# YEARLY PLANNING DISCUSSION Automotive Technology 2023 General Questions

## Program Name Automotive Technology Academic Year 2023

1. Has your program mission or primary function changed in the last year?

No.

- 2. Were there any noteworthy changes to the program over the past year? (e.g., new courses, degrees, certificates, articulation agreements)
- 1. We are have had to plan on the reduction of our teaching laboratory space by more than 2000 sq ft due to the loss of O300 building at the end of Spring 2023.
- 2. We have entered into the Toyota Motor Sales of North America TECS Elite program.
- 3. We are now offering the AT 100 introductory course at both San Ynez and Lompoc High Schools.

## **Learning Outcomes Assessment**

- a. Please summarize key results from this year's assessment. We are only now getting back to our assessment plan after the conversion to PLOs and using the SPOL program. We have created a common assessment tool to be used in the AT 100 course which is the only multi-section course we teach and that common assessment will be used to measure the applicable PLOs in that course.
- b. Please summarize your reflections, analysis, and interpretation of the learning outcome assessment and data.

The one PLO that was assessed this year, Communications, was identified by our Advisory Committee and by other sources as an important skill. The assessment showed that 70% of the students assessed had met expectations for the course. One interesting aspect was that once that outcome was identified as what we wanted to measure then more attention was paid and many of the instructors raised the profile of that outcome in their course work. To put it in other terms; what gets measured gets improved.

c. Please summarize recommendations and/or accolades that were made within the program/department.

The cycle of identifying the important outcomes and then paying attention to that outcome

d. Please review and attach any <u>changes</u> to planning documentation, including PLO rubrics, associations, and cycles planning.

We will need to review the Program Learning Outcomes, assessments and the SPOL program usage with all of the program faculty and include the part time faculty in the assessment cycle. This would be made much easier with the creation of the program coordinator position.

3. Is your two-year program map in place and were there any challenges maintaining the planned schedule?

Yes and the plan is in place and has been included in the Suggested Course Sequence. We will most likely see issues with the loss of several sections of the T100 course with the loss of the O300 building.

4. Were there any staffing changes?

We have been able to find day time part time instructors and so we less turmoil in the course schedule however we can't count on this being the norm and so the long-term goal should be to hire a 3<sup>rd</sup> full time instructor for the program.

We have been unable to hire any student workers due to an onerous student worker system.

5. What were your program successes in your area of focus last year?

The program has weathered the COVID crisis well with a downturn in enrollments equal or less than the institution in general and without compromising the core outcomes of the program. We will have to offer at least the same number of sections of AT 100 we do now until we can expand the concurrent offerings in order to keep on track with our 2-year completion plan. Alignment of the program with Toyota and ASE requirements will require additional equipment as well as new requirements for the maintenance of student records and instructor certification.

Outside Certifications for our students (ASE, Toyota and others) appear to increase the earning potential of the degrees and certificates offered by the program but to what degree is unknown. Offering those certificates may be an area we should focus on.

## CTE two-year review of labor market data and pre-requisite review

6. Does the program meet documented labor market demand?

The openings in the area are 46 per month. The program had 22 completions last year.

7. How does the program address needs that are not met by similar programs?

We are the only source for training at our level in the area. In addition, we see completers going in to many related fields such as agriculture, industrial mechanical repair and aerospace.

8. Does the employment, completion, and success data of students indicate program effectiveness and vitality? Please, explain.

We increase our students' earnings by +85% (median change in earnings between the second quarter prior to the beginning of the academic year of entry and the second quarter after the end of the academic year of exit from the last college attended)

9. Have recommendations from the previous report been addressed?

We continue to work through the roughly 30 recommendations from the 2016 Comprehensive Program Review.

## **Validation for Program Planning Process:**

10. Who have you identified to validate your findings? (Could include Guided Pathway Success Teams, Advisory Committee Members, related faculty, industry partners or higher education partners).

The Industrial Technology department has chosen to select a common Core Topic and to assist and review each other's findings and plans. In addition to the IT department, this planning document will be shared with the Auto Tech Advisory Committee.

In addition, I have submitted the Auto Tech 2023 Education and Industry Partnerships to the STEM Success Team for review and comment.

