



“We Strive to 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 Programs
(Academic Degree & Certificate Programs)**

Three Year Program Review

Degree / Certificate Program

Small Engine and Outboard Marine Technology

Period of Three Year Review

Fall 2013 to Summer 2016

Program Review Completed By:

Name	Title	Signature	Date
Marvin Yarofaisug	Instructional Assistant		6/19/17

Program Review Certified By:

Name	Title	Signature	Date
Robert Ramarui	Dean, Academic Affairs		6/19/17

Program Review Received By: (Institutional Research & Evaluation Office)

Name	Title	Signature	Date
LT Sara	Institutional Researcher		6/19/2017

Purpose:

Program review at Palau Community College is a process that provides an extensive evaluation of academic and non-academic programs on a three year basis. The results of yearly assessments (using the FAMED process) are compiled into the one three year review cycle.

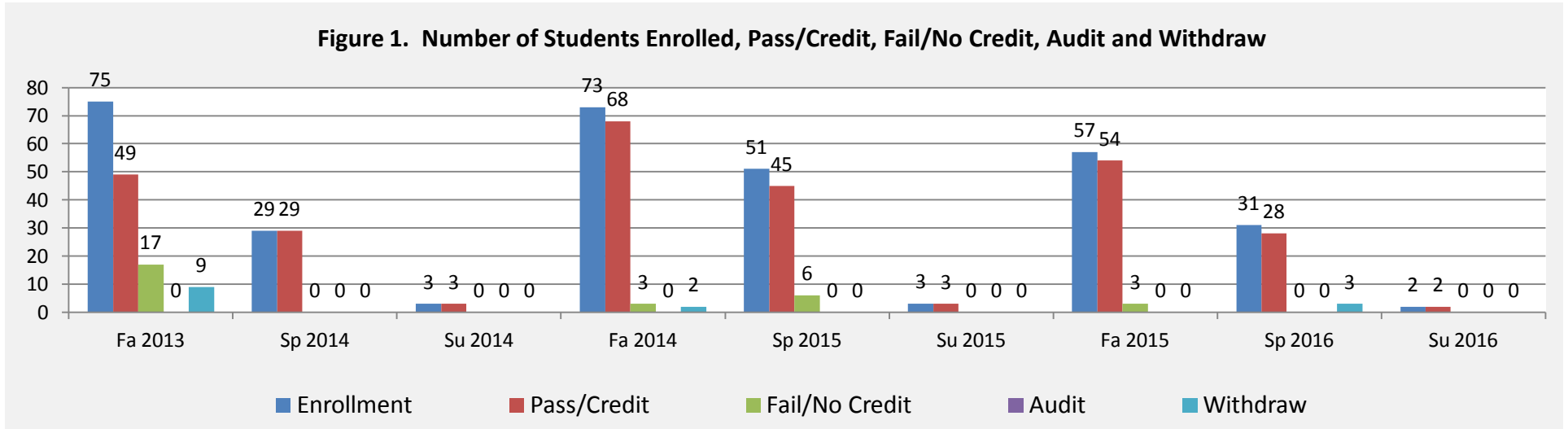
The purpose of program review is to evaluate program sufficiency to allow definite strategies to be developed for major revisions, to provide information for consideration when decisions are made, and to develop recommendations to improve institutional effectiveness.

**Instructions for completing Program Review:**

1. Type your text into the boxes. The text boxes will expand to accommodate the amount of text spaces you need.
2. Individual instructions are included before each section.
3. Submit completed and signed Program Review in both hard copy and electronic copy format to the Institutional Research & Evaluation Office.
4. Required supporting documents must be included during submission.
 - Appendix A: CLOs – PLOs – ILOs Mapping (e-copy only)
 - Appendix B: Most Approved CLOs and PLOs (e-copy only)
 - Appendix C: FAMED grid of all course assessment data within review cycle (e-copy only)
5. Be sure to keep both hard and electronic copies for your file.

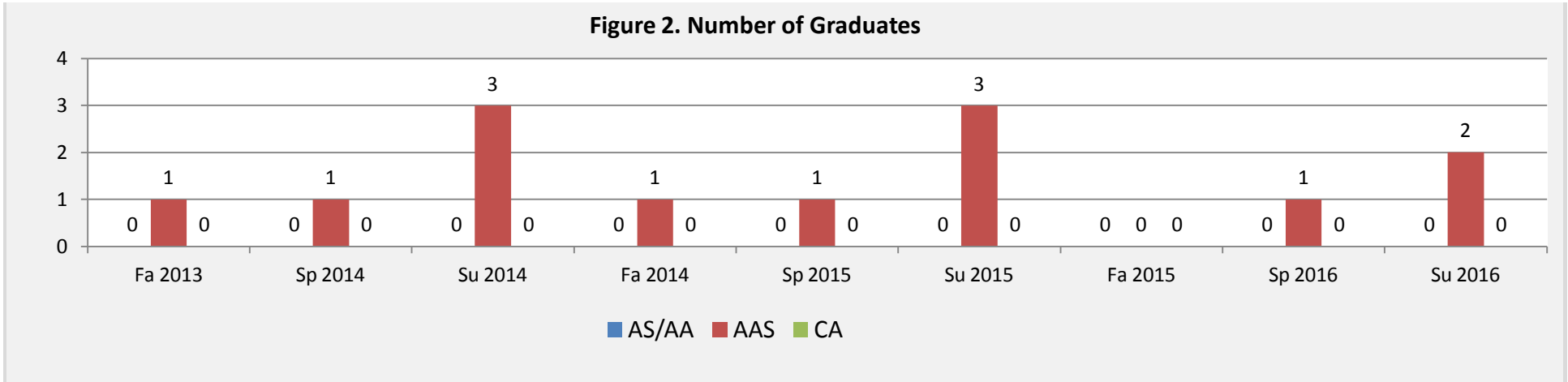
Note: Other college plans may include the 15-Year Institutional Master Plan, the 5-Year Technology Plan, Institutional Learning Outcomes, Institutional-Set Standards for Student Achievement, or other plans, such as an approved department plan or committee plan.

