PALAU COMMUNITY COLLEGE

"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.

Academic Program Three Year Review

Instructional Program

GENERAL ELECTRONICS TECHNOLOGY (GE)

Period of Three Year Review

Fall 2009 to Summer 2013

Completed By:	Joel G. Yabes Program Instructor(s)	Date: 12/29/14
Program/Department Chair:	Joel G. Yabes	Date: 12/29/14
Dean of Academic Affairs:	Robert Ramurai	Date: 12/29/14

Program Review Narrative Summary

- **Summary of the academic program purpose**

  The General Electronics Technology program is designed to provide students with technical knowledge, skills and proper work habits/attitudes necessary for employment in the field of electronics. The program prepares students to work, advance in their career as electronic technicians, assemblers, testers, parts counter sales persons or operators of their own electronic parts distributor establishments, service repair shops, and prepares them for further education.

  The goal of the program is to prepare the students to acquire competencies in different areas of electronics such as:

  - Electronics circuit assembly and manufacturing,
  - Service and repair of electronics consumer products,
  - Service and repair to industrial devices and control equipment, and
  - Service and repair of computer

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  Secondly, to develop their employability skills and ability to operate their own enterprise.

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

  The General Electronic program in missions of the collage provides learning opportunities for the students to acquire technical expertise in electronics assembly, manufacturing, repair and maintenance of electronics consumer products and industrial devices. It develops employability skills of the students leading to be prospective electronic technicians, assemblers, parts sales person or operators of their own enterprise

- **Summary of Program Data**

  a. **Figure 1 – Student Status**

	Fa 2009	Sp 2010	Su 2010	Fa 2010	Sp 2011	Su 2011	Fa 2011	Sp 2012	Su 2012	Fa 2012	Sp 2013	Su 2013	Average
Enrollment	75	50	4	63	33	1	71	52	6	58	54	5	39.33
Pass/Credit	75%	74%	75%	63%	82%	100%	73%	88%	100%	91%	63%	100%	82%
Fail/No Credit	25%	20%	25%	29%	18%	0%	21%	8%	0%	5%	19%	0%	14%
Audit	20%	12%	25%	24%	9%	0%	14%	6%	0%	28%	17%	0%	13%
Withdraw	0%	6%	0%	8%	0%	0%	6%	4%	0%	3%	19%	0%	4%

The table above (tabular view of Figure 1) represents the total and average student enrollments in all courses as well as the number of students who passed, failed, audited, and withdrew from the courses. Comparing the passing, failing, and withdrawal rates of students shows that more students successfully pass GE courses. There are number of students enrolled in the courses as auditing students for the purpose of gaining experience and training in specific areas while a few withdrew for various reasons.

Overall, the data indicates that majority of the students enrolled in GE courses successfully complete the courses.

b. Figure 2 – Number of Graduates

	Fa 2009	Sp 2010	Su 2010	Fa 2010	Sp 2011	Su 2011	Fa 2011	Sp 2012	Su 2012	Fa 2012	Sp 2013	Su 2013
AS/AA	0	0	1	0	0	0	0	0	0	0	0	0
AAS	0	1	2	0	1	1	0	0	5	0	0	5
CA	0	0	0	0	0	0	0	0	0	0	0	0

The table above (tabular view of Figure 2) illustrates the number of students who have successfully completed and received an Associate of Science degree and Associate of Applied Science degree in the GE. Though the number of students graduated from the program is very low compare to the enrolment shown in data (a. Figure 1) it is important to understand that there are number of students who enrolled on the program just to gain experience or for gaining units to complete their academic requirements. The last column of data (a) figure 1 indicates that there is a high rate of student who passed on the GE program courses meaning the program is performing well.

c. Figure 3 – Class Information

	Fa 2009	Sp 2010	Su 2010	Fa 2010	Sp 2011	Su 2011	Fa 2011	Sp 2012	Su 2012	Fa 2012	Sp 2013	Su 2013	Average
Under 10 Students	50%	100%	100%	50%	100%	100%	50%	100%	100%	50%	57%	100%	80%
10 – 19 Students	50%			50%			50%			50%	43%		20%
20 – 29 Students													
30 or more Students													
TOTAL CLASSES	6	8	1	6	8	1	6	7	1	6	7	1	5

The table above (tabular view of Figure 3) shows the average class size for GE classes. As shown in the table (c) 80% of the classes have under 10 students and only 20% of the classes have between 10 -19 students.
Every fall semesters 50% of the classes increased it sized due to the enrollment of freshmen and in the spring semester sized was reduced due to student failed in their classes and some withdrew from their classes.

d. Figure 4 – Course Offering Information

	Fa 2009	Sp 2010	Su 2010	Fa 2010	Sp 2011	Su 2011	Fa 2011	Sp 2012	Su 2012	Fa 2012	Sp 2013	Su 2013	Average
Total Prog/Dept Classes Taught	6	8	1	6	8	1	6	7	1	6	7	1	5
Total Lecture ONLY Classes													

Total Lab ONLY Classes		12%	100%		12%	100%			100%			100%	36%
Total Lecture and Lab Classes	100%	88%		100%	88%		100%	100%		100%	100%		65%
Total Online Classes													

The table above (tabular view of Figure 4) illustrates the number and type of GE classes offered. All offered classes in GE program were lecture and lab courses except for the internship which is a pure Lab

The lecture and lab courses were made for the student to easily learn and develop their skills by means of practically applying the concept, principles, and theories they learned in the class to the actual field.

e. Figure 5 – Faculty Information

	Fa 2009	Sp 2010	Su 2010	Fa 2010	Sp 2011	Su 2011	Fa 2011	Sp 2012	Su 2012	Fa 2012	Sp 2013	Su 2013
Full Time Faculty	1	1		1	1		1	1		1	1	
Part Time Faculty	2	2	1	1	2	1	1	1	1	1	1	1
TOTAL FACULTY	3	3	1	2	3	1	2	2	1	2	2	1

The table above (tabular view of Figure 5) represents the number of full time and part time faculty that teaches GE classes. Currently, there is only one full time GE faculty and two regular part time instructor in the program This fulltime faculty heads the General Electronics Program as well as teaches some GE courses for GE majors. The two regular part time instructors teach other courses in the program.

f. Table 1 – Faculty Student Ratio Information

Ratio	Fa 2009	Sp 2010	Su 2010	Fa 2010	Sp 2011	Su 2011	Fa 2011	Sp 2012	Su 2012	Fa 2012	Sp 2013	Su 2013
Full Time Faculty (F : S)	1:11	1:7		1:6	1:5		1:10	1:8		1:8	1:8	
Part Time Faculty (F : S)	1:16	1:12	1:4	1:18	1:4	1:1	1:17	1:8	1:6	1:14	1:8	1:5

The table above (Table 1. Faculty-Class Size Ratio)shows the ratio of faculty to class size. The average ratio of 1 faculty to class size ranges from as low as 1 faculty to 4 students (1:4) per class to as high as 1 faculty to 18 students (1:18) per class.

- **Summary of Student Learning and Curriculum**

  There are a total of 14 GE courses offered here at the College. All 14 courses have CLOs. The course outlines and documentations for all 14 courses are currently undergoing updates. Such updates will include changes to student learning outcomes, materials and equipment, texts and references, task lists, and CLOs. Tentatively, the course outlines and all other modification documentations will be submitted to CPC in January 2013 for final approval and will begin implementation in Fall of 2013.

  Additionally, all course CLOs have been aligned with PLOs and ILOs in the mapping template. Signature assignments used in course assessments have also been identified. The program mapping and signature assignment documents have been submitted to the ALO and the AALO (see appendices C and D).

