



## Automotive Career Education Enrollment & Completer Projections, with Analysis

The Ventura College Automotive program has undergone a realignment of its courses and sequencing over the last 4 school years. This process involved implementing a true 4 semester rotational schedule with a repeatable sequence designed to guarantee students the opportunity of program completion within 2 academic years (21 months). In the Fall of 2018, the final scheduling corrections were made allowing for 2 cohorts of 24 students each to move through the program. 4 cohorts of students exist at any given time and student attrition is accounted for by accepting additional students which accommodates both part time and special population students, this makes the cohort size a variable between an average of 48 – 56 students per year, or 96 – 116 at any given time. While full time students are ideal so that each cohort moves through the program in a two year cycle, it is not required as part time and special population's pathways must be accommodated to meet both industry and educational needs.

The schedule of classes was developed originally on a previous curriculum model which had different courses with different units and hours. As these units and hours, and course sequencing have been standardized, the Automotive Department has also worked in conjunction with its accrediting agencies and regional employers to develop a new schedule to better meet industry demand. The new schedule is expected to provide students and employers with a better schedule management system leading to higher enrollment and completion rates. It however should also be noted that currently the program fills to capacity, additional enrollments will be a factor of growth as the program is already very successful in course enrollment and success rates. The 2-3 Day Schedules below do not show the placement of V11 as V11 runs once each semester and is the starting point for the program.

### Ventura College 2-3 Day Schedule for ACE Program:

Fall Semester (1<sup>st</sup> and 3<sup>rd</sup> Semester students):

Day	Monday		Tuesday		Wednesday		Thursday		Friday	
8am	V34 - V13 Engines	V27 - V12 Electrical 1	V34 - V13 Engines	V27 - V12 Electrical 1	V42 - V32 Eng. Perf 1	V38 - V31 AC / Heat	V42 - V32 Eng. Perf 1	V38 - V31 AC / Heat	V33 - V33 Man Trans	V43 - V23 Electronics
9am	4 units 140 Hours	4 Units 140 Hours	4 units 140 Hours	4 Units 140 Hours	4 Units 140 Hours	4 Units 140 Hours	4 Units 140 Hours	4 Units 140 Hours	4 Units 140 Hours	4 Units 140 Hours
10am	17.5 weeks 35 days	17.5 Weeks 35 Days	17.5 Weeks 35 days	17.5 Weeks 35 Days	17.5 Weeks 35 Days	17.5 Weeks 35 Days	17.5 Weeks 35 Days	17.5 Weeks 35 Days	17.5 Weeks 17.5 Days	17.5 Weeks 17.5 Days
11am	Cohort 1 1st	Cohort 2 1st	Cohort 1 1st	Cohort 2 1st	Cohort 1 3rd	Cohort 2 3rd	Cohort 1 3rd	Cohort 2 3rd	Cohort 1 3rd	Cohort 2 3rd
12pm	8-12PM	8-12PM	8-12PM	8-12PM	8-12PM	8AM-11:30A	8-12PM	8AM-11:30A	9AM-5PM	
1pm	V27 - V12 Electrical 1	V34 - V13 Engines	V27 - V12 Electrical 1	V34 - V13 Engines	V38 - V31 AC / Heat	V42 - V32 Eng. Perf 1	V38 - V31 AC / Heat	V42 - V32 Eng. Perf 1		
2pm	4 Units 140 hors	4 units 140 hours	4 Units 140 hors	4 units 140 hours	4 Units 140 Hours	4 Units 140 Hours	4 Units 140 Hours	4 Units 140 Hours		
3pm	17.5 Weeks 35 Days	17.5 weeks 35 days	17.5 Weeks 35 Days	17.5 weeks 35 days	17.5 Weeks 35 Days	17.5 Weeks 35 Days	17.5 Weeks 35 Days	17.5 Weeks 35 Days		
4pm	Cohort 1 1st	Cohort 2 1st	Cohort 1 1st	Cohort 2 1st	Cohort 1 3rd	Cohort 2 3rd	Cohort 1 3rd	Cohort 2 3rd		
5pm	1-5PM	1-5PM	1-5PM	1-5PM	1PM-4:30P	1-5PM	1PM-4:30P	1-5PM	9AM-5PM	8AM-5PM



Spring Semester (2<sup>nd</sup> and 4<sup>th</sup> semester students):