1.0 Program Data



Brief summary of data

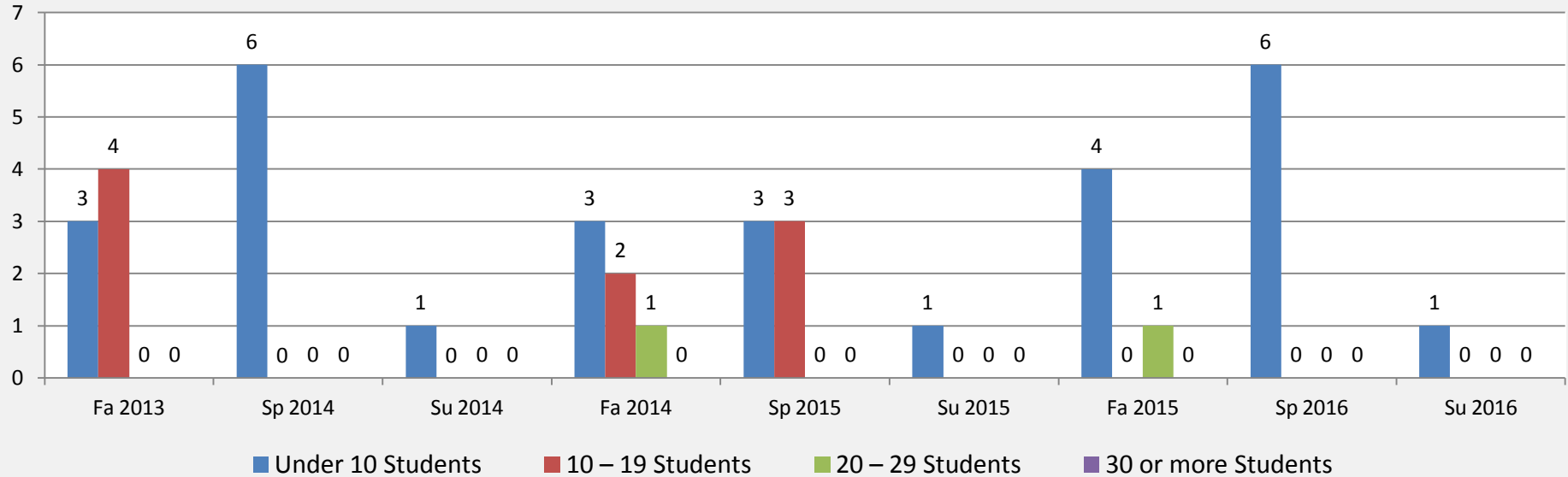
The table above signifies the total student enrollment in all courses and also the number of students who pass, fail, audit and withdraw from the courses. There are no students enrolled in the courses as auditing students while there are very few withdrawals for various reasons. Comparing the passing, withdrawal, and failing rates of the students, these show that most of the students who enroll in SE courses successfully passed and completed the courses.



Brief summary of data

The table above shows the number of students who have successfully completed and graduated from the SE program and received their Associate of Applied Science degree. Although the number of students that graduated from the program is low compared to the enrolment shown in data from Figure1, it is important to understand that there are a number of students who enrolled in the Agricultural (AG) Program as one of the SE courses (SE113) is also a required program course for the AG program. The last bar of data (figure 1) indicates that there is a high rate of students who passed SE required program courses meaning the students are performing well. The summer graduate number is higher as that is when most SE students complete the internship course which is the last course of the SE program.

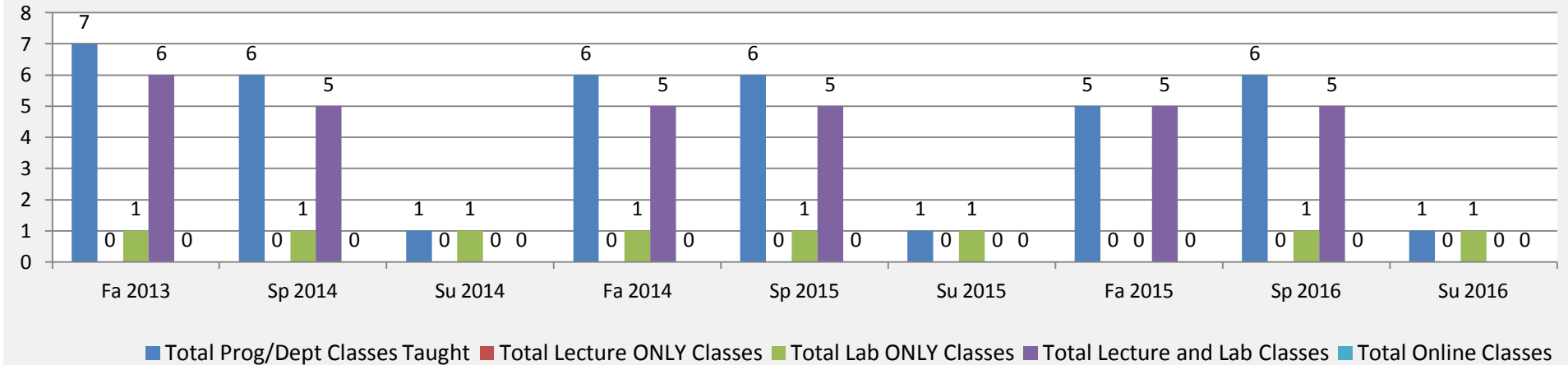
Figure 3. Number of Classes Based on Student Enrollment



Brief summary of data

As shown in Figure 3 there are a few classes that have under 10 students as well as classes that have between 10 -19 students. As can be seen, there is also a class consisting of 20-29 students. This course (SE113) also consists of AG students as it is also a required course for the AG program. Fall semester classes tend to increase in size due to the enrollment of new freshmen and in the spring semester class size is reduced due to student failure, withdrawals or students who do not return spring semester. (Spring course prerequisites are fall courses).