- **Summary of Course Assessment Data**

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

  Upon evaluating the results of the course assessment in Fall 2009 to Spring 2010 that indicates majority of the students in GE 115, 124 and 126 obtained below proficiency level some changes have been made for the improvement of the courses, like; in teaching strategy we gave more hands-on training to the student, and we maximized the use of computer to aid instruction for the sustainability of their skill and knowledge. Another thing is constant monitoring of their performance and direct advising that creates student awareness in their progress and things that they should improve to meet the proficiency level of their skills. The manifestations of these changes were resulted to the improvement of the proficiency level of the students in GE115,124 and 126 in Fall2010 to spring 2011. See **Appendix A 3.0 - Year 1 and Year 2**.

  Though it was expected that in Year 3 Fall2011 Course GE115 will retain or increase the proficiency level but due to some personal reasons 4 student stop attending the class and 2 of them obtained below 70% proficiency level that lead to the decrease in 57% of the student achieved proficiency level. But, looking back on fall 2012, again 84% of the student in GE115 achieved proficiency level, meaning, and program course still doing fine with the student.

  On spring 2011, only 63% of the student achieved proficiency level in GE 124 and GE126. This is due to some personal reasons of the students that 2 of them withdrew from the class and 3 of them stop attending the class. See **appendix I** for suggestions for improvement of the course. Still the rest of the program courses are doing fine with the student.

  Although the PLOs were not been assessed in similar manner like CLOs, all changes and recommendation we have made to improve program courses also led to over all improvement of students program learning outcomes. See **Appendix J Program Learning Assessment data**.

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

Upon reviewing the results of PLO data, changes were been made to increase the number of student that can achieve proficiency level in the program, and these are the following:

1. Update of the program courses and course learning outcomes

   GE program has 4 PLOs and CLOs in their program courses. These CLOs were aligned together with PLOs to make clear on how the program will go to help each individual student to achieved proficiency in their skills. Other documents such assessment sheets, rubrics, and signature assignments where all been made for the program to collaborate for the achievement of the PLOs

2. Modification of Course Learning Outcomes

   In Fall 2009 GE 215 CLO4- Troubleshoot and Repair Computer Monitor was replace with Troubleshoot and repair CRT/LCD T.V in Fall 2011

   In spring 2010 GE126 has 6 CLOs and upon reviewing it modification has been made CLO 5 and CLO 6 were integrated to become one CLOs.

3. Personal Tools and materials needed by student in their training where included and required by the program to motivate them and gave them opportunities to practice their skills outside the four corners of the school. In this way, student can also build their confidence and experience working in actual field.

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

a. List actions identified in your last program review or any other related plan(s).

- Hire one faculty. Status: On going
- Request two(2) additional classrooms. Status: Incomplete
- Purchase of additional equipment and instructional materials. Status: On going
- Attend trainings and seminars either local or abroad according to the listed training needs. Status: On going
- Develop multi-media instructional materials. Status: On going.

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

There are two measurable outputs on the action plan I listed on the previous program review: First is hire one faculty and the second is request for two(2) additional classrooms. None of these Action plan were completed due related administrative decision and plan.

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

Some of the action plans listed in the previous program review were in progress like: Purchase of additional equipment and instructional materials, Attend trainings and seminars either local or abroad according to the listed training needs, and Develop multi-media instructional materials are all on going and progressing. All of these were in deed helping the student increase their ability to learn the course and develop their technical skill in all program CLOs like for example; **Purchase of additional equipment and instructional materials** will help the student to continuously practice their skill and strengthening their ability to work in actual field. **Attend trainings and seminars either local or abroad according to the listed training needs**; the faculty attended several training in Solar PV installation for both Grid connect and OFF grid connect. The skills and information that the faculty learned from these tanning will reflect on the next course outline review and update. Then, upon approval of CPC it will be delivered to the student to update their skills and knowledge. **Develop multi-media instructional materials;** some of the power point presentation was completed and already using by the faculty to present their lectures and laboratory activities, and giving the students with electronics copy to ensure that they can still catch-up with it.

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

- Review and update of course outlines - This plan ensures that all course outlines are up to date and that they are aligned with the CLOs, PLOs, and ILOs.
- Review and update course assessment document and process - This plan ensures that learning outcomes on each course are properly assess and implemented.
- Request for two (2) additional shop room and one (1) stock room – This ensures that learning environment is conducive and to highly motivate the student to pursue their chosen vocation.
- Purchase of Personal student Tools and material - This ensures that necessary tools and materials are available for students and faculty teaching GE courses.
- Purchase of addition training equipment and tools – To equalize the ratio of shop equipment per student in order to increase learning efficiency and instructions.
- Develop student work book per course – This is to establish standard work activities of the student base on PLOs and CLOs.

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

a. PLOs and CLOs were defined in the program and completed.
b. Signature Assignments and assessment tools were completed
c. All courses offered every semester were been assessed.
d. 8 new computers were placed in GE shop for the update of training equipment.
e. Purchase of personal tools and training materials for the student are now in placed that motivate student to increase their proficiency level.
f. Purchase of 5 Micro Controller Trainer and 1 LCD TV equipment were in placed.

- **Summary of Program Major Strengths**

  a. The program has the qualified and competent faculty that delivers quality education and training to the students, they are well trained, well versed, have a long experience teaching technology.

  b. The program provides students with hands-on trainings in electronics and develops their initiatives to be self-employed individuals. See Appendix D for their specific activities in signature assignment

  c. The program has direct linkages to different cooperating agencies that provide actual training and work experiences to the students.

- **Recommendations for Improvements**

  Does the student assessment data indicate overall program needs that may require support from the institution? Define these observed needs supported by assessment data.

  - Classroom and facilities- Classroom and facilities are not enough to accommodate and provide the needs of students for a higher and efficient learning.
  - Equipment – The available equipments is not enough to meet the standard student-equipment ratio.
  - Purchase of consumable and some instructional materials should be made early before classes start
  - Faculties should be given opportunities to attend training seminars related to his field of teaching.
  - 2 Additional classrooms should be provided to the program to separate the industrial electronics shops room, consumer electronics shop room, and computer shop room. Facilities such as tables, chairs and cabinets should be provided according to the designed framework in electronics.
  - Purchase of additional Equipment tools and instruments should be given attentions to strengthen the instruction and learning.

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- **Summary of Action Plans**

  - Review and update of course outlines - This plan ensures that all course outlines are up to date and that they are aligned with the CLOs, PLOs, and ILOs
  - Review and update course assessment document and process - This plan ensures that learning outcomes on each course are properly assess and implemented.
  - Professional development - This plan ensures that GE faculty is always up to date in electronics technology and delivering up to date information and instructions to the student.
  - Request for two (2) additional shop room and one (1) stock room - This ensures that learning environment is conducive and to highly motivate the student to pursue their chosen vocation.
  - Purchase of Personal student Tools and material - This ensures that necessary tools and materials are available for students and faculty teaching GE courses.
  - Purchase of addition training equipment and tools – To equalize the ratio of shop equipment per student in order to increase learning efficiency and instructions.
  - Develop student work book per course - This is to establish standard work activities of the student base on PLOs and CLOs.

- **Summary of Resource Request (if any)**
  All resource requests should be tied to at least one of the following:
  - **An institutional learning outcome**
  - **A program learning outcome**
  - **A course learning outcome**

a. What ILO, PLO and/or CLO does this resource request address?

Facilities- All the ILOs, PLOs, and CLOs of the GE program courses were addressed by this request.

Equipment- All the ILOs, PLOs, and CLOs of the GE program courses were addressed by this request.

Supplies- All the ILOs, PLOs, and CLOs of the GE program courses were addressed by this request.

Software- All the ILOs, PLOs, and CLOs of the GE program courses were addressed by this request.

Training- All the ILOs, PLOs, and CLOs of the GE program courses were addressed by this request.

Others-

b. What will be the anticipated outcome if resource request is granted?

Facilities- Conducive and an attractive learning environment will increase enrollment, retention, and proficiency level of the student.

Equipment- Adequate training equipment provides more effective and reliable training.

Supplies- Success in course assessment and increase in student proficiency level

Software- Effective and reliable computer training

Training- Training delivery and Teaching instructions will become more dynamic.

c. Describe the resource request in detail.

