

"We Guarantee Quality and Excellence"

Palau Community College is an accessible public educational institution helping to meet the technical, academic, cultural, social, and economic needs of students and communities by promoting learning opportunities and developing personal excellence.

INSTRUCTIONAL PROGRAM THREE YEAR REVIEW

Academic Program

Automotive Mechanics Technology

Period of Three Year Review

Fall 2009 to Summer 2012

Completed By: Nobby Enano
Program Instructor(s)

Date: 12 / 23 / 24

Program/Department Chair: Nobby Enano

Date: 12 / 23 / 24

Dean of Academic Affairs: Robert Ramarui

Date: 12 / 31 / 24

Received by Institutional Research Office on:	Date	Name and Initial of receiving personnel
	01/09/2015	Husto Ulengchong

Program Review Narrative Summary

- **Summary of the academic program purpose**

This program provides students with technical knowledge, skills and proper work habit/attitudes necessary for employment in the field of Automotive Technology. The program prepares the students to work and advance in their career in the field of Automotive Mechanics Technology. In addition, the program provides a foundation for those interested in managing their own automotive repair shop or a merchandizing company for automotive parts and accessories.

- **The relationship of program to the college Mission Statement**

The formulated goals of this program correlates to the mission of Palau Community College in helping the students and communities by promoting learning opportunities and developing personal excellence; this program provides technical knowledge, skills, attitude in servicing automotive undercarriage system and their components, servicing automotive power train system and their components, servicing engine mechanical components and their auxiliary system, servicing automotive electrical system and computer controlled components.

- **Summary of Course Assessment Data**

- a. How has assessment of course-level student learning outcomes led to improvement in program-level student learning?

The assessment results are the materials used for determining the performance level of each student in knowledge, skills, and attitude and that will also identifies the learning style of each student. Identifying the learning style of the student will challenge the teacher to match-up the student learning style. A cognitive instructor is a mis-match to a psychomotor learner student. Meaning, student learning outcome can be improved by aligning the teaching style of the instructor to the learning style of the student. The specific criterion of knowledge, skills, and attitude are the elements to be used for identifying student needs. The instructor will help the student based on their needs; if the knowledge has to be focus on that particular student because his/her cognitive is very slow, then the teacher will focus on that matter and this will enhance student learning outcome and that will led to improved course learning outcome because the number of competent students are increasing.

- b. How has assessment of program-level student learning outcomes led to certificate/degree program improvements?

The improvement of the program is always based on the number of competent students of each program courses and not on the number of equipment. Therefore, the results of the assessments for knowledge, skills, and attitude will be used to justify the needs of the program; if the data show that the students are not passing because they don't have the technical know-how, then the problem must be identified and if the reason lack of practice, then scheduling will be made. In this way, we can justify if we need books, posters, film showing, tools, materials, equipment and etc. to improve course learning outcome and this will led to improve the program.

- **Summary of Evaluation of Previous Goals/Activities from Previous Cycle (Figure 5)**

- a. List of actions identified in your last program review or in any other related college plan(s)*.
 1. The college should procure the tools and equipment to diagnose and troubleshoot electronic and computerized controlled automotive components.
 2. Automotive department should possess one LCD projector for on time film viewing.
 3. All mock-ups should be ready for use.

4. Automotive Department should accept outside or walk-in customers for car repair to allow the student to enhance the student knowledge and skills.
5. Mock-ups for computerized controlled components should be ready for use.

b. What measurable outcomes were achieved due to the actions completed?

1. Three (3) students who graduated in this program are now employed as a mechanic instructor.
2. The other students who graduated in this program are now employed as an automotive service technician, and driver for heavy equipment vehicles.
3. The first year students are now involve in servicing engine and undercarriage system.
4. The second year students are in-charged of servicing automatic transmission and EFI engine.
5. All graduates of this program since spring 2009 to spring 2013 are now employed in their field of specialization.
6. The first year and the second year students are now ready for creating an Auto Club that will facilitate the need of the public, community, and the people of this Island of Palau in servicing vehicles.

c. Evaluate the success of the completed actions. Did the completed actions lead to improvement of student learning?

1. Yes, it successfully improved the program, and thanks to the ALO department for helping us to design and create tools for assessment to determine learners sphere; we found out that, most of the students are affective and psychomotor learner and few are cognitive learner. With this point of view, we can help more students to succeed in this program. The collected data will support our justification that the college must purchase more mock-ups to help students learn fast and be motivated and passionate in the field of automotive technology through hands-on and experience.
2. Yes, it successfully improved the program; for most of the students are now aware about the component specification and it is obviously that they are responsive on reading precession tools.

d. What modifications do you plan to make to the program to improve student learning?

1. No modification needed at this time, but to establish more mock-ups, posters, precision tools, diagnostic tools for Asian and domestic cars must be produced before we start spring 2015.
2. Establish more efficient assessment tools for knowledge test to accurately identify student's level of performance.
3. Establish more efficient marking sheet for skills test to accurately determine student's level of performance.

e. Update major changes/accomplishments since the last review.

1. CLO assessment tools for knowledge and skills were changed.
2. *Tracdat* is in place and correctly upload all the required documents, recommendations, and actions needed to improve the program. We can now easily access or re-visit our program for improvement.
3. List of consumable materials in every semesters are approved.
4. More classroom and laboratory room were added and locations for work-stations are now in place to comply CLO assessments.