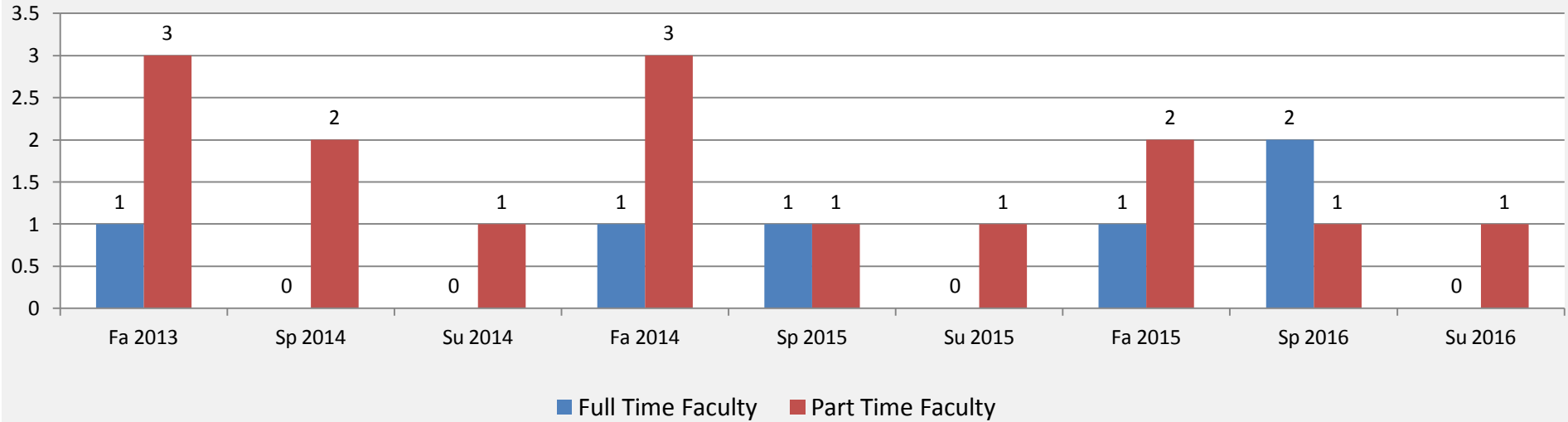
Figure 4. Class Offering



Brief summary of data

The table above illustrates the number and type of classes the SE program requires. All classes that are offered in the SE program require lectures and labs except for internship which is pure lab. The lecture and lab courses were made for student to easily learn and develop their skills by means of practically applying the concept, principles, and theories they learn in the classes to the actual field.

Figure 5. Faculty Head Count



Brief summary of data

The table above represents the full time and part time faculty that teach SE classes. From fall 2013 there was 1 full time faculty and two part-time. This full time faculty heads the Small Engine and Outboard Marine Technology program and also teaches some courses for SE major and the three other part time instructors teach other courses in this SE major program. Spring and summer of 2014 there was no full time instructors because the full time instructor had retired; therefore, there were only part time only. In addition, internship is run by a part time instructor. Fall of 2014 there was one fulltime instructor and three part-time; Spring of 2015 there was two full time instructors and 1 part time. Summer of 2015 there was only one fulltime instructor only.

Table 1: Faculty to Class Size Ratio (Program Headcount)

Ratio	Fall 2013	Spring 2014	Summer 2014	Fall 2014	Spring 2015	Summer 2015	Fall 2015	Spring 2016	Summer 2016
Full Time Faculty (F : S)	<u>1 : 21</u>	<u>1 : 28</u>	<u>0 : 0</u>	<u>1 : 55</u>	<u>1 : 50</u>	<u>0 : 0</u>	<u>1 : 41</u>	<u>1 : 11</u>	<u>0 : 0</u>
Part Time Faculty (F : S)	<u>1 : 16</u>	<u>1 : 1</u>	<u>1 : 3</u>	<u>1 : 6</u>	<u>1 : 1</u>	<u>1 : 3</u>	<u>1 : 3.5</u>	<u>1 : 1</u>	<u>1 : 1</u>

Brief summary of data

The table above indicates the faculty to class size ratio. From fall 2013 to spring 2014, the full time instructor that had been teaching and running the program for many years taught the courses while an instructional assistant assisted with the labs only. After he retired, in fall 2014 another instructor was hired. In fall 2015, Palau Community College hired an instructional assistant to assist the full time instructor with the program. Also, in fall 2014 and 2015, the large number of students taught by the full time faculty included AG students.

II. Student Learning and Curriculum

How many program courses are there? (refer to catalog or recent approval by CPC)	% of courses with Identified CLOs	List all revised program courses outlines or proposed new courses that received CPC approval within this review cycle	% of PLOs aligned with ILOs
11	100%	SE112 – 1/11/16 SE113 – 1/11/16 SE123 – 1/11/16 SE124 – 1/11/16 SE212 – 1/11/16 SE213 – 1/11/16 SE223 – 1/11/16	100%

Provide Summary of Student Learning and Curriculum in the box below. Summary should include reasons for course revisions and course proposals.

7 of the program courses were revised and received CPC approval. CPC requires course be reviewed every 5 years and it was time for review of courses. The course learning outcomes were revised during this revision period. The rest of the courses are also being reviewed but the review has not yet been completed. One course has been also reviewed and approved but will fall under the next program review cycle. There are only 3 courses left to be reviewed and approved by CPC. All courses are aligned with the program learning outcomes. No new courses have been proposed as the program does not need any revision at this time.

III. Course Assessment Data

Year 1: School Year 2013-2014

Semester Assessed	Course Assessed	CLO - PLO Mapping	Results of Assessments
Fall 2013	SE101	CLO 1,2,3,4 – PLO 1 CLO 3 – PLO 4	Not assessed
Fall 2013	SE112	CLO 1,2,3 – PLO 1 CLO 1,2,3,4 – PLO 4 CLO 1,2,3,4 – PLO 5	Not assessed