Day	Monday		Tuesday		Wednesday		Thursday		Friday	
8am	V47 - V42	V30 - V41	V47 - V42	V30 - V41	V26 - V21	V28 - V22	V26 - V21	V28 - V22	V43 - V23	V33 - V33
	Driveability	Auto Trans	Driveability	Auto Trans	Brakes	Steer/Susp	Brakes	Steer/Susp	Electronics	Man Trans
9am	4 units	4 Units	4 units	4 Units	4 Units	4 Units	4 Units	4 Units	4 Units	4 Units
	140 Hours	140 hors	140 Hours	140 hors	140 hours	140 hours	140 hours	140 hours	140 Hours	140 hours
10am	17.5 weeks	17.5 Weeks	17.5 weeks	17.5 Weeks	17.5 Weeks	17.5 Weeks	17.5 Weeks	17.5 Weeks	17.5 Weeks	17.5 Weeks
	35 days	35 Days	35 days	35 Days	35 Days	35 Days	35 Days	35 Days	17.5 Days	17.5 Days
11am	Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 1	Cohort 2
	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>
12pm	8-12PM	8-12PM	8-12PM	8-12PM	8-12PM	8-12PM	8-12PM	8-12PM	9AM-5PM	9AM-5PM
1pm	V30 - V41	V47 - V42	V30 - V41	V47 - V42	V28 - V22	V26 - V21	V28 - V22	V26 - V21		
	Auto Trans	Driveability	Auto Trans	Driveability	Steer/Susp	Brakes	Steer/Susp	Brakes		
2pm	4 Units	4 units	4 Units	4 units	4 Units	4 Units	4 Units	4 Units		
	140 hours	140 Hours	140 hors	140 Hours	140 hours	140 hours	140 hours	140 hours		
3pm	17.5 Weeks	17.5 weeks	17.5 Weeks	17.5 weeks	17.5 Weeks	17.5 Weeks	17.5 Weeks	17.5 Weeks		
	35 Days	35 days	35 Days	35 days	35 Days	35 Days	35 Days	35 Days		
4pm	Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 1	Cohort 2		
	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>		
5pm	1-5PM	1-5PM	1-5PM	1-5PM	1-5PM	1-5PM	1-5PM	1-5PM	8AM-5PM	8AM-5PM

*Note: The core programs run during a day schedule. Elective coursework is not reflected as part of the program as those courses are not part of the stackable certificate, or 2-year COA / AS course sequencing requirements.*

The new 2-3 day schedule better accommodates student needs by matching scheduling with employment opportunities. Furthermore, the schedule staggers student cohort groups so that 1<sup>st</sup> semester students who are employed benefit from 4<sup>th</sup> semester students who are employed, pairing stronger students with more experience with those who have little to no experience. This method provides a peer to peer experience at the student's place of employment. It is important to note that the Automotive Department programs currently and historically have been successful in placing a large number of technicians into regional automotive facilities and students often move through the program as a cohort in both the educational and employment arena.

The Automotive Department and its Faculty have tracked and conducted their own analysis of data available through the school's web portal and by means of intercollege collaboration. The following tables identify student seat capacities, census enrollments, contact hours, FETS (Full Time Equivalent Student) and FTEF (Full Time Equivalent Faculty) calculations and productivity as well as projected data for the new Ventura College ACE program.



