

LMC Program Review Year 3 Update 2019-2020

Instructional Unit Name: AUTOMOTIVE TECHNOLOGY

Introduction

In 2017-2018, all departments/programs completed a Comprehensive Program Review (CPR), in which goals were set for the 2017-2022 program years. Los Medanos College (College) is now in year three of a five-year review cycle. New to this program review cycle is the passage of the State's [Vision for Success](#) plan which establishes system-wide goals that can only be attained by each department contributing to college-level goals aligned with the state plan. Toward that end, the [Contra Costa Community College District Strategic Plan \(CCCD Strategic Plan\)](#) adopted by the Governing Board at its June 2019, meeting, aligns with the *Vision for Success* and plans are underway to ensure that the *Los Medanos College Educational Master Plan (LMC EMP)* also supports college and state goals. The intent is to direct College efforts toward a singular and coordinated set of goals.

The *Vision for Success* directs each college to increase degree and certificate completion and increase student transfers, improve time to completion, increase job placement in field of study, narrow achievement gaps and establishes targeted goals in five primary areas as follows:

Goal #1 Increase by 20 percent the number of CCC students annually who acquire associates degrees, credentials, certificates, or specific skill sets that prepare them for an in-demand job.

Goal #2 Increase by 35 percent the number of CCC students' system-wide transferring annually to a UC or CSU.

GOAL #3 Decrease the average number of units accumulated by CCC students earning associate's degrees, from approximately 87 total units (the most recent system-wide average) to 79 total units—the average among the quintile of colleges showing the strongest performance on this measure

GOAL #4 Increase the percent of exiting CTE students who report being employed in their field of study, from the most recent statewide average of 69 percent to an improved rate of 76 percent—the average among the quintile of colleges showing the strongest performance on this measure in the most recent administration of the CTE Outcomes Survey.

Goal #5 Reduce equity gaps across all of the above measure through faster improvements among traditionally underrepresented groups as identified by the college.

The College can only meet its local and state goals with the contribution of each department's efforts. As noted, the intent is to direct College efforts towards a singular and coordinated set of goals to garner greater efficiencies and avoid duplication of effort.

The *Program Review Year 3 Update* includes five components with specified timeframes (not in chronological order) for draft and completion:

Item 1. Program Update (October 1 – October 31)

Provide an update to the department’s 2017-18 CPR

Item 2. Setting the Vision for Success Goals 2021-22 (November 1 – November 27)

Department/program alignment of goals, action steps, timeline, responsible party and next steps – all tied to the *Vision for Success* indicators. For ease of reference, the *Vision for Success* indicators are included in this section.

Item 3. Assessment Date and Effectiveness (August 26 – September 30)

Status report on the review and assessment of courses and next steps

Item 4. Course Outline Updates (August 26 – September 30)

Status report on the review and assessment of Course Outline of Records and next steps

Item 5. Resource Needs (February 1 – February 28)

Resource needs to meet goals, if any.

The table below shows a list of the above components in chronological order. The intent is to complete sections of Program Review by these dates to better assess and inform the process.

Date	Program Review Update Component
August 26 – September 30	Item 3. Assessment Date and Effectiveness Status report on the review and assessment of courses and next steps.
August 26 – September 30	Item 4. Status report on the review and assessment of Course Outline of Records and next steps.
October 1 – October 31	Item 1. Provide an update to the department’s 2017-18 CPR
November 1 – November 27	Item 2. Department/program alignment of goals, action steps, timeline, responsible party and next steps – aligned with the <i>Vision for Success</i> indicators.
February 1 – February 8	Item 5. Resource Needs

1. Program Update (Oct 1 – Oct 31)

1a. Provide any important changes or updates within your program since your last CPR. (New degrees, new curriculum, staffing changes, etc.)

A new course for electric vehicle technology has been written and submitted to the curriculum committee. Funding for equipment has been secured through grant funding to provide faculty training and equipment for this course.

1b. Please address the following enrollment data provided for your program.

1.b.1. What are the enrollment trends over the past 3 years, beginning with Fall 2017? (Please address census enrollment, census fill rate, and productivity (Ftes/Ftef))

The enrollment trends for the past three years are as follows:

	Ftes	Ftef	Census enroll.	Census Fill
2017 Fall	66.6	3.44	258	85.7%
2018 Spring	60.3	3.44	271	84.4%
2018 Summer	6.4	.54	43	35%
2018 Fall	77.9	4.24	317	78.3%
2019 Spring	62.9	3.85	298	69%
2019 Summer	7.1	.53	46	37%
2019 Fall	84.4	4.41	341	84.2%

Overall FTES and enrollment has been trending higher while maintaining a consistent fill rate on a year to year comparison. Following the fall semesters program, enrollment moved from 258 to 317 and jumped to 341 in 2019. Spring enrollment improved from 271 to 298, showing growth at a slower rate. Moving deeper into the course by course data reveals advanced courses struggled when placed in a day schedule (reflective of advanced students having moved to employment and now continue as night students).