Fall 2013	SE113	CLO1,2,3-PLO1 CLO1,2,3-PLO4 CLO1,2,3-PLO5	CLO1:75% of students assessed performed at proficiency level. CLO2:75% of students assessed performed at proficiency level. CLO3:75% of students assessed performed at proficiency level.
Fall 2013	SE212	CLO1,2,3,4-PLO1 CLO1,4-PLO4 CLO1,2,3,4-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3:100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level.
Fall 2013	SE213	CLO1,2-PLO1 CLO1,2-PLO4 CLO1,2-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level.
Spring 2014	SE122	CLO1,2,3,4,5-PLO1 CLO1,2,3,4,5-PLO2 CLO4-PLO3 CLO1,2,3,4,5-PLO4 CLO1,2,3,4,5-PLO5	Not Assessed
Spring 2014	SE123	CLO1,2,3-PLO1 CLO1,2,3-PLO4 CLO1,2,3-PLO5	Not assessed
Spring 2014	SE124	CLO1,2-PLO1 CLO2-PLO4 CLO1,2-PLO5	Not assessed
Spring 2014	SE221	CLO1,2,3,4-PLO1 CLO2,3,4-PLO2 CLO3-PLO3 CLO1,2,3,4-PLO4 CLO234-PLO5	Not assessed
Spring 2014	SE222	CLO1,2,3,4,5-PLO1 CLO1,2,3,4,5-PLO2 CLO1-PLO4 CLO1-PLO5	Not assessed
Spring 2014	SE223	CLO1,2-PLO1 CLO1,2-PLO2 CLO2-PLO3 CLO1,2-PLO4 CLO2-PLO5	CLO1: 100% of students assessed performed at the proficiency level. CLO2: 0% of students assessed performed at the proficiency level.

Year 2: School Year 2014-2015

Semester Assessed	Course Assessed	CLO - PLO Mapping	Results of Assessments
Fall 2014	SE101	CLO 1,2,3,4 – PLO 1 CLO 3 – PLO 4	CLO1 100% of student assessed and reached the proficiency level. CLO2: 100% of students assessed performed at the proficiency level. CLO3: 100% of students assessed performed at the proficiency level. CLO4: 100% of students assessed performed at the proficiency level.
Fall 2014	SE112	CLO 1,2,3 – PLO 1 CLO 1,2,3,4 – PLO 4 CLO 1,2,3,4 – PLO 5	CLO1 71% of student assessed and reached the proficiency level. CLO2 79% of student assessed and reached the proficiency level. CLO3 50% of student assessed and reached the proficiency level. CLO4 100% of student assessed and reached the proficiency level.
Fall 2014	SE113	CLO1,2,3-PLO1 CLO1,2,3-PLO4 CLO1,2,3-PLO5	CLO1 91% of student assessed and reached the proficiency level. CLO2 95% of student assessed and reached the proficiency level. CLO3 91% of student assessed and reached the proficiency level.
Fall 2014	SE212	CLO1,2,3,4-PLO1 CLO1,4-PLO4 CLO1,2,3,4-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level.
Fall 2014	SE213	CLO1,2-PLO1 CLO1,2-PLO4 CLO1,2-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level.
Fall 2014	SE 223	CLO1,2-PLO4 CLO1,2-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level.

Spring 2015	SE 122	CLO1,2,3,4,5-PLO1 CLO1,2,3,4,5-PLO2 CLO4-PLO3 CLO1,2,3,4,5-PLO4 CLO1,2,3,4,5-PLO5	CLO 1: 83% of students assessed performed at the proficiency level. CLO 2: 83% of students assessed performed at the proficiency level. CLO 3: 92% of students assessed performed at the proficiency level. CLO 4: 75% of students assessed performed at the proficiency level. CLO 5: 92% of students assessed performed at the proficiency level.
Spring 2015	SE 123	CLO1,2,3,4,5-PLO1 CLO1,2,3,4,5-PLO4 CLO1,2,3,4,5-PLO5	CLO 1: 91% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 91% of students assessed performed at the proficiency level. CLO 4: 82% of students assessed performed at the proficiency level. CLO 5: 64% of students assessed performed at the proficiency level.
Spring 2015	SE 124	CLO1,2-PLO1 CLO2-PLO4 CLO1,2-PLO5	CLO 1: 91% of students assessed performed at the proficiency level. CLO 2: 82% of students assessed performed at the proficiency level.
Spring 2015	SE 221	CLO1,2,3,4,5-PLO1 CLO2,3,4-PLO2 CLO3-PLO3 CLO1,2,3,4-PLO4 CLO2,3,4-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 60% of students assessed performed at the proficiency level.
Spring 2015	SE222	CLO1,2,3,4,5-PLO1 CLO1,2,3,4,5-PLO2 CLO1,2,3,4,5-PLO4 CLO1,2,3,4,5-PLO5	CLO 1: 60% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 80% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 80% of students assessed performed at the proficiency level.
Spring 2015	SE223	CLO1,2-PLO1 CLO1,2-PLO2 CLO2-PLO3 CLO1,2-PLO4 CLO2-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level.

Summer 2015	SE223	CLO1,2-PLO1 CLO1,2-PLO2 CLO2-PLO3 CLO1,2-PLO4 CLO2-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level.
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Year 3: School Year2015-2016

Semester Assessed	Course Assessed	CLO - PLO Mapping	Results of Assessments
Fall 2015	SE 101	CLO 1,2,3,4 – PLO 1 CLO 3 – PLO 4	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level.
Fall 2015	SE 112	CLO 1,2,3 – PLO 1 CLO 1,2,3,4 – PLO 4 CLO 1,2,3,4 – PLO 5	CLO 1: 80% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level.
Fall 2015	SE 113	CLO1,2,3-PLO1 CLO1,2,3-PLO4 CLO1,2,3-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 72% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level.
Fall 2015	SE 212	CLO1,2,3,4-PLO1 CLO1,4-PLO4 CLO1,2,3,4-PLO5	CLO 1: 88% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level.
Fall 2015	SE213	CLO1,2-PLO1 CLO1,2-PLO4 CLO1,2-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level.