Facilities-

- **Shop Room for Consumer Product Servicing** has an area of 25ft x 25ft with better lighting system, ventilation, and safety. Cabinets for equipment and student tools are provided. 16 Standard student shop table with an area of 4ft by 3ft. AC power outlet with safety protection device are included for each student shop table and on the four sides of the wall.

- **Industrial and Computer Servicing** has an area of 25ft x 25ft with better lighting system, ventilation, and safety. Cabinets for equipment and student tools are provided. 16 Standard student shop table with an area of 4ft by 3ft. AC power outlet with safety protection device are included for each student shop table and on the four sides of the wall

- **Storage Room for Student Projects and Materials**. Has an area of 15ft by 10ft with good lighting system, ventilation, and safety. Steel rack for student projects and cabinet of consumable materials are provided. Ac power outlet on four sides of the wall are also provided.

Equipment-

- TV training Equipment – 8sets of LCD/LED TV 24"-32"
- Audio Training Equipment- 8 sets Speaker, Amplifier, Audio Mixer, Microphone, and Audio Player with minimum power of 100 watts
- Computer training Equipment- 10 computers with Core two Duo processor, minimum of 1GB Ram , 250 GB Hard disk, and an LCD monitor.
- Industrial training Equipment- 8 AC Motors single phase and Three phase , 8 sets of motor controller, 8sets of programmable logic controller, 8 sets of micro controller, sets of sensors and other electrical devices
- 8 sets of Electronic Communication Training Equipment capable of delivering training for Fiber optic, Data communication, RF communication, Telephone communication, and Microwave communication.
- 2 units Oscilloscope dual trace 100Mhz, 8 sets of Multi-meter, 2 units Function Generator, 2 units of RF generator, 8 sets of Temperature Meter, 8 sets of Audio meter, 8 sets of Power meter. And 8 units of Power supply.

Supplies-

- **Consumable Training materials**
  Wires, Electrical insulators, Semiconductors, Printed Circuit Board Materials, Soldering Materials, Panel Meters, Switches, and Terminal post
- **Shop Maintenance Materials**
  Light bulbs, Batteries, Fuse, Electrical Insulators, AC switch, AC outlets, Shop towel, Sand papers, Sanitizer, Sink cleaner Tissue papers, Soap, Floor Map, Fire extinguisher, and First aid Kit.
- **Office Instruction Materials**
  White Board Markers and Eraser, Maker, Pen, Pencils, Folders, Clipper, Stapler, Staple Wire, Scissor, Thumb Tacks, utility box, Computer Ink, Blank CD/DVD
- **Shop Tools and utilities**
  Drill Press Machine, Sanding Machine, Air Compressor, Soldering Tools, Assembly tools, Cutting tools, Flash lights, Measuring Tools, Utility boxes and Lighted magnifying glass.

Software

- License Windows 7 and Windows for group station
- Norton Utility Disk for group station
- Antivirus Software for group Station

Training

- LCD TV Repair Training
- Radio/Telecommunication Training.
- Industrial related Training
- Computer Related Training
- Solar PV(Off-Grid) Training
- Biomedical Training

Others- 2 Student lockers Cabinet contains 16 locker for each cabinet with a depth of 16" a wideness of 12" and a height of 18 inches for each locker.

Appendix A: Department Review Assessment Data

1.0 Department Data

Figure 1. Number of Students enrolled, completers, failures, auditors,withdrawals, challenge testers and incompleters

