Review of Performance: Course: VTM 101 – Introduction to Motor Vehicle Mechanics

Fall 2011, 13 students

Submitted by: Pablo H. Lamsis, Jr.

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| **SLO#** | **Program**  **SLO#** | **I, D, M** | **Reflection/Comment** |
| 1. Demonstrate the ability to perform safe, professional, and responsible work practices. | PLO # 1, 2, 3, & 4. | I,D | How many students were successful on this SLO. At what level were the students successful and other comments on student learning. How was SLO assessed (project, essay, quiz question, etc.)  Thirteen (13) students were assessed on this SLO. Assessments were carried out over a period of time from November 16, 2011 up to Dec 6, 2011 to allow students to realize the importance of working safely and responsibly. Assessments were carried out by using the VTM Automotive Club Service Sheet and observing their performance whilst servicing and repairing vehicles from the community. Final assessment was carried out using the final exam as the measuring parameter. Twelve (12) students reached the level of D (Demonstrate) as they possess the safety knowledge and awareness but lacks practical application such as wearing PPE. From time to time, students are always reminded to wear their PPE. |
| 2. Carry out competent work activities in bench fitting, identification and use of fasteners, adhesives and sealants. | PLO # 1, 2, 3, & 4. | I,D | Out of thirteen (13) students, only twelve (12) were successful to the D level. Worksheets were given to each task and graded according to student’s performance. One student was absent for nearly 3 weeks and did not attend the final exam. |
| 3. Explain and demonstrate two and four stroke cycle operation of an engine. | PLO # 1, 2, 3, & 4. | I,D,M | Computer-based training (ATECH) was used to explain the concept of engine operation followed by practical “hands-on” application in the workshop. This combined training resulted in students doing well in their work. Twelve (12) students attained the M level of this SLO. One student was absent for 3 weeks and did not take the final exam. |

**Additional observations:** A revision is urgently needed for the whole program as it is outdated. Automotive technology is fast changing and real hands-on is needed for a student-centered learning approach. This is evident in students’ increased enthusiasm when working with real vehicles. Program modification is being done at this time to incorporate these changes.

**Special comments:** An Action Plan had been submitted to the Division Chairperson to cater for more involvement in students working on real vehicles. See Appendix A attached here.

**Recommendations:** In addition to the action plan attached below, it also recommended that a separate classroom equipped with computers (at least 4 to start with) to enable students to work on computer-based instruction and access specific vehicle specifications over the internet so they can be equipped with the latest information on automotive technology. This will assist them in repairing and servicing various types and models of vehicles in the island.

Signature: Pablo H. Lamsis, Jr., Associate Professor Date: December 8, 2011

Name typed, position

**APPENDIX A**

**Motor Vehicle Mechanic Program**

**Action Plan for 2011 – 2012**

**Goal No. 1:** To collaborate with government agencies, business establishments, college stakeholders, and others interested in developing students to become the future mechanics in the island by seeking their support to bring their vehicles for repair and maintenance at the college automotive workshop.

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| **Steps** | **Action** | **By Whom** | **When** | **Comments** |
| 1 | Write letter to COM-FSM Director of Maintenance requesting for vehicles to work on and provide preventive maintenance and services. | Pablo  Francisco Mendiola – COM-FM Director of Maintenance | Nov. 23, 2011 | Email sent on Nov. 23, 2011. Received positive response from Director of Maintenance saying he will support the plan.  Another email came from Pohnpei Campus Maintenance Supervisor saying he is amendable to the plan. |
| 2 | Write letters to government agencies in Pohnpei seeking for support of the above goal. | Pablo | December 22, 2011 | Need to talk to government agencies prior to sending them official letters. |
| 3 | Invite the public community in raising their awareness in automotive preventive maintenance and repair by providing services at the college campus workshop. | VTM Automotive Club (Pablo’s students) | Started on Nov. 16, 2011 and is planned to be ongoing process for all semesters. | Students were requested to bring their own cars for maintenance and repair. The word was spread and one gov’t agency in Kolonia made an appointment for their RVR car to be repaired. |

**Goal No. 2:** To improve student-centered learning in the college by giving students real “hands-on” training in the repair and maintenance of running vehicles in accordance with the program / course outlines.

