1. Program Description

The Leeward Community College Automotive Technology Program is a 2-year National Institute for Automotive Service Excellence Education Foundation (ASEEF) Master Automobile Service Technology Accredited training program. ASEEF is formerly known as the National Automotive Technician Education Foundation (NATEF). The mission of the program is: (1) to prepare students with the skills and competencies necessary for a successful career as an automotive technician; (2) to instill in students the work habits and attitude to work in a highly competitive field; and (3) to provide the students with the basic skills necessary to become lifelong learners in order to keep abreast of the latest technological changes in the automotive field.

PSLOs:

1. Demonstrate the professional skills and knowledge required in the automotive industry.
2. Apply safety procedures required in shop practices.
3. Employ principles necessary for practical applications within the automotive industry.

2. Analysis of the Program

Demand Indicators: HEALTHY

Demand Indicators remain Healthy as it has been for the past two years.

The number of new and replacement positions for both State and County have remained constant. However, our number of majors has increased ten percent (99 to 109), which may indicate some progress in our recruitment efforts. The increase may also be indicative of an increase in the number of students who are majors, but have not completed all degree requirements as Line 7, FTE enrollment, has decreased by five percent (59-56), however, this decrease may be better explained by the decrease in classes offered, Line 8 (31-27). This decrease is a cyclic variation caused by the 11 month Ford ASSET class schedule.
Efficiency Indicators: HEALTHY

Efficiency Indicators remain Healthy as has been for the past two years.

Fill rate, Line 10 has decreased slightly by three percentage points. The program has been experiencing a steady intake of unprepared or otherwise challenged students. Although all instructors are deeply dedicated to student success, these students are often in life situations that interfere with their abilities to complete their work or to attend classes as needed for success. Some enroll into the Program unaware of the demands of the courses and seek something more suited to their comfortable effort level. Regardless, everyone does all they can to help these students succeed but if this industry is not in their interest, then it’s best they move on to something that suits them.

Line 12 correlates well with the increase in the number of student majors.

Line 16, Low-enrolled classes increased due to a significant drop in the enrollment of the Ford ASSET classes. This has been corrected with a near capacity enrollment intake of the new and current cohort of students.

Effectiveness Indicators: CAUTIONARY

Effectiveness Indicators continue to remain cautionary as has been for the past two years.

Line 20, the number of certificates and degrees awarded decreased by almost fifteen percent (63-54). This “Unhealthy” indicator may have been caused by a combination of students not completing their general education requirements requiring an extra semester toward graduation and Ford ASSET students graduating after data cutoff. The alarming figures are Lines 20a, Degrees Awarded which decreased by thirty seven percent (30-19), and 20b, CAs awarded which increased by thirty six percent (22-30). The Program’s recruitment efforts and the possibilities of Early College partnerships may help to increase this indicator to “Healthy” in the future, however, it will not be able to sustain increases of five percent per year without major improvements to Program and facility capabilities.

The Program persistence rates, Lines 19 and 19a have increased substantially which is puzzling considering the decreases in enrollment, Line 7, and fill rate, Line 10. Regardless, Line 19, Fall to Spring persistence at seventy two percent is near “Healthy” and very encouraging.
Perkins Indicators

Perkins Indicators, Line 29 has decreased to 85.71 percent from 92.98 percent for the previous year and a resulting “Not Met” performance level. Line 31 has also decreased to 80.95 percent from 83.08 percent the previous year also resulting in a “Not Met” performance level. These decreases may have been the result of the students leaving the program who were unprepared or unsuited for the demands of the courses. We are not able or allowed to screen the incoming students for industry suitability and so cannot predict or consistently succeed in these areas.

Indicators, Line 33 Nontraditional Participation and Line 34 Nontraditional Completion had increased commendably from 5.98 percent to 10.58 percent for participators and 7.35 percent to 10.91 percent for completers. These successes indicate that the recruitment efforts of our dealership employed, nontraditional gender Peer Mentor and our new Outreach and Student Support Specialist (formerly our Retention Specialist) are making headway. The goal of twenty three percent nontraditional students may be somewhat unreasonable considering the history and current state of the industry, but our recruitment efforts will continue to be increased in attempt to meet this goal. This was also reflected in the previous action plan.

