Kaua`i Community College
Annual Program Review Update for
Automotive Mechanics Technology Program

Program Description

The Automotive Mechanics Technology program is a competency-based program built on the standards specified by the National Automotive Technicians Education Foundation (NATEF). Students who successfully complete the Associate in Applied Science degree will have received training in all eight NATEF areas: Automatic Transmission/Transaxle, Brakes, Electrical/Electronics Systems, Engine Performance, Engine Repair, Heating and Air Conditioning, Manual Drive Train and Axles, and Suspension and Steering.

The Automotive Mechanics Technology program courses are clustered into certificates. Each certificate provides a set of marketable workplace skills. This two-year degree program begins every fall.

This program is articulated with other UH Community College Automotive programs. Students enroll in all the Automotive Mechanics Technology program courses offered each semester in order to earn the desired certificate or degree in the shortest time possible. Students are strongly encouraged to consult with an academic advisor to help them plan the best path for reaching their academic goals.

Students are able to earn Certificates of Completion in their first and second semesters. Certificates of Achievement or an Associate in Applied Science degree is earned at the completion of the 2-year program.

A revampment of the program was undertaken in 2000. The major changes were: Twenty percent increase in lab time per course; classes went from semester length to modular, and students could now earn a Certificate of Completion in their first and second semesters. Changes were implemented as recommended by the Automotive Advisory Committee.

The course Student Learning Outcomes (SLOs) aligns with the automotive Program Student Learning Outcomes (PLOs), which also aligns with Kaua‘i Community College’s ISLO's. Kauai Community College's Mission Statement is of open access, serving the community and beyond education and training in a caring, student-focused, and intellectually stimulating environment that contributes to the development of life-long learners.

AMT faculty provide students a caring environment of intellectual stimulation that challenges them to be life-long learners. The many facets of the auto repair industry and the challenges associated with them leads to a personally fulfilling life.

To assure that students succeed in achieving their goal of attaining an AAS Degree in the Automotive Mechanics Technology program, a maximum of 25 contact hours per week in

automotive courses is prescribed for a 2-year course of study. This does not include the 22 additional credits taken in General Education courses. This would increase their average student contact hours an additional 5 hours per week, for a total of 30 contact hours per week. The AMT program classes are modular. AMT vocational instructors teach (by contract) a maximum of 25 contact hours per week.

AMT students have classes ranging from 5 days a week, 4 hours plus 24 minutes per day (4.6 hrs/day) minimum to 5 days a week, 5 hours and 10 minutes per day (5.2 hrs/day) depending on the semester. First year students attend classes 4 days a week, Monday through Friday, approximately 6 hours per day.

This relatively large load is common in Career Technical Education (CTE) programs.

Program Mission Statement: The Automotive Mechanics Technology (AMT) program at Kaua‘i CC provides open access, post-secondary education to qualified students. Students and technicians of the auto repair industry develop and massage their minds to think critically as a necessity of the diagnosis, repair, and maintenance of today’s hi-tech vehicles.

Part I. Quantitative Indicators

Overall Program Health: Healthy

Majors Included: AMT Program CIP: 47.0617

Demand Indicators		Program Year			Demand Health Call
		14-15	15-16	16-17	
1	New & Replacement Positions (State)	197	167	149	Healthy
2	*New & Replacement Positions (County Prorated)	16	10	9	
3	Number of Majors	40	36	32	
3a	Number of Majors Native Hawaiian	16	18	18	
3b	Fall Full-Time	65%	68%	62%	
3c	Fall Part-Time	35%	33%	38%	
3d	Fall Part-Time who are Full-Time in System	0%	0%	0%	
3e	Spring Full-Time	68%	68%	70%	
3f	Spring Part-Time	32%	32%	30%	
3g	Spring Part-Time who are Full-Time in System	0%	0%	0%	
4	SSH Program Majors in Program Classes	635	650	561	
5	SSH Non-Majors in Program Classes	36	129	6	
6	SSH in All Program Classes	671	779	567	
7	FTE Enrollment in Program Classes	22	26	19	
8	Total Number of Classes Taught	17	17	19	