- **Summary of Program Major Strengths**

- a. The program provides students with knowledge, skills, and proper work habit/attitude necessary for employment in the field of automotive technology. The successful students

that will complete the program are obviously knowledgeable and skillful in servicing under-carriage system, manual and automatic transmissions, electronically or computerized controlled engine, and car air-conditioning system.

- b. The program has provided student concept; a foundation in managing their own automotive repair shop or a merchandizing company for automotive parts and accessories.
 - c. Have qualified Faculty to teach the program; the fulltime instructor is a graduate of Bachelor of Industrial Technology (Major in Industrial Management in the field of automotive industries), a certified TOYOTA TECHNICIAN, and a certified Automotive Mechanic Servicing NC-2 (National Certificate level 2 in Philippines), has an industrial experience as an automotive mechanic for more than seven (7) years, and fifteen (15) years teaching experience.
 - d. The part time instructor is a graduate of Automotive Mechanics Technology in Associate Applied Science with a three (3) years industrial experience as an Auto Mechanic.
- **Recommendations for Improvements**
 - a. Do the student assessment data and/or any other college plan indicate overall program needs that may require support from the institution? Define these observed needs supported by assessment data and/or any other college plan.

The program needs does not always require support from the institution. To crack down the walls of ignorance, arrogance, laziness, absenteeism, and rudeness of the students are the things that we need to clear out first, that we may able to bring our technology, tools, and equipment in their lives; to develop their personal excellence and to help them meet their needs in technical, academic, and their economic needs. Therefore, the assessment result must accurately analyze to enhance student learning outcome and the course learning outcome to perfectly develop the program and this will align PCC mission statement and plans.

- **Summary of Action Plans**

Objective	Time line	Person Responsibility
Establish more mock-ups, posters, precision tools, diagnostic tools for Asian and domestic cars.	February 2015	Administration / Academic Affairs / Automotive Instructor
Establish more efficient assessment tools for knowledge test.	February 2015	Automotive Instructor
Establish more efficient marking sheet for skills test.	February 2015	Automotive Instructor

- **Summary of Resource Request (if any)**
The G-scan II diagnostic tool and car lifter are the primary equipment that we need for our assessment and laboratory exercises for these will help the students to correctly diagnose engine problem and to service power train and undercarriage system components.

Appendix A: Program Review Assessment Data

1.0 Program Data

Figure 1. Number of Students Enrolled, Pass/Credit, Fail/No Credit, Audit and Withdraw

