Program Evaluation

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Program Evaluated:

Certificate of Achievement in Career Education with emphasis on Motor Vehicle Mechanics

A. Program Goals:

This program is designed to develop an understanding of the basic purpose, construction, operation and service of component parts and assemblies of an automobile. Students will develop the knowledge and skills required to disassemble, inspect, reassemble and perform basic repairs and maintenance on motor vehicle units and components.

Based on the common program learning outcomes from the various sections of the career education, the following are its goals and objectives:

1. Identify safety and occupational health requirements in the specific trade area being studied.

2. Use competently specified hand and power tools.

3. Read and interpret information from technical drawings related to the respective trade.

4. Perform hand skills in their respective trades.

5. Participate in the respective trade.

6. Successfully pass the theoretical and practical exams (Basic and Intermediate Level) as specified under the Pacific Regional Trade Testing Scheme.

B. Program History

Fall Semester 2005, Spring 2006, Summer 2006 – first program offering;

Fall 2006 – was not offered to pave way for offering of new program - Small Engine Equipment & Outboard Motor Repair;

Fall 2007 – this program was offered from then on

Course outlines were made following the program learning objectives under the Certificate of Achievement in Career Education which was already existing in the COM-FSM catalogue. It was

designed to have a maximum student seating of ten (10). There were ten (10) first batch of students during Fall 2005.

Significant milestones / current activities:

Since its implementation, students were involved in various activities such as repairs and maintenance services of vehicles given to vehicle owners from the local community and college faculty and staff including college vehicles and fabrication of trainers that were shown during the annual Technology & Trade Exhibit done since 2007 up to the present.

During its maiden year, a move was made to initiate support from the public to donate their used cars for students to work on. Generous donors answered the call and the college received six (6) donor cars that were dismantled by the students and work study groups. These assemblies and components were made as lab trainers for students.

The United States Department of Agriculture (Pohnpei) donated one Toyota Pick-Up for students learning and college use in the year 2011. Students repaired the vehicle and now used as college transport at Pohnpei Campus.

C. Program Description

Designed to develop an understanding of the basic purpose, construction, operation and service of component parts and assemblies of an automobile. Students will develop the knowledge and skills required to disassemble, inspect, reassemble and perform basic repairs and maintenance on motor vehicle units and components.

D. Program Admission Requirements

High school graduate or GED certificate holder. Applicants must take the COM-FSM Entrance Test (COMET) and be accepted by the Admissions Board. Acceptance by the Admissions Board is based on the applicant's score on the COMET and other criteria as defined by the Admissions Board.

E. Program Certificate Requirements

General Education Requirements:

ESL 050 Technical English (3)

MS 104 Technical Math (4)

CA 100 Computer Literacy (3)

BU 097 Intro to Entrepreneurship (3)

Technical Requirements:

VTM 101 Intro to Motor Vehicle Mechanics (4)

VTM 102 Fuel, engine cooling, and power train systems (4)