Efficiency Indicators		Program Year			Efficiency Health Call
		14-15	15-16	16-17	
9	Average Class Size	11.1	12.9	8.8	Healthy
10	*Fill Rate	79.4%	92.4%	62.7%	
11	FTE BOR Appointed Faculty	2	2	2	
12	*Majors to FTE BOR Appointed Faculty	20	17.7	16	
13	Majors to Analytic FTE Faculty	18	16.0	13.5	
13a	Analytic FTE Faculty	2.2	2.2	2.4	
14	Overall Program Budget Allocation	$349,859	$257,871	Not Yet Reported	
14a	General Funded Budget Allocation	$214,394	$222,233	Not Yet Reported	
14b	Special/Federal Budget Allocation	$109,003	$0	Not Yet Reported	
14c	Tuition and Fees	$26,462	$35,638	Not Yet Reported	
15	Cost per SSH	$521	$331	Not Yet Reported	
16	Number of Low-Enrolled (<10) Classes	7	3	13	
***Data element used in health call calculation**				**Last Updated: October 29, 2017**	

Effectiveness Indicators		Program Year			Effectiveness Health Call
		14-15	15-16	16-17	
17	Successful Completion (Equivalent C or Higher)	94%	92%	85%	Healthy
18	Withdrawals (Grade = W)	3	0	10	
19	*Persistence Fall to Spring	67.3%	72.5%	64.8%	
19a	Persistence Fall to Fall	52.2%	47.3%	32.3%	
20	*Unduplicated Degrees/Certificates Awarded	25	23	19	
20a	Degrees Awarded	2	6	3	
20b	Certificates of Achievement Awarded	3	11	39	
20c	Advanced Professional Certificates Awarded	0	0	0	
20d	Other Certificates Awarded	36	43	51	
21	External Licensing Exams Passed	Not Reported	Not Reported	N/A	
22	Transfers to UH 4-yr	1	0	0	
22a	Transfers with credential from program	1	0	0	

22b	Transfers without credential from program	0	0	0	

	Distance Education: Completely On-line Classes	Program Year 14-15	15-16	16-17
23	Number of Distance Education Classes Taught	0	0	0
24	Enrollments Distance Education Classes	N/A	N/A	N/A
25	Fill Rate	N/A	N/A	N/A
26	Successful Completion (Equivalent C or Higher)	N/A	N/A	N/A
27	Withdrawals (Grade = W)	N/A	N/A	N/A
28	Persistence (Fall to Spring Not Limited to Distance Education)	N/A	N/A	N/A

	Perkins IV Core Indicators 2015-2016	Goal	Actual	Met	
29	1P1 Technical Skills Attainment	92.00	90.91	Not Met	
30	2P1 Completion	51.00	36.36	Not Met	
31	3P1 Student Retention or Transfer	81.00	72.73	Not Met	
32	4P1 Student Placement	63.87	66.67	Met	
33	5P1 Nontraditional Participation	22.00	8.11	Not Met	
34	5P2 Nontraditional Completion	22.00	0.00	Not Met	

	Performance Measures	Program Year 14-15	15-16	16-17
35	Number of Degrees and Certificates	5	17	42
36	Number of Degrees and Certificates Native Hawaiian	3	8	18
37	Number of Degrees and Certificates STEM	Not STEM	Not STEM	Not STEM
38	Number of Pell Recipients[1]	20	20	21
39	Number of Transfers to UH 4-yr	1	0	0

***Data element used in health call calculation**	**Last Updated: October 29, 2017**
[1]PY 16-17; Pell recipients graduates not majors	

Part II. Analysis of the Program

The Health (Overall Program Healthy) has changed to HEALTHY from Cautionary in 2016. The number of New and Replacement Positions has decreased by 10%; 10 in 2015-2016 to 9 in 2016-2017. The "Efficiency" and "Effectiveness" indicators remain good at the "HEALTHY" level.

The Overall Program Health Demand Indicator has a HEALTHY rating. With the exception of Automotive, majority of the Voc Tech programs have an indicator of Cautionary due to the method of calculation. This method of calculation is not indicative of Demand of jobs. We have consistently explained this over the past years of this APRU process.

