

(Amended: November 16, 2009)

**MAUI COMMUNITY COLLEGE
AUTOMOTIVE TECHNOLOGY PROGRAM
2009 PROGRAM REVIEW
November 6, 2009**

I. OVERVIEW OF THE PROGRAM

A. Mission and Vision of the College

1. The College Mission

Maui Community College is a learning-centered institution that provides affordable, high quality credit and non-credit educational opportunities to a diverse community of lifelong learners.

2. The College Vision

We envision a world-class college that meets current and emerging Maui County education and training needs through innovative, high quality programs offered in stimulating learning environments. The College mission, goals, and actions will be guided by the Native Hawaiian reverence for the ahupua`a, a practice of sustaining and sharing diverse but finite resources for the benefit of all.

B. Mission and Vision of the Program

1. The Automotive Program Mission.

The Mission of the Automotive Program is to provide exemplary entry-level technicians in the automotive and related fields, update the skills of technicians in the field and leading them to becoming lifelong learners.

The program mission statement reflects the college's mission statement in the following areas:

- Improving accessibility to superior programs and services that meet the changing educational and training need of its diverse community;
- Creating curricula that give students opportunities to develop academic competencies and occupational skills, to nurture interests, to cultivate talents, and to become contributing members of their community.

2. The Automotive Program Vision

The Program Vision is to continue to provide qualified automotive technicians to meet the employment needs for the County of Maui. Work towards national certifications with the Accrediting Commission for Community and Junior Colleges (ACCJC) and National Automotive Technicians Education Foundation (NATEF). The program is working towards improving the facility, which was built in 1947.

3. Program Goals

- To prepare and place automotive majors in entry-level positions in the automotive field and automotive-related occupations.
- To provide employees already in the automotive profession with the skills and knowledge for technical upgrading.
- To prepare students who want to continue and transfer to a 4-year university.
- To provide support courses to other MCC programs.
- To provide students with an option of Cooperative Education gaining work experience while taking Automotive courses.
- To provide individuals with the basic automotive skills to enhance their own personal knowledge.

4. Student Learner Outcomes of the program

- a. Up on completion of the Automotive Technology Program (A.A.S.) students will be able to:
 - Diagnose, service, and repair the modern internal combustion engine.
 - Diagnose, service, and repair the brake system.
 - Diagnose, service, and repair the automatic transmission and transaxle.
 - Diagnose, service, and repair the power train system.
 - Diagnose, service, and repair the electrical system.
 - Diagnose, service, and repair the fuel system.
 - Diagnose, service, and repair the emission system
 - Diagnose, service, and repair the ignition system
 - Diagnose, service and repair the heating and air conditioning system.
 - Diagnose, service, and repair the steering and suspension system.
 - To be able to write customer repair orders and estimates.
 - To be able to orally communicate, to customer, management, parts person and other technicians.
 - To be able to use computer to retrieve information for repairs and estimates.
 - To be able to write resumes and be able to use job interview techniques.

C. Relation to MCC Strategic Plan

1. The Automotive Program is using the MCC Strategic Plan Action Strategies and the five goals as a guide to making changes to the program. The program is strongest in the first and second goals in the MCC Strategic Plan:
 - a. Goal 1. Educational Effectiveness and Student Success
 - Maintain all aspects of the College as a learning-centered institution.
 - Provide instructional methods, technologies, materials, facilities, and academic support services that accommodate students of varied learning styles, backgrounds, interests, and abilities.
 - Provide students with access to a seamless UH system with full articulation between all campuses.
 - Engage students in active learning.
 - Use technology to enhance student learning and the quality and efficiency of student service functions
 - b. Goal 2. A Learning, Applied Research, and Service Network

Engage in intellectual and educational activities that enable the county of Maui and the state of Hawai`i to flourish.

Objective 1

Support the county and state economy, workforce development, and improved access to lifetime education for all by building partnerships within the UH University system and with other public and private educational, governmental, and business institutions.
 - c. The Automotive Program mission and vision statements reflect these goals. The program realizes the importance it is to overall mission of the college and the community.

D. Program Faculty

The Automotive Program faculty includes two fulltime instructors and two part time lecturers. The instructors and lecturers come with varied technical training and automotive experience which gives the program diversity. This is a list of automotive faculty members and their technical qualifications.

FULLTIME FACULTY

1. **Kyle Takushi**
Automotive Instructor
Title: Instructor.
Length of Service – 4 years

Courses Taught: AMT 20, AMT 40G, AMT 43, AMT 46, AMT 50, and AMT 57.

Educational Qualifications:

- Maui Community College – Certificate of Achievement 1996
- Maui Community College - Associate in Science Degree-
Automotive Technology 1996

Automotive Work Experience:

- 2 years, Automotive Technician with Dollar Rent A
Car
- 2 years, Automotive Technician with Maui Toyota Dealership
- 7 years, Automotive Technician with A & K Auto Repair Inc.
- 2 semesters, Automotive Lecturer with Maui
Community College.
- 4 years full-time instructor at Maui Community College.