Spring 2016	SE 122	CLO1,2,3,4,5-PLO1 CLO1,2,3,4,5-PLO2 CLO4-PLO3 CLO1,2,3,4,5-PLO4 CLO1,2,3,4,5-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 66% of students assessed performed at the proficiency level. CLO 3: 66% of students assessed performed at the proficiency level. CLO 4: 66% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level.
Spring 2016	SE 123	CLO1,2,3-PLO1 CLO1,2,3-PLO4 CLO1,2,3-PLO5	CLO 1: 33% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level.
Spring 2016	SE 124	CLO1,2-PLO1 CLO2-PLO4 CLO1,2-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level.
Spring 2016	SE 221	CLO1,2,3,4,5-PLO1 CLO2,3,4-PLO2 CLO3-PLO3 CLO1,2,3,4-PLO4 CLO2,3,4-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level.
Spring 2016	SE 222	CLO1,2,3,4,5-PLO1 CLO1,2,3,4,5-PLO2 CLO1,2,3,4,5-PLO4 CLO1,2,3,4,5-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level.
Spring 2016	SE 223	CLO1,2-PLO1 CLO1,2-PLO2 CLO1-PLO4 CLO1-PLO5	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level.
Summer 2016	SE 223	CLO1,2-PLO1	CLO 1: 100% of students assessed performed at

		CLO1,2-PLO2 CLO2-PLO3 CLO1,2-PLO4 CLO2-PLO5	the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level.
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Provide Summary of Course Assessment Data in the box below. Summary should include how assessment results have led to improvement of course and program learning outcomes, student learning and achievement.

All courses were assessed at some period over the three year cycle although some courses were not assessed each year. This is due to the faculty turnover during the three year period.

Over the three year assessment period from fall 2013 to summer 2016, most students reached the proficiency level with the course learning outcomes. Courses that had a rating of below 70% were few and not all the course learning outcome proficiency levels were below 70%. In spring 2014 and fall 2014, only one CLO for only one course each semester was below the 70% benchmark. In spring 2015 there were two courses but only one CLO for each course that was below the 70% benchmark.

In spring 2016, the instructor changed the course assessment tool from hands on assessment to a written exam. At this time, two courses had 4 CLO proficiency ratings below 70% with one course having three of the CLOs out of 5 rate well below 70%. The instructor has gone back to hands on assessment to measure the proficiency level of the students for all CLOs for all courses.

IV. Program Learning Outcomes (PLOs) Assessment

Program Learning Outcomes Assessment Results

List PLOs	Proficiency Level	Results of Assessments
SE PLO 1	SE101CLO1,2,3,4,5 -100% SE112CLO1,2,3-80% SE113CLO1,2,3-86% SE212CLO1,2,3,4-99% SE213CLO1,2-100% SE122CLO1,2,3,4,5-83% SE123CLO1,2,3,4,5-82% SE124CLO1,2-91% SE221CLO1,2,3,4-95% SE222CLO1,2,3,4,5-92% SE223CLO1,2-92%	91% of the students assessed achieved the proficiency level in PLO #1. No action plan needed at this time.
SE PLO 2	SE122CLO1,2,3,4,5-83% SE221CLO2,3,4-94% SE222CLO1,2,3,4,5-92% SE223CLO1,2-92%	90% of the students assessed achieved the proficiency level in PLO #2.
SE PLO 3	SE122CLO4-71% SE221CLO3-100% SE223CLO2-83%	85% of the students assessed achieved the proficiency level in PLO #3.

SE PLO 4	SE101CLO3-100% SE112CLO1,2,3,4-85% SE113CLO1,2,3-86% SE212CLO1,4-98% SE213CLO1,2-100% SE122CLO1,2,3,4,5-83% SE123CLO1,2,3,4,5-82% SE124CLO2-91% SE221CLO1,2,3,4-95% SE222CLO1,2,3,4,5-92% SE223CLO1,2-92%	91% of students assessed performed at the proficiency level. The expected outcome of 70% was met. SE program will continue to offer program courses as they are, continue to assess the program courses, and will make any changes when need arise. Changes and implementation will continue to be based on course assessment results and data.
PLO5	SE112CLO1,2,3,4-85% SE113CLO1,2,3-86% SE212CLO1,2,3,4-99% SE213CLO1,2-100% SE122CLO1,2,3,4,5-83% SE123CLO1,2,3-86% SE124CLO1,2-93% SE221CLO2,3,4-94% SE222CLO1,2,3,4,5-92% SE223CLO2-83%	90% of students assessed performed at the proficiency level. The expected outcome of 70% was met. SE program will continue to offer program courses as they are, continue to assess the program courses, and will make any changes when need arise. Changes and implementation will continue to be based on course assessment results and data.

Provide Summary of Program Learning Outcomes Assessments in the box below. Summary should include analysis of this cycle with previous cycles; how assessment results have led to major decisions made to support the improvement of program's student learning and student achievement.

Of the 5 PLOs, all were above the 70% benchmark.

PLO 3 is above the bench mark but is a PLO which students are able to gain knowledge but are not able to practice the skills. Instructors can teach the course learning outcomes, but the lab is not equipped to have students then practice the skills. It is only when students do internship that practice is able to be done. The instructor would like build a transom out of plywood so students will be able to practice boat fitting and rigging skills in the lab. At this time assessment can only be done by a written exam and not by hands on practicum.

V. Evaluation of Previous Program Review Action Plan/s

Indicate the status of the previous program review action plans below. (Include all previous action plans.)

Action Plan Activity/Objectives	Status Complete/Ongoing/Incomplete	Updates of Action Plan/s (Report action plan individually.)
To obtain visual and audio teaching aids.	Ongoing	Visual and audio aids were obtained and the instructor continues to search for additional technology and visual teaching aids.
Upgrade faculty through training,	Ongoing	Chairperson and instructional assistant both received training in Japan for Yamaha

seminar, or online trainings.		engines and also NCCER instructor training. Additional training will be requested as needed. Both faculty are also in the process of preparing to enroll in a 4 year degree program by taking necessary PCC courses required for the online bachelor's program.
Train faculty in the use of technology as a support media to enhance lecture and content.	Ongoing	Current instructors have some training in technology; will continue to avail of training when offered.
To attend high technology OMC training.	Not completed	Training in other engine types (Mercury, Evinrude, etc.) is not yet available.

Provide Summary of the Evaluation of Previous Program Review Action Plan/s in the box below. Summary should include what measurable outcomes were achieved due to the actions completed; were the completed action plans led to improvement of student learning and student achievement; and provide detailed explanation of action plans that are ongoing and plans that are incomplete.

Using visual and audio aids has helped students reach the proficiency benchmark in most course and program learning outcomes. Faculty intend to continue using available aids and also to search for more aids to continue using these types of aids.

Faculty are using the training information gained from both the Yamaha company in Japan and NCCER to assist with instruction of course and program outcomes. Instructors have found that students grasp concepts better when visual and audio aids are used.