Until another method of calculation is devised, this outcome will most likely not change.

Regarding Perkins IV Core Indicators, all AMT programs in the UH CC system do not meet several of these indicators. The Non-Traditional aspect of students in the AMT arena is a very low percentage nationwide. Until women view the auto tech career as appealing and physically attainable, we predict this trend to remain status quo.

The last CPR (Comprehensive Program Review) for the AMT program was in 2013. The AMT program is externally accredited by NATEF. Automotive Programs certified by NATEF go through a re-certification process every 5 years. The process includes a very comprehensive self-evaluation and on-site evaluation by a NATEF Evaluation team. The AMT program is presently completing the self-eval, the NATEF Team will be on campus in Spring 2018. To remain compliant with NATEF and industry standards, aged/inoperable equipment were identified during the self-evaluation. Equipment (wheel alignment machine, wheel balancer, "smart" diagnostic scanner, "smart" board)) are needed to ensure students meet the required training in accordance to NATEF tasks.

Part III. Goals, Alignment and Action Plan

2016-2021 Strategic Goals

(2016-2017 Priority Goals are underlined)

The AMT program's next 5-year CPR will be completed in the Spring of 2018.

The recommendations of NATEF in 2015-2016 were as follows:

NATEF's Standards	**Person responsible**	**Status**
Std. 1.1A **Develop formal Annual Employment Survey**	TT Counselor, Institutional Researcher, Program Coordinator	In process
Std. 5.5A-E **Develop survey to determine student employment (after graduation).**	TT Counselor, Institutional Researcher, Program Coordinator	In process
Std. 7.2	APT, Fiscal Officer	On going

Purge old tools and equipment not being used.		
Std. 8.1 **Rearrange shop work areas and tables to improve work flow.**	AMT APT	On going
Std. 8.4 **Clean up/organize recycling area.**	AMT APT	On going
Std. 8.7 **Organize tool room** **Maintain tool inventory**	AMT APT and VCAS	On going
Std. 8.8 **Covered study area adjacent to lab**	VCAS	Researching funding and cost
Std. 9.3B **Continue with industry update training and professional development**	Administration	On going

Goal Alignment UH System Goals, Kauai Community College Goals, and Strategic Goals	**Program Goals**
UHCC/KCC Initiative: Hawaii Graduation Initiative	
Strategic Goal 1: Increase the Number of Graduates	1. Develop "LEAVER SURVEY" of

	AMT students (Trade Tech Counselor/I.R. person) 2. Identify the "reasons" for students leaving. 3. Develop plans according to survey results. 4. Provide academic advising and support to students to help them stay on track.
Strategic Goal 2: Increase the Number of Native Hawaiian Graduates	1. Have AMT APT attend Wai'ale'ale orientation/campus events to develop relationships with NH students and market the AMT program. 2. Continue to improve interactions with Wai'ale'ale counselor during semester's student reporting of "student progress report".
Strategic Goal 3: Increase the Number of Low Income Student Graduates	1. Work with on-campus programs that look to recruit and retain this student demographic.
Strategic Goal 4: Increase the Number of Students Who Transfer	N/A
Strategic Goal 5: Eliminate Access and Success Gaps	1. Actively engage students to attend classes and provide extra support where needed.
Strategic Goal 6: Reduce the Time to Degree: Accelerate College Readiness	1. Schedule courses effectively to increase degree attainment.
Strategic Goal 7: Reduce the Time to Degree: Increase Student Retention and Credit Accumulation	1. Schedule courses effectively to increase degree attainment.
UHCC/KCC Initiative: Hawaii Innovation Initiative	