Licenses:

- State Mechanics License - Certified Mechanic-MC7269
Certified in eight areas; Air Conditioning system, Brake System,
Electrical System, Engines, Front Suspension System, Automatic
Transmission, and Engine Performance.

Certifications:

- Automotive Service Excellence (ASE) Master Technician
Certifications in eight automotive areas, since 1995. Includes; Engine
Repair, Automatic Trans/transaxle, Manual Drive Train and Axles,
Suspension and Steering, Brakes, Electrical System, Heating and Air
Conditioning, and Engine Performance.

2. Thomas Hussey

Automotive Instructor - Program coordinator

Title – Associate Professor C.C.

Length of Service – 17 years

Courses Taught: AMT 16, AMT 20, AMT 30, AMT 43, AMT 46, AMT 50,
AMT 55, AMT 40C, AMT 41C, AMT 60 and AMT 80.

Educational Qualifications:

- Maui Community College - Certificate of Achievement –
Automotive Technology - 1978
- Maui Community College - Associate in Applied Science -
Automotive Technology - 1998

Automotive Work Experience:

- 4 years, mechanic helper with Central 76 Service
Station
- 5 years, Automotive Technician with Haleakala Motors – General
Motors/Mazda Dealership

- 7 years, Heavy Equipment Technician with Maui Land & Pineapple Co.
- 2 years, Crash Rescue, Heavy Equipment and Automotive Technician with State of Hawaii. Airport Division.
- 17 years full-time, Automotive Instructor with Maui Community College

License:

State Mechanics License - Certified Mechanic- MC-6409
 Certified in eight areas; Air Conditioning system, Brake System, Electrical System, Engines, Front Suspension System, Automatic Transmission, Manual Drive Train and Axles, and Engine Performance.

Certifications:

- Automotive Service Excellence (ASE) Master Technician with certifications in eight automotive areas.
 Includes; Engine Repair, Automatic Trans/transaxle, Manual Drive Train and Axles, Suspension and Steering, Brakes, Electrical System, Heating and Air Conditioning, and Engine Performance.
- Automotive Service Excellence (ASE) Certification - Parts Specialist
- Automotive Service Excellence (ASE) Certification - Master; Cylinder Engine Machinist which includes Head Specialist, Cylinder Block Specialist, and Assembly Specialist.
- Automotive Service Excellence (ASE) Certification - Refrigerant Recovery & Recycling
- Automotive Service Excellence (ASE) Certification - Undercar Specialist which includes; Exhaust Systems, Suspension and Steering, and Brakes
- Automotive Service Excellence (ASE) Certification – Service Consultant

PART TIME FACULTY

1. **Dennis Nakagawa**

Title: Lecture

Number of semesters taught: 3

Courses taught: AMT 20 and AMT 80

Education Qualifications:

- a. Maui Community College, Automotive, 2002 to 2004
- b. Midland Technical College, Associate Degree in Automotive and Machinist Technology. 1989 to 1994
- c. Maui Technical School, Certificate of Completion in Automotive Mechanics. 1963 to 1965

Automotive Work Experience:

- 22 years United States Army Wheel & Track Vehicle Mechanic
- 3 years Maui Arts and Cultural Center, Maintenance Technician

Certifications:

- Automotive Service Excellence (ASE) Certifications:
Automotive areas with Technician status. This includes;
Brakes, Heating and Air Conditioning.

2. **Chester Rafanan**

Title: Automotive Lecture

Number of semesters taught: 5

Courses taught: AMT 40C, 40B, 40G

Educational Qualifications:

- a. Maui Community College, Associate Science Degree,
Automotive Technology (1992)

Automotive work experience:

- a. 1 year, Technician with National Rent a Car
- b. 1 year, Technician with Valley Isle Motors
- c. 10 years, Technician with Haleakala Motors
- d. 6 years, Assistant Service Manager Cutter of Maui
- e. 3 years, Service Advisor Maui Toyota
- f. 2 years, Service Advisor Pfleuger Maui

License:

State Mechanics License – Certified Mechanic – MC 7231
Certified in eight automotive areas, Air Conditioning, Brakes,
Electrical, Engines, Steering & Suspension, Automatic Transmissions,
Manual Drive Train and Axles, and Engine Performance.

Certifications:

Automotive Service of Excellence (ASE) Certified as a Service Advisor and
in eight automotive areas, Air Conditioning, Brakes, Electrical, Engines,
Steering & Suspension, Automatic Transmissions, Manual Drive Train and
Axles, and Engine Performance.