11. Are there specific recommendations regarding the core topic responses from the validation team?

Incorporate into all AT courses a component involving the Career Center and other support services including possibilities to transfer. This plan will involve the STEM Success Team.

Continue to work through institutional initiatives such as Guided Pathways and outreach efforts to expose non-traditional students and their support structures (families and counselors) to the opportunities in Auto Tech.

Finalize the details of the concurrent enrollment offering at LHS and work towards the goal of a concurrent enrollment offering at the SMJUHS CTE center. Track their instructors' progress in attainment of minimum qualifications or work with them to find another suitable arraignment.

Finalize the move from O300 including finding suitable times and spaces for the AT 100 sections and adding capacity in the form of equipment and infrastructure. This will require resource requests for labor assistance and equipment.

Stabilize and institutionalize the Toyota/AHC partnership by incorporating the program into our curriculum and seek resources to support the effort. The required Toyota and ASE program administration will require reassign time.

Seek other opportunities for outside student certification and the needed student support. If the privately owned Prometrics site does not return to Santa Maria, then we need to investigate setting one up or partnering with another institution to set up a local testing center.

Resource Requests include:

Automotive Technology Program and Student Support Services Integration \$ unknown

Non-traditional student outreach effort \$2380

Concurrent enrollment offering at the SMJUHS CTE center \$450

Auto Tech Move from O300 \$53467

## Area of Focus Discussion 2023 Automotive Technology EDUCATION AND INDUSTRY PARTNERSHIPS

**Education and Industry Partnerships** – review relationships with four-year institutions including preparation for transfer and changes in major requirements assess employment as well as review employment and the needs of employers and regional partners. Sample activities include the following:

## Possible topics:

- Review academic transfers and associate degree for transfer alignments.
- Review articulation agreements.
- Review C-ID (course identification system) modifications.
- Integrate advisory committee recommendations and regional training needs.
- Review career and technical education (CTE) labor market information and trends.
- Explore collaborations, internships and externships, and cooperative work experience opportunities.
- CTE unit completion goals in the Student-Centered Funding Formula and CCCCO Vision for Success.
- 1. What data were analyzed and what were the main conclusions?

The Automotive Technology programs' formal partnerships with regional educational institutions consist of concurrent enrollment offerings at 2 district high schools (San Ynez and Lompoc) and informal relationships with the Industrial Technology Department of Cal Poly, San Luis Obispo.

The AT Program has a formal relationship with Toyota Motor Sales, U.S.A., Inc. through the Technical Education College Support Elite (TECS) program. This consists of incorporating their outcomes, equipment and vehicles into our curriculum and the opportunity for our students to participate in paid internships at local dealerships. We also maintain relationships with nearly all of the automobile dealerships in the district and with many of the service dealerships (shops) through advisory committee.

In order to improve and expand those partnerships and relationships we looked at the following:

## Enrollment, course taking, success data analysis:

<u>Community College Pipeline data, South Central Coast</u>: AHC is the 3<sup>rd</sup> largest program for enrollment in this region, larger than SBCC, Cuesta or Oxnard with Ventura and College of the Canyons the only larger programs.

<u>Degrees and Awards</u>: This showed that we are averaging around 20 degrees and 15 certificates per year with a drop corresponding to the 2019-20 COVID disruption. Automotive Technology

awards were the highest number in the IT Department and is among the highest in any single major at AHC. The Auto Tech program has produced the 11<sup>th</sup> highest number of degrees in the 21/22 Academic year with the shortest time to completion of any of the programs with more degrees. That is out of 115 Degree and Certificates offered at AHC.

<u>Enrollments by Course</u>: This showed that the AT 100 course has the most single course enrollments, nearly double the next closest course. I was unable to disaggregate the impact of the addition of concurrent enrollment at San Ynez HS and so it is difficult to predict the impact of Lompoc HS concurrent enrollment will have, but currently (Spring 23) the concurrent enrollment represents 25% of the total in AT 100.

<u>Loss of O-300 building impact study by Patrick McGuire and Loren Bradbury</u>: It appears that we will lose the equivalent of 2 sections of AT 100 per semester. We will be able to offset some of that with the addition of AT100 being taught concurrently at Lompoc HS in 2024 but the amount of offset is unknown.