Strategic Goal 8: Increase Job Placement for KauaiCC Students	1. Work with AMT Advisory Committee and other community Professional networks to establish employment pipelines. 2. Communicate with on-campus career development and placement center to disseminate employment information to students.
Strategic Goal 9: Increase the STEM Workforce	N/A
Strategic Goal 10: Increase Lifelong Learning and Professional Development Opportunities for community members	1. Work with OCET department to develop and provide courses and workshops to meet industry, personal, and professional development needs for the community.
UHCC/KCC Initiative: Modern Teaching and Learning Environment	
Strategic Goal 11: Increase Campus and Community Sustainability	1. Research/develop new methods of shop waste disposal. 2. Promote alternative energy with hybrid/electric vehicles.
Strategic Goal 12: Strengthen Distance Education Offerings	N/A
Strategic Goal 13: Enhance Facilities with Appropriate Technology and Ensure Facilities Support 21st Century Learning and Teaching Environments	1. See Part III Action Plan and Part IV Resource Implications.
UHCC/KCC Initiative: High Performance Mission-Driven System	
Strategic Goal 14: Reduce the Cost of Education for Students	1. Revisit the old tuition payments of students paying for 12 credits only!

	2. The AMT Program has started using "CDX", which is an online textbook and job sheets (NATEF TASK). This represents a savings of approximately 88%. Students were spending approximately $220 per ASE area (eight textbooks/task books). Students now spend approximately a total of $200 for an on-line equivalent (i.e. $1,760 vs $200).
Strategic Goal 15: Implement Hawai'i Papa O Ke Ao	1. Incorporate Hawaiian Cultural Values in philosophy of doing auto repair business.
Strategic Goal 16: Increase Opportunities for and Participation in Professional Development	1. Research possible student attendance of equipment manufacturer's trade-show (SEMA).
UHCC/KCC Initiative: Enrollment	
Strategic Goal 17: Increase Recent High School Graduates Enrollment	1. Implement different placement test scores for non-degree majors. 2. Offer AMT 20 as part of Early College Program at the high schools. 3. Attend College and Career Day events at various campuses. 4. Make presentations to educational groups such as Keiki to Career to the AMT Program.
Strategic Goal 18: Increase Pacific Islander Enrollment	1. Actively work with Kauai Native Hawaiian Chamber of Commerce to recruit NH students.
Strategic Goal 19: Increase High School Non-Completers and GED Recipient Enrollment	1. Eliminate requirements to place into college level Math and English level courses for non-degree majors.

Strategic Goal 20: Increase Enrollment of Working Adults	1. Develop PLA program within AMT.
Strategic Goal 21: Increase Enrollment of International Students	1. Actively seek out future opportunities to recruit international students from Pacific Island nations.

Status Report for the prior year requests

Program Goal & Campus Strategic Goal or Priority Alignment	Goal 1 and 4 of Program Goals.
Action Item	Ensure currency of lab equipment: A: Update diagnostic scanners **annually** to maintain currency with new model vehicles. B. Renew information system. Changeover to Electronic Data On-line Fall 2009. C. Renew equipment as obsolescence and/or breakage occurs. Measure program effectiveness in terms of abilities of students to pass the national exam for automotive technicians (ASE). Utilize the End-of-Program Tests given by NATEF **(NA3F).** Test students in their 4th semester in all eight ASE automotive categories. Safety and Health **SHOP SUPPLIES:** Have A.P.T. organize/track/order/Maintain **SHOP SAFETY/HEALTH SUPPLIES.** **Classroom/Office/ Shop Supplies:** Purchase **expandable items** as depleted for continued efficiency of classroom/office/shop operations. **Videos/Small Tools/Computer:** Purchase as required.
Resource Acquired	**OPERATIONAL BUDGET $20,000 per year**
Outcome(s)	PLO Impacted: 1, 3, 4, 5, 6, 7 (On going)
Outcome(s) Evaluation (Improvements made to	The 2017 ARPD of the Automotive Program increased to HEALTHY overall.

program based on assessment data)	
Action Plan if outcome was not met	

Status Report for the prior year requests

Program Goal & Campus Strategic Goal or Priority Alignment	NATEF requirement to remain **ACCREDITED.**
Action Item	Equip. Obsolescence: See also Action Item 3C
Resource Acquired	Equipment Replacement Budget: **$20,000 per year**
Outcome(s)	PLO Impacted: 1 – 4 (On going)
Outcome(s) Evaluation (Improvements made to program based on assessment data)	The 2017 ARPD of the Automotive Program increased to HEALTHY overall.
Action Plan if outcome was not met	

Action Plan and New Resource Request

List in the table below resource requests greater than or equal to $3000. Do not include requests of an ongoing nature unless it is for new permanent personnel. Do not include lecturers in your request nor overload that has to do with teaching extra courses. The ranking rubric can be found in KCCP 1-6. For multiple requests, please add additional tables as needed.