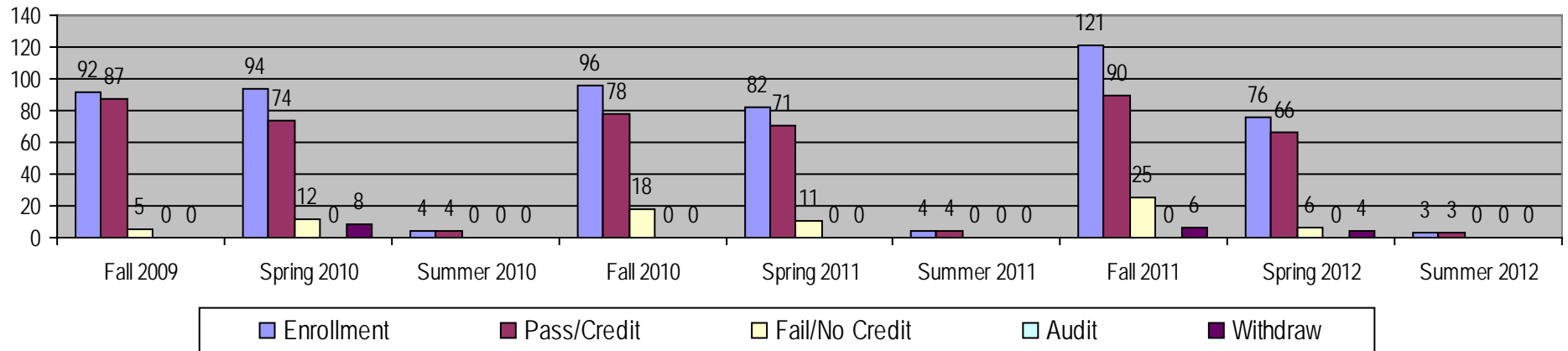


Figure 2. Number of Graduates

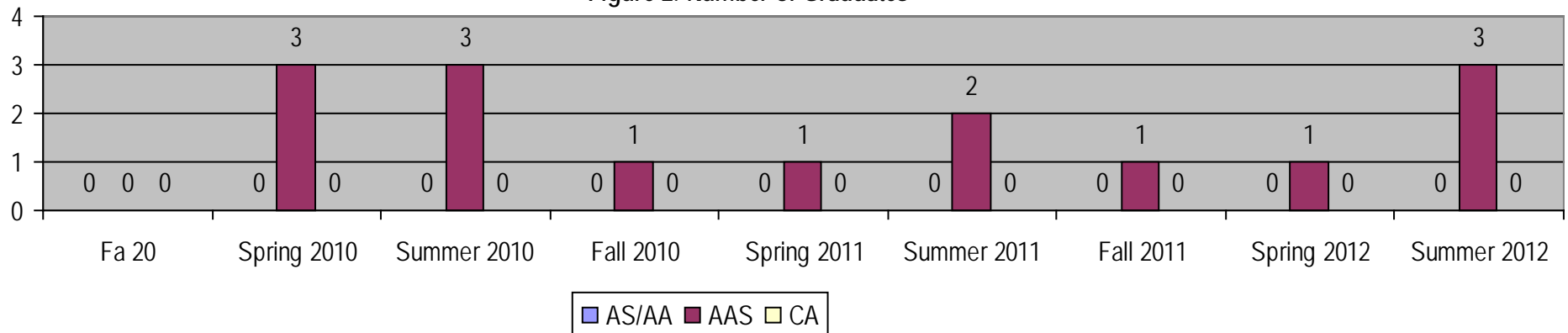


Figure 3. Number of Classes Based on Student Enrollment

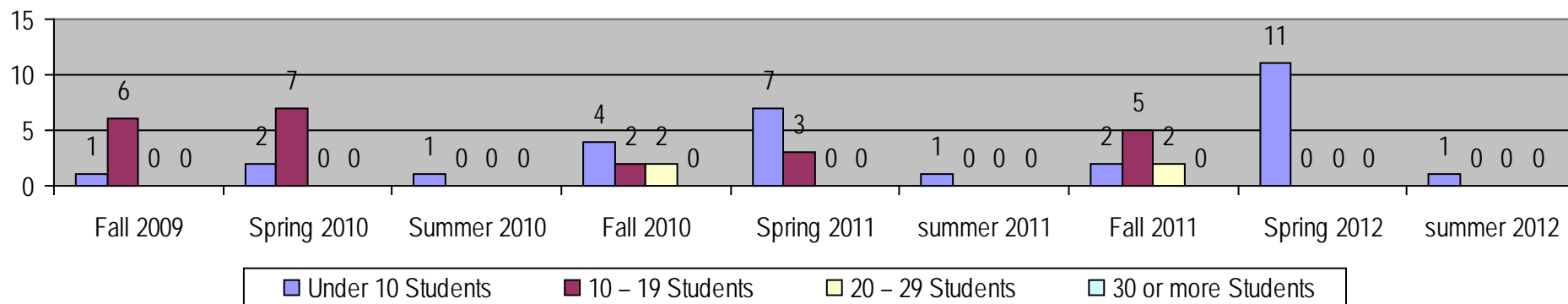


Figure 4. Class Offering

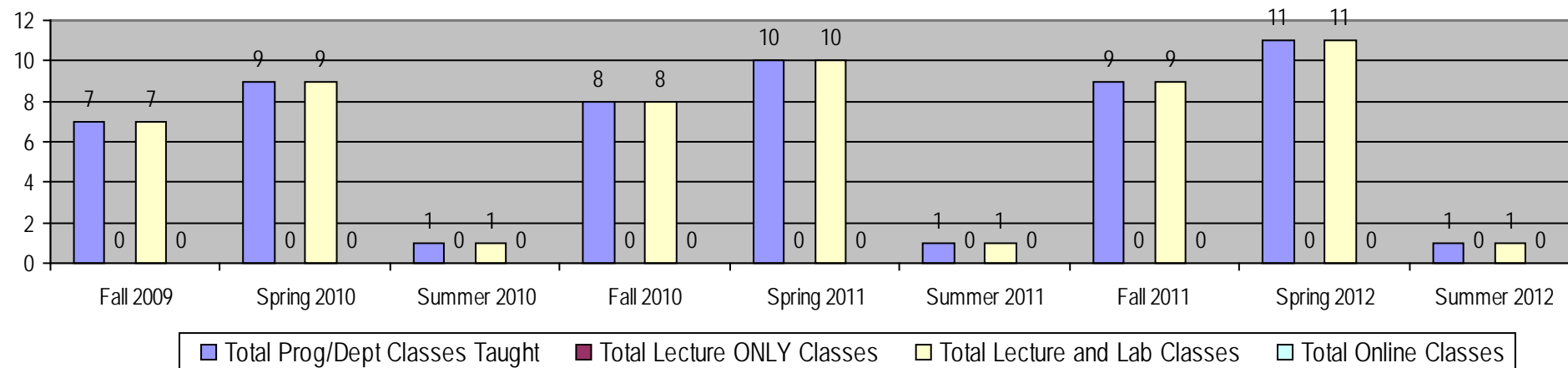
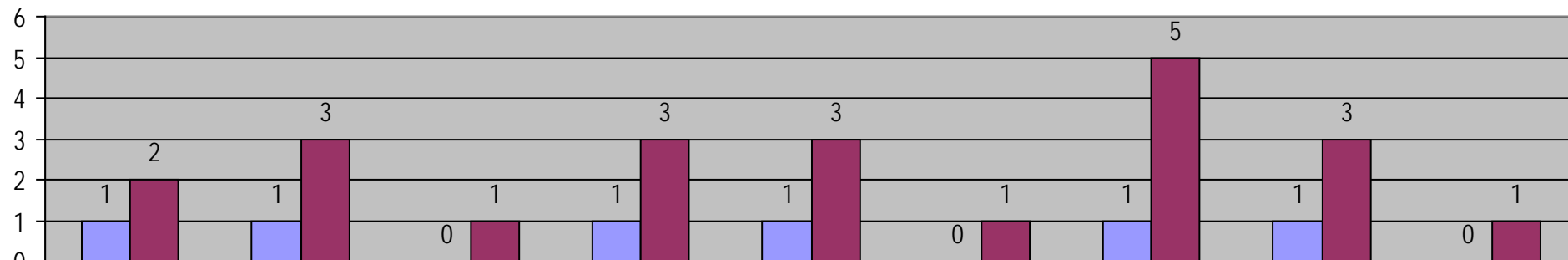