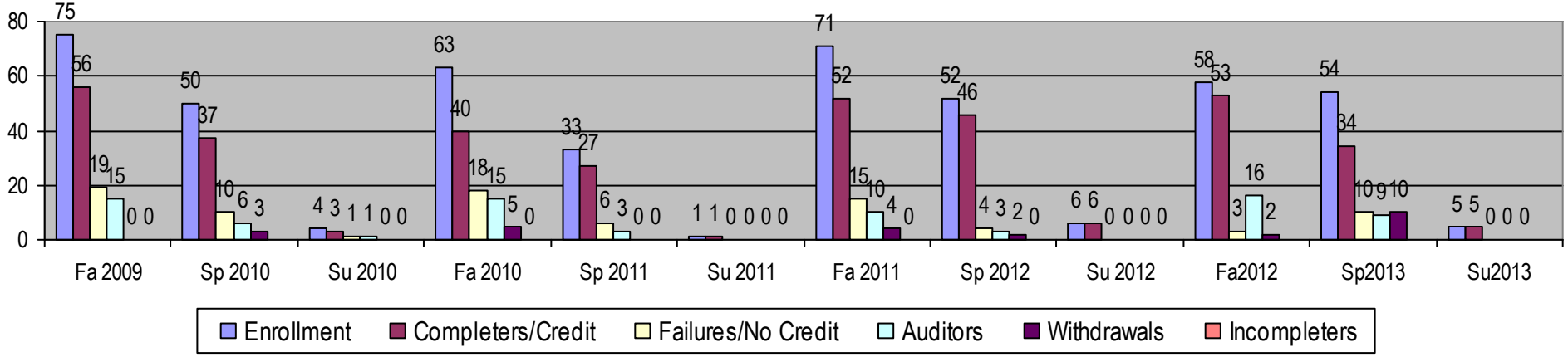

Figure 2. Number of Graduates

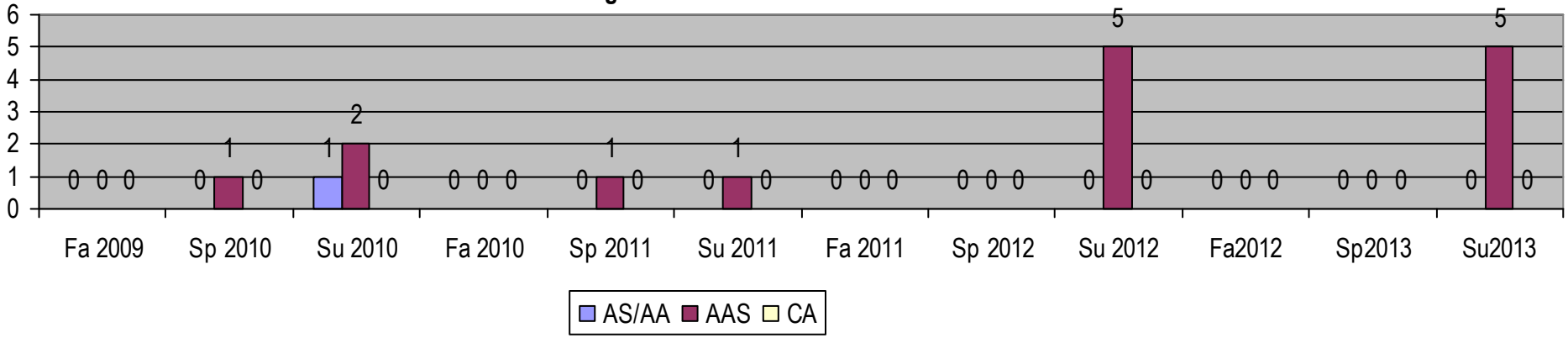

Figure 3. Number Size of Class and Sections Conducted

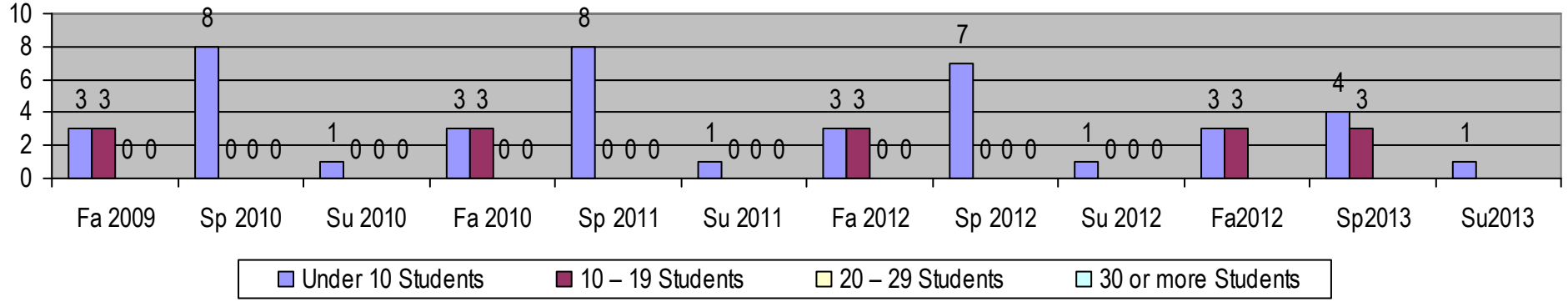

Figure 4. Class Offering

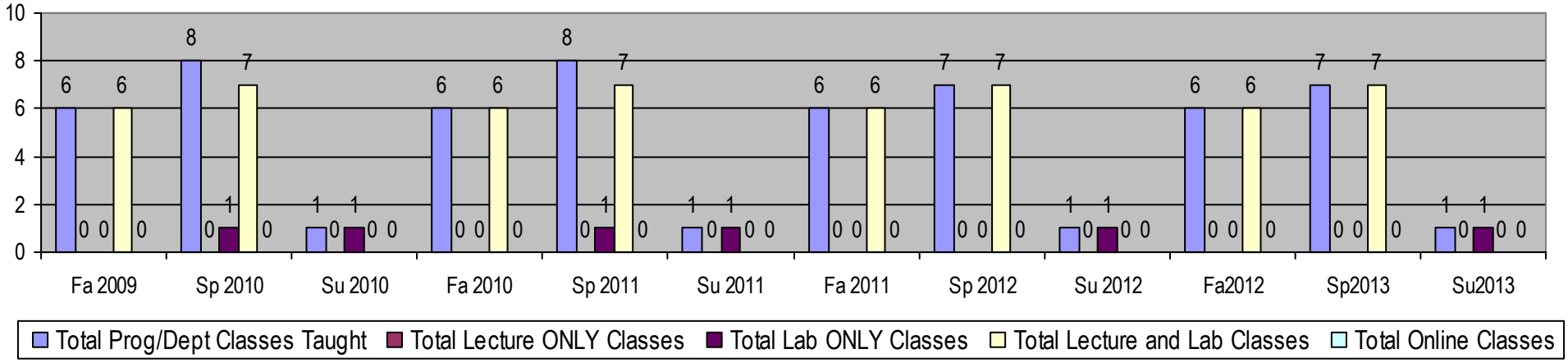

Figure 5. Faculty Head Count

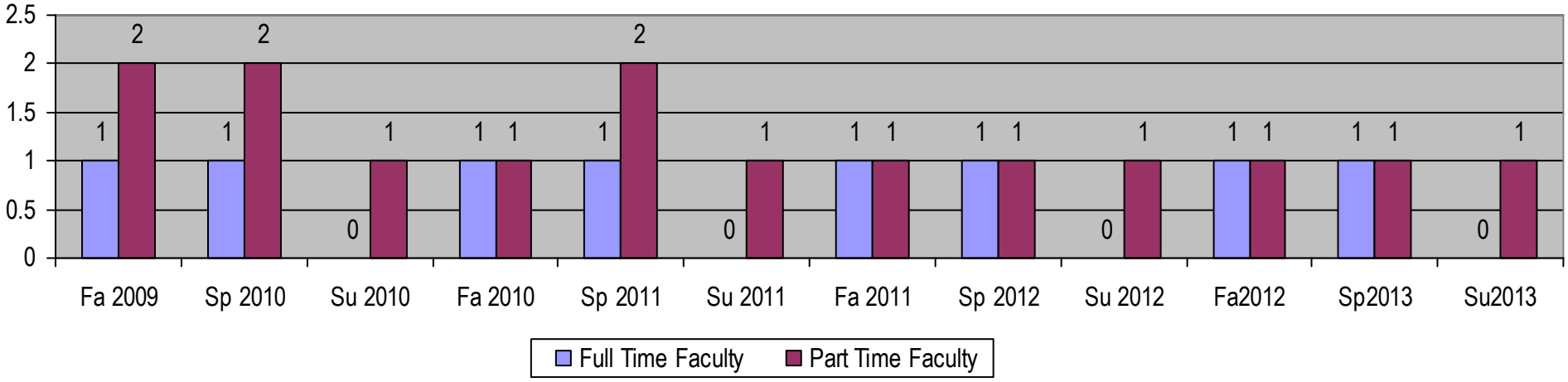

Table 1. Faculty-Student Ratio (program headcount).

Ratio	Fa 2009	Sp 2010	Su 2010	Fa 2010	Sp 2011	Su 2011	Fa 2011	Sp 2012	Su 2012	Fa 2012	Sp 2013	Su 2013
Full Time Faculty (F : S)	1:11	1:7		1:6	1:5		1:10	1:8		1:8	1:8	
Part Time Faculty (F : S)	1:16	1:12	1:4	1:18	1:4	1:1	1:17	1:8	1:6	1:14	1:8	1:5

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 *There are a total of 14 GE courses.	**100%** *All GE courses have CLOs. Such CLOs are currently being used to assess the courses.	**100%** *Note: All GE outlines were updated and submitted to CPC. All have been approved and implementation begins this Fall semester 2013.	**100%** *Outline updates containing changes to textbooks and other resources were submitted to CPC in January 2013. All changes have been approved and implementation begins this Fall semester 2013.	**100%** *All CLOs have been aligned with PLOs and all PLOs have been aligned with ILOs. ***Refer to appendix C.***

3.0 Course Assessment Data

Year 1: School Year 2009- 2010

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2009	GE113	CLO 1,2,3,4,5,6 –PLO4	**No Assessment made to this course during this time**
	GE114	CLO 1,2,3,4 –PLO1 CLO 1,2,3,4 –PLO2 CLO 1,2,3,4 –PLO3 CLO 1,2,3,4 – PLO4	**No Assessment made to this course during this time**
	GE115	CLO 1,2,3,4,5- PLO1 CLO 1,2,3,4,5 –PLO2 CLO 1,2,3,4,5 – PLO3 CLO 1,2,3,4,5 – PLO4	43% of students performed at proficiency level for all CLOs; therefore, more time is needed for student advising, create efficient teaching strategy and create conducive learning environment to motivate them always study and come to class.
	GE127	CLO 1,2,3,4 – PLO3	100% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE214	CLO 1 – PLO1 CLO 1,2,3,4 – PLO2 CLO 4 – PLO4	100% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE215	CLO 1,2,3,4,5- PLO2 CLO 1,2,3,5- PLO4	100% of students performed at proficiency level for all CLOs . No changes needed at this time
Spring 2010			
	GE124	CLO3 – PLO1 CLO 1,2,3,4,5,6- PLO2 CLO 1,2,3,4,5,6- PLO3 CLO 2 – PLO4	40% of students performed at proficiency level for all CLOs; therefore, more time is needed for student advising, create efficient teaching strategy and create conducive learning environment to motivate them always study and come to class.
	GE125	CLO 1,2 ,4 – PLO1 CLO 1,2,3 – PLO2 CLO 1,2,3,4,5 – PLO3 CLO 1 – PLO4	**No Assessment made to this course during this time**

	GE126	CLO 1,3 – PLO1 CLO 1,2,3,4 - PLO2 CLO 4,5 – PLO4	40% of students performed at proficiency level for all CLOs; therefore, more time is needed for student advising, create efficient teaching strategy and create conducive learning environment to
	GE216	CLO1 – PLO1 CLO 2 _ PLO2 CLO1,2,3,4 - PLO3	75% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE217	CLO 1,2,3,4 – PLO3	85% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE222	CLO 1,2,3,4 - PLO2 CLO 4 – PLO4	85% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE223	CLO 1,2,3 – PLO4	**No Assessment made to this course during this time**
	GE225	PLO1,2,3,4	**No Assessment made to this course during this time**
Summer 2010	GE225	PLO1,2,3,4	**No Assessment made to this course during this time**