E. Ways in which program interacts with these organizations:

1. Advisory Committee:

a. Automotive Advisory Committee

The members are represented by a high school automotive instructor, a independent automotive repair shop owner, retired automotive instructor from a community college, a representative from the new car dealership, a representative from the automotive parts stores, and a member from the State Consumer and Affairs Department. The purpose of this committee is to advise the Automotive program to what the automotive industry needs are, and to guide the program to fulfilling those needs.

Advisory Committee Members include:

Gail Fujimoto	Hawaii Consumer Complaints
Rick Hanks	Gemini (Good Year), Manager, Former Student
Tim Hultquist	Island Dodge, Lead Technician, Former Student
Dwayne Kim	Roberts of Hawaii, Technician, Former Student
Hollis Lee	Retired, MCC Automotive Instructor, Former Student
Dennis Nakagawa	MCC Automotive Lecturer, Former Student
Neil Nakamura	Maui High School, Instructor AMT
Nathan Perreira	Pacific Heavy Equipment & Auto Repair, Owner
Chester Rafanan	Servco of Maui, Lexus, Service Manager, Former Student
Dennis Sasai	Lahainaluna High School, Instructor
George Seriguchi	Community Representative, Retired MCC AMT Instructor
Andrea Valite	Lexus of Maui, Technician, Former Student
Ivan Watanabe	Jim Falks Valley Isle Motors, Parts Manager

2. Community groups:

a. Valley Isle Timing Association

- This association has provided tuition scholarships for automotive students.

b. ALU LIKE, Inc.

- This organization has provided tuition assistance, tools and summer program partnership for students of Hawaiian ancestry.

c. Kamehameha Schools Career Education Lifelong Learning Department

- This organization has provided tuition and supplies for the summer program.

d. Mu'ō A'e

- This organization has provided tuition assistance for students of Hawaiian ancestry.

d. Kiwani's Club of The Valley Isle

- This organization has provided community exposure for program, as well as monetary donations towards foundation.

3. Professional associations:
 - State Department of Commerce and Consumer Affairs (DCCA).
 - The automotive program is a resource for the investigator to understand the consumer complaint and what repairs were done.
 - Thomas Hussey is member of their advisory board.
 - A DCCA investigators is a member of the Automotive Advisory Committee.

4. Program Coordination Council PCC:
 - Automotive Technology Program Coordinating Council
 - The main purpose of the council is to maintain horizontal articulation among the five community college Automotive Programs in the state.

5. National accreditation bodies:
 - a. NATEF – National Automotive Teachers Educational Foundation
 - The automotive program is in the process of working towards this certification. Currently implementing NATEF student outcomes into our courses.

6. Other key organizations:
 - a. NACAT – North American Council of Automotive Teachers
 - Provides a conference that MCC automotive instructors can attend to receive updated training.
 - b. AC Delco Training division of General Motors Corp.
 - Uses automotive facility as a training location on Maui.
 - This arrangement allows instructors and chosen students attendance in training classes.
 - Training materials are donated to the program
 - c. Checkers Auto Parts
 - Uses automotive facility as a training location on Maui.
 - This arrangement allows instructors and chosen students attendance in training classes.
 - Tools and training materials are donated to the program.
 - d. General Motors Corp
 - Has donated slightly damaged cars to the program.
The cars allow students to practice on newer vehicles.
 - e. Jim Falk’s Valley Isle Motors
 - has selected the program to be a vendor for tire installation and wheel balancing.

II. CURRICULUM AND STUDENTS

A. General Education Standards (COWIQs), program goals, and student learning outcomes

These five standards are currently in place; Critical thinking, oral communication, written communication, information technology, and quantitative reasoning (COWIQs). The program

uses these standards to guide the curriculum and to make modifications in the general education of a student needs here at Maui Community College.

1. The history of these COWIQs standards maybe found using this link <http://www.hawaii.edu/ovpp/gened/gedwww.htm>
2. The Automotive Program is using these five standards to prepare students to have a successful career in the automotive and the related fields. These are the ways the (COWIQs) are being used in the program:

Critical Thinking (Standard 5)

- problem solving the customers complaints
- determining and confirming the problem
- diagnosis problem using repair service manuals
- perform repairs according prescribed procedures
- verify that the problem has been solved or repair

Oral Communication (Standard 4)

- being able to relay information about diagnosis and repairs to all with customers, co-workers, and supervisors

Written Communication (Standard 1)

- diagnosis and repairs repair must be written on a repair order to show what work was performed

Information Technology (Standard 3)

- the use of electronic equipment used to monitor the different systems
- the repair manuals are now on computer DVD discs.
- Additional information is located on the world wide web

Quantitative Reasoning (Standard 2)

- the automobile is a rolling example of physics at work
- math is used in most courses to explain how principles work
- is part of problem solving by understanding why part was put there and how it works.