1.b.2. What does the data suggest in terms of future needs/directions?

The data shows that when additional courses are added (specifically in the fall) enrollment follows, as shown by the census fill rate. As a result of the growing census enrollments it is reasonable to expect the program will continue to grow with careful planning and scheduling of the courses currently within the catalog. Growth can also be anticipated with planned courses or courses in process of approval (service writing, lab, engine mastery and electrical/autonomous vehicles).

1c. Provide a brief update of your program's goals as listed in your (CPR) 2017- 2018. Given these goals, please provide a brief update on: (a) Goals completed since their submission in 2018, and the impact of that completion on program effectiveness; (b) Goals abandoned with an explanation of why they were abandoned and (c) Goals still in progress or modified to be achieved by 2021-2022. Please include action steps, timeline, and responsible parties.

Goals	Completed/ Abandoned/ In Progress/ Modified	Impact/ Explain/ Action Steps	Timeline/ Responsible Parties
<p>Goal 1: Complete the integration of our industry partners and their curriculum as a component of the automotive program. (Subaru U, AUDI and Fiat/Chrysler)</p>	<p>Completed.</p>	<p>FCA has been incorporated into instruction for every course in the catalog. A process has been developed for students seeking to participate in the Subaru U program. Additionally Ford has joined the program after this goal was written. We are in process of integrating Ford training resources into the program.</p>	<p>Earl Ortiz, Stan Gozzi, Phil Torres</p>
<p>Goal 2: Complete the curricular redesign and alignment to better provide students with early off-ramp options to employment and clearer pathways for those seeking A/S and cert. completion. Identify additional funding sources that will be necessary to equip the program for these courses with the resources needed for student success here and beyond the program.</p>	<p>Completed</p>	<p>All courses in the program have been realigned with course numbers and COOR adjustments to provide a clear pathway for students within the program. New certificates approved by our advisory committee have been submitted to realign these certs with industry standards and the courses offered in the Automotive program. Significant funding was provided to achieve needed upgrades to the automotive shop and equipment needed to achieve our desired outcomes.</p>	<p>Jason Dearman</p>
<p>Goal 3: Expand course offerings to meet the growing demand not only within the automotive industry but other sectors seeking workers with technical/mechanical skills. (BART, Drill Tech, Industrial maintenance, etc.)</p>	<p>In Process</p>	<p>Fall of 2019 represented the largest number of offerings the automotive program has ever previously provided. A total of 11 sections were scheduled and taught. Prior to the 17-18 Program review 7 or 8 sections was the norm. This goal is marked as in Process. It can easily be claimed that the goal has been met or completed however when comparing the capacity of the program vs. the emsi data and normal retirements the industry will continue to be severely undersupplied with the needed technicians in the coming years. In short the program lacks the capacity to provide the needed workforce and will have to continually seek ways to expand offerings when possible.</p>	<p>Jason Dearman, Phil Torres</p>
<p>Goal 4: Train current and future faculty and staff members for new and emerging sectors in the automotive industry. With a specific focus on electric vehicles and autonomous self-driving vehicles.</p>	<p>In Process</p>	<p>All faculty has received training on Hybrid technologies and basic training with Autonomous technologies. Significant grant funding has been awarded for the development of an electric vehicle course series. Due to the emerging nature of this technology training has not been readily available and opportunities are currently researched.</p>	<p>Jason Dearman</p>

For CTE programs only:

- 1c. Community and Labor Market Needs (Link Ed Code [78016](#), Title 5, [51022](#))

Labor market data is projecting continued growth through 2024 of 6.6% or 548 new positions.

This does not include replacement technicians for retirements. Median income has increased to 23.38/hr. The data stands alone as good reason to continue growth however it does not capture industries outside automotive that regularly pull from the program (BART, drilltech, tri-delta etc.)

- 1d. Advisory Board Update and Analysis (CTE related only) Include dates of Advisory Board meetings in 2018-2019, and those completed or planned in 2019-2020.

Advisory Board meetings have moved from annual to biannual due to NATEF accreditation requirements. Advisory boards were held on December 5th 2018, July 11th 2019 and December 5th 2019.