Faculty are waiting for the Dean of Academic Affairs to request training needs for other types of engines (Mercury and Evinrude) through the companies on island.

VI. 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
Build a transom out of plywood for the lab.	This will assist students in gaining practice with PLO 3.	plywood	Spring 2017

Purchase a Green Machine TU 26	This will assist students in SE113. Students need to take apart the engine and put it back together again.	Green machine TU26 (approximately \$500)	Spring 2017
Purchase a Yamaha 40hp 4 stroke engine	This will help SE112, 122, 123, 124, SE 212, 213, 221, and 222 students gain knowledge and skills and become proficient in the CLOs of the courses and the PLOs of the SE program.	40 hp 4 stroke engine (approximately \$15,000)	
Continue request for training in engines, especially those other than Yamaha.	Students will be trained in engines other than Yamaha which are becoming more common now in Micronesia. The CLOs and PLOs apply to all types of engines.	Travel and training expense	Summer 2017
Continue to complete PCC courses for preparation of SDSU bachelor's program.	The SDSU bachelor's program will assist faculty in learning teaching strategies which will in turn help students gain knowledge and skills in the CLOs and PLOs of the program.	Tuition cost	Spring 2018
Offer SE113 both fall and spring semesters	This course is needed for AG students also. It is often a large class. By offering it both semesters, more time can be spent with smaller groups and individual students.	No cost	Spring 2017

Provide Summary of Action Plans in the box below. Summary should include program major strengths; program needs and any recommendations for improvements based on assessment results, data and/or other college major plans. The summary needs to indicate overall program needs that may require financial support from the institution.

Students who graduate from the SE program have acquired the knowledge and skills to succeed in the field. Many students are hired at the place where they completed their internship and supervisors of the students are pleased with the skills and attitudes that interns display. This is noted in their comments when the intern students are assessed. One of the strengths of the program is having full instructors with work experience. These instructors have worked in a repair shop themselves and therefore are aware of the knowledge, skills and attitudes that outboard marine repair shops are seeking for their employees. Most students do well in the internship course because these instructors are using this knowledge when instructing the SE students through the program. Many of the students intern where the faculty had worked because the good relationship between the owner/manager of the shop and them remains. The faculty will take students to the repair shop to see firsthand how a shop is run.

The program has a need for a transom as indicated in the action plan. This is needed so that students can practice boat fitting and rigging. This is tied to PLO 3 where students are tested on knowledge but not the hands on skills.

A Green Machine TU26 is needed so that when students put the engine back together after they take it apart, they will know if it has been done properly if it starts. Students currently practice on broken machines which do not run and are not often repairable. Therefore, it is best to have one that is not brought in by a customer which may not be repaired or may be further damaged by students inexperienced. This is covered in SE113 and PLO 1, PLO 4 and PLO 5.

A 40 hp 4 stroke engine is needed for students to practice skills to reach proficiency with the courses CLOs. Not all of the course learning outcomes show students reaching the 70% benchmark. (SE112, 122, 123, 124, SE 212, 213, 221, and 222). This will also help them gain proficiency with all of the program learning outcomes. SE122 has low proficiency ratings for three of the 5 CLOs.

Ongoing training and education for the faculty will assist the faculty with keeping updated in the field and also improve their teaching methods.

By offering SE 113 both fall and spring semesters, students will have more practice in the lab if the student enrollment is smaller. Currently students are divided into groups but the groups are quite large so the amount of practice time for each student is not much.

Based on the action plans, the program needs to purchase plywood for the transom, a Green Machine TU26, and a 40hp 4 stroke engine. The other expense will be for training.

VII. Resource Requests

Itemize resource request below.

Type of Resource	Detailed Description	Estimated Amount Requested	Justification
Personnel	None needed		
Facilities	Sufficient		
Equipment	40hp 4 stroke Yamaha outboard motor	\$15,000.00	This outboard motor will be used for all courses except SE101, SE113, and SE223. It will cover PLO1, PLO 2, PLO 3, and PLO 5. This outboard motor will be used for demonstration inside the lab. Students will use this to learn all the specific parts for four stroke engines including all kinds of sensors required for four stroke engines. They will learn how to troubleshoot the defect, tune up and do the adjustment on the timing belt with the camshaft.
	Green Machine	\$500.00	The Green Machine is to assist with the skills and CLOs for SE113
Supplies	Plywood	\$60.00	The plywood will be used to make a

			transom so students can practice boat fitting and rigging skills during labs.
Software	No specific software needed at this time.		
Training	For Evinrude and Mercury motors as these are now being sold in Micronesia in addition to the Yamaha engine	TBD	Faculty have had some training on Yamaha engines; more is needed to continually keep up with changes. No training has been provided for other engine brands which are now being sold in Micronesia. There are repair shops and sales of these engines where students could do internship or be hired.
Other			
Total		\$15,560.00	

Provide Summary of Resource Request in the box below. Summary should connect the resources requested to course, program and institutional learning outcomes assessment results and/or any other college major plans.

A 40hp 4 stroke engine is being requested. This outboard motor will be used for all courses except SE113 and SE223. It will cover PLO1, PLO 2, PLO 3, PLO 4, and PLO 5. This outboard motor will be used for demonstration inside the lab. Students will use this to learn all the specific parts for four stroke engines including all kinds of sensors required for four stroke engines. They will learn how to troubleshoot, tune up, and do the adjustment on the timing belt with the camshaft.

The plywood is need to build a transom for the shop. PLO 3 covers boat fitting and rigging. Currently student are assessed through paper based assessment as there is no transom for students to practice these skills on. It is only when students enroll in the internship course that hands on experience can be gained. SE221 CLO3 and SE 223 CLO2 are mapped to PLO 3.

The training request is a need now that motors other than Yamaha have been ordered and sold in Micronesia. Students who intern at repair shops who cater to Evinrude and Mercury engines are at a disadvantage having not had the chance to compare and work on these different engines. Both faculty have had training on Yamaha engines but not these engines. PLO 1 through PLO 5 will be covered as well as the SE courses as knowledge and skills gained through the trainings will be passed on to the SE program students.