3. The automotive program is designed to develop these skills in students to give them a method to continue learning to improve themselves to succeed in this career.

B. COWIQ and Program Outcome curricular grids

The grid was developed using the program outcomes and to which courses in the program these were the focus, part of the course, referred to in course, or not part of the course. The grid also shows both specific outcomes as well as general program outcomes. What was learned from the grid, is in which other courses that are taught the subject is either a part of or referred to.

Map of General Education Outcomes by Course

	Critical Thinking	Information Retrieval	Quantitative Reasoning	Oral Comm.	Written Comm.	Creativity
AMT 20	2	2	2	1	1	0
AMT 30	2	2	2	1	1	0
AMT 40B	2	2	2	1	1	0
AMT 40C	2	2	2	1	1	0
AMT 40G	2	2	2	1	1	0
AMT 41C	2	2	2	1	1	0
AMT 43	2	2	2	1	1	0
AMT 46	2	2	2	1	1	0
AMT 50	2	2	2	1	1	0
AMT 53	2	2	2	1	1	0
AMT 55	2	2	2	1	1	0
AMT 60	3	3	3	1	2	0

3 Major Emphasis: The student is actively involved (uses, reinforces, applies, and evaluated) in the student learning outcomes. The learner outcome is the focus of the class.

2 Moderate Emphasis: The student uses, reinforces, applies and is evaluated by this learner outcome, but it is not the focus of the class.

1 Minor Emphasis: The student is provided an opportunity to use, reinforce, and apply this learner outcome but does not get evaluated on this learner outcome.

0 No Emphasis: The student does not address this learner outcome.

**Maui Community College
Program Assessment Plan
Associates of Applied Science in Automotive Technology**

Program Learning Outcomes

1. Diagnose, service, and repair an automobile, which include the modern internal combustion engine, brake system, automatic transmission and transaxle, power train system, electrical system, fuel system, heating and air conditioning system, and the steering and suspension system.

PLO 2	X		X		X	
PLO 3	X		X		X	
PLO 4	X	X	X	X	X	X

- * PLO 1 & 4, will be assessed each semester and reported annually.
- * PLO 2 & 3, will be assessed each spring and reported annually.
- * The AMT program will work towards developing a rubric to show the levels that AMT students are achieving the learning outcomes during the 2009 – 2010 program year.

C. Student Achievement

**Annual Report of Program Data for Automotive Technology
Maui Community College Program Major(s): AMT**

Overall Program Health				Healthy
Demand Indicators				Demand Health Healthy
			Academic Year	
			08-09	
1	New & Replacement Positions (State)		130	
2	New & Replacement Positions (County Prorated)		14	
3	Number of Majors		54	
4	SSH Program Majors in Program Classes		630	
5	SSH Non-Majors in Program Classes		17	
6	SSH in All Program Classes		647	
7	FTE Enrollment in Program Classes		22	
8	Total Number of Classes Taught		12	

Efficiency Indicators		Academic Year	
			08-09
9	Average Class Size		13.3
10	Fill Rate		83%
11	FTE BOR Appointed Faculty		2.0
12	Majors to FTE BOR Appointed Faculty		26.8
13	Majors to Analytic FTE Faculty		29.5
13a	Analytic FTE Faculty		1.8
14	Overall Program Budget Allocation		C/P
14a	General Funded Budget Allocation		C/P
14b	Special/Federal Budget Allocation		C/P
15	Cost per SSH		C/P
16	Number of Low-Enrolled (<10) Classes		1
Efficiency Health			
Healthy			
Effectiveness Indicators		Academic Year	
			08-09
17	Successful Completion (Equivalent C or Higher)		86%
18	Withdrawals (Grade = W)		1
19	Persistence (Fall to Spring)		66%
20	Unduplicated Degrees/Certificates Awarded		20
20a	Number of Degrees Awarded		6
20b	Certificates of Achievement Awarded		5
20c	Academic Subject Certificates Awarded		0
20d	Other Certificates Awarded		21
21	Transfers to UH 4-yr		0
21a	Transfers with degree from program		0
21b	Transfers without degree from program		0
Effectiveness Health			
Healthy			

C/P denotes that the measure is provided by the college, if necessary.