Advisory discussions focused heavily on preparing for NATEF accreditation. Members routinely raised concerns of increasing difficulty finding qualified technicians and rapid technology change. Concerns were raised at two separate meetings that our customer lab fee is not clearly tracked and my cause issues with NATEF's accounting requirements.

Safety inspections of the shop and tools provided for the student were performed by members and found to be in good condition with very few recommendations for improvement, with only one notable suggestion being that we discontinue bench style brake lathes in favor of on vehicle lathes (current industry standard).

Our next meeting will take place in June or July of this year.

2. Setting Vision for Success Goals for 2021-22 (Nov 1—Nov 27)

The *Vision for Success* directs each college to increase degree and certificate completion and increase student transfers, improve time to completion, increase job placement in field of study, narrow achievement gaps and establishes targeted goals in five primary areas. The College can only meet its local and state goals with the contribution of each department’s efforts. As noted, the intent is to direct College efforts towards a singular and coordinated set of goals to garner greater efficiencies and avoid duplication of effort.

2a. The following table lists the *Vision for Success* indicators that we must align to as a college and as a district. Please look at your program data (Tableau) for each of the following *Vision for Success* indicators. Please address all indicators that are relevant to your program, set your program goal, indicate the action steps, timeline and responsible parties to achieve program goals.

Vision for Success Indicators and ACCJC Indicator	Program Set Goals for 2021-2022	Action Steps	Timeline	Responsible Parties	Notes
Degrees (AA, AS, ADT)	As per VSF goal One, Increase the number of students who complete and receive an AS in automotive technology	Provide the counseling department a time to visit and work with students in the classroom during the semester to provide AS pathways.	Fall 2020	Jason Dearman	
Certificates of Achievement	As per VSF goal one, our goal will be to increase our number of students receiving their certificates.	The majority of students’ complete courses required for certification. Our first step will be to create visual reminders within the automotive area reminding students to apply for their certificates.	Fall of 2020	Jason Dearman	
CTE Jobs	As per Goal VSF four, Connect students more directly with employers in the automotive industry.	Create a more direct method for employers and students to connect. (social media, students seeking employment list approved to share with our employers)	Fall of 2020	Phil Torres	

2b. The Vision for Success Goal 5—Equity. The College has identified three disproportionately impacted (DI) populations: African-American, economically disadvantage students (low income), and foster youth students. The College’s goal is to reduce the equity achievement gap on course success for disproportionately impacted (DI) student populations. Please look at your program data (Tableau) for each of the following DI population. Please pick one or more DI populations that are relevant to your program, set your program goal, indicate the action steps, timeline and responsible parties to achieve program goals.

Course Success by DI Population	Program Set Goals for 2021-2022	Action Steps	Timeline	Responsible Parties	Notes
African American	Achieve a measurable increase in African American student success	Seek out training of flex activities for staff to help identify resources and instructional techniques to support this student population.	Fall 2020	Phil Torres, Jason Dearman, Earl Ortiz	
Low Income	Reduce overall cost of student textbooks.	Meet with CDX automotive. For potential switch to one time cost for digital text (\$190-\$225) vs. traditional textbooks at a cost of \$1800-\$2000 over the two year program.	Fall 2020	Phil Torres, Jason Dearman, Earl Ortiz	

3. Assessment Update and Effectiveness (August 26-Sept 30)

- a. Please review the data provided on assessment status of courses in your discipline in Cycle 2 (2017/18-2020/21), if there were any courses that were not assessed in Cohorts 1 and 2, please (a) list them, (b) explain why they were not assessed, (b) when are you going to assess them, and (c) who is going to assess them.

Course	Reason course was not assessed	When course will be assessed	Faculty Responsible for Course Assessment
AUTO-035	This Course was caught mid change during a program redesign. Course hours, content, grading and number were changed. Advisory input and previous assessments were used. Assessment data for the auto 35 fundamentals was collected but does not accurately reflect the auto 112 engine technology that now takes its place.	20-21	Phil Torres
AUTO-046	This Course was caught mid change during a program redesign. Course hours, content, grading and number were changed. Advisory input and previous assessments were used. The auto 046 is now auto 111.	This assessment will be moved to 21-22. It will be attached to a certificated sequence with Electric and autonomous vehicles and is likely to experience adjustments in 2020.	Jason Dearman
AUTO-037	This Course was caught mid change during a program redesign. Course hours, content, grading and number were changed. Advisory input and previous assessments were used. Auto 037 is now Auto 122.	20-21	Phil Torres
AUTO-042	This Course was caught mid change during a program redesign. Course hours, content, grading and number	20-21	Phil Torres

	were changed. Advisory input and previous assessments were used. Auto 042 is now Auto 121.		
AUTO-043	This Course was caught mid change during a program redesign. Course hours, content, grading and number were changed. Advisory input and previous assessments were used. Auto 043 is now Auto 120	20-21	Jason Dearman

- b. Discuss the results of any outcomes assessments (e.g. CSLO) performed this year. What changes, if any, are planned to improve student success?