Figure 5. Faculty Head Count



NOTE: Full Time Faculty refers to full time faculty in the program/department. A Part Time Faculty includes adjuncts as well as Full Time Faculty that are teaching courses not within their program/department. These Full Time Faculty are assisting other programs outside of their own, therefore, are considered Part Time Faculty.

Table 1. Faculty to Class Size Ratio (program headcount).

Ratio	Fall 2009	Spring 2010	Summer 2010	Fall 2010	Spring 2011	Summer 2011	Fall 2011	Spring 2012	Summer 2012
Full Time Faculty (F : S)	1:30	1:41	0	1:37	1:35	0	1:44	1:44	0
Part Time Faculty (F : S)	2:62	3:53	1:4	3:59	3:47	1:4	5:77	4:32	1:3

2.0 Student Learning and Curriculum

How many program courses are there? (refer to catalog)	%of courses with Identified CLOs	% of course outlines updated	% of courses whose Textbooks are updated (outline reflects change)	% of PLOs aligned with ILOs
14	100%	100%	100%	83%

3.0 Course Assessment Data

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2009	AM-101	CLO 2, 3, 4, 5 – PLO 1 CLO 2, 3,5 to PLO 2	70% of students performed at proficiency level for all CLOs except CLO 4; therefore, more time is needed to be spent in discussion of ethics of teaching.
	AM-111	CLO 1, 2, 3, 4, 5 to PLO 1	
	AM-112		
	AM-213		
	AM-214		
	AM-215		
Spring 2010	AM-124		
	AM-125		
	AM-126		
	AM-225		
	AM-226		
	AM-227		
Fall 2010	AM-101		
	AM-111		
	AM-112		
	AM-213		
	AM-214		
	AM-215		
Spring 2011	AM-124		
	AM-125		
	AM-126		
	AM-225		
	AM-226		
	AM-227		
Fall 2011	AM-101		
	AM-111		
	AM-112		
	AM-213		
	AM-214		
	AM-215		
Spring 2012	AM-124		
	AM-125		

	AM-126		
	AM-225		
	AM-226		
	AM-227		
Fall 2012	AM-101		
	AM-111		
	AM-112		
	AM-213		
	AM-214		
	AM-215		

4.0 Program Learning Outcomes (PLOs) Assessment

SAMPLE

List PLOs	Proficiency Levels	Results of Assessments
ED PLO #1	ED110- CLO#4-75% ED120- CLO#1 -77% ED151- CLO#1,2,3- 88% ED200- CLO#1,2 -84% ED204- CLO#1 – 92%	83% of the students reached the proficiency level for ED PLO #1. No action is needed.
ED PLO #2		

List of PLOs	Proficiency Level	Results of Assessments

5.0 Evaluation of Previous Program Review Action Plans

Indicate the status of the previous program review action plans

Action Plan Activity/Objectives	Status Complete/Ongoing/Incomplete	Remarks

6.0 Action Plans

Based on this program review results, describe the program action plan for the next three (3) academic years. Include necessary resources.

Action Plan Activity/Objectives	How will this action plan improve student learning outcomes? (CLO, PLO, ILO)	Needed Resources (if any)	Timeline

7.0 Resource Requests

Type of Resource	Description	Estimated Amount Requested	Justification
Personnel	None	0	None
Facilities	None	0	None
Equipment	Hydraulic car lifter	\$7,000	This equipment is intended for undercarriage system and power train servicing and thus helps students to comply PLO 1 and 2.
Supplies	Basic consumables at local stores.	\$2,000	To accommodate all CLO assessments.
Software	G-scan diagnostic tool for Asian cars.	\$10,000	This will help the students to identify engine component specifications, trouble code, and actual output and input signals of sensors and actuators. Thus preventing damage of sensors and engine control unit.
Training	Hybrid cars, and CV transmission	\$2,000	Hybrid cars today are now acceptable in the market; people appreciate the advantage of using this type of cars and same to CV transmission. It is our advantage to have training on this kind of technology; for It is our objectives to provide students with technical knowledge, skills and proper work habit/attitudes necessary for employment in the field of Automotive Technology.
Other	Ceiling insulation	Only the PCC President knows the amount this project.	To provide conducive learning environment.
Total:		\$21,000	

Appendix E: Provide all supporting evidence for this review

Appendix B1: Institutional Learning Outcome (ILO)

Institutional Learning Outcome (ILO)

1. **Critical Thinking and Problem Solving:** Analyze and solve problems by using informed judgment based on evidence, sound reasoning, and/or creativity to differentiate facts from opinions and to specify solutions and their consequences.
2. **Communication:** Effectively communicate, both orally and in writing, thoughts in a clear, well-organized manner to persuade, inform, and/or convey ideas in academic, work, family and community settings.