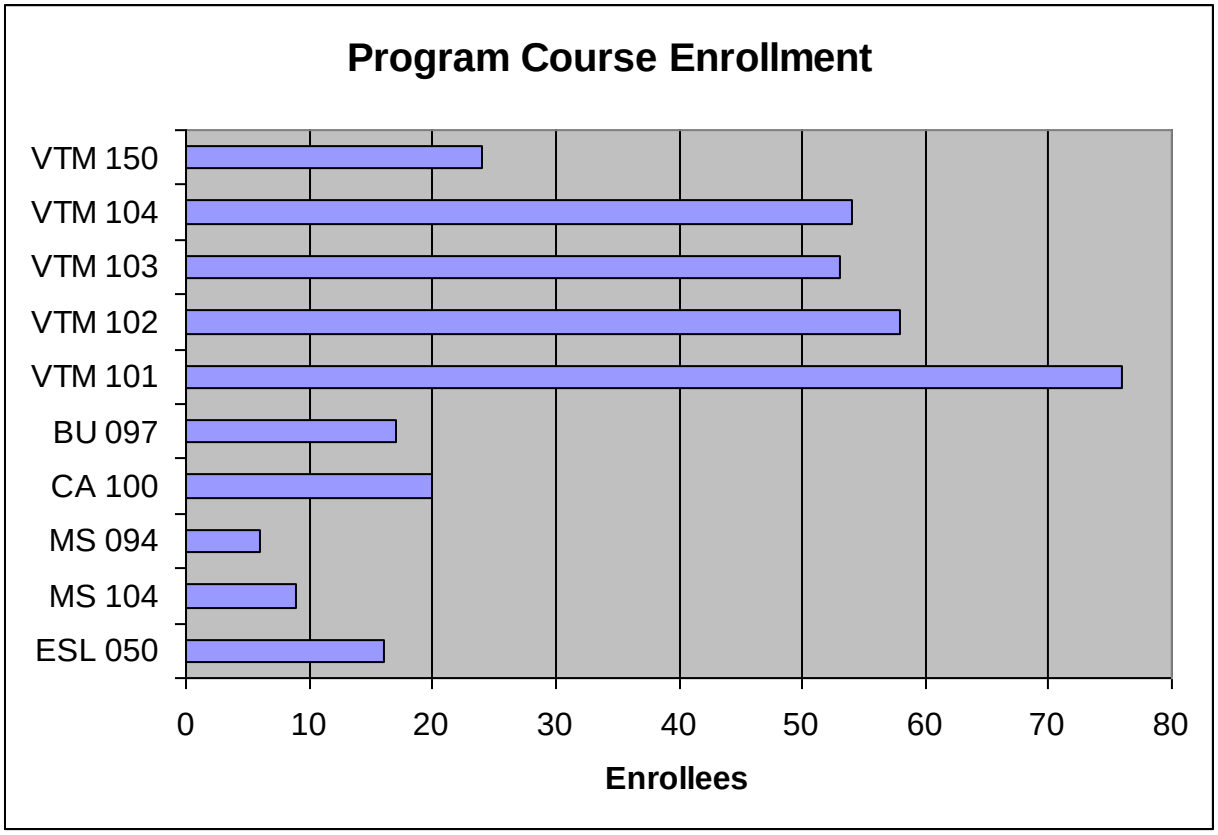
VTM 103 Ignition, electrical, and transmission systems (4)

VTM 104 Brakes, steering, suspension and wheel alignment (4)

VTM 150 Cooperative Education (6)

Total requirements: 35 credits

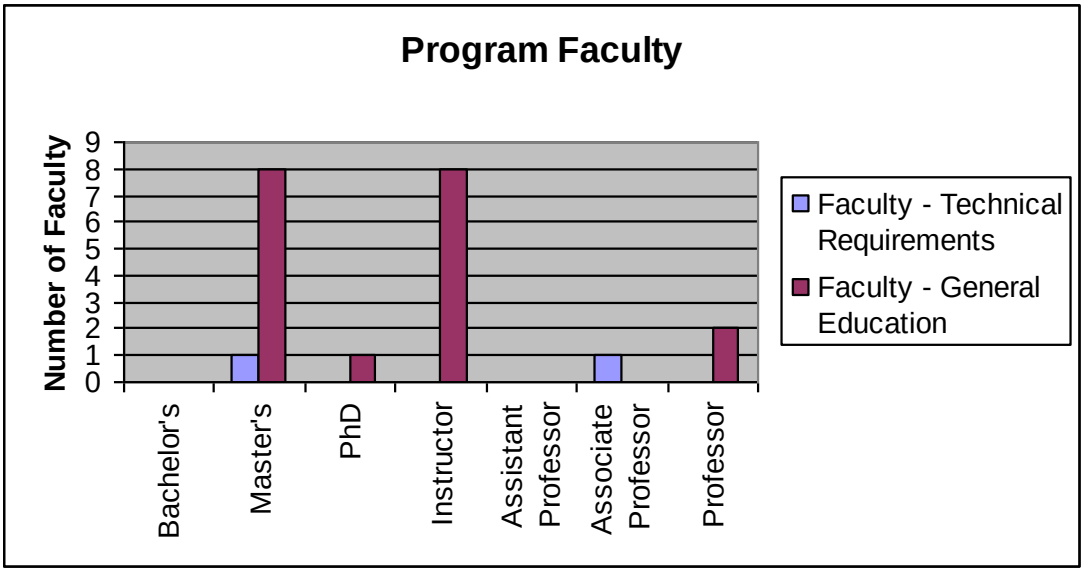
F. Program Courses and Enrollment



Source: COM-FSM Student Information System Record (SIS) and Instructor's Class List Fall 2005- Fall 2011.