**Small Engine & Outboard Motor Technology Program (SE)
ILOs – PLOs – CLOs Mapping**

ILOs → PLOs ↓	ILO 1 Critical Thinking and Problem Solving	ILO 2 Communication	ILO 3 Quantitative and Technological Competence	ILO 4 Diversity	ILO 5 Civic Responsibility	ILO 6 Aesthetics
PLO 1 Students will be employable in the field of Small Engine and Outboard Marine Technology.	SE 101- CLO 1 SE 101- CLO 2 SE 101- CLO 3 SE 101- CLO 4 SE112- CLO 1 SE 112- CLO2 SE 112- CLO 3 SE 112- CLO4 SE 113- CLO 1 SE 113- CLO 2 SE 113- CLO 3 Se 122- CLO 1 SE122- CLO 2 SE 122-CLO 3 SE 123- CLO1 SE 123- CLO2 SE 123- CLO3 SE 124- CLO 1 SE 124- CLO 2 SE 212- CLO 1 SE212- CLO 2 SE212- CLO3 SE 212- CLO4 SE 213- CLO1 SE 213- CLO2 SE 221- CLO1 SE 221- CLO2 SE 221- CLO3 SE 222- CLO 1 SE 222- CLO2 SE222- CLO 3 SE223- CLO 1 SE223- CLO 2	SE 101- CLO1 SE 113- CLO2 SE 113- CLO3 SE 123- CLO1 SE 212- CLO2 SE 212- CLO3 SE 221- CLO1 SE 221- CLO2 SE 221- CLO3 SE 222- CLO1 SE 223- CLO1 SE 223- CLO2	SE 101- CLO 1 SE 101- CLO 2 SE 101- CLO 3 SE 101- CLO 4 SE112- CLO 1 SE 112- CLO2 SE 112- CLO 3 SE 112- CLO4 SE 113- CLO 1 SE 113- CLO 2 SE 113- CLO 3 Se 122- CLO 1 SE122- CLO 2 SE 122-CLO 3 SE 123- CLO1 SE 123- CLO2 SE 123- CLO3 SE 124- CLO 1 SE 124- CLO 2 SE 212- CLO 1 SE212- CLO 2 SE212- CLO3 SE 212- CLO4 SE 213- CLO1 SE 213- CLO2 SE 221- CLO1 SE 221- CLO2 SE 221- CLO3 SE 222- CLO 1 SE 222- CLO2 SE222- CLO 3 SE223- CLO 1 SE223- CLO 2	SE 221- CLO1 SE 221- CLO2 SE 223- CLO1 SE 223- CLO2	SE 101- CLO1 SE 101- CLO2 SE 101- CLO3 SE 101- CLO4 SE 223- CLO1 SE 223- CLO2	SE 221- CLO1 SE 221- CLO2 SE 223- CLO2
PLO 2 Students will demonstrate skills	SE 122- CLO1 SE 122- CLO2 SE 122-CLO3	SE 122- CLO1 SE 122- CLO2 SE 122-CLO3	SE 122- CLO1 SE 122- CLO2 SE 122-CLO3	SE 222- CLO1 SE 222- CLO2 SE 222- CLO3		

in diagram reading and testing.	SE222- CLO 1 SE 222- CLO2 SE 222- CLO3 SE 223- CLO2	SE222- CLO 1 SE 222- CLO2 SE 222- CLO3 SE 223- CLO2	SE222- CLO 1 SE 222- CLO2 SE 222- CLO3 SE 223- CLO2	SE 223- CLO1 SE 223- CLO2		
PLO 3 Students will demonstrate skills in boat fitting and rigging.	SE 221- CLO3 SE 223- CLO2	SE 221- CLO3 SE 223- CLO2	SE 221- CLO3 SE 223- CLO2	SE 221- CLO3 SE 223- CLO1 SE 223- CLO2		SE 221- CLO3 SE 223- CLO2
PLO 4 Students will be able to manage and operate their own service shop.	SE 101- CLO 3 SE 112- CLO 1 SE 112- CLO 2 SE 112- CLO 3 SE 112- CLO4 SE113 CLO1 SE 113- CLO2 SE 113- CLO3 SE 122- CLO1 SE 122- CLO 2 SE 122- CLO3 SE 123- CLO1 SE 123- CLO2 SE 123- CLO3 SE 124- CLO2 SE 212- CLO 1 SE212- CLO 4 SE 213- CLO1 SE213- CLO2 SE 221- CLO1 SE 221- CLO2 SE222- CLO 1 SE 223- CLO1 SE 223- CLO2	SE 101- CLO 3 SE 112- CLO 1 SE 112- CLO 2 SE 112- CLO 3 SE 112- CLO4 SE113 CLO1 SE 113- CLO2 SE 113- CLO3 SE 122- CLO1 SE 122- CLO 2 SE 122- CLO3 SE 123- CLO1 SE 123- CLO2 SE 123- CLO3 SE 124- CLO2 SE 212- CLO 1 SE212- CLO 4 SE 213- CLO1 SE213- CLO2 SE 221- CLO1 SE 221- CLO2 SE222- CLO 1 SE 223- CLO1 SE 223- CLO2	SE 101- CLO 3 SE 112- CLO 1 SE 112- CLO 2 SE 112- CLO 3 SE 112- CLO4 SE113 CLO1 SE 113- CLO2 SE 113- CLO3 SE 122- CLO1 SE 122- CLO 2 SE 122- CLO3 SE 123- CLO1 SE 123- CLO2 SE 123- CLO3 SE 124- CLO2 SE 212- CLO 1 SE212- CLO 4 SE 213- CLO1 SE213- CLO2 SE 221- CLO1 SE 221- CLO2 SE222- CLO 1 SE 223- CLO1 SE 223- CLO2	SE 221- CLO1 SE 221- CLO2 SE 223- CLO1 SE 223- CLO2	SE 221-CLO1 SE 221- CLO2 SE 223- CLO2	SE 221- CLO1 SE 221- CLO2 SE 223- CLO2
PLO 5 Students will demonstrate skills in diagnosing and repairing small engines and outboard motors.	SE 112- CLO1 SE 112- CLO2 SE 112- CLO3 SE 112- CLO4 SE 113- CLO1 SE 113- CLO2 SE 113- CLO3 SE122- CLO1 SE 122- CLO2 SE 122- CLO3	SE 112- CLO1 SE 112- CLO2 SE 112- CLO3 SE 112- CLO4 SE 113- CLO1 SE 113- CLO2 SE 113- CLO3 SE122- CLO1 SE 122- CLO2 SE 122- CLO3	SE 112- CLO1 SE 112- CLO2 SE 112- CLO3 SE 112- CLO4 SE 113- CLO1 SE 113- CLO2 SE 113- CLO3 SE122- CLO1 SE 122- CLO2 SE 122- CLO3	SE 223- CLO1 SE 223- CLO 2		SE 223- CLO2