3. **Quantitative and Technological Competence:** Use mathematical skills appropriate to our technological society by analyzing and solving problems that are quantitative in nature and by utilizing technology for informational, academic, personal and professional needs.
4. **Diversity:** Understand and appreciate differences in cultures and behaviors between one-self and others by demonstrating respect, honesty, fairness, and ethical principles in both personal and professional life.
5. **Civic responsibility:** Apply the principles of civility and morality to situations in the contexts of a healthy family, work, community, environment, and the world.
6. **Aesthetics:** Apply numerous means of inquiry to experience and appreciate the values of arts and nature.

Appendix B2: Program Learning Outcomes (Automotive Mechanics Technology)

Upon Completion of this program, students will be able to demonstrate basic knowledge, skills, and attitude in:

1. Servicing automotive undercarriage system and their components.
2. Servicing automotive power train system and their components.
3. Servicing engine mechanical components and their auxiliary system.
4. Servicing automotive electrical system and computer controlled components

Appendix C: Program mapping that shows alignment of CLOs – PLOs – ILOs

Curriculum Alignment Matrix 2012 – 2016 Catalog Requirements

Program/ dept. Courses	PLO #1	PLO #2	PLO #3	PLO # 4	ILO
AM – 101 Vehicle Operation	I	I	I	I	1 & 3
AM – 111 Basic Automotive Maintenance	D			I	1 & 3
AM – 112 Engine Servicing I			D	I	1 & 3
AM – 124 Drive Train Servicing		D	I		1 & 3
AM – 125 Automotive Electricity	I	I	D	D	1 & 3
AM – 126 Engine Servicing II			D, M	I	1 & 3
AM – 213 Automotive Air-conditioning			D	D	1, 3, & 5
AM – 214 Electronic Engine Management			D	D	1 & 3
AM – 215 Automatic Transmission		D		I	1 & 3
AM – 225 Automotive Computer Control System		I	I	M	1, 3, & 5
AM – 226 Electronically Controlled Transmission		D, M		D	1 & 3
AM – 227 Traction Control	D, M			D,M	1 & 3
WE 110 Oxy Acetylene	I				1 & 3
AB 110 Auto Body Repair for Non-majors	D				1 & 3
CS 100 Computer Literacy	I	I	I		1, 2, 3, &

					4
BA 110 Introduction to Business	I	I	I		1, 2, 3, 4, 5, & 6
AM 228 Internship OR	D,M	D,M	D,M	D,M	
AM 229 Service Learning					

LEGEND:

I – Introduced (covers KNOWLEDGE & COMPREHENSION)

D – Developed (covers APPLICATION & ANALYSIS)

M – Demonstrated at Mastery Level Appropriate for Graduation (covers SYNTHESIS & EVALUATION)

Appendix D1: Signature assignment form

Palau Community College

Signature assignments

Skills assessment

Fall 2014

AM-101 VEHICLE OPERATION

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	65 to 84 points
Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 65 points

Course learning Outcome #1: Inspect Under hood Components

Tasks include: **Change engine oil and filter**, check cooling system, **check engine drive belts tension**, check automotive battery reserve voltage, check automatic transmission fluid level and quality, identify brake fluid class and quality, identify coolant class and quality, identify windshield washer fluid classification, classify automatic transmission fluid uses and compatibility, classify engine lubricants uses and compatibility, classify automotive gear oil uses and compatibility, and/or classify automotive grease class, uses and compatibility

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			

9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #2: Inspect vehicle main components

Tasks include: Check suspension components, check steering components, check brake components, check drive train components, check lighting components, check charging components, check starting system components, check panel board gauges, warning lights, instruments and controls, and/or interpret vehicle maintenance schedules

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Course learning Outcome #3: Clean Vehicle Unit

Tasks include: Identify cleaning materials, wash vehicle body panel, clean engine compartment, and /or interior panel and carpet.

Criteria	Consistently	Usually	Sometimes
1. Apply shampoo correctly			
2. Scrub outside body panel correctly			
3. Rinse with water correctly			
4. Wipe outside body panel correctly			
5. Correctly apply liquid wax			
6. Clean windshield correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Course learning Outcome #4: Obey and Observe Traffic Rules and Regulation

Tasks include: Obey traffic sign and road markers, show road courtesy, and /or obey traffic rules and regulation.

Criteria	Consistently	Usually	Sometimes
1. Obey regulatory signs correctly			
2. Read and understand warning signs correctly			
3. Obey warning signs correctly			
4. Read and understand information signs correctly			
5. Read and comprehend road marker correctly			
6. Correctly obey road markers			
7. Obey traffic enforcer correctly			
8. Keep distance correctly			
9. Correctly use and apply mechanical traffic signs			
10. Correctly understand traffic lights			

Course learning Outcome #5: Drive Light Duty Vehicle

Tasks include: Conduct engine pre-starting and warm-up, **drive light duty vehicle equip with manual transmission**, drive light duty vehicle equip with automatic transmission, and or show defensive driving skills.