Year 2: School Year 2010-2011

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2010	GE113	CLO 1,2,3,4,5,6 –PLO4	**No Assessment made to this course during this time**
	GE114	CLO 1,2,3,4 –PLO1 CLO 1,2,3,4 –PLO2 CLO 1,2,3,4 –PLO3 CLO 1,2,3,4 – PLO4	**No Assessment made to this course during this time**
	GE115	CLO 1,2,3,4,5- PLO1 CLO 1,2,3,4,5 –PLO2 CLO 1,2,3,4,5 – PLO3 CLO 1,2,3,4,5 – PLO4	80% of the student who participated on this assessment passed the course with a grade of 70 and above.
Spring 2011			
	GE124	CLO3 – PLO1 CLO 1,2,3,4,5,6- PLO2 CLO 1,2,3,4,5,6- PLO3 CLO 2 – PLO4	75%% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE125	CLO 1,2 ,4 – PLO1 CLO 1,2,3 – PLO2 CLO 1,2,3,4,5 – PLO3 CLO 1 – PLO4	75% of students performed at proficiency level for all CLOs . No changes needed at this time. Except for CLO 1 and 4 see **Appendix E.** for recommendation for improvement.
	GE126	CLO 1,3 – PLO1 CLO 1,2,3,4 - PLO2 CLO 4,5 – PLO4	80%% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE225	PLO1,2,3,4	100% of the student reached proficiency level. One student was enrolled in GE225: Internship in the Spring 2010. Please refer to Internship Assessment for more detailed information. NOTE: GE225: Internship assessment documentations are maintained by the Internship Coordinator.

Summer 2011	GE225	PLO1,2,3,4	100% of the student reached proficiency level. One student was enrolled in GE225: Internship in the Spring 2010. Please refer to Internship Assessment for more detailed information. NOTE: GE225: Internship assessment documentations are maintained by the Internship Coordinator.

Year 3: School Year 2011-2012

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2011	GE113	CLO 1,2,3,4,5,6 –PLO4	100% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE114	CLO 1,2,3,4 –PLO1 CLO 1,2,3,4 –PLO2 CLO 1,2,3,4 –PLO3 CLO 1,2,3,4 – PLO4	100% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE115	CLO 1,2,3,4,5- PLO1 CLO 1,2,3,4,5 –PLO2 CLO 1,2,3,4,5 – PLO3 CLO 1,2,3,4,5 – PLO4	57% of students performed at proficiency level for all CLOs; therefore, more time is needed for student advising, create efficient teaching strategy and create conducive learning environment to motivate them always study and come to class. See **Appendix F** for recommendation for improvement.
	GE127	CLO 1,2,3,4 – PLO3	100%% of students performed at proficiency level for all CLOs . No changes needed at this time.
	GE214	CLO 1 – PLO1 CLO 1,2,3,4 – PLO2 CLO 4 – PLO4	100%% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE215	CLO 1,2,3,4,5- PLO2 CLO 1,2,3,5- PLO4	100%% of students performed at proficiency level for all CLOs . No changes needed at this time.
Spring 2012			
	GE124	CLO3 – PLO1 CLO 1,2,3,4,5,6- PLO2 CLO 1,2,3,4,5,6- PLO3 CLO 2 – PLO4	86%% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE125	CLO 1,2 ,4 – PLO1 CLO 1,2,3 – PLO2 CLO 1,2,3,4,5 – PLO3 CLO 1 – PLO4	100% of students performed at proficiency level for all CLOs except for CLO2. See **Appendix G** for recommendation for improvement
	GE126	CLO 1,3 – PLO1 CLO 1,2,3,4 - PLO2 CLO 4,5 – PLO4	86%% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE216	CLO1 – PLO1 CLO 2 _ PLO2 CLO1,2,3,4 - PLO3	100%% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE217	CLO 1,2,3,4 – PLO3	100%% of students performed at proficiency level for all CLOs . No changes needed at this time

	GE222	CLO 1,2,3,4 - PLO2 CLO 4 – PLO4	100%% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE223	CLO 1,2,3 – PLO4	100%% of students performed at proficiency level for all CLOs . No changes needed at this time
Summer 2012	GE225	PLO1,2,3,4	100% of the student reached proficiency level. Six student was enrolled in GE225: Internship in the Spring 2010. Please refer to Internship Assessment for more detailed information. NOTE: GE225: Internship assessment documentations are maintained by the Internship Coordinator.

Year 4: School Year 2012-2013

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2012	GE113	CLO 1,2,3,4,5,6 –PLO4	100%% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE114	CLO 1,2,3,4 –PLO1 CLO 1,2,3,4 –PLO2 CLO 1,2,3,4 –PLO3 CLO 1,2,3,4 – PLO4	100%% of students performed at proficiency level for all CLOs . No changes needed at this time.
	GE115	CLO 1,2,3,4,5- PLO1 CLO 1,2,3,4,5 –PLO2 CLO 1,2,3,4,5 – PLO3 CLO 1,2,3,4,5 – PLO4	84% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE127	CLO 1,2,3,4 – PLO3	100% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE214	CLO 1 – PLO1 CLO 1,2,3,4 – PLO2 CLO 4 – PLO4	100% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE215	CLO 1,2,3,4,5- PLO2 CLO 1,2,3,5- PLO4	83% of students performed at proficiency level for all CLOs . No changes needed at this time
Spring 2013			
	GE124	CLO3 – PLO1 CLO 1,2,3,4,5,6- PLO2 CLO 1,2,3,4,5,6- PLO3 CLO 2 – PLO4	63% of students performed at proficiency level for all CLOs; therefore, more time is needed for student advising, create efficient teaching strategy and create conducive learning environment to motivate them always study and come to class. See **Appendix H** for recommendation for improvement.
	GE125	CLO 1,2 ,4 – PLO1 CLO 1,2,3 – PLO2 CLO 1,2,3,4,5 – PLO3 CLO 1 – PLO4	100%% of students performed at proficiency level for all CLOs . No changes needed at this time
	GE126	CLO 1,3 – PLO1 CLO 1,2,3,4 - PLO2 CLO 4,5 – PLO4	63% of students performed at proficiency level for all CLOs; therefore, more time is needed for student advising, create efficient teaching strategy

			and create conducive learning environment to motivate them always study and come to class. See **Appendix I** for recommendation for improvement.
	GE216	CLO1 – PLO1 CLO 2 _ PLO2 CLO1,2,3,4 - PLO3	100%% of students performed at proficiency level for all CLOs . No changes needed at this time.
	GE217	CLO 1,2,3,4 – PLO3	100%% of students performed at proficiency level for all CLOs . No changes needed at this time.
	GE222	CLO 1,2,3,4 - PLO2 CLO 4 – PLO4	100%% of students performed at proficiency level for all CLOs . No changes needed at this time.
	GE223	CLO 1,2,3 – PLO4	100%% of students performed at proficiency level for all CLOs . No changes needed at this time
Summer 2013	GE225	PLO1,2,3,4	100% of the student reached proficiency level. One student was enrolled in GE225: Internship in the Spring 2010. Please refer to Internship Assessment for more detailed information. NOTE: GE225: Internship assessment documentations are maintained by the Internship Coordinator.