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| **Steps** | **Action** | **By Whom** | **When** | **Comments** |
| 1 | To conduct program review and align it to the present needs of students and community. Based on this, program modification will be made. | Program Instructor | January 2012 | Program review had been made in 2008 and needs to be updated with all the required data. |
| 2 | Incorporate more “hands-on” approach to learning with real running vehicles.  *Examples of course-related work for the Fall semester course schedule VTM 101 and VTM 102 are:*   1. Engine maintenance such as changing oil and filter; 2. Fixing engine fluid leaks and associated parts and components; 3. Checking and testing engine coolant temperature and pressure; 4. Checking and testing engine oil pressure; 5. Changing engine coolant; 6. Changing or replacing belts and hoses; 7. Engine tune up such as engine vacuum checks, replacing sparkplugs, checking ignition timing, adjusting valve clearance, and PCV checks; 8. Manual transmission maintenance and minor repairs; 9. Topping up or changing gear oil; 10. Clutch components and linkage repair; 11. Replacing CV boots and lubricating joints; 12. Transaxle checks and lube service; 13. Differential checks and lube service; 14. Final drive bearings and seals checks and service; 15. Repair worn-out threads, fittings, and use sealants and adhesives to fix trims; and 16. Obtain repair information from service manual or from the internet.   *Examples of course-related work for the Spring semester course schedule VTM 103 and VTM 104 are:*   1. Carry out all jobs mentioned for VTM 101 and VTM 102; 2. Checking and servicing battery, starting, charging, and lighting systems; 3. Jump starting vehicles in the event of breakdowns; 4. Carry out ignition timing; 5. Checking and replacing fuses, fusible linkages, and light bulbs; 6. Checking and providing preventive maintenance on brakes, wheels, tires, and suspension; 7. Servicing disc and drum brakes; 8. Checking and servicing steering alignment; 9. Carry out tire vulcanizing; 10. Troubleshoot and diagnose engine problems; 11. Troubleshoot and diagnose manual transmission, clutch, and final drive problems; 12. Troubleshoot and diagnose starting, charging, and lighting problems; 13. Troubleshoot and diagnose brakes, steering, wheel, and suspension problems; 14. Perform preventive maintenance on automatic transmissions; and 15. Obtain repair information from service manual or from the internet. | Program Instructor | Started on November 16, 2011 and is an ongoing process.  Program modification will be implemented on all courses of the program as soon as approval for program modification is done. | This is an ongoing process.  *What are the expected benefits for the learners? Learners will be able to:*   1. Experience following proper work flow in a real working scenario; 2. Obtain and interpret work information from superior; 3. Apply personal safety in the workplace, vehicle, equipment, and materials; 4. Work with peers to maintain team work and proper work flow; 5. Experience and learn work ethics and customer care; 6. Think critically and obtain service information manually or online; and 7. Service, diagnose, maintain, and repair automotive assemblies and components. |

**Goal No. 3:** Bring in at least one (1) teaching assistant or two (2) full time apprentice mechanic students who will be working towards their journeyman certificate to be trained as future mechanics and eventually become educators in the program.

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| **Steps** | **Action** | **By Whom** | **When** | **Comments** |
| 1 | Hire a local teaching assistant to assist student apprentice / interns and in lab preparations. | Program Instructor | As soon as enrollment in the program has increased.  Spring 2012 | When real work is carried out in the school workshop, the teaching assistant will assist students in the procurement of parts with the vehicle owner, advising them of material storage and equipment preparation and all the paper work required. |
| 2 | Provide a school competency-based student learning wherein learners will work on running vehicles to provide basic repair and maintenance work routine. Jobs will be allocated to apprentice students supervised by the automotive program instructor and assisted by the teaching assistant or student apprentice or work study students. Program Instructor will decide the works to be carried out depending on the level of training the students had undergone and are capable of doing. | Program Instructor | As soon as enrollment in the program has increased.  Spring 2012 |  |
| 3 | Increase student enrollment in the program to justify hiring of additional assistant teaching staff. | Program Instructor and Student Services | As soon as enrollment in the program has increased.  Spring 2012 |  |

**Goal No. 4:**  Create long –term partnerships with interested motor vehicle repair shops in the island to promote apprenticeship scheme for the benefit of their business, students, and the college. Collaborate with high schools for the School-to-Work Program that will complete a three-way partnership between an automotive facility, the relevant laborers (students), and the college.

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| **Steps** | **Action** | **By Whom** | **When** | **Comments** |
| 1 | Write official letters to all motor vehicle repair shops in the island to promote apprenticeship scheme of the program. | Program Coordinator / Instructor and interested motor repair shops | Summer 2012 | This activity was initiated during the summer of 2010 and has gained momentum. Following up with an official letter to obtain long-term partnership will benefit the college, automotive workshops, and students. |
| 2 | Meet with high school heads and motor vehicle repair shops in the island to promote school-to-work program. | Program Instructor and High School Heads | Summer 2012 | This is a pilot project aimed at promoting the program to high school community and engage student enthusiasm about the value of work and study. |

Prepared and submitted by:

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Program Instructor

Date: December 7, 2011