3. Program Student Learning Outcomes

a) List of the Program Student Learning Outcomes

PSLOs:

4. Demonstrate the professional skills and knowledge required in the automotive industry.
5. Apply safety procedures required in shop practices.
6. Employ principles necessary for practical applications within the automotive industry.

b) Program Student Learning Outcomes that have been assessed in the year of the Annual Review of Program Data.

As stated in prior years, the concepts of our SLOs and PSLOs are constantly taught, monitored and assessed by our strict adherence to the standards of our ASEEF accreditation requirements. In addition to the numerous operational tasks that must be completed, the constant demonstration of professional soft skills by the students are also required and are critically monitored as part of grading requirements.

c) Assessment Results
As we do not screen our program students prior to enrollment and some may lack sufficient preparation, maturity, aptitude and talent level required, 100 percent task completion will not be consistently attainable, however it will always be intended. Regarding the SLO and PSLO soft skills, all continuing students have been successful at adhering to the ASEEF guidelines.

d) Changes that have been made as a result of the assessments.

No changes have been made. The Automotive Program continues to meet all requirements and expectations of ASEEF. In addition, the Program Advisory Committee, which is comprised of industry partners that employ our students, will apprise us when new employees do not meet their expected level of professional skill or behavior.

4. Action Plan

The Automotive Program will continue to seek improvements in student recruitment, facilities and equipment supporting high-quality education and training as stated in College Mission and as required by our ASEEF accreditation.

Two years ago, the Program met with administration and began drafting a plan to modernize the facilities and increase Program capabilities. Industry demand for employees outweigh our rate of graduation by a factor of ten and there is little that can be done to increase the number of graduates without increasing the capabilities of the Program. Some items discussed and suggested were the updating and addition of new shop space and classrooms and a new arrangement of parking and storing the many practice vehicles the program uses. It is disappointing to see that the “Automotive Modernization Project” may be just a pipe dream as it does not appear on the Leeward CC list of Capital Improvement Projects going ten years forward. The Program Advisory Committee has stated concern about the future of the industry as all large employers have numerous vacancies that go unfilled and an increase in the number of employable graduates is needed. In addition, Automotive related industries have asked that we explore any opportunity to provide program improvements that assist their industry needs. These industries include heavy equipment and diesel and motorcycle repair. We currently have no room to expand and so are of no assistance to them. We will continue discussion with our industry partners to explore their needs with greater efforts in the brainstorming of solutions.

In effort to increase student enrollment, the Automotive Program began an Early College Partnership with James Campbell High School this past fall. However, the conflicts of teacher duty periods and student activities resulted in low enrollment and Campbell HS
has cancelled the Spring session of AMT 100. There is conversation ongoing with Castle High School and also Waianae and Waipahu High Schools involving Early College partnerships but applying course schedules in ways that avoid the challenges that caused Campbell to not succeed.

In addressing Perkins Indicators 5P1 and 5P2 concerning the number of non-traditional students and completers, the Program will continue to increase efforts to recruit female students. This is quite a daunting task as the disfavor of Automobile repair is an attitude toward the industry and not necessarily one toward the Program. We will increase our efforts with the creation of additional entertaining and non-gender directed activities to be utilized at recruitment functions and the Program will also look into recruitment efforts being directed to students of local all-girl schools. The Program’s female industry employed Peer Mentor and new Outreach and Student Support Coordinator will also be accompanying these visits and can provide a more gender-neutral view into the industry.

Other action plan items from the previous year, with the exception of the Early College initiative with Campbell High School, have not yet been initiated but are expected to be soon and will be commented on in the upcoming ARPD and CRE due next year.

5. Resource Implications

The program will again be submitting resource requests for the following items as in years past:

The costs for equipment repair, tools and supplies are always rising. We have seen a significant increase in the cost of equipment repair recently. We continue to make do with what we have, but are now having to make do with less, given these cost increases. Our Program will be undergoing reaccreditation next year and ample program finances are an item of scrutiny demonstrating administrative and college support. The AMT Program requests an increase of $7000 to the annual supply budget to better meet these increased costs and also begin updating tool inventory to the new required standards before ASEEF reaccreditation inspection in Fall 2020. The Dean of Career & Technical Education has contributed this amount to the Program for 2019-2020, however it should be an ongoing supplement not taken or contributed from another account.