Analysis of Two semester offerings of AT 389 Special Projects/CWE for the TECs Elite program: Although roughly 15 students finished the Toyota training, there were less than 5 internships available between the local Toyota dealerships. Also, one of the conditions of the Toyota program was that we complete the Automotive Service Excellence (ASE) foundation program certification. In addition to equipment and facilities requirements, the maintenance of student records, curriculum requirements and instructor certification required for ASE certification will require additional resources.

## **Employment and Earnings Data Analysis:**

## Strong Workforce:

"Students with a Job Closely Related to Their Field of Study": For AHC Auto Tech the average was about 70% over the previous 5 years.

"Median Change in Earnings for SWP Exiting Students": This showed a +85% for the last sample (2019-20).

"Median Annual Earnings for SWP Exiting Students": This showed earnings of \$29,296 for 2019-20.

"Exiting Students Who Attained the Living Wage": This only showed 14% for 2019-20. One probable reason is that the living wage for SB County is around \$50,000. (https://livingwage.mit.edu/counties/06083)

One issue with this data set seems to be the aggregation of students. Many CTE majors show more transfers to 4-year institutions than attainment of certificates or AS degrees. Lightcast 2022 Occupational Overview for Automotive Service Technicians in SLO and Santa

Barbara Counties. This shows that the number in the occupation is lower than the national average (1394 for the area vs 1844 for the average area this size) but that pay is above average (\$51,028) with a lower than average number of postings (46 per month). This research also shows that our curriculum aligns well with the skills that are sought by employers: Brakes, Changing Oil Vehicle, Inspection, Hand Tools, Suspension, Transmission and Balancing were all specified in job advertisements in the area. This data set also shows that we are not alone in struggling with diversity issues. Only 1.5% of those employed in this field in this area are females.

<u>Indeed.com Survey</u> (https://www.indeed.com/certifications/view/automotive-service-excellence-ase-certification-324SZQ7T)

71% of job seekers said "help my career progression" was the biggest reason for earning their Automotive Service Excellence (ASE) Certification

73% said earning their Automotive Service Excellence (ASE) Certification helped them make more money

62% said earning their Automotive Service Excellence (ASE) Certification helped them get a job 89% said they would recommend a family member or friend earn their Automotive Service Excellence (ASE) Certification.

This data demonstrated the perceived relationship between earnings and ASE certification. Advisory Committee Minutes:

https://www.hancockcollege.edu/advisory/autotech/doclib/2022-04-

20%20Auto%20Tech%20Advisory%20Notes.pdf

The employers who participate in our Advisory Committee expressed satisfaction with the experience they have had with hiring our students. Because of the limited nature of this data, it is important to not assume this is the norm for employers.

<u>CTEO Survey Wages</u>: The data shows strong wage gains for our students, better than the average for the institution, with an average of nearly 40% increase.

<u>Cal Poly Industrial Technology Advisory Board;</u> A survey of Auto Tech students shows that 20% of graduates enter other trades or educational opportunities within 2 years of completion. (https://www.aseeducationfoundation.org/uploads/ASE-\_2021\_Career-

Survey\_Presentation.pptx ). We have maintained a relationship with the CP IT program with the goal of exposing students to the option of continuing their education to the bachelor's degree level. The activities included field trips to the CP campus and hosting the CP IT Department Chair here on campus. Working with the STEM Success team counselors Christine Reed and David Hernandez we were able to identify several students who are now working with counseling to meet the transfer requirements.

## Conclusions:

The program has weathered the COVID crisis well with a downturn in enrollments equal or less than the institution in general and without compromising the core outcomes of the program. We will have to offer at least the same number of sections of AT 100 we do now until we can expand the concurrent offerings in order to keep on track with our 2-year completion plan. Alignment of the program with Toyota and ASE requirements will require additional equipment as well as new requirements for the maintenance of student records and instructor certification.

Outside Certifications for our students (ASE, Toyota and others) appear to increase the earning potential of the degrees and certificates offered by the program but to what degree is unknown. Offering those certificates may be an area we should focus on.