- Input your action item based on your quantitative indicators and Program Student Learning Outcomes.
- Identify names of key persons involved in implementing the steps and the overall strategy. When possible, identify partnerships that will enhance strategies.
- Indicate when you will complete the action.

- In the "Indicator of Improvement" column, identify and quantify the outcomes expected from the action by using the actual numbers from your quantitative indicators table in Part III. What indicator will be improved by the action? To what extent? (e.g., Persistence will increase from the current 63% to 73 %.)
- In the "PSLO Impacted" column, identify the specific PSLO that will be addressed by the action. Include the program-level or course-level assessment data that supports the need for the action.
- Include specific action plans for any Perkins Core Indicator for which the program did not meet the goal.

Program Goal & Campus Strategic Goal or Priority Alignment	NATEF requirement to remain **ACCREDITED.** UHCC/KCC Goal 13: Enhance Facilities with Appropriate Technology and Ensure Facilities. UH Goal 2/KCC Goal 3: Workforce Development. Aligns with the college's mission: creates curricula and programs responsive to the community's changing needs for career and workforce development.
Action Item	Replace Wheel Alignment machine
Resource(s) Request	$28,000
Person(s) Responsible and Collaborators	Gordon Talbo/AMT Program Head, AMT Advisory Board, VCAS
Timeline	Before next Fall 2018
Indicator of Improvement	Students meet SLOs for applicable AMT courses. Student ASE certification. Creates curricula and programs responsive to the community's changing needs for career and workforce development.
PSLO Impacted	Meets PSLOs 1, 2, 6, 7
Current Status	Applying for funding

Action Plan and New Resource Request

Program Goal &	NATEF requirement to remain **ACCREDITED.**

Campus Strategic Goal or Priority Alignment	UHCC/KCC Goal 13: Enhance Facilities with Appropriate Technology and Ensure Facilities. UH Goal 2/KCC Goal 3: Workforce Development. Aligns with the college's mission: creates curricula and programs responsive to the community's changing needs for career and workforce development.
Action Item	Replace Tire Changer
Resource(s) Request	$9,000
Person(s) Responsible and Collaborators	Gordon Talbo/AMT Program Head, AMT Advisory Board, VCAS
Timeline	By Fall 2018
Indicator of Improvement	Students meet SLOs for applicable AMT courses. Student ASE certification. Creates curricula and programs responsive to the community's changing needs for career and workforce development.
PSLO Impacted	Meets PSLOs 1, 2, 6, 7
Current Status	Applying for funding

Action Plan and New Resource Request

Program Goal & Campus Strategic Goal or Priority Alignment	NATEF requirement to remain **ACCREDITED.** UHCC/KCC Goal 13: Enhance Facilities with Appropriate Technology and Ensure Facilities. UH Goal 2/KCC Goal 3: Workforce Development. Aligns with the college's mission: creates curricula and programs responsive to the community's changing needs for career and workforce development.
Action Item	Purchase "SMART" Diagnostic Scanner
Resource(s) Request	$15,000
Person(s)	Gordon Talbo/AMT Program Head, AMT Advisory Board, VCAS

Responsible and Collaborators	
Timeline	Before next Spring 2019
Indicator of Improvement	Students meet SLOs for applicable AMT courses. Student ASE certification. Creates curricula and programs responsive to the community's changing needs for career and workforce development.
PSLO Impacted	Meets PSLOs 1, 2, 6, 7
Current Status	Applying for funding