Criteria		Consistently	Usually	Sometimes
1.	Starts the engine correctly			
2.	Park the car correctly			
3.	Apply brakes correctly			
4.	Correctly change gears uphill			
5.	Correctly change gears down hill			
6.	Shows defensive driving			
7.	Shows road courtesy			
8.	Correctly pass slow moving vehicles			
9.	Correctly read panel board gauges			
10.	Correctly steer the steering wheels when making turns			

Palau Community College

Signature assignments

Skills assessment

Fall 2014

AM-111 BASIC AUTOMOTIVE MAINTENANCE

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	65 to 84 points
Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 65 points

Course learning Outcome #1: Perform Suspension System Servicing

Tasks include: Identify suspension components, inspect suspension parts for looseness, **remove and replace suspension parts and components**, and/or conduct under chassis bolt tightening

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #2: Perform Steering System Servicing

Tasks include: Identify Steering system parts, inspect Steering parts for looseness, **remove and replace steering parts and components**, repack front wheel bearings, and/or adjust steering spoke.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #3: Perform Brake System servicing

Tasks include: Identify Brake system parts, conduct Brake system preventive maintenance, and/or **remove and replace brake parts and components**.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #4: Conduct Wheel Alignment

Tasks include: Identify wheel alignment angles, conduct wheel alignment, and/or **adjust suspension and steering system geometrical angle**

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #5: Analyze Undercarriage Problem

Tasks include: Analyze Suspension system failure, analyze Steering system problem, analyze Brake system failure, and/or analyze Wheel alignment problem.

Criteria		Consistently	Usually	Sometimes
1.	Verify the complaint			
2.	Determine the related symptoms			
3.	Analyze the symptoms			
4.	Knows components specifications			
5.	Isolate the trouble			
6.	Correct the trouble			
7.	Check for proper operation			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Palau Community College
 Signature assignments
 Skills assessment
 Fall 2014
AM-112 ENGINE SERVICING I

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	65 to 84 points
Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 65 points

Course learning Outcome #1: Service Engine Electrical System

Tasks include: Check ignition system input and output supply, service distributor assembly, adjust ignition timing, check centrifugal advancer, check vacuum advancer, service spark plug, check pre-heating system power supply, check pre-heating relay and timer, check pre-heating system power supply, check pre-heating relay and timer, and/or check glow plug performance

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #2: Perform Engine Tuning

Tasks include: Clean diesel fuel lines, replace fuel filter, bleed air at fuel lines, check fuel pump assembly, **replace fuel filter**, **overhaul carburetor assembly**, and/or servicing fuel tank

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #3: Service Engine Valve Mechanism

Tasks include: **Adjust valve clearance**, **replace hydraulic type valve lifter**, install camshaft sub-gears, and/or check camshaft to crankshaft timing

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #4: Conduct Engine Cooling System Preventive Maintenance

Tasks include: Check cooling fan, check radiator hose condition, **change engine coolant**, and/or clean water jacket and passages

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #5: Perform Engine Lubrication System Preventive Maintenance

Tasks include: **Change oil filter**, **change engine oil**, perform engine oil flushing / cleaning, check engine oil pressure, and/or check engine oil leaking

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Palau Community College

Signature assignments

Skills assessment

Fall 2014

AM-214 ELECTRONIC ENGINE MANAGEMENT

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	65 to 84 points
Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 65 points

Course learning Outcome #1: Service Carburetor Assembly

Tasks include: **Overhaul carburetor assembly**, adjust engine idling, adjust choke system, and/or check carburetor vacuum hoses.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #2: Service Electronic Fuel Injection Control Unit

Tasks include: **Measure electronic control unit input and output voltage**, clean electronic control unit terminals and sockets, **measure electronic control unit power supply**, measure air-flow meter signal voltage, measure throttle valve signal voltage, and/or measure water temperature sensor signal.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Course learning Outcome #3: Service Electronic Fuel Injection Actuators

Tasks include: Measure fuel injector operation and resistance value, **clean electronic fuel injector hole**, and/or **check electronic fuel injector spray pattern**.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Course learning Outcome #4: Service Electric Fuel Pump Assembly

Tasks include: Measure electric fuel pump input voltage, measure electric fuel pump resistance value, and **check electric fuel pump operation**.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Course learning Outcome #5: Service Electrical Security System

Tasks include: Measure electrical security control unit power supply, **measure electrical security control unit input and output voltage**, check electrical security system signal, service electrical security system sensor and manual switch operation, service electrical security system actuators, and/or check electrical security system wave signal.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Palau Community College

Signature assignments

Skills assessment

Fall 2014

AM-215 AUTOMATIC TRANSMISSION

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	65 to 84 points
Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 65 points

Course learning Outcome #1: Inspect Automatic Transmission Operating Performance

Tasks include: **Conduct hydraulic test**, conduct stall test, and conduct time lag test.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Course learning Outcome #2: Service Gear Box Assembly

Tasks include: Service forward planetary gear, service forward clutch, service forward brake, service forward clutch, and/or service forward brake.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #3: Service Valve body Assembly

Tasks include: Service throttle valve, service lock-up valve, service modulator and accumulator valve, service shift valves, service regulator valves, and/or service pressure relief valves.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #4: Service Automatic Transmission Solenoid Valves

Tasks include: Service forward solenoid valves, service reverse solenoid valves, and service overdrive solenoid valves.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #5: Service Automatic Transmission Shifting Linkage