**Fall 2017 FTES/FTEF Numbers Based on Department Analysis**

Course No.	CRN	Seat Cap	Contact Hours	Census Enrollment	Term Length	FTES	FTES to \$	WSCH	FTEF (Faculty Load)	Productivity
V10	75024	24	3.5	22	17.5	2.56667	12123.907	77	0.1666	462.1848739
V11	70437	24	3.5	27	17.5	3.15	14879.34	94.5	0.1666	567.2268908
V11	71632	24	3.5	25	17.5	2.91667	13777.167	87.5	0.2	437.5
V12	70318	24	2	27	17.5	1.8	8502.48	54	0.0666	810.8108108
V12	71995	24	2	28	17.5	1.86667	8817.3867	56	0.1333	420.1050263
V27	72007	24	2	28	17.5	1.86667	8817.3867	56	0.1333	420.1050263
V27	72012	24	2	25	17.5	1.66667	7872.6667	50	0.2	250
V27L	72366	24	4.5	28	17.5	4.2	19839.12	126	0.2	630
V27L	72141	24	4.5	25	17.5	3.75	17713.5	112.5	0.1333	843.9609902
V33	72053	24	2	28	17.5	1.86667	8817.3867	56	0.2	280
V33L	73018	24	4.5	28	17.5	4.2	19839.12	126	0.1333	945.2363091
V34	72163	24	2	27	17.5	1.8	8502.48	54	0.2	270
V34	72368	24	2	26	17.5	1.73333	8187.5733	52	0.1333	390.0975244
V34L	72362	24	6	27	17.5	5.4	25507.44	162	0.2666	607.651913
V34L	72386	24	6	26	17.5	5.2	24562.72	156	0.1333	1170.292573
V38	72441	24	2	28	17.5	1.86667	8817.3867	56	0.2	280
V38L	72782	24	4.5	28	17.5	4.2	19839.12	126	0.2	630
V42	70680	24	8	24	17.5	6.4	30231.04	192	0.4	480
V42	72784	24	8	30	17.5	8	37788.8	240	0.4	600
V43	72186	24	2	26	17.5	1.73333	8187.5733	52	0.4	130
V43L	72993	24	3.5	26	17.5	3.03333	14328.253	91	0.4	227.5
<b>Totals</b>	<b>73228</b>	<b>504</b>	<b>74.5</b>	<b>559</b>		<b>66.65</b>	<b>314827.94</b>	<b>1999.5</b>	<b>4.2996</b>	<b>519.5243532</b>

**Spring 2018 FTES/FTEF Numbers Based on Department Analysis**

Course No.	CRN	Seat Cap	Contact Hours	Census Enrollment	Term Length	FTES	FTES to \$	WSCH	FTEF (Faculty Load)	Productivity
V11	30692'	28	4	27	17.5	3.6	17004.96	108	0.2	540
V12	30766'	28	1	28	17.5	0.93333	4408.6933	28	0.0666	420.4204204
V26	30005'	28	2	25	17.5	1.66667	7872.6667	50	0.1333	375.0937734
V26	30392	28	2	26	17.5	1.73333	8187.5733	52	0.1333	390.0975244
V26L	32305'	28	4.5	25	17.5	3.75	17713.5	112.5	0.2	562.5
V26L	32309'	28	4.5	26	17.5	3.9	18422.04	117	0.2	585
V28	31559'	30	2	26	17.5	1.73333	8187.5733	52	0.1333	390.0975244
V28	30695'	30	2	28	17.5	1.86667	8817.3867	56	0.1333	420.1050263
V28L	30764'	30	4.5	26	17.5	3.9	18422.04	117	0.2	585
V28L	32290'	30	4.5	28	17.5	4.2	19839.12	126	0.2	630
V30	30791	22	2	21	17.5	1.4	6613.04	42	0.1333	315.0787697
V30	33067	22	2	26	17.5	1.73333	8187.5733	52	0.1333	390.0975244
V30L	31978'	22	6	21	17.5	4.2	19839.12	126	0.2666	472.6181545
V30L	33069	22	6	26	17.5	5.2	24562.72	156	0.2666	585.1462866
V33	30849	24	2	26	17.5	1.73333	8187.5733	52	0.2	260
V33L	30861	24	4.5	26	17.5	3.9	18422.04	117	0.1333	877.7194299
V43	32486'	28	2	22	17.5	1.46667	6927.9467	44	0.1333	330.0825206
V43L	32762'	28	4.5	21	17.5	3.15	14879.34	94.5	0.2	472.5
V47	32765'	26	8	24	17.5	6.4	30231.04	192	0.4	480
V47	32765'	26	8	21	17.5	5.6	26452.16	168	0.4	420
V48	30893	24	8	22	17.5	5.86667	27711.787	176	0.4	440
V49	30909	24	8	4	17.5	1.06667	5038.5067	32	0.4	80
<b>Totals</b>		<b>532</b>	<b>92</b>	<b>525</b>		<b>62.0667</b>	<b>293178.11</b>	<b>1862</b>	<b>3.8662</b>	<b>475.0778477</b>