Data current as of: 10/16/2009 - 1:30 PM

Distance Education Completely On-line Classes		Academic Year	
			08-09
22	Number of Distance Education Classes Taught		0
23	Enrollment Distance Education Classes		0
24	Fill Rate		0%
25	Successful Completion (Equivalent C or Higher)		0%
26	Withdrawals (Grade = W)		0
27	Persistence (Fall to Spring Not Limited to Distance Education)		0%
Perkins IV Core Indicators			

Perkins IV Measures 2007-2008		Goal	Actual	Met
28	1P1 Technical Skills Attainment	90.00	47.37	Did Not
29	2P1 Completion	44.00	42.11	Did Not
30	3P1 Student Retention or Transfer	55.00	70.27	Met
31	4P1 Student Placement	50.00	100.00	Met
32	5P1 Nontraditional Participation	25.00	11.86	Did Not
33	5P2 Nontraditional Completion	25.00	19.05	Did Not

The AMT Program continues to address the performance in the areas of 1P1, 1P2 and 2P1, while continuing to address the students needs in the area of academic and remedial challenges. A high amount of student enrolled in the program are not completing the general education credits, making these students unsuccessful in meeting their graduation requirements. Many of the students in AMT are facing academic and remedial challenges. Industry does not require a degree to be employed. Instead, Industry requires achievement of the ASE (Automotive Service in Excellence) Certification.

In the area of General Education courses, the Program Coordinator has collaborated and partnered with the Physics, Language Arts and Communications programs to support the students success in the non-AMT courses. After a successful “try out” in team-teaching in 2007-2008, the AMT program continued a second year of team-teaching, this time with a new Physics instructor who was experienced in teaching an applied physics for AMT students. The Physics instructor and AMT Program Coordinator worked together to teach classes with both instructors participating in the instruction. This proved to be successful and students reported grasping the Physics lessons more effectively. In the area of Language Arts, the English 55 instructor has found success in using the NATEF curriculum for the AMT students. The NATEF curriculum is also being used by the Communications (Speech) instructor.

Continued monitoring and support of the general education classes that AMT students are required to take will continue. In addition, the White Paper Committee (of which the AMT Program Coordinator is a member), for developmental remedial students continue to address strategies to make our students successful. Further, to assist students to increase their English, Math, and study skills, both instructors and lecturers encourage and introduce all classes to the TLC staff for study skill support. .

In the area of completion, instructors and counselors have aggressively worked with students to move them through the “paper process” of applying for their degrees and certificates. We’ve noted that several of the students who were eligible for certificates have not received them because they are unaware of the application process. Instructors have begun to track students for classes needed to complete for their graduation requirements and encouraging them to increase their grade point average.

D. Changes made in accord with the recommendations of the previous program review for Program Health Indicators (PHIs)

This year, the program received approximately \$70,000 in grant assistance from the Perkins Funds. These funds were used to purchase tools and equipment to update old scanners, shelving to

organize the tool room, a security system to provide security and efficiency to keeping inventory controls.

This equipment was added to the inventory and equipment purchased in the 2007-2008 program year with grant funds from the U.S. Dept of Labor, Rural Development Program. The addition of these tools and equipments continues to add to the necessary inventory required by NATEF. The AMT Program will continue to update the Programs equipment as we continue to work towards meeting NATEF certification.

As a follow-up, towards the ending of the program year, the Operations and Maintenance Department completed the electrical wiring and installation of the equipment. While the program is grateful for the work completion, there is no measurement as the students were unable to use the equipment as the college semester had ended.

The program continues to generate other funds to pay for shop supplies, repair of equipment, and replacement of broken tools. Equipment has been purchased to improve the program and equipment repair has been completed for those pieces that could not be replaced. Funds generated specifically from auto repair and service, particularly in the Diagnostic and Repair (AMT 60) class, has increased from previous years. This is the result of better shop management and the increase of class size.

As a result of positive partnering the community, significant donations of equipment were made to the Program. Vehicle lifts, tire machines, wheel balancers and testers valued at approximately \$8-10,000 were donated to the program by Firestone of Hawaii. This shows positive support by the community.

E. Changes made in accord with the recommendations of the previous program review for Perkins measures

1. The program continues to work towards Perkins recognition of our Certification as a completer of the program. The student after completing one or more of these courses can choose, at this point, to leave the program to pursue a career with those skills. With the addition of the equipment received by the program, improvements of the student's skills were increased, and partnership continues with a local dealership. The program continues to work towards NATEF certification.
2. While the program gained new equipment toward NATEF standards, the program continues to be challenged without adequate funding to meet all of the equipment needs. Curriculum and Student Learning Outcomes are NATEF and Industry driven. The program continues to operate with 2 full-time instructors, of which one also acts as Program Coordinator and Shop Manager. Both instructors also participate on various Maui Community College committees and the Program Coordinator participates on two UH CC's statewide committees. The Program Coordinator is tasked with Grant Writing, Report Writing, Equipment/Tool Purchases and Budget Management for the AMT program, and also maintenance of the Shop, which includes overseeing construction to the shop and repairs and improvements, which usually happens in the summer months.

3. Non-traditional student enrollment continues to be limited. Additional recruitment towards non-traditional students occurred at Career and Scholarship Fairs, visits to the high schools and program tours at the college. Partnership with the CTE to encourage enrollment of non-traditional student and student support continues. A non-traditional grant (Perkins Funding) is used to assist non-traditional students to complete the program by purchases of books and tools for their use.