G. Program Faculty

The chart below show program faculty, their rank and degree who taught in the program.

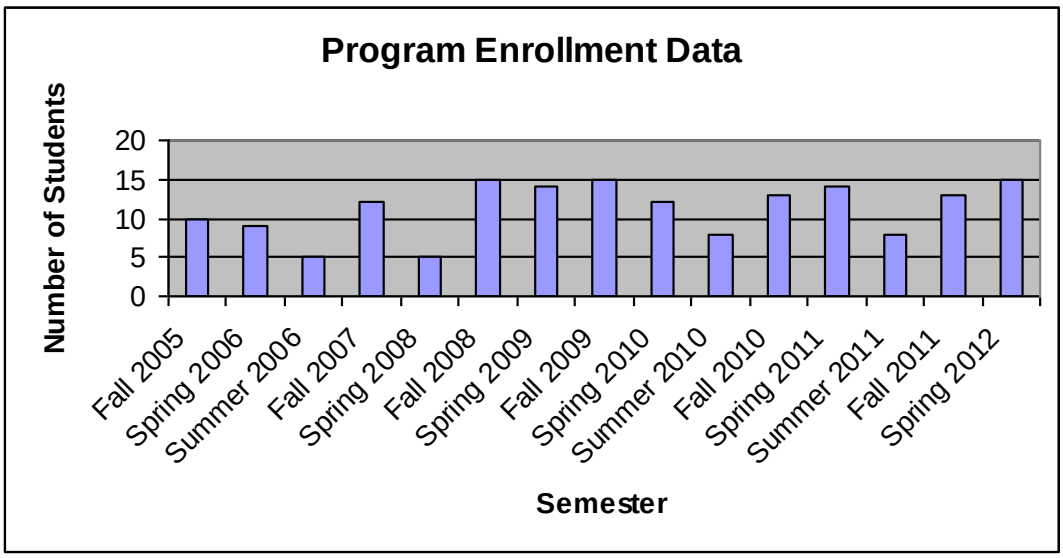


Source: COM-FSM Personnel Listing, COM-FSM General Catalogue from 2005 – 2011, and SIS

H. Program Outcome Analysis

The following are sets of health indicators data that were collected and analyzed:

1. Program Enrollment



Source: COM-FSM Student Information System Record Fall 2005-Spring 2012

2. Graduation Rate

As of this writing, data gathered from SIS yielded only three (3) students who graduated in this certificate program: one (1) from batch 2005 and two (2) from batch 2007. All other batches of students from 2008 onwards are still working towards their graduation. Four (4) are expected to graduate in Spring 2012.