Action Plan and New Resource Request

Program Goal & Campus Strategic Goal or Priority Alignment	NATEF requirement to remain **ACCREDITED.** UHCC/KCC Goal 13: Enhance Facilities with Appropriate Technology and Ensure Facilities. UH Goal 2/KCC Goal 3: Workforce Development. Aligns with the college's mission: creates curricula and programs responsive to the community's changing needs for career and workforce development.
Action Item	Purchase Smart Board
Resource(s) Request	$10,000
Person(s) Responsible and Collaborators	Gordon Talbo/AMT Program Head, AMT Advisory Board, VCAS
Timeline	By Fall 2018
Indicator of Improvement	Student meet SLOs for applicable AMT courses. Student ASE certification. Creates curricula and programs responsive to the community's changing needs for career and workforce development.
PSLO Impacted	Meets PSLOs 5, 6, 7

Current Status	Applying for funding

Part IV. Resource Implications

RESOURCES NEEDED			OUTCOMES
Initial Acquisition Cost	**Annual Recurring Cost**	**Useful Life**	**(Identify and Quantify)**
$20,000	$20,000	1 year	Equipment replacement budget
$20,000	$20,000	1 year	Operating budget
$22,000		5-7 yrs	Replace Wheel Alignment machine
$12,000		5-7 yrs	Replace Wheel Balancer
$15,000	$900 per year	5-7 yrs	Purchase "Smart" Diagnostic Scanner
$10,000		10 yrs	Purchase "Smart" Board

Part V. Program Student Learning Outcomes and Assessment

A) Evidence of Industry Validation

The automotive repair industry hires technicians that are Automotive Service Excellence (ASE) certified. ASE certification is meant to instill
confidence by consumers of the validity of the repair technician. At the end of the students tenure at Kauai Community College Automotive
Mechanics Technology program, each student is tested in all ASE Automotive Technology areas (eight areas, A1 – A8) using the ASE Student
testing program. Students entering the workforce will then take the regular ASE tests. The ASE test is the venue that the State of Hawaii
Regulatory Board licenses automotive technicians.

B) Expected Level Achievement

100% achievement of all SLOs at 70% or better.

C) Courses Assessed

Course are now being assessed by LiveText.

AMT 20, AMT 40B, AMT 40D, AMT 40E, AMT 41, AMT 50, AMT 53, AMT 55
AMT 30, AMT 40G, AMT 40H, AMT 43, AMT 46, AMT 60

D) Assessment Strategy/Instrument

LiveText/Program Ending Test. Implemented CDX starting this Fall 2017.

E) Results of Program Assessment

Reviewing data from LiveText (course level assessment tool) indicates that the AMT program is achieving its mission to prepare students for
entry-level into the auto-repair industry. It is also evident (by student comments, will also qualify this by a formal survey instrument in the
future) that students sometimes enter the program with intentions of pursuing a career in auto repair, then finish the program and decide
against becoming technicians. This is not a negative reflection on the program, rather personal choices of students. To rate the validity of a
program solely based on percentage of graduates entering the workforce would be wrong and an injustice to the community and education.
How many college graduates (Bachelors and Masters) actually work in the areas of their major?

F) Other Comments

No content.

G) Next Steps

It has been determined that when assessed scores are lower than benchmarks, these students usually show low readings comprehension levels
and/or basic math skills that are low also. We will be requiring that these identified students be concurrently enrolled in reading and/or
math courses during their first enrolled semester.

Automotive Program Learning Outcomes (PLO's)

1. Demonstrate technical proficiency in entry-level skills for employment in the automotive service field or related areas.
2. Apply the theory behind automotive procedures and use critical thinking when performing service, maintenance, diagnostics, and repair of all major automotive systems.

3. Comply with personal and environmental safety practices in accordance with applicable safety and environmental regulations.
4. Identify and use appropriate tools, testing and measuring equipment required to accomplish each task established by National Automotive Technology Education Foundation (NATEF).
5. Locate references, training information and manufacturer's procedures from industry resources using the appropriate technology and will be able to perform tasks in accordance with their research.
6. Perform all diagnostic and repair tasks in accordance with manufacturer's recommended procedures as published.
7. Communicate effectively both orally and in writing.

Part VI. Programs Cost Per SSH

This will be filled in by the VCAA's office with the help of the Business office and clerk-stenos.

Part VII. Capacity Collect Alternative Measurement

If your program has an externally mandated (e.g. professional accreditation or licensing) capacity of less than 16 students per faculty, the program may be eligible for alternative efficiency health call calculation.