Tasks include: Check shifting linkage movement, adjust shifting linkage, and/or service shifting lock.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Palau Community College

Signature assignments

Skills assessment

Fall 2014

AM-124 DRIVE TRAIN SERVICING

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	70 to 84 points
Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 70 points

Course learning Outcome #1: Service Clutch System

Tasks include: Replace clutch master repair kit, replace clutch auxiliary sleeve repair kit, adjust clutch pedal free play, remove manual transmission assembly, check pilot bearing, replace clutch lining and pressure plate, replace clutch release bearing, and/or installing manual transmission assembly.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #2: Service Longitudinal Type Manual Transmission

Tasks include: Identify manual transmission parts, dismantle manual transmission assembly, clean manual transmission parts, assemble transmission assembly, check shifting lever free play, and/or adjust shifting lever linkage selector.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #3: Service Front Drive Shaft

Tasks include: Remove front drive shaft assembly, replace outboard universal joint assembly, replace inboard universal joint, and/or install front drive universal joint.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #4: Service Transversal Type Manual Transmission Assembly

Tasks include: Identify transversal manual transmission parts, dismantling transversal type manual transmission assembly, check transmission gear backlash, check transmission synchronizer assembly, check differential gear backlash, and/or install transmission gear assembly.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #5: Service Manual Transmission Transfer Case

Tasks include: Dismantle transfer case assembly, check shifting rail and fork, check four wheel drive high speed ranges gear backlash, check four wheel drive low speed ranges gear backlash, install transfer case gear assembly, and/or install transfer case assembly.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #6 Service Rear differential and Drive Axles

Tasks include: Identify rear differential parts, measure differential gear backlash, measure differential ring gear backlash, checking pinion gear bearing load, check pinion gear tooth contact, remove rear drive axle assembly, replace rear drive axle oil seal, install axle bearing, install axle bearing retainer, install axle bearing shim, install rear axle assembly.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Palau Community College

Signature assignments

Skills assessment

Fall 2014

AM-125 AUTOMOTIVE ELECTRICITY

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	70 to 84 points

Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 70 points
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Course learning Outcome #1: Service Automotive Battery

Tasks include: Check battery electrolyte specific gravity, conduct battery charging, conduct battery connection, check battery plate's condition, and/or check battery charging voltage.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Course learning Outcome #2: Service Starting System

Tasks include: Check starter motor operation, check starter switch and relay, remove starter motor assembly, dismantle starter motor assembly, test armature winding, test solenoid switch, test field coil winding, assemble starter motor components, and/or install starter motor assembly.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Course learning Outcome #3: Service Charging System

Tasks include: Check charging output, check charging system wiring connection, check voltage regulator operation, remove alternator assembly, dismantle alternator assembly, test stator winding, test rotor winding, replace alternator carbon brush, check rectifier diode operation, assemble alternator components, and/or install alternator assembly.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			

9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #4: Service Ignition System

Tasks include: Check ignition system voltage output, measure ignition switch voltage output, check distributor advance mechanism, check ignition coil resistance value, test ignition module, adjust contact point clearance, measure ignition system sensor resistance value, measure high tension wire resistance value, and/or check spark plug condition.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #5: Service Engine Electrical System

Tasks include: Check electrically operated cooling fan operation, check electrically operated cooling fan relay and sensor switch, check engine temperature sensor, check engine temperature gauge, check oil pressure sensor, and/or check oil pressure gauge.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #6: Service Lighting System

Tasks include: Check light bulbs, check lighting system relay and fuses, check light switch terminal contact, conduct wiring installation for head light circuit, conduct wiring installation for park and tail circuit, conduct wiring installation for signal and hazard circuit, conduct wiring installation for stop light circuit, conduct wiring installation for horn circuit, and/or conduct wiring installation for plate light circuit.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			

7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #7: Service Chassis Electrical System

Tasks include: Check wiper motor condition, lubricate wiper linkages, test wiper relay, check wiper switch terminal contact, replace wiper blade, adjust wiper rod position, clean wiper washer water passage, and/or test wiper washer motor condition.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Palau Community College

Signature assignments

Skills assessment

Fall 2014

AM-126 ENGINE SERVICING II

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	70 to 84 points
Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 70 points

Course Learning Outcome #1: Troubleshoot Engine Mechanical Failure

Tasks include: Measure engine compression pressure, measure engine oil pressure, check engine blow-by, check engine valve clearance, check unusual knocking or grinding sound, and/or check engine timing.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			

7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course Learning Outcome #2: Service Engine Top End Components

Tasks include: Grind engine valve, measure cylinder head war page, measure engine valve stem oil clearance, check valve spring squareness, install valve train mechanism, adjust engine valve clearance, and/or test engine valve leakage.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course Learning Outcome #3: Service Engine Bottom End Components

Tasks include: Clean engine block assembly, install piston ring, install piston assembly, install crankshaft and bearing assembly, install connecting rod and caps, measure crankshaft bearing oil clearance, measure crankshaft thrust clearance, measure piston protrusion, and/or install oil pump and oil pan assembly.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course Learning Outcome #4: Service Engine Front end Components

Tasks include: Replace camshaft oil seal, replace crankshaft oil seal, replace engine timing belt, install timing chain, install timing gear, install timing cover, and/or install water pump assembly.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			

7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course Learning Outcome #5: Overhaul Engine Assembly