4.0 Program Learning Outcomes (PLOs) Assessment

List PLOs	Proficiency Level	Results of Assessments
GE PLO1	GE114-CLO 1,2,3,4- 100% GE115CLO 1,2,3,4,5- 66% GE-124CLO3 – 66% GE125-CLO 1,2 ,4 - 92% GE126-CLO 1,3 – 67% GE214-CLO 1, - 100% GE216 - CLO 1, - 92% GE225 - CLO 1 – 100 %	80% of the students reached the proficiency level for GE PLO #1. No action is needed
GE PLO2	GE114 - CLO 1,2,3,4- 100% GE115- CLO 1,2,3,4,5 - 66% GE124 - CLO 1,2,3,4,5,6 -66% GE125 - CLO 1,2,3 – 92% GE126 - CLO 1,2,3,4 – 67% GE214 - CLO 1,2,3,4 – 100% GE215 - CLO 1,2,3,4,5 – 94% GE216 - CLO 2 – 92% GE222 - CLO 1,2,3,4 - 95% GE225 - CLO2 – 100%	83% of the students reached the proficiency level for GE PLO #2. No action is needed
GE PLO3	GE114 –CLO 1,2,3,4 – 100% GE115 -CLO 1,2,3,4 - 66 % GE124 - CLO 1,2,3,4,5 - 66% GE125 - CLO 1,2,3,4,5,6 – 79% GE 127 – CLO 1,2,3,4 – 100% GE216 - CLO1,2,3,4 – 92%	80% of the students reached the proficiency level for GE PLO #3. No action is needed

	GE217 - CLO 1,2,3,4 – 100% GE225 - CLO3 100%	
GE PLO4	GE113 - CLO 1,2,3,4,5,6 - 100% GE114 - CLO 1,2,3,4 - 100% GE115 - CLO 1,2,3,4,5 – 66% GE124 - CLO 2 – 66% GE125 - CLO 1 – 92% GE126 - CLO 4,5 – 67% GE214 - CLO 4 – 100% GE215 - CLO 1,2,3,5 – 94% GE222 - CLO 4 – 95% GE223 - CLO 1,2,3 – 100% GE225 - CLO4 – 100%	83% of the students reached the proficiency level for GE PLO #4. No action is needed

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
Hire one faculty	On going	There is one regular par time faculty in the program.
Request two(2) additional classrooms	Incomplete	The Shop Building is in plan for renovation and the instructor is looking forward to have two additional rooms. One room will be used for computer and industrial training shop and the other room will be used for Repair and assembly of consumer products.
Purchase of additional equipment and instructional materials	On going	Purchase of tools and materials needed by the student for their training should be made early before the start of the class.
Attend trainings and seminars either local or abroad according to the listed training needs	Ongoing	Related Seminars attended by the faculty in USA, Tennessee – Fall2009 Palau MOE - Solar PV Off-Grid Connect Palau PCC – Solar PV Grid Connect Palau PCC – Solar PV Off and Grid Connect
Develop multi-media instructional materials	Ongoing	Some of the Instructional Multimedia developed and acquired by the program are already been used like Video Tape, DVDs and Power point presentation.

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
Review and update of course outlines	This plan ensures that all course outlines are up to date and that they are aligned with the CLOs, PLOs, and ILOs.	None	Summer 2015
Review and update course assessment document and process.	This plan ensures that learning outcomes on each course are properly assess and implemented	None	Summer 2015
Professional development	This plan ensures that GE faculty is always up to date in electronics technology and delivering up to date information and instructions to the student.	Funding to allow GE faculty attend trainings, workshops, and conferences in GE related topics.	Ongoing
Request for two (2) additional shop room and one (1) stock room	This ensures that learning environment is conducive and to highly motivate the student to pursue their chosen vocation.	Funding to renovate the building in order to provide 2additional shop room and 1 stock room	Refer to the Physical Plan for renovation timeline.
Purchase of Personal student Tools and material	This ensures that necessary tools and materials are available for students and faculty teaching GE courses.	Funding to buy personal tool and materials for student and be available at PCC store.	Before the start of Fall and Spring semester
Purchase of addition training equipment and tools –	To equalize the ratio of shop equipment per student in order to increase learning efficiency and instructions.	Funding to buy additional training equipment and tools for the GE shop	Ongoing
Develop student work book per course	This is to establish standard work activities of the student base on PLOs and CLOs. .	Funding to buy needed printing materials and student work materials.	Summer 2015

7.0 Resource Requests

Type of Resource	Description	Estimated Amount Requested	Justification
Personnel	Not at this Time		

Facilities	Shop Room for Consumer Product Servicing Table Lab and Closet	$30,000	• The existing shop room is too small to accommodate 7 classes for every semester. Aside from this, there is no space any more to accommodate other training equipment and student tool cabinet. The existing room is not conducive for efficient student learning. • Stock room is very much needed to store student training materials, projects, shop maintenance materials and other equipment. • The existing Laboratory tables are not a standard lab table. It create difficulties for the student to place all the needed materials, tools and instrument during their Lab activities specially in troubleshooting LCD/LED TV a consumer product.
Facilities	Shop Room for Industrial and Computer Servicing Table Lab and Closet	$30,000	
Facilities	Stock Room for Student Projects and Materials.	$30,000	
Equipment	TV training Equipment	$3,200	Presently is newest technology and student are needs to learn how to repair this kind of TV.
Equipment	Audio Training Equipment	$3,000	Service and repair of audio equipment such as Speaker, Amplifier, Audio Mixer, Microphone, and Audio Player are the CLOs needed by the student to be come electronics technicians.
Equipment	Computer training Equipment	$8,000	Computer is one of the most important and most frequently used kinds of equipment in our house and office. As electronic technician He/she must have skills in servicing and repairing it.
Equipment	Industrial training Equipment	$4,000	Service and Repair of Industrial training equipment such as motor controller, programmable logic controller, micro controller, sensors and other electrical devices must be learned by the student in order to be absorbed in industry as machine operator or technician.
Equipment	Electronic Communication Training Equipment	$4,000	PNCC and Radio company needs an electronics technician who is knowledgeable in fundamentals of communication. This training equipment will help the student to build their knowledge and skill electronics communication, such as Radio, Data, Fiber Optic, Microwave, and Satellite Communications System.

Equipment	Instruments	$1,500	Instruments such as Oscilloscope, Multi-meter, Function Generator RF generator, Temperature Meter, Audio meter, Power meter. and Power supply are the essential instruments to build student skills in troubleshooting , data analysis and design.
Supplies	Consumable Training materials	$4,000	Consumable training materials for General Electronics are highly needed to give student a hands on experience in designing electronics product, wiring and installing electronics equipment, Servicing and repairing consumer products, and Servicing and repairing computers.
Supplies	Shop Maintenance Materials	$800	Shop maintenance materials are needed to sustain conducive learning on the room, provide safety around the shop, and to maintain all equipment, tools and instruments always in good running conditions.
Supplies	Office Instruction Materials	$300	Office instruction and materials are important to aid instructor in teaching, conveying information, direction to student activities, keeping record of the students attendance and performance, and to organized student works/ activities.
Supplies	Shop tools	$1,000	Shop tools are needed by the student to help them in building their projects and to support CLOs of the program.
Software	Computer OS	$500	License OS for new version of MS windows are highly needed for the computer training. It is a must that every computer that uses MS windows must be license
	Computer Utility Disk	$300	License Utility Disk is to provide software maintenance and hardware diagnostic capability. This software is important for technician to accurately determine the problem of computer and safely fix it.
Training	• LCD TV Repair Training • Radio Communication Training. • Industrial related Training • Computer Related Training • Solar PV(Off-Grid) • Biomedical	$2,500	• Faculty is in need to attend training in LCD/LED TV repair get fresh ideas and concept in repairing it. • Training in Radio communication is the 2nd priority needed by the faculty to strengthen student learning comes in this area. • Related training in industrial and computer is the 3rd priority needed by the faculty to strengthen the CLOs of the related courses in the program. • Related training in Biomedical and Solar

			PV is the 4th priority needed by the program in order to established new CLO needed by the community such as in Hospitals and the residential.
Other	Student locker Cabinet	$500	Student in this program doesn't have any existing locker or cabinet where they safely store or put their tools, instruments and other belonging. Students are already tired in bringing every day their heavy tools and it make them uncomfortable during the training.
Total		$123,600	

Appendix B: Provide Program Learning Outcomes (PLOs)

Program Learning Outcomes (PLOs)

During the program experience, the program learning outcomes (PLOs) will be assessed through the use of signature assignments of course learning outcomes which aligned with the PLOs. A grading scale will be used to determine the students' proficiency levels of each PLO using specifically aligned assignment. The numerical rating of 5,4,3,2, and 1 are not intended to represent the traditional school grading system of A,B,C,D, and F. The descriptions associated with each of the numbers focused on the level of student performance for each of the program learning outcomes listed below.