Currently, the AMT 129 Engine Repair class performs cylinder bore machining operations with forty-year-old equipment. Modern engines require much more precision in this operation and can only be accomplished with newer designed, dedicated machinery as used in modern industry machine shops. Cost of a modern replacement is approximately $65,000.

A recommendation from the program’s last ASEEF reaccreditation inspection not yet addressed is that of not having emergency electrical cut-off switches for the vehicle hoists
in each shop. The circuit breakers for the high voltage circuits of the hoists are in storage rooms in the modules and too remote to be quickly accessed in the event an immediate shutoff is needed. It was recommended that easily reachable and accessible safety switches be installed in all shops for each circuit powering the hoists. Estimated cost for contractor is $25,000.

The plastic, portable eyewash stations located in each shop were purchased in year 2000 and neither designed nor intended to be a permanent safety installation. The purchase was for the intention of meeting the immediate safety requirements of ASEEF and OSHA. The best solution for the nineteen-year-old stations is the installation of plumbed, permanently mounted eyewash stations which are cleaner, safer and always available. In addition, emergency showers can be installed over head to them, minimizing the need for additional plumbing work in those installations. The existing emergency showers are original to the buildings, almost forty years ago, and currently exist over and adjacent to high voltage electrical outlets. The need for replacement is immediate, ludicrous in location, possibly illegal and obviously not to current building codes. Conversion to permanent eyewash stations with overhead emergency showers is estimated to cost $12,000.

We continue to request the replacement of the aging and very noisy (90db in classroom) shop air compressor located adjacent to Module 4. The instructor and students have difficulty communicating in class whenever the compressor is running, and the high noise levels are a health concern. Vendor recommends that all air lines and plumbing be replaced also because of age related deterioration. Energy savings with compressors of modern, efficient technology and engineering will not be realized unless the air lines are replaced. Estimated cost of the compressor is $26,000. Cost of plumbing replacement is not determined as a structural engineer must be retained for assessment and estimate.

Additional shop air, water and electrical concerns are the retractable reels that spool air and water hoses and electrical extension cords from the ceilings of the shops and labs. All of these fixtures are original to the building, almost forty years old, and are not functioning properly. All either leak or do not hold position when hose or cord is extended necessitating the need to wrap or otherwise lock the hose or cord in something to hold it from retracting with the extended length becoming a trip hazard. Replacement of all shop and lab hose and electrical reels, 134 in total is approximately $30,000 for the reels alone. Labor can be done by our maintenance department with rented man-lift. Contractor installation has not been determined.

New resource requests will include:

The modifications to the AMT 241, Electrical/Electronic II course now allow additional time for more work involving on-vehicle electronic diagnostics. WiFi capabilities have also recently been improved throughout the shop facilities. To utilize these improvements, 12 additional scan tools with oscilloscope and web capability to be used concurrently with the
AMT 245 Engine Performance course at an approximate cost of $90,000, will allow students access to trouble code diagnostics, live vehicle data, electrical waveform analyses and repair and diagnostic information at the vehicle. The additional units will help alleviate the lack in current resources serving these needs of both classes. There are currently only four units being shared between the thirty students. A possible alternative would be laptops used in conjunction with available software and add-on hardware that will provide the same capabilities. This arrangement is used for many diagnostic procedures and training activities in automotive dealerships, however, there would be no cost advantage to this option.

Currently, the PAT Division utilizes a Perkins funded, Outreach and Student Support Coordinator. This position greatly enhances our capabilities in Program and Division recruitment efforts and will provide increased enrollment in the future. The person in this position had increased recruitment activities prior to being granted this new position and has helped the number of Automotive majors increase ten percent over last year. The Outreach and Student Support Coordinator should be made a permanent APT position and will be requested in the upcoming personnel request also.