Tasks include: Remove engine assembly, dismantle engine parts, clean engine parts, measure engine mechanical oil clearance, assemble engine parts, and/or reinstall engine assembly.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Palau Community College

Signature assignments

Skills assessment

Fall 2014

AM-225 AUTOMOTIVE COMPUTER CONTROL SYSTEM

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	70 to 84 points
Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 70 points

Course Learning Outcome #1: Service Electronic Fuel Injection System

Tasks include: Service electric fuel pump, service electronic fuel injection ECU (Electronic Controlled Unit), and/or service electronic fuel injectors.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			

8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course Learning Outcome #2: Service Electronic Controlled Ignition System

Tasks include: Service electronic controlled ignition components, service distributor assembly, and/or service electronic controlled ignition system actuator.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course Learning Outcome #3: Service Engine Computer Control Unit

Tasks include: Service electronic spark advance components, service idle speed control components, and/or check and clear diagnostic codes.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course Learning Outcome #4: Service Emission Control System

Tasks include: Service positive crankcase ventilation valve, service PCV pipe, measure blow-by gases, service EGR valve, service EGR actuator modulator, service EGR sensor, check EGR sensor, service charcoal canister, service evaporation emission hoses, and/or service evaporation emission control valves.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			

9.	Apply personal safety			
10.	Apply shop safety			

Course Learning Outcome #5: Service Computerized Controlled Air Induction System

Tasks include: Service T-VIS system, service V-TEC system, and/or service ACIS system

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Palau Community College

Signature assignments

Skills assessment

Fall 2014

AM-226 ELECTRONICALLY CONTROLLED TRANSMISSION

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	70 to 84 points
Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 70 points

Course learning Outcome #1: Service ECT Planetary Gear Box

Tasks include: Service front planetary gears, service rear planetary gears, service over-drive planetary gears, service front and rear clutch, service over-drive clutch, service one-way clutch, and/or service brakes number 1, 2, & 3.

Criteria	Consistently	Usually	Sometimes
1. Loosen bolts and nuts correctly			
2. Remove parts correctly			
3. Install parts correctly			
4. Tighten bolts and nuts correctly			
5. Finish task on time			
6. Use tools and equipment correctly			
7. Knows components specifications			
8. Apply tidiness			
9. Apply personal safety			
10. Apply shop safety			

Course learning Outcome #2: Service Electronically Controlled Transmission ECU (Electronic Control Unit)

Tasks include: Measure electronically controlled transmission ECU power supply, measure electronically controlled transmission input supply, and/or measure electronically controlled transmission output supply.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #3: Service Full Time Four Wheel Drive Components

Tasks include: Measure vehicle speed sensor, measure engine speed sensor, measure throttle valve sensor.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #4: Service Electronic Controlled Transmission Valve Body

Tasks include: Remove electronic controlled transmission valve body, overhaul electronic controlled transmission valve body, installing electronic controlled transmission valve body, remove electronic controlled transmission solenoid valves, measure electronic controlled transmission solenoid valves power supply, and/or install electronic controlled transmission solenoid valves.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #5: Service Electronic Controlled Transmission Actuators

Tasks include: Removing electronic controlled transmission actuators, check electronic controlled transmission actuators operation, and/or install electronic controlled transmission actuators.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Palau Community College

Signature assignments

Skills assessment

Fall 2014

AM-227 TRACTION CONTROL

Level of Performance: _____

Date of Assessment: _____

Distribution of points:		Description	Level of performance	
Consistently	10	Consistently completes the task and shows no mistake; excellent performance is obvious in the work place.	Highly Competent	85 to 100 points
Usually	7	Usually completes the task, but familiarity of concepts, parts, and components are obviously limited.	Competent	70 to 84 points
Sometimes	3	Able to show basic skills but it demands supervision to complete the task.	Beginner	Below 70 points

Course learning Outcome #1: Service Anti-lock Brake System Motor Assembly

Tasks include: Service Anti-lock brake system motor relay, service Anti-lock brake system hydraulic pump motor, and/or measure Anti-lock brake system motor relay.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #2: Service Anti-lock Brake System Control Module

Tasks include: Service ABS modulator unit, measure control module input and output voltage, scan ABS trouble code, service wheel speed sensor, service wheel speed sensor, and/or measure ABS sensor voltage output.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #3: Service Suspension Height Control System

Tasks include: Service height control valve, service height control sensor, and/or service electronic controlled shock absorber.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #4: Service Traction Sub-throttle Control System

Tasks include: Service steering angle sensor, service acceleration sensor, service yaw sensor, service sub-throttle sensor, service sub-throttle actuator, and/or service traction brake actuator.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Course learning Outcome #5: Service Traction Control ECU

Tasks include: Measure traction control ECU power supply, measure traction control input and output supply voltage, and scan traction control trouble code.

Criteria		Consistently	Usually	Sometimes
1.	Loosen bolts and nuts correctly			
2.	Remove parts correctly			
3.	Install parts correctly			
4.	Tighten bolts and nuts correctly			
5.	Finish task on time			
6.	Use tools and equipment correctly			
7.	Knows components specifications			
8.	Apply tidiness			
9.	Apply personal safety			
10.	Apply shop safety			

Appendix D: Signature assignment form (for PLO)