We also need to acknowledge the fact that many of our students will leave the automotive career path and we should make certain that they see the best possible return on their investment of time by establishing pathways to alternative careers.

2. Based on the data analysis and looking through a lens of equity, what do you perceive as *challenges* with student success or access in your area of focus?

Based on the IT Pilot Survey results we need to continue to focus on exposing the students to the Career Center services, JobSpeaker, counseling, financial aid and all the extra-curricular services offered at AHC. This could be a result of the high percentage of first in the family college students, the perception that CTE students are not "real" college students or simply a failure to make them aware of the services. This likely results in poor outcomes in employment and earnings, but there is little direct data in that area. A part of this integration of our students into the college culture should include exposing them to opportunities for transfer.

We still struggle to attract non-traditional students, namely females. The <u>Lightcast 2022</u> <u>Occupational Overview for Automotive Service Technicians in SLO and Santa Barbara Counties shows</u> that only 1.5% of those employed in this field in this area are females. This issue is something that is not unique to AHC or even this CTE major. After analysis and experience with various outreach efforts, it is apparent that societal influences are very difficult to overcome.

The Santa Maria, Pioneer Valley and Righetti students can be served by offering concurrent AT 100 at the new CTE center. We have had conversations with the director and with the instructor, but the instructor is a minimum of 3 semesters from meeting the minimum qualifications to teach at AHC. This means the majority of the districts' high school students do not have access to the AT 100 course until they come to AHC.

Although we have yet to see the impact, it is apparent that the loss of the O300 space will be the biggest challenge to the students and program. We are already being forced to reduce the AT 100 capacity by 20 students and some of the lab capacity will be in outdoor areas. In addition, the lack of clarity of process continues to consume a large amount of time and energy of the staff and faculty.

The students completing the TECS Elite program need to be given the opportunities to complete the entire program including the internships.

Outside certification opportunities during student progression is difficult for our students due to the cost of taking the tests and for travel with the nearest Prometrics testing center being 150-mile round trip.

3. What are your plans for change or *innovation*?

Incorporate into all AT courses a component involving the Career Center and other support services including possibilities to transfer. This plan will involve the STEM Success Team.

Continue to work through institutional initiatives such as Guided Pathways and outreach efforts to expose non-traditional students and their support structures (families and counselors) to the opportunities in Auto Tech.

Finalize the details of the concurrent enrollment offering at LHS and work towards the goal of a concurrent enrollment offering at the SMJUHS CTE center. Track their instructors' progress in attainment of minimum qualifications or work with them to find another suitable arraignment.

Finalize the move from O300 including finding suitable times and spaces for the AT 100 sections and adding capacity in the form of equipment and infrastructure. This will require resource requests for labor assistance and equipment.

Stabilize and institutionalize the Toyota/AHC partnership by incorporating the program into our curriculum and seek resources to support the effort. The required Toyota and ASE program administration will require reassign time.

Seek other opportunities for outside student certification and the needed student support. If the privately owned Prometrics site does not return to Santa Maria, then we need to investigate setting one up or partnering with another institution to set up a local testing center.

4. How will you *measure* the results of your plans to determine if they are successful? Increasing enrollment trend line meeting or exceeding population growth of the district.

Increase in employment of our graduates in "Closely Related to Their Field of Study" to meet or exceed the state average for CTE Strong Workforce students.

To increase the percentage of exiting students who attained the regions living wage.

Increase the participation of non-traditional students in our program.

Maintain the enrollment numbers in our program.

Continuation and expansion of the Toyota involvement in the program.

Based on the narratives for the prompts above, what are some program planning initiatives and resources needed for the upcoming years? Use the tables below to fill in **NEW** resources and planning initiatives. *This section is only used if there are new planning initiatives and resources requested.* 

## Example:

	Definition	Sample
Mission	The values and philosophy of	The mission of the English program is to develop
	the program, a vision of what	students' reading and writing skills by providing
	the program is supposed to	opportunities for critical thinking, research, and
	do.	analysis. Moreover, the program affirms its promotion
		of equity and diversity among the community by

		providing opportunities and outreach to eradicate illiteracy.
Goals	The general aims or purposes of the program and its curriculum. Effective goals are broadly stated, meaningful, achievable and can lead to assessable outcomes.	Increase literacy and writing competency within the students and college community.
Program planning initiatives	Program planning initiatives are specific activities that a program would need to complete in order to achieve goals and mission.	Develop community literacy program for historically underrepresented populations.
Actions/ Resource Request	These are the specific actions/resources needed to complete a planning initiative.	Gather volunteers from students and teachers to tutor at community center. Budget: \$500 for supplies.