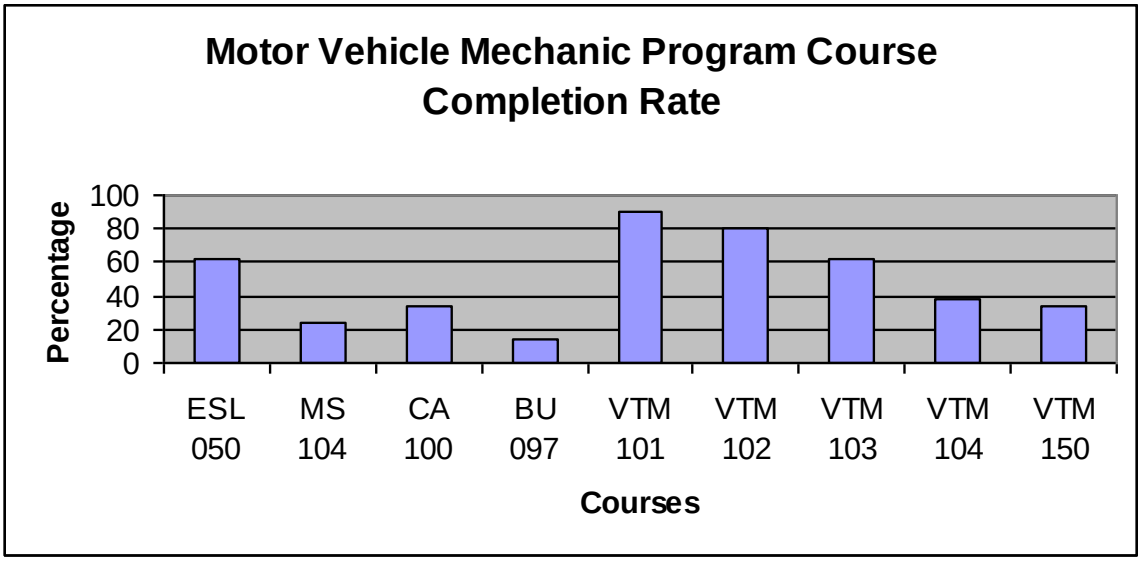
3. Average Class Size

Average class size is 10 students.

4. Students' Seat Cost

No data gathered as of this writing.

5. Course Completion Rate for the Programs



Source: COM-FSM Student Information System Record Fall 2005-Fall 2011.

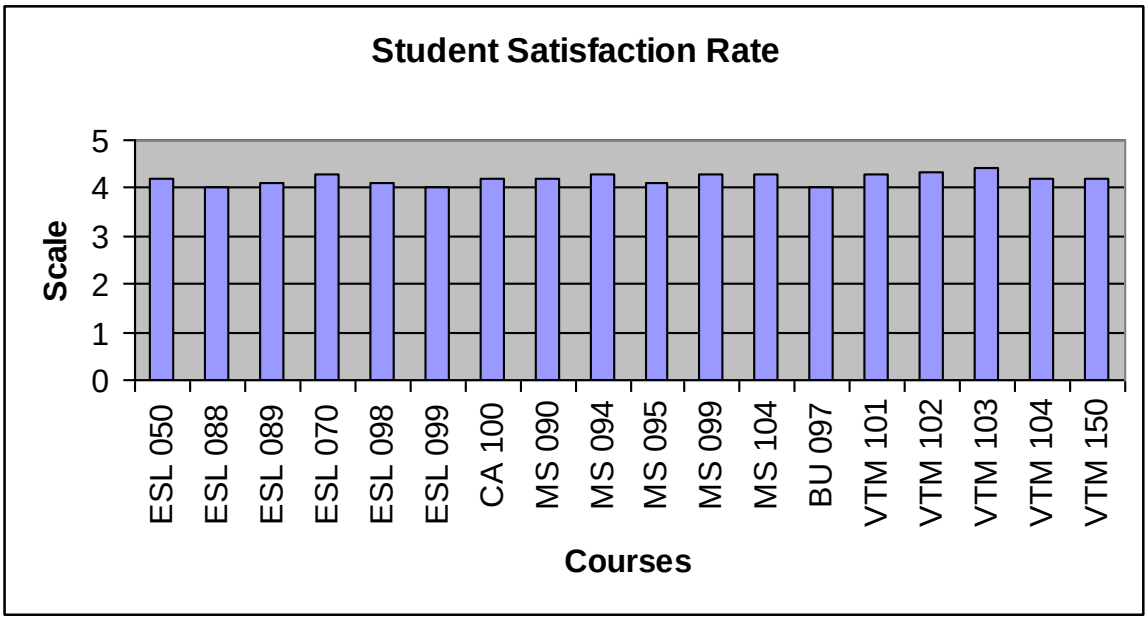
6. Students' Satisfaction Rate

Students' satisfaction rate was based on the Student Evaluation record which students filled up and commented every semester. Students were asked to comment or rate the Instructor and course delivery on a five-point scale: 1 = Never; 2= Rarely; 3= Sometimes; 4= Usually; 5= Always, from the following criteria:

1. Keeps regular schedule every class day.
2. Shows interest in the subject.
3. Gives individual help as needed.
4. Avails himself/herself for student conference.
5. Welcomes questions, suggestions and discussion from students.
6. Shows interest and respect for students.