Perkins IV Core Indicators					
Perkins IV Measures 2007-2008			Goal	Actual	Met
28	1P1 Technical Skills Attainment		90.00	47.37	Did Not
29	2P1 Completion		44.00	42.11	Did Not
30	3P1 Student Retention or Transfer		55.00	70.27	Met
31	4P1 Student Placement		50.00	100.00	Met
32	5P1 Nontraditional Participation		25.00	11.86	Did Not
33	5P2 Nontraditional Completion		25.00	19.05	Did Not

F. Measurable Benchmarks

During this period, there were two Non-Traditional graduates and six non-traditional students in the program. The Employment Placement and Retention rates continue to exceed the baseline as it is a norm that AMT students work while attending school. In addition, both instructors assist students in finding employment and actively refer students to dealership and industry. In the area of completion, counselors and instructors are actively working to assist students in the application process for graduation. In the area of Vocational skills and academic achievement, historically, students who enter this program have weak English, Math and Study skills, work full or part-time and are not prepared for the rigor of attaining a college education. Industry standards do not require technicians to have a college degree, therefore upon completion of their automotive skills and knowledge the students are finding it more feasible to begin working in the industry rather than to complete their college degree. Industry requirements for technicians rest in achievement of industry required testing and certification, i.e. ASE certifications. Many of our students are testing and passing ASE tests during their first year in AMT. In order to become ASE certified, the student must complete at least two years of full-time employment in the industry. Students in the AMT field are not seeing the feasibility of a college degree when it is not essential for placement in industry.

G. Program/Certificate/Degree Standards, Student Learner Outcomes (SLOs) and the NATEF (National Automotive Teachers Education Foundation) task standards.

1. [http://mauicc.hawaii.edu/http://mauicc.hawaii.edu/catalog/Requirements for Certificate of Competence \(Cert.Co.\):](http://mauicc.hawaii.edu/http://mauicc.hawaii.edu/catalog/Requirements%20for%20Certificate%20of%20Competence%20(Cert.Co.):)

- *Heating and Air Conditioning: 3 credits: Automotive Technology 43(3)*

- *Suspension and Steering: 3 credits: Automotive Technology 55(3)*
 - *Brakes: 3 credits: Automotive Technology 53(3)*
2. **Requirements for Certificate of Achievement (C.A.): 52-55 credits**
- Automotive Technology 20(3), 30(7), 31(3), 40B(3), 40C(4), 40G(3), 41C(3), 43(3), 46(3), 50(4), 53(3), 55(3), 57(2)
 - Welding 19BC(2)
 - Natural Science: Physics 50(3)
 - English 22 or higher (3)
 - Math 50T(2), 50X(1), 50Y(1) or Math 27(3)
3. **Requirements for Associate in Applied Science Degree (A.A.S): 68-71 credits All C.A. courses plus:**
- Automotive Technology 60(7)
 - Communication 145 or English 100, 106, or higher (3)
 - Social Science elective (3)
 - Humanities elective (3)
 - Social Science elective (3)
4. **Student learner outcomes of the program**
- Upon completion of the Automotive Technology Program (A.A.S.) students will be able to:
- Diagnose, service, and repair the modern internal combustion engine.
 - Diagnose, service, and repair the brake system.
 - Diagnose, service, and repair the automatic transmission and transaxle.
 - Diagnose, service, and repair the power train system.
 - Diagnose, service, and repair the electrical system.
 - Diagnose, service, and repair the fuel system.
 - Diagnose, service, and repair the emission system
 - Diagnose, service, and repair the ignition system
 - Diagnose, service, and repair the heating and air conditioning system.
 - Diagnose, service, and repair the steering and suspension system.
 - To be able to write customer repair orders and estimates.
 - To be able to orally communicate, to customer, management, parts person and other technicians.
 - To be able to use computer to retrieve information for repairs and estimates.
 - Write resumes and able use job interview techniques.

Refer to program learner grid that shows courses these outcomes are being met. (See Appendix B)

5. The Automotive Program is following the NATEF (National Automotive Teachers Education Foundation) task standards. The program is in the process of working towards this certification by implementing the NATEF student outcome standard into the program courses. More specific information on NATEF can be found online at NATEF.com.

H. Program trends, including student goals, enrollment trends, retention, and time of completion.

1. Many students do not earn certificates or degrees because they are already working part time in the field while coming to program. They complete the automotive program courses but fail to complete the general educational courses. We encourage all students to continue and complete and earn the certificate or degree but the urge to work full time is too great. The students that are continuing to work and attend college part time are completing their certificate or degrees in three years. From the Perkins indicators, the program graduates are low but it does not indicate how many of the students are working in the field as a career.