4. Course Outline of Record Updates (August 26 – Sept 30)

Please review the data provided on the status of COORs in your discipline. (Note: These data do not reflect courses submitted after May 2019. For each COOR that has *not* been updated since May 2019, please indicate the faculty member responsible for submitting the updated COOR to the Curriculum Committee by **November 1, 2019**.)

Course	Faculty Responsible for COOR Update
All Coors were updated in Spring and fall of 2018 With the exception of Auto 057 smog update.	Phil Torres will be updating the Auto 057 COOR

Impact of Resource Allocation

If you have received funding via the Resource Allocation Process, you will be asked by the Office of Business Services how the resource helped you in achieving your program goals.

The automotive program has not received funding from the RAP process. All improvements in previous years have been funded through SWF, Perkins and other grant projects

5. Resource Needs (Feb 1 – Feb 28)

Resource needs to meet goals, if any. If there are no requests, this section may be skipped.

Faculty/Staff Resource Request			
Department/Unit Goal - Reference #		Strategic Goal and/or Objective - Reference #	
Goal #3			
Department/Unit Name		Position Name/Classification	FTE
Automotive Technology / Vocational technology		Tool Room Staff	
Position Type	Funding Duration	Funding Source	Est. Salary & Benefits
<input type="checkbox"/> Faculty R/T <input checked="" type="checkbox"/> Classified <input type="checkbox"/> Manager <input type="checkbox"/> Student	<input checked="" type="checkbox"/> On-going/Permanent <input type="checkbox"/> One-time	<input checked="" type="checkbox"/> Operations (Fund 11) <input type="checkbox"/> Other <input type="text"/>	
Justification:			
As noted in section 1.B.1 program growth has been significant with additional growth projected in the next year. The voc-tech department is anticipating growth in the welding, HVAC program and potentially incubating new programs. The day time tool room is staffed by only a singular person. An additional part-time Classified employee is needed to support the maintenance of new equipment (more equipment requiring routine maintenance has been added, newly added shop vehicles, new welding fab tech courses, clerical demands have dramatically increased with additional automotive courses and their attached vehicle repair orders).			

Operating Resource Request		
Department/Unit Goal - Reference #		Strategic Goal and/or Objective - Reference #
Goal #3		
Department/Unit Name		Resource Type
Automotive Technology		<input type="checkbox"/> Equipment <input checked="" type="checkbox"/> Supplies <input type="checkbox"/> Service/Contract
		<input type="checkbox"/> IT Hardware/Software <input type="checkbox"/> Facility Improvement <input type="checkbox"/> Other
General Description		Est. Expense
The yearly operating supplies budget has not been adjusted in 15 years. An increase of 5 to 5 thousand dollars is needed to support the additional courses and technology now used.		\$5000-6000
Justification:		

While overall expenses have increased due to natural inflation new expenses have been incurred due to program growth and technology changes. A second section of auto 110 consumes \$400 to \$500 in gaskets, fuel and oils (X2 additional sections). The addition of an electric vehicle program will require external safety certification and replacement of regulated gloves and safety equipment (\$250 annually). All repair manuals are available only as online subscriptions, currently we are on the last year of a pre-paid subscription through a grant. \$1500 annually will be required to maintain this critical resource. Environmental chemical recovery expenses have increased by \$2000 annually over the past five years severely pressuring remaining funds to support overall program. Other expenses (A/C machine annual maintenance, smog calibration gases, wear and tear on tools and equipment) have all increased with the growth of the program.

<u>Professional Development Resource Request</u>	
Department/Unit Goal - Reference #	Strategic Goal and/or Objective - Reference #
Goal #4	
Department/Unit Name	Resource Type
Automotive Technology	<input checked="" type="checkbox"/> Conference/Meeting <input type="checkbox"/> Materials/Supplies <input type="checkbox"/> Online Learning <input type="checkbox"/> IT Hardware/Software <input type="checkbox"/> Other
General Description	Est. Expense
Maintain current on industry trends and technological advances in the automotive industry through participation in factory training and attending the SEMA education event.	\$5000-6000
Justification:	
The automotive industry is experiencing a rapid advancement in technological changes (electrification, semi and full autonomy, Direct injection and variable displacement engines). Faculty no longer working in the industry are at risk of rapidly falling behind regarding the demands and needs of the automotive industry.	