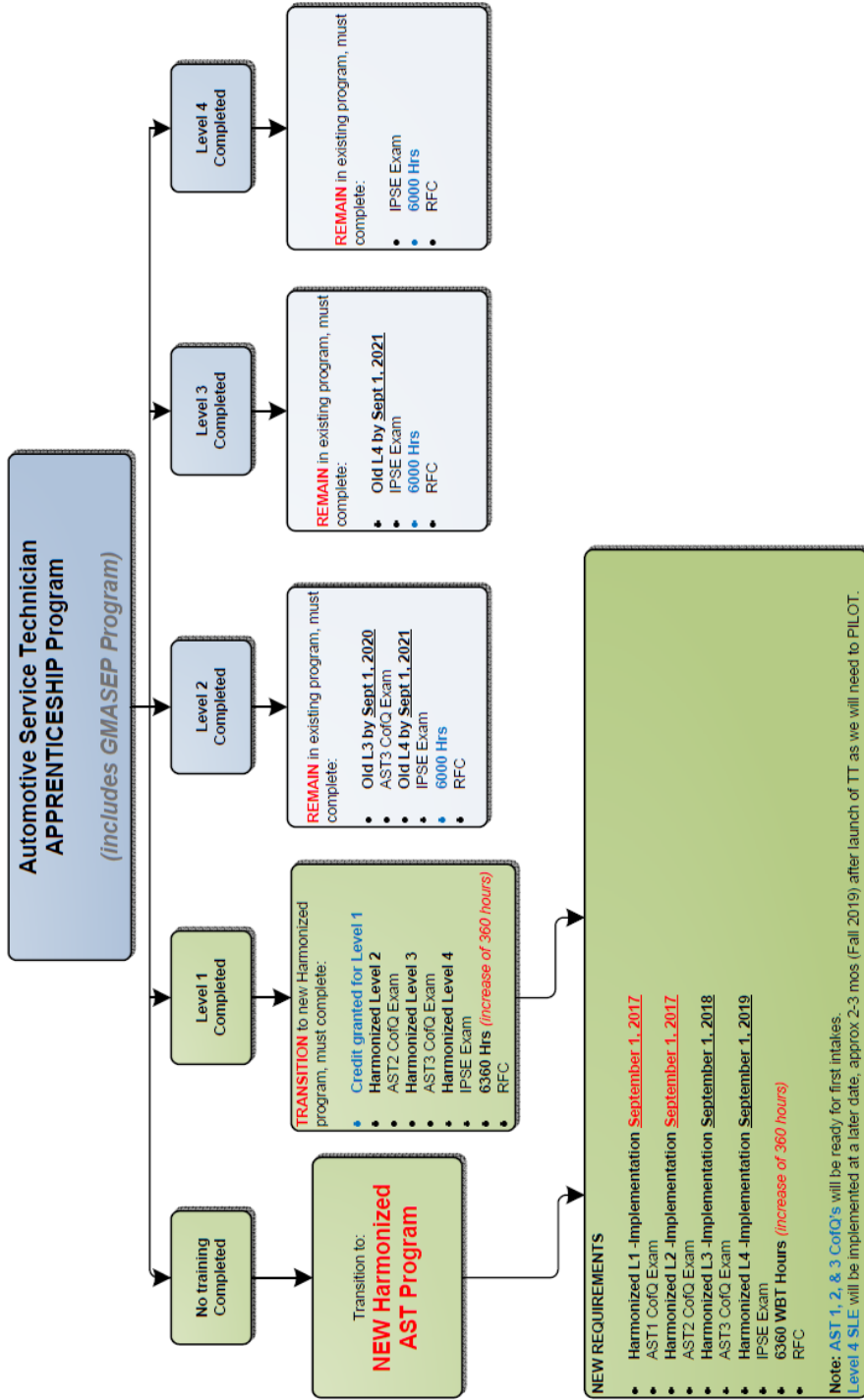
### Overlap (Repeated Content)

This table lists the content that a student will be **repeating** if they have completed Current Level 3 (CL3) and then take Harmonized Level 4 (HL4).

	Competency	Hours
F3	Diagnose and repair diesel emission control systems	6
F1	Diagnose and repair diesel fuel delivery and injection systems	16
F2	Diagnose and repair diesel intake and exhaust systems	2
I5	Diagnose and repair instrumentation, entertainment systems and displays	4
J1	Diagnose and repair air flow control and heating systems	6
J2	Diagnose and repair refrigerant systems	30
L1	Diagnose and repair restraint systems	10
	<b>Total Overlap Hours</b>	<b>74</b>

# Appendix C: Transition Map

## Automotive Service Technician 1, 2, 3 & 4 Transition Map EFFECTIVE September 1, 2017



Last Updated: May 4, 2017