7. Helps the students in meeting individual learning needs.
8. Uses classroom lab fully.
9. Provides clear directions for assignment and instruction.
10. Grades fairly and frequently.
11. Makes the purpose of the course clear.
12. Talks clearly at an easy-to-follow speed.
13. Lessons are well paced with activity as well as lecture.
14. Makes the course interesting.
15. Textbooks were appropriate and helpful.

Satisfaction rate for all courses are shown on the chart below according to available data.



Source: Student Evaluation Record from Instructional Coordinator's Office COM-FSM, Pohnpei Campus and Program Instructor's record, Fall 2005 – Fall 2011

7. Employment Data

Batch 2005: Ten (10) students

1 – employed at Governor's office and has completed his US Journeyman Certificate.

1 – joined the US military

2 – are in the US mainland working

1 – put up own part time work repairing cars

1- pursuing AS degree at COM-FSM

Batch 2007: 11 students

1 – part-time student and mechanic (did not graduate but doing own business)
2 – pursuing their AAS degrees at COM-FSM
1 – graduated and working towards his AS degree in Building Technology
1 – graduated and continued his study at FMI-Yap
Batch 2008: 15 students
1 – expected to graduate Spring 2012 and doing part time job at Car Care, Pohnpei, FSM
1 – did not graduate but employed as part time mechanic at PCR
Batch 2009: 15 students
2 – passed the COMET and working towards their associate degrees at COM-FSM
1 – did not graduate but working as part time mechanic in a tire shop at Awac, Pohnpei, FSM.
Batch 2010: 13 students – no data collected
Batch 2011: 13 students – no data collected

8. Transfer Rate

8. 9%
Out of 78 students who enrolled for this program or courses during the Fall of 2005 and 2011, seven (7) students transferred to degree programs after passing their COMET at the college.

9. Program's Student Learning Outcomes

This program is designed to develop an understanding of the basic purpose, construction, operation and service of component parts and assemblies of an automobile. Students will develop the knowledge and skills required to disassemble, inspect, reassemble and perform basic repairs and maintenance on motor vehicle units and components.
1. Identify safety and occupational health requirements in the specific trade area being studied.
2. Use competently specified hand and power tools.
3. Read and interpret information from technical drawings related to the respective trade.
4. Perform hand skills in their respective trades.
5. Participate in the respective trade.
6. Successfully pass the theoretical and practical exams (Basic and Intermediate Level) as

specified under the Pacific Regional Trade Testing Scheme.

10. Students' Learning Outcomes for Program Courses

VTM 101 Introduction to Motor Vehicle Mechanics

1. Demonstrate the ability to perform safe, professional, and responsible work practices.
2. Carry out competent work activities in bench fitting, identification and use of fasteners, adhesives and sealants.
3. Explain and demonstrate two and four stroke cycle operation of an engine.

VTM 102 Fuel, Engine Cooling, & Standard Power Train Systems

1. Explain the design, function, and operation of carburetors and basic fuel injection systems.
2. Differentiate engine cooling systems types, identify their major components, and explain their functions.
3. Identify major parts of the standard power train systems and explain their operation and function.
4. Demonstrate the ability to access and understand instructions from service manuals and publications.
5. Demonstrate basic maintenance of the fuel, engine cooling and power train systems.

VTM 103 Ignition, Electrical & Transmission Systems

1. Identify and describe function of parts of the contact point (conventional type) ignition system and compare them to the electronic ignition system. Perform basic ignition system testing and maintenance.
2. Explain electrical operational theory, carry out basic testing of batteries, charging, starting systems and electrical accessories.
3. Explain the principles involved in the operation of automatic transmission and transaxles and be able to carry out basic maintenance.