**Fall 2018 FTES/FTEF Numbers Based on Department Analysis**

Course No.	CRN	Seat Cap	Contact Hours	Census Enrollment	Term Length	FTES	FTES to \$	WSCH	FTEF (Faculty Load)	Productivity
V11	71632	28	4	31	17.5	4.13333	19524.213	124	0.2	620
V12	71995	28	2	28	17.5	1.86667	8817.3867	56	0.1333	420.1050263
V27	72007	24	2	25	17.5	1.66667	7872.6667	50	0.1333	375.0937734
V27	72012	24	2	26	17.5	1.73333	8187.5733	52	0.2	260
V27L	72366	24	4.5	25	17.5	3.75	17713.5	112.5	0.2	562.5
V27L	72141	24	4.5	26	17.5	3.9	18422.04	117	0.1333	877.7194299
V33	72053	24	2	27	17.5	1.8	8502.48	54	0.2	270
V33L	73018	24	4.5	27	17.5	4.05	19130.58	121.5	0.1333	911.4778695
V34	72163	24	2	29	17.5	1.93333	9132.2933	58	0.2	290
V34	72368	24	2	27	17.5	1.8	8502.48	54	0.1333	405.1012753
V34L	72362	24	6	29	17.5	5.8	27396.88	174	0.2666	652.6631658
V34L	72386	24	6	27	17.5	5.4	25507.44	162	0.1333	1215.303826
V38	70318	24	2	25	17.5	1.66667	7872.6667	50	0.2	250
V38	72441	24	2	24	17.5	1.6	7557.76	48	0.2	240
V38L	70895	24	4.5	25	17.5	3.75	17713.5	112.5	0.2	562.5
V38L	72782	24	4.5	24	17.5	3.6	17004.96	108	0.2	540
V42	72784	24	8	28	17.5	7.46667	35269.547	224	0.4	560
V42	70680	24	8	23	17.5	6.13333	28971.413	184	0.4	460
V43	72186	24	2	19	17.5	1.26667	5983.2267	38	0.4	95
V43L	72993	24	4.5	19	17.5	2.85	13462.26	85.5	0.4	213.75
<b>Totals</b>		<b>488</b>	<b>77</b>	<b>514</b>		<b>66.1667</b>	<b>312544.87</b>	<b>1985</b>	<b>4.4664</b>	<b>489.0607183</b>

**Year to Year Comparison (Fall 2017 – 2018)**

Term	Total Seat Capacity	Total Contact hours	Total Census	Total FTES	Total FTES \$	WSCH	Faculty Load	Productivity	Total No. of Courses
Fall 2017	504	74.5	559	66.65	314827.9	1999.5	4.2996	515.294406	21
Fall 2018	488	77	514	66.16667	312544.9	1985	4.4664	489.0607	19
<b>Total</b>	<b>992</b>	<b>151.5</b>	<b>1073</b>	<b>132.8167</b>	<b>627372.8</b>	<b>3984.5</b>	<b>8.766</b>	<b>1004.35511</b>	
<b>Difference</b>	<b>-16</b>	<b>2.5</b>	<b>-45</b>	<b>-0.48333</b>	<b>-2283</b>	<b>-14.5</b>	<b>0.1668</b>	<b>-26.2337055</b>	<b>-2</b>
<b>Average</b>	<b>496</b>	<b>75.75</b>	<b>536.5</b>	<b>66.40834</b>	<b>313686.4</b>	<b>1992.25</b>	<b>4.383</b>	<b>502.177553</b>	<b>20</b>

**Projected ACE Program Numbers Based on Department Analysis:**

*Fall 2020 Semester Projections*

Course No.	Seat Cap	Contact Hours	Projected Census Enrollment	Term Length	FTES	FTES to \$	WSCH	FTEF (Faculty Load)	Productivity
V11	28	6	30	17.5	6	28341.6	180	0.3	600
V12	24	8	27	17.5	7.2	34009.92	216	0.4	540
V12	24	8	26	17.5	6.93333	32750.293	208	0.4	520
V13	24	8	28	17.5	7.46667	35269.547	224	0.4	560
V13	24	8	27	17.5	7.2	34009.92	216	0.4	540
V23	24	8	20	17.5	5.33333	25192.533	160	0.4	400
V31	24	8	26	17.5	6.93333	32750.293	208	0.4	520
V31	24	8	27	17.5	7.2	34009.92	216	0.4	540
V32	24	8	26	17.5	6.93333	32750.293	208	0.4	520
V32	24	8	26	17.5	6.93333	32750.293	208	0.4	520
V33	24	8	27	17.5	7.2	34009.92	216	0.4	540
<b>Totals</b>	<b>268</b>	<b>86</b>	<b>290</b>		<b>75.3333</b>	<b>355844.53</b>	<b>2260</b>	<b>4.3</b>	<b>527.2727273</b>