Rating Scale: 5 Excellent
4 Above-Average
3 Average.
2 Below Average
1. Unacceptable.

A. Assemble and manufacture electronic circuit

5. Demonstrate knowledge and skills in printed circuit board designing, soldering and de-soldering, use of instruments and equipments in assembling of electronic circuit with 90%-100% accuracy.

4. Demonstrate knowledge and skills in printed circuit board designing, soldering and de-soldering, use of instruments and equipments, and assembling of electronic circuit with 80%-89% accuracy.

3. Demonstrate knowledge and skills in printed circuit board designing, soldering and de-soldering, use of instruments and equipments, and assembling of electronic circuit with 70%-79% accuracy

2. Demonstrate knowledge and skills in printed circuit board designing, soldering and de-soldering, used of instruments and equipments, and assembling of electronic circuit with 65%-69% accuracy.

1. Unable to demonstrate knowledge and skills in printed circuit board designing, soldering and de-soldering, used of instruments and equipments, and assembling of electronic circuit with below 65% accuracy.

B. Service and repair of electronic consumer products

5. Demonstrate knowledge and skills in troubleshooting and repair of audio equipment, radio receiver, television, video equipment and other electronic consumer products with 90%-100% accuracy.

4. Demonstrate knowledge and skills in troubleshooting and repair of audio equipment, radio receiver, television, video equipment and other electronic consumer products. with 80%-89% accuracy.

3. Demonstrate knowledge and skills in troubleshooting and repair of audio equipment, radio receiver, television, video equipment and other electronic consumer products with 70%-79% accuracy

2. Demonstrate knowledge and skills in troubleshooting and repair of audio equipment, radio receiver, television, video equipment and other electronic consumer products with 65% to 69% accuracy.

1. Unable to demonstrate knowledge and skills in troubleshooting and repair of audio equipment, radio receiver, television, video equipment and other electronic consumer products with below 65% accuracy.

C. Service and repair of industrial devices, control, and equipment.

5. Demonstrate knowledge and skills in troubleshooting and repair of electric machine, programming the microcontroller and programmable logic controller, and other controlling devices with 90%-100% accuracy.

4. Demonstrate knowledge and skills in troubleshooting and repair of electric machine, programming the microcontroller and programmable logic controller, and other controlling devices with 80%-89% accuracy.

3. Demonstrate knowledge and skills in troubleshooting and repair of electric machine, programming the microcontroller and programmable logic controller, and other controlling devices with 70%-79% accuracy.

2. Demonstrate knowledge and skills in troubleshooting and repair of electric machine, programming the microcontroller and programmable logic controller, and other controlling devices with 65%-69% accuracy.

1. Unable to demonstrate knowledge and skills in troubleshooting and repair of electric machine, programming the microcontroller and programmable logic controller, and other controlling device with below 65% accuracy

D. Service and repair of computer

5. Demonstrate knowledge and skills in PC assembly, loading an operating system and other application software, troubleshooting and repairing the computer, and upgrading the computer with 90%-100% accuracy.

4. Demonstrate knowledge and skills in PC assembly, loading an operating system and other application software to PC, troubleshooting and repairing the computer, and upgrading the computer with 80%-89% accuracy.

3. Demonstrate knowledge and skills in PC assembly, loading an operating system and other application software to PC, troubleshooting and repairing the computer, and upgrading the computer with 70%-79% accuracy.

2. Demonstrate knowledge and skills in PC assembly, loading an operating system and other application software to PC, troubleshooting and repairing the computer, and upgrading the computer with 65%-69% accuracy.

1. Unable to demonstrate knowledge and skills in PC assembly, loading an operating system and other application software to PC, troubleshooting and repairing the computer, and upgrading the computer with below 65% accuracy.

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

GENERAL ELECTRONICS PROGRAM MAP

COURSE	PLO1- Assemble and Manufacture Electronic Circuit	PLO2 - Service and Repair of Electronic Consumer Products	PLO3- Service and Repair of Industrial Devices and Control Equipment	PLO4 - Service and Repair of Computer	Institutional Learning Outcomes (ILOs)
GE 113				CLO 1,2,3,4,5,6	ILOs 1-4
GE 114	CLO 1,2,3,4	CLO 1,2,3,4	CLO 1,2,3,4	CLO 1,2,3,4	ILOs 1-4
GE 115	CLO 1,2,3,4,5	CLO 1,2,3,4,5	CLO 1,2,3,4,5	CLO 1,2,3,4,5	ILOs 1-4
GE 124	CLO3	CLO 1,2,3,4,5,6	CLO 1,2,3,4,5,6	CLO 2	ILOs 1-4
GE 125	CLO 1,2 ,4	CLO 1,2,3	CLO 1,2,3,4,5	CLO 1	ILOs 1-4
GE126	CLO 1,3	CLO 1,2,3,4		CLO 4,5	ILOs 1-4
GE 127			CLO 1,2,3,4		ILOs 1-4
GE 214	CLO 1,	CLO 1,2,3,4		CLO 4	ILOs 1-4
GE 215		CLO 1,2,3,4,5		CLO 1,2,3,5	ILOs 1-4

GE 216	CLO1	CLO 2	CLO1,2,3,4		ILOs 1-4
GE 217			CLO 1,2,3,4		ILOs 1-4
GE 222		CLO 1,2,3,4		CLO 4	ILOs 1-4
GE 223				CLO 1,2,3	ILOs 1-4
GE225	CLO1	CLO2	CLO3	CLO4	ILOS 1-4

Prepared by: Joel G. Yabes
Program Instructor

Appendix D: Provide signature assignment form

Signature Assignment
General Electronics (GE)

Course Number	Course Title	Semester Credit	Signature Assignments	Means of Assessment (Provide the exact signature assignment instruction.)
GE 113	COMPUTER OPERATING SYSTEM	3	Project based assessment package (CLO 1-5)	CLO 1 -5 –Through the assessment package, the students will read and interpret electronic diagrams, design, assemble, test and troubleshoot power supply circuit.
GE 114	BASIC ELECTRONICS	3	Project based assessment package (CLO 1-5)	CLO 1 -5 –Through the assessment package, the students will set-up, configure and customize personal computer
GE 115	ELECTRONIC TOOLS, TESTS INSTRUMENTS AND MEASUREMENT	3	Performance Test (CLO1,CLO3-CLO5) Hand's on project (CLO2)	CLO 1 –Using soldering pencil and hot air soldering iron the student will de-soldering and soldering electronics component on the circuit board with quality, good appearance, apply safety procedures, and should finish it on time. CLO 2 –Base on the schematic diagram the student will manually design the printed circuit board of their project, etch, drill and mount all the electronics component on it with good quality and appearance, apply safety procedures, and should finish it on time

				CLO 3 –Using the Analog and Digital multi-meter the student will measure the resistance, current, and voltage of an electronic circuit, interpret the results of measured value, apply safety procedures, and should finish it on time. CLO 4 – Using an oscilloscope the student will setup the instrument properly, measure the different properties of an electrical signal, interpret the results of measured value, apply safety procedures, and should finish it on time. CLO 5 – Using RF/Function generator the student will setup and calibrate the generator properly, hookup to oscilloscope, measure the different properties of the generated signal, apply safety procedures, and finish it on time.
GE 124	ANALOG CIRCUITS AND APPLICATIONS	3	Hand's on Project (CLO1- CLO6)	CLO 1& CLO3 –The student will design a circuit board for a DC regulated power supply and small audio signal amplifier, mount all the components on the board properly, solder it with good quality and appearance, assemble it to enclosure with proper wirings, apply safety procedures, and should finish it on time. CLO 2 & CLO4– The student will locate the specific troubles of the power supply circuit and small audio signal amplifier, replace the defective parts properly, test, operate, reassemble, clean, apply safety procedures and should finish it on time