The tables below are to create objectives/planning initiatives that come from the discussion and narrative above.

## Sample:

New Program Planning Initiative	
Title:	(Short description of the planning initiative) Telescope night
Planning years:	(The academic years this will take to complete) 2021-22 to 2024-25

## **Description:**

(A more detailed version of initiative. Please include a description of the initiative, why it is needed, who will be responsible, and actions that need to happen, so it is completed.)

The success levels of our courses have indicated that students need to have a hands-on experience with finding and pinpointing important celestial objects. Having a telescope night would allow students to learn how to align and find objects.

**Resources:** 

Priority Level: Low Medium High

**Resource Type: Equipment** Staff Faculty Supplies and Materials

Quantity: 1

Per Item Price: \$69.99 Price with taxes/shipping, etc.: \$76.00

**Description:** 

Telescopes for students to use during the telescope nights. It is a 70mm telescopes for Adults Astronomy & Kids & Beginners, 300mm Portable Refractor Travel Telescope (15X-150X) with A Smartphone Adapter A Wireless Remote

https://www.amazon.com/ToyerBee-Telescope-Telescopes-Professional-

Smartphone/dp/B095XQVTNM/ref=sr 1 4?crid=256FVSAQ5EU0P&keywords=telescope&qid=166794 4660&sprefix=telescop%2Caps%2C160&sr=8-4&ufe=app do%3Aamzn1.fos.18ed3cb5-28d5-4975-8bc7-93deae8f9840

New Program Planning Initiative		
Title:	Automotive Technology Program and Student Support Services Integration	
Planning years:	2023/24	

## **Description:**

Working with Student Services and the STEM Success Team, identify and incorporate into the Automotive Technology Program, the most effective student support activities. These may include Counselors presenting to each class each semester and following up with each student on their Educational Plan and Resume.

**Resources:** 

Priority Level: Medium

**Resource Type:** Staff, Faculty, Supplies and Materials

**Quantity:** Unknown

Per Item Price: Price with taxes/shipping, etc.:

**Description:** 

Counseling/student services reassign time may be required and outreach materials be needed

New Program Planning Initiative		
Title:	Non-traditional student outreach effort	
Planning years:	2023/24	

## **Description:**

Identification of and outreach to groups of non-traditional students. This will involve the STEM Success Team and AHC and district High School and possibly Jr. High counselors to develop outreach materials, possibly seminars or workshops and follow up.

### **Resources:**

Priority Level: Medium

Resource Type: Staff and Faculty stipend

Quantity: 20

Per Item Price: \$50/hour Price with taxes/shipping, etc.: \$1500

**Description:** Develop and teach "Introduction to Auto Tech" workshop for HS and AHC non-traditional

students.

1-day workshop to teach basic vehicle maintenance and familiarity with the tools involved and auto

shop.

#### Resources:

Priority Level: Low

**Resource Type:** Supplies and Materials

Quantity: 20

Per Item Price: \$40 Price with taxes/shipping, etc: \$880

Description: Personal protective equipment for participants: Safety glasses

https://www.harborfreight.com/safety/vision-protection/safety-glasses/premium-safety-glasses-

57503.html Safety gloves:

https://www.harborfreight.com/general-purpose-synthetic-leather-utility-gloves-large-2-pair-

58734.html

New Program Planning Initiative		
Title:	Concurrent enrollment offering at the SMJUHS CTE center	
Planning years:	2024/2025	

**Description:** Establish and support Concurrent Enrollment classes at Santa Maria Joint Union High School Districts Career and Technical Education Center by assisting the existing faculty to meet the minimum qualifications to teach our courses or by finding another option.

**Resources:** 

Priority Level: Low Resource Type: Faculty Quantity: 3 hours/semester

Per Item Price: \$150 Price with taxes/shipping, etc: \$450

Description: Work with counseling faculty to ensure the SMJUHS has faculty in place to teach AT

concurrent enrollment.