SE123- CLO1	SE123- CLO1	SE123- CLO1			
SE 123- CLO2	SE 123- CLO2	SE 123- CLO2			
SE 123- CLO 3	SE 123- CLO 3	SE 123- CLO 3			
SE 124- CLO1	SE 124- CLO1	SE 124- CLO1			
SE 124- CLO2	SE 124- CLO2	SE 124- CLO2			
SE212- CLO 1	SE212- CLO 1	SE212- CLO 1			
SE 212- CLO2	SE 212- CLO2	SE 212- CLO2			
SE212- CLO 3	SE212- CLO 3	SE212- CLO 3			
SE 212- CLO4	SE 212- CLO4	SE 212- CLO4			
SE213- CLO 1	SE213- CLO 1	SE213- CLO 1			
SE 213- CLO2	SE 213- CLO2	SE 213- CLO2			
SE 222- CLO1	SE 222- CLO1	SE 222- CLO1			
SE 223- CLO2	SE 223- CLO2	SE 223- CLO2			

Small Engine Program Course Learning Outcomes (CLOs)

Upon successful completion of the course, students will be able to...

SE 101: Boat Operation

CLO 1- Students will be able to explain and apply Palau and international boat safety precautions as they apply to small boats.

CLO 2- Students will be able to perform correct boat operation safety driving techniques.

CLO 3- Students will be able to maintain boat engines and hulls in a safe working condition.

SE 112: Basic Engine Principles

CLO 1- Students will be able to service and repair an outboard engine powerhead.

CLO 2- Students will be able to understand outboard lubrication points and perform break-in procedures.

CLO 3- Students will be able to revive a submerged engine.

CLO 4- Students will be able to understand and use service manuals and parts catalogues.

SE 113: Two & Four Cycle Engine

CLO 1- Students will be able to recognize and name all major parts from both two and four-stroke engines.

CLO 2- Students will be able to recognize and explain differences between two and four-stroke engines.

CLO 3- Students will be able to explain tune-up and trouble-shooting techniques for two and four-stroke engines.

SE 122: Outboard Engine Electrical System

CLO 1- Troubleshoot, test, repair electrical system.

CLO 2- Troubleshoot, test, repair starter motor.

CLO 3- Troubleshoot test, repair alternator.

CLO 4: Perform battery testing and servicing.

CLO 5: Test, adjust, replace wiring and switch.

SE 123: Outboard Fuels & Carburetion System

CLO 1- Students will be able to identify and explain the operation of the components of an outboard fuel system.

CLO 2- Students will be able to remove, service and reinstall all components in an outboard fuel system.

CLO 3- Students will be able to trouble-shoot and repair all aspects of an outboard fuel system.

SE 124: Outboard Cooling System

CLO 1- Students will be able to identify every part of an outboard cooling system and explain how it works.

CLO 2- Students will be able to service, maintain and repair a faulty cooling system.

SE 212: Outboard Lower Unit System

CLO 1- Students will be able to carry out a full service of an outboard gear box as well as repair or replace any damaged parts.

CLO 2- Students will be able to demonstrate and explain how a power trim system works.

CLO 3- Students will be able to identify and describe various types of propellers as well as remove and refit them.

CLO 4- Students will be able to trouble-shoot, service and repair the shifting systems for various outboards.

SE 213: Outboard Power Head System

CLO 1- Students will be able to remove, service and repair an outboard power head.

CLO 2- Students will be able to identify, inspect and check crankshafts, bearings, pistons and cylinder blocks.

SE 221: General Laboratory

CLO 1- Perform and demonstrate proper procedures for handling inventories and the customers.

CLO 2- Perform general tune-up.

CLO 3- Perform troubleshooting.

CLO 4 - Perform installing motors and accessories.

SE 222: Diagram Reading & Testing

CLO 1- Perform service and repair boat electric system.

CLO 2- Demonstrate the use of volts and OHM meter to test the entire electrical system.

CLO 3- Use and understand wiring diagrams.

CLO 4- Service, testing and repair small gas engine wiring.

CLO5- Use of diagnosis equipment.

SE 223: Internship

CLO 1- Demonstrate proper employee behaviors and work habits.

CLO 2- Perform small engine and outboard motor repair tasks as assigned by a site supervisor.

Small Engine & Outboard Motor Technology Program Learning Outcomes (PLOs)**Upon successful completion of the program, students will be able to:**

PLO 1 – Students will be employable in the field of Small Engine and Outboard Marine Technology.

PLO 2 – Students will demonstrate skills in diagram reading and testing.

PLO 3 – Students will demonstrate skills in boat fitting and rigging.

PLO 4 – Students will be able to manage and operate their own service shop.

PLO 5 – Students will demonstrate skills in diagnosing and repairing small engines and outboard motors.

Institutional Learning Outcomes (ILOs)

Upon successful completion of the degree program and Palau Community College life experience, students will be able to:

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.

ILO 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.

ILO3 – Quantitative and Technological Competence: Use Mathematical skills appropriate to our technological society by analyzing and solving problems that are quantitative in nature and use technology for informational, academic, personal and professional needs.

ILO 4 – Diversity: Understand and appreciate differences in cultures and behaviors between the self and others by demonstrating respect, honesty, fairness, and ethical principles in both personal and professional life.

ILO 5 – Civic Responsibility: Apply the principles of civility and morality to situations in the contexts of a healthy family, work, community, environment, and world.

ILO 6 – Aesthetics: Apply numerous means of inquiry to experience and appreciate the values of arts and nature.