I. Changes in field; resources; shifts to respond to changes

1. The Automotive Program was given no institutional funds for equipment. The program used G-funds, and also received grant funds and self-generated funds.
2. Improvement to the program continues under the direction of the Program Coordinator, the addition of new equipment, successful partnering with community, and upgrading the curriculum and being creative in ways to make students successful.
3. Program Coordinator has attempted to sell donated cars to increase funds, but due to administrative constraints, we have not been able to sell any of the donated vehicles.
4. The program continues to apply for grants as a source of funds.

J. Major curricular changes since last review.

1. Research into new or updated curriculum began and the textbooks and materials ordered during the last program reporting period was received and used. It was found that the textbooks and materials were expensive, illustrations were not clear and useful, therefore it did not make a smooth transition. To remedy this, an updated textbook which will be more user-friendly will replace the current texts being used. Grant applications and reporting continued during this period, and a Perkins Coordinator was given to support the grant process. However, while it was anticipated that the Perkins Coordinator would relieve some of the workload of managing the grant funds, purchases and administrative duties, the expectation did not meet the results. The Program Coordinator continues to stumble through the process to obtain, expend and report on those grants that are available and during this period, was unable to utilize some of the grant funding due to a failure to meet administrative/business office demands.
2. New and updated equipment such as training boards were used during this period and students have been better able to complete the required NATEF tasks and student learner outcomes have been achieved.

K. Student advising and the degree to which faculty participate in the mentoring of students.

1. Faculty continue to be available to all students for advising in instructional and career planning. Advice is given freely and communication runs both ways. Each semester class advising includes note taking, test taking, resume writing, job interview training, team-advising including vocational counselor where class planning for college completion is conducted. Instructors participated in new-student orientation programs for new students and resulted in an easier transition for students into our program.

L. Opportunities for student involvement in program-related organizations, clubs, and governance.

1. There is no automotive program club. Student may participate in the campus student government activities. The program does participate in the county fair parade and students are asked help to decorate a trailer. This year, students and instructors wholeheartedly supported the county fair parade by again having several entries. An AMT student took the initiative to paint one of the vehicles, while the shops “half” car was updated. In addition a golf-cart was modified and used in the parade and was a highlight for all. A “tram”, three vehicles attached together, was also entered along with a float which included the Early Childhood Education program and their children, parents, and instructors.
2. Instructors have formed a relationship with students interested in modifying and racing by helping to modify student vehicles and meeting at the Maui Raceway Park. This is to support students interest while encouraging and promoting safe racing and good sportsmanship.
3. Instructors and Students participated in supporting the Kiwani’s Keiki Fest, an annual fair providing day-long activities for Maui County families and approximately 5000 attendees. Program Coordinator took on the roll of coordinating the recruitment of vintage cars, compact vehicles and racecars to be displayed at the festival. This also included hosting the volunteer car owners, by providing drinks, food and prizes for the participants and also provided balloons for the keikis.

M. Use of lecturers to teach courses; related concerns

1. Lecturers are used in the program when fulltime faculty is unable to teach a class due to instructor load. The program coordinator recruits the best qualified person to teach the subject. The current lecturer was well-received by the students and takes initiative to prep for his classes by checking/charging batteries, preparing shop vehicles, and assuring tools/equipment are available for students.
2. An on-going concern with lecturers are their teaching abilities and experience. Coordination and support of the lecturer is crucial to assure the lecturer has the ability to teach at the level that assures the theory and learner outcomes are met. The Program Coordinator is charged with mentoring lecturers and supporting them through the process of becoming successful instructors. Lecturers are also evaluated through the standard college evaluation process whereby students are able to rate the instructor.

N. Admission policy

1. The program has found that English 19 with a grade C or better, or placement at least English 22 is needed to do well in the automotive program. This is one of program prerequisites (except AMT 16 and AMT 20).
2. The Program Coordinating Council (PCC) for Automotive, has recommended all Automotive Programs in the State of Hawaii require students taking automotive classes must maintain a current driver's license. This is program prerequisite.
3. The program also uses Compass Writing (040) skills as a prerequisite.

O. Job placement, including job prospects and procedures for placing graduates,

1. The campus does have a job placement office in the form of Cooperative Education where students receive credit for working at on the job skills. In addition, many local businesses will call the AMT program directly.
2. The program regularly receives calls from potential employers to request candidates for hire. The instructors will then discuss the job requirements and duties, and then try to match a student with the skills needed for that position. This method has been successful. Most automotive students are attending classes and working at least part-time by the second year. In addition, several dealerships, and independent specialty shops made courtesy visits to classes to recruit technicians.
2. The college has actively sponsored and participated in job and career fairs. The AMT program participated in at least four career fairs. The AMT program also received high school students who toured the college and participated in program shop tours.
3. This was the first year of a shadowing program. Students from high schools spend a day in the program participating with our regular students giving them hands-on experience in the classroom and lab. One student spent four days attending the AMT program.