VTM 104 Brakes, Steering, Suspension & Wheel Alignment

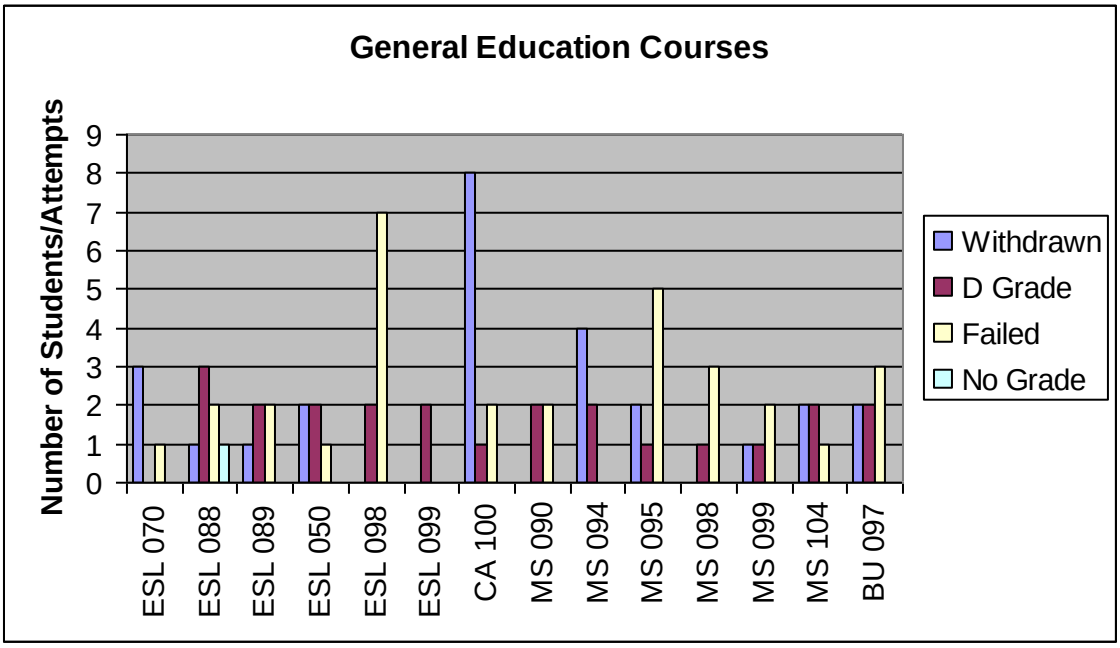
1. Explain the theory of brakes operation and hydraulic principles.
2. Perform brake system diagnosis, brake bleeding and vacuum booster testing. Explain anti-lock brake system.
3. Define steering column and linkage fundamentals, manual and power steering theory, theory of suspension system and wheel alignment fundamentals.

VTM 150 Cooperative Education

1. Demonstrate positive job-related traits such as punctuality, self- motivation, self-control in difficult situations, enthusiasm for work and a polite and cheerful manner.
2. Demonstrate technical knowledge of his/her trade and apply the same to the directed work experience.
3. Recall experiences requiring human relations as a demonstration of proper application of appropriate attitudes and as validation of communication skills.
4. Successfully complete given tasks as appropriate to his/her trade.

Discussion of Findings

The chart below show SIS data from Fall 2005 up to Fall 2011 which yielded a total of 81 attempts from students majoring in the program.



Source: COM-FSM Student Information System Fall 2005 – Fall 2011

As a result of the above findings, program completion takes longer than anticipated. Students would either become part time students or drop out of the program completely especially when they are on academic warning or suspension.

Recommendations

In view of the recent challenges the college is currently facing in terms of low graduation rate, high drop out rate, low course completion rates, the following are recommendations for the program:

1. Modify the existing program to include appropriate general education courses intended for the certificate level. As an example, BU 097 and CA 100 are courses that require higher English language proficiency. This would be more appropriate for degree-bound students;
2. In addition to Item # 1, PLO # 6 which states that: "*Successfully pass the theoretical and practical exams (Basic and Intermediate Level) as specified under the Pacific Regional Trade Testing Scheme",* no longer exist as T3 – who carry out this testing scheme ceased to operate.
3. More "hands-on" courses should be added to the program to include welding and automotive onboard diagnostics (OBD) and troubleshooting. The outdated program should conform to existing automotive industry practices and standards and the needs of the community; and
4. Incorporate computer-aided instructions in the teaching of technical courses to assist students in understanding complex circuits as in the case of automotive onboard diagnostics. Whilst the best approach in training is real hands-on exposure, it should be noted that damage to car electronic parts could be at risk and purchasing replacement parts are expensive. Using computer-aided software such as ATECH prepares students to understand and put into real practice the hands-on scenario without fear of damaging or replacing expensive parts. This could save college annual budget and promotes better learning for students.