*Spring 2021 Semester Projections*

Course No.	Seat Cap	Contact Hours	Projected Census Enrollment	Term Length	FTES	FTES to \$	WSCH	FTEF (Faculty Load)	Productivity
V11	28	6	26	17.5	5.2	24562.72	156	0.3	520
V21	24	8	26	17.5	6.93333	32750.293	208	0.4	520
V21	24	8	25	17.5	6.66667	31490.667	200	0.4	500
V22	24	8	24	17.5	6.4	30231.04	192	0.4	480
V22	24	8	25	17.5	6.66667	31490.667	200	0.4	500
V23	24	8	26	17.5	6.93333	32750.293	208	0.4	520
V33	24	8	25	17.5	6.66667	31490.667	200	0.4	500
V41	24	8	24	17.5	6.4	30231.04	192	0.4	480
V41	24	8	26	17.5	6.93333	32750.293	208	0.4	520
V42	24	8	26	17.5	6.93333	32750.293	208	0.4	520
V42	24	8	24	17.5	6.4	30231.04	192	0.4	480
<b>Totals</b>	<b>268</b>	<b>86</b>	<b>277</b>		<b>72.1333</b>	<b>340729.01</b>	<b>2164</b>	<b>4.3</b>	<b>503.6363636</b>

**Comparison of Current Auto Program to Projected ACE Program:**

Term	Total Seat Capacity	Total Contact hours	Total Census	Total FTES	Total FTES \$	WSCH	Faculty Load	Productivity
2016-17 (AUTO)		158	1153	135.5905	640475.17	4067.714	8.2988	952.665914
2017-18 (AUTO)	1012	175.5	1073	151.4667	715467.95	4544	8.766	1018.58257
2-Year Averages (AUTO)	1000	166.5	1036	128.7167	608006.05	3861.5	8.1658	994.602201
Projected 2020-21 (ACE)	536	172	567	147.4667	696573.55	4424	8.6	1030.90909
<b>Difference, Current AUTO vs. Projected ACE</b>	<b>-464</b>	<b>5.5</b>	<b>-469</b>	<b>18.74997</b>	<b>88567.497</b>	<b>562.5</b>	<b>0.4342</b>	<b>36.3068897</b>

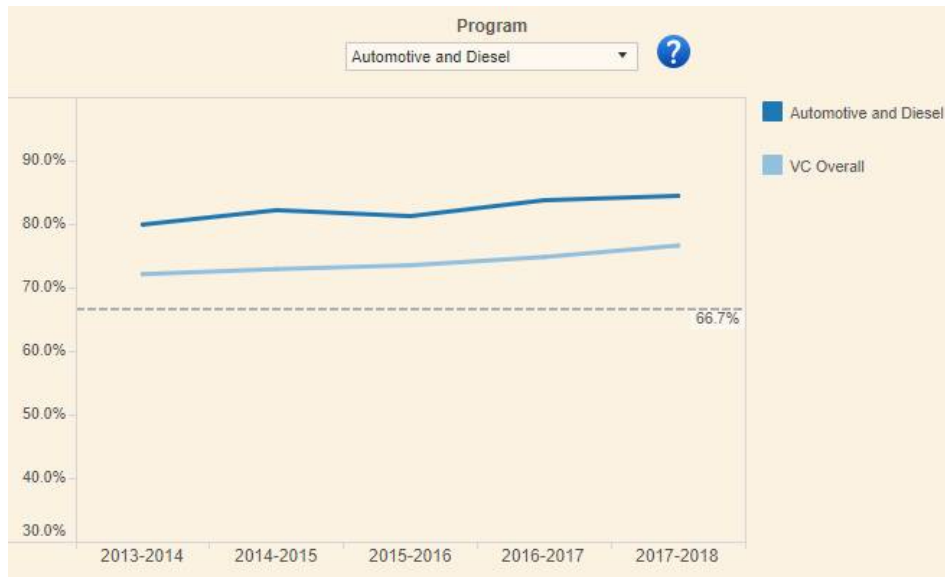
Course enrollments reported through the Total Census column show a decrease in enrollments by 464, this is the result of the ACE program structure in which lecture and lab components are combined. This has been done to benefit both the program and the students and places emphasis on the career education skills competency-based learning objectives of the program. The total seat capacity of the new ACE program has therefore also been reduced by approximately 50%. Total contact hours, FTES, WSCH, Faculty Load, and Productivity all see positive gains. Faculty Load has an increase of .4342 while Productivity reflects modest gains. The new program is built from the old one and does not require additional resources to implement, it can be sustained with current college and third-party resources and donations.