P Articulation with high schools, community colleges, and four-year Institutions

1. The Automotive Program has an articulation agreement with the Department of Education, Automotive Programs here in the County of Maui. This agreement is to allow high school automotive students who completed a task list established by the MCC Automotive Program to receive three credits, leading toward MCC automotive certificate or degree. This articulation agreement would allow the students to bypass AMT 20 Introduction to mechanics course. The articulation agreement between the DOE, Department of Education and Maui Community College was signed in 1991. (See Appendix E)

Q. Centers or Institutes

1. The program uses the Learning Center to help students with their resume writing. Students are able to use their computer to write their resumes. Time is scheduled during classes to have learning center personnel come in and give a lecture about job

preparation, resume writing and what information needs to be in it, and how to follow up. Staff from the Co-op program have also assisted the AMT students in resume writing.

V. ANALYSES OF PROGRAM – TYING IT ALL TOGETHER

A. Summary statement

1. The Automotive Program continues to progress in raising its standards to meet two national sets of accreditations.
 - a. Accrediting Commission for Community and Junior Colleges (ACCJC)
 - b. National Automotive Teacher Educational Foundation (NATEF)

2. The Effectiveness Indicators used in the chart does not reflect the actual graduation rates, and/or completion rates. In lines 20, 20a and 20b, errors in the actual graduates occur. For example, 20a should show 9 degrees actual, when in fact it shows 6. And, in 20b there should be 10 certificates awarded. This noted correction in graduates should change the percentage rates of our program health indicators and therefore show the AMT Program as Healthy.

3. The Program continues to make progress towards improvement in all areas. Changes made by the Program Coordinator and Instructors are visible in every aspect of the program, beginning with increased funding from grants, shop services, student numbers, partnerships and academies; to increased visibility and partnerships with other programs, industry and community; to overall appearance of shop and classroom, addition of new equipment and technology.

4. While the goal of the program is to have a coordinated team-effort between the Program Coordinator, Instructor and Lecturers, to run a smooth program and shop which benefits the students learning, the reality is that the Program Coordinator is tasked with the overall responsibility of ensuring the resources, equipment, maintenance and needs of every aspect in this program. Currently, the Program Coordinator is a 9-month instructor who has responsibility for full-time instruction, grant-writing, program reporting, Equipment/Tool Purchases, Budget management for the AMT program, maintenance of shop, update of curriculum, support and mentor the instructor and lecturers of AMT, as well as develop and maintain community partnerships for the program, lead and develop the AMT Advisory Committee and recruit and retain students, solicit for scholarships. To continue to do all of this, the MCC AMT Program will continue to pursue an 11-month position for the Program Coordinator while distributing the class load amongst the lecturers.

B. Plans for next year

1. Continue to recruit students, including non-traditional, into the AMT program. (College Fairs, shop tours, career fairs, school visitations).

2. Work with Counselor to increase number of students who apply/receive certificates.
3. Promote to students the benefits of applying for/receiving their certificates/degrees as Industry does not require college certificates/degrees.
4. Continue participation on White Paper Committee to increase strategies to address the remedial students success.
5. Continue participation on the Non-Traditional Committee to continue recruitment and retention of students.
6. Continue to work with necessary general education instructors who teach specific courses needed by AMT students. (Team-teaching Physics 50)
7. Continue to bring in TLC tutors to the AMT classes for learning and study skills.
8. Continue towards NATEF certification.
9. Pursue 11-month position for Program Coordinator.

C. Budget for Next Year:

1. The program continues to pursue (NATEF) certification. Additional funds received will continue to be used to purchase equipment necessary to bring the AMT program up to NATEF standards. Additional equipment, hands on trainers and supplies for the students will be purchased with additional funds.
2. The program continues to apply for funds or grants as available.

D. BOR questions:

- Is the program organized to meet its objectives (student learning outcomes?)
YES
- Is the program meeting the student learning outcomes?
YES
- Are program resources adequate?
No, additional funds for equipment and an 11-month Program Instructor/Coordinator is needed.
- Is the program efficient?
Work in Progress
- Does your review provide evidence of a quality program?
Yes
- Are the program outcomes compatible with the student learning outcomes?
Yes
- Are the program student learning outcomes still appropriate functions of the college and university?
Yes

- E. Resource Implications (physical, human, financial)
10. Carl Perkins funding for non-traditional students.
 11. Assistance/support from counseling and TLC staff and co-op staff.
 12. AMT Instructors and counselors
 13. Carl Perkins funding for White Paper Committee
 14. Cooperation from General Ed. Instructors.
 15. TLC staff.
 16. Carl Perkins grant for Program Improvement.
 17. State General Funds support of 11 month position.