New Program Planning Initiative		
Title:	Auto Tech Move from O300	
Planning years:	2022/23	

### **Description:**

The loss of O300 teaching space will change the program dramatically. The additional 8 to 10 sections that will now need to be housed in O200 with require additional equipment (lifts, work benches, demonstration units) as well as changes to the facility (teaching both Fundamentals and Transmissions in the dedicated transmission lab). In addition, the turnaround of the labs with no slack time will require more lab assistance and improved organization and storage.

## **Resources:**

**Priority Level:** High

**Resource Type:** Equipment

Quantity: 2

Per Item Price: \$12500 Price with taxes/shipping, etc: \$25000

**Description:** 2 14000 lbs 4 post lifts to replace the 5 lifts in O300.

Quotes have been obtained.

Quote 686105-00.pdf

Resources:

Priority Level: High

**Resource Type:** Equipment Staff Faculty Supplies and Materials

Quantity: 4 mobile work benches

Per Item Price: \$980 Price with taxes/shipping, etc.: \$4217.60

**Description:** We will have to conduct some lab work in the south outdoor covered area. These

benches will allow work to be done in that area.

https://www.autobodytoolmart.com/product/ranger-heavy-duty-teardown-work-bench-fluid-catch-

rwb-1td

**Resources:** 

**Priority Level:** High

**Resource Type:** Staff Labor – Lab assistant and student worker(s)

**Quantity: 50 hours** 

Per Item Price: Average \$35/hour Price with taxes/shipping, etc.: \$1750

**Description:** The large amount of equipment to sort and move as well as the amount of cleanup and

organizing of O200 that needs to happen will require many extra hours by faculty and staff.

**Resources:** 

Priority Level: High

Resource Type: Storage and organization Tubs/Bins

Quantity: 25

Per Item Price: Average \$25 Price with taxes/shipping, etc.: \$1500

Description: The large amount of tools and materials will need to be stored in an organized manner to

maximize the space.

**Resources:** 

Priority Level: High

**Resource Type:** Storage racks

**Quantity: 8** 

Per Item Price: Average \$750 Price with taxes/shipping, etc.: \$6000

Description: The large amount of tools and materials will need to be stored in an organized manner to

maximize the space.

**Resources:** 

Priority Level: High

**Resource Type:** Outside contractor

Quantity:

Per Item Price: Price with taxes/shipping, etc.: \$15000

Description: We will need to hire outside contractors to install and anchor the pallet racks and

stationary tool storage as well as moving the 20' shipping container.

New Program Planning Initiative		
Title:	Auto Tech Coordinator Position	
Planning years:	2022/23	

## **Description:**

The numerous improvement initiatives that the program has taken on have reached a point where we need to assign these responsibilities to one Faculty.

**Resources:** 

Priority Level: High Resource Type: Faculty Quantity: .3 FTF Load

**Description:** The Program Coordinator position for Automotive Technology is required in order to coordinate all of requirements of the Toyota TECS Elite, the ASE Certification and all of the other

various institutional and program initiatives we are involved in.

New Program Planning Initiative		
Title:	Increase Outside Certification Opportunities for ASE Students	
Planning years:	2022/23	

#### **Description:**

The numerous improvement initiatives that the program has taken on have reached a point where we need to assign these responsibilities to one Faculty.

**Resources:** 

Priority Level: High Resource Type: Staff Quantity: 20 hours

Per Item Price: \$50/Hour Price with taxes/shipping, etc.: \$1000

**Description:** Investigate and identify the needed resources to bring back the Prometrics Testing center to Santa Maria or work towards partnering with other entities to establish a local testing center. In addition, we should identify other certification opportunities and work to eliminate

student barriers to obtaining those certifications.

## Program Review Signature Page:

Patrick Mcguire (Apr 29, 2023 17:16 PDT)	Apr 29, 2023
Program Review Lead	Date
Thomas Lamica Thomas Lamica (May 1, 2023 07:22 PDT)	May 1, 2023
Program Dean	Date
3/2	May 9, 2023
Vice President Academic Affairs	 Date