Course enrollments for the Automotive Program have been well above the local and state college averages for some time. Course success rates have also been above average; however the certificate and degree completions have historically been below average. The current Automotive program staff has worked at closing the certificate gaps and success can be seen in the number of certificates issued rising from a 5-year average of 11 – 12 per year, to an average of 33.5 certificate completions over the last two academic school years (17-18, 18-19). This has also been the result of emphasis on workforce development by the state and college. The rollout of the new certificate structure is expected to significantly increase the number of completers and captures



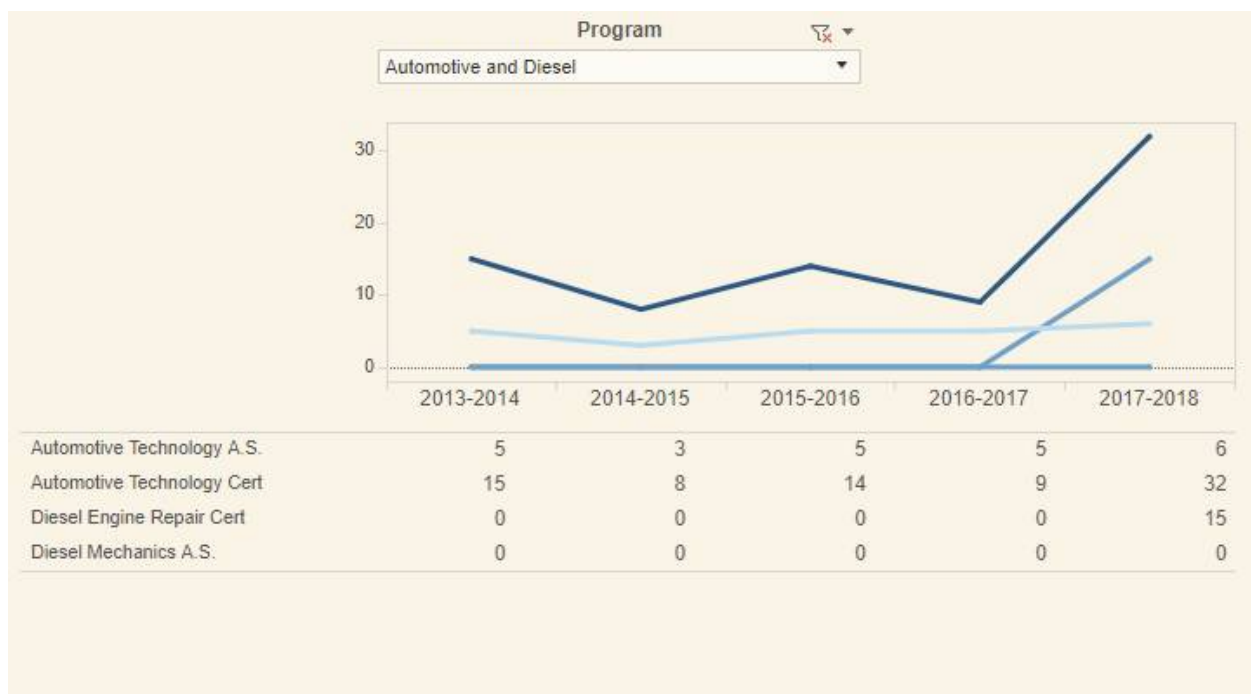
student success for industry standard skills attainment that was not previously awarded a COA

Available data tables (below) for the current 18-19 AY Program Review confirm the data above, however the data is not exclusive to the Automotive Program as the Diesel Program is included. The Diesel program graduated its first class in the 17-18 AY. The 5-year trend for the Automotive Program Overall Course Success Rate is also provided below. Department analysis and tracking of its data is more accurate and reflect the actual number of students in classes based on census reporting.



*Course Success Rates, Ventura College 18-19 AY Program Review Data*

*Certificates and Degrees awarded, Ventura College 18-19 AY Program Review Data*





It should be noted that student success is not accurately correlated with the student course success rates as some students do not complete the current program and / or courses when they acquire employment in the field. This is often the result of students who accept full-time positions during the day.