				CLO 5 & CLO 6 The student will be given an electronics circuit board that generate and process signals, he/she will locate the specific trouble, replace the defective parts, test, operate, clean, apply safety procedures, and should finish it on time
GE 125	DIGITAL CIRCUITS AND APPLICATIONS	3	Final Exam (CLO 1 & 2) Project based assessment(CLO 1-5)	CLO 1& 2 –Describing/explaining the different components of digital circuits. CLO 1-5 –Through the project based assessment the student will prepare logic diagrams, design and troubleshoot a logic circuit
GE 126	PRINCIPLES OF ELECTRONIC COMMUNICATION	3	Hand's on Project CLO1 – CLO5	CLO 1&3 – The student will assemble an AM/FM Radio Transmitter and Receiver Circuit , with good quality and appearance, apply safety procedures, test the operation, and should finish it on time. CLO 2&4 – The student will locate the specific troubles of an AM/FM Radio Transmitter and Receiver Circuit, replace the defective parts properly, test , operate, reassemble ,clean, apply safety procedures, and should finish it on time CLO 5 - The student will splice and wire Telephone and LAN cable properly, applying good quality and safety procedures, and finish it on time.
GE 127	INDUSTRIAL ELECTRONIC DEVICES, CIRCUITS AND APPLICATIONS	3	Hand's on Project (CLO1 - CLO 5)	CLO 1-5 – The student will install an open-loop and closed-loop control system with AC or DC Motor on the panel board,

				layout all the devices properly , wire and hookup all the devices with good appearance, perform different controls, repair and test field control device, operate the system, apply safety procedures and should finish it on time.
GE 214	AUDIO EQUIPMENT SERVICE AND REPAIR	3	Hand's on project (CLO1 – CLO3) Troubleshooting project (CLO4)	CLO 1 Base on a given schematic diagram the student will design the electronics circuit board of an Audio Power Amplifier, assemble the circuit with good quality and appearance, apply safety procedures and should finish it on time. CLO 2 The student will assemble the different parts of a speaker enclosure system, wire it with good quality and appearance, apply safety procedures, test the operation, and should finish it on time. CLO 3 The student will install different audio equipment on the panel board properly, hookup and setup with good quality and appearance, test and operate, apply safety procedures and should finish it on time CLO 4 The student will locate the specific troubles of an audio equipment, replace the defective parts properly, test and operate, reassemble and clean, apply safety procedures and should finish it on time
GE 215	TELEVISION SERVICE AND REPAIR	3	Midterm Exam and Performance test. CLO1.	CLO1 The student will identify the different Sections/ Blocks of the Television System, explain the operation

			Troubleshooting Project CLO2 – CLO4.	of each block in TV system, setup the Channel Selection and Video, hookup the VCR/VCD/DVD player to TV. CLO2 - 4 The student will perform adjustment of the different service control inside the TV set, trace the different circuits of the CRT TV board, Troubleshoot and repair the problem
GE 216	MICROCONTROLLER TECHNOLOGY	3	Hand's on Projects (CLO1-CLO4)	CLO1- CLO4 The student will assemble a microcontroller circuit, Test and troubleshoot the problem, develop programs, and Interface it to the input/output electrical devices with good quality, appearance, apply safety and finish it on time.
GE 217	INDUSTRIAL CONTROL TECHNOLOGY	3	Hands On project. (CLO 1-CLO 6)	CLO 1 &CLO2 The student will locate the specific troubles of interface circuit and actuating device, replace and repair the defective parts , clean , and operate it. CLO 3 & CLO 4 The student will disassemble and assemble a robot Arm, manually test the operation, install the software to the computer ,hookup the Robot arm to the computer, and develop different programs with proper operation, efficiency and flexibility. CLO 5 & CLO 6The student will wire the I/O devices to PLC, setup and configure the parameters of PLC, test the operation of PLC, develop different programs with proper operation, efficiency and flexibility.

GE 222	VIDEO SYSTEM REPAIR AND MAINTENANCE	3	Troubleshooting Projects	CLO1& CLO2 The student will locate the specific troubles of the VCR and Cam-coder equipment, replace the defective parts properly, test, operate, reassemble, clean, apply safety procedures and should finish it on time. CLO3The student will locate the specific troubles of the DVD equipment, replace the defective parts properly, test, operate, reassemble, clean, apply safety procedures and should finish it on time CLO4 The student will locate the specific troubles of the LCD/LED video monitor, replace the defective parts properly, test, operate, reassemble, clean, apply safety procedures and should finish it on time
GE 223	PC ASSEMBLY,MAINTENANCE, AND REPAIR	3	Final Exam (CLO 1-3) Project based assessment (CLO 2)	CLO 1 –Describing how to load operating system and add new hardware. CLO 2 –The student will troubleshoot and repair PC through project-based assessment CLO 3 –Describing/explaining how to upgrade computer.
GE 225	Internship			

Appendix E

PALAU COMMUNITY COLLEGE
PROGRAM/DEPARTMENT NAME: General Electronics
COURSE TITLE: GE 125 Digital Circuits and Applications
5 COLUMN GRID (Course Assessment: SPRING SEMESTER 2011 Cycle Number 1 Prepared by: JERRY O. TAROY

Assessment Summary at a Glance

How many students were included?	:	**8**
How many sections of the course were included?	:	**1**
What was the number of full-time faculty?	:	**2**
What was the number of adjunct faculty?	:	**N/A**
How many online sections were included?	:	**N/A**
On which campuses were the courses taught?	:	**PCC Koror**

EXPANDED STATEMENT OF INSTITUTIONAL PURPOSE	COURSE INTENDED LEARNING OUTCOMES	MEANS OF COURSE ASSESSMENT AND CRITERIA FOR SUCCESS	SUMMARY OF DATA COLLECTED	USE OF RESULTS
Mission Statement: Palau Community College is an accessible 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. **Program Description** The general electronics program is designed to provide students with technical knowledge, skills and proper work habits/attitude necessary for employment in the field of electronics. The program prepares the	Upon Completion of this course, students will be able to: A. Read and Interpret digital circuit diagram B. Design and construct logic controller circuit C. Troubleshoot and repair logic controller circuit D. Design and	The assessment is composed of two parts; knowledge test and skills assessment which cover all the course learning outcome. *We are satisfied if …..* **KNOWLEDGE TEST** 70% of the students achieved 70% or higher on written examination. **SKILLS ASSESSMENT** 70% of the students achieved average (3) rating or	All the students got more than 70% on the **knowledge test**. The criterion for success was achieved. 50 % students got more than average rating on **accuracy**. The criterion for success was not achieved.	Based on the faculty discussion about the compiled result, the failure on dimensions 1 and 4 could be cause by two factors. STUDENT FACTOR: 1. Student's interest on the course 2. Students missing classes 3. Absenteeism 4. Student failure to follow written instruction. 5. Student's work habits and attitude. FACILITIES 1. We can't provide meaningful hand's on activities to the students due to the fact that the electronic lab is lacking

students to work and advance their career as electronic technicians, assemblers, testers; parts counter salespersons or operators of their own electronic parts distributor establishments and service and repair shop. **Course Description** This course is design to familiarized students with the different digital circuits, techniques and their respective functions and their applications. Such circuits are arithmetic logic unit, comparator, decoder and encoder circuits, multiplexer and demultiplexer circuits, digital counters, registers and memory circuits. It includes test procedures and circuit connections of logic gates and digital circuits.	construct sequential controller circuit E. Troubleshoot and repair sequential controller circuit	higher on **accuracy**.		of electronic components needed for student's activities and hands-on training on this particular course. According to Joel, these materials are available only from off island and were requested before but due to the college's financial constraint, the materials were not purchased. **PLAN TO IMPROVE THE COURSE** 1. Devise a placement test or career guidance counseling to determine what program/course they really like to take. 2. Utilize more strict attendance policy. 3. Allot more time for student's hand's on activities by providing them the actual electronics components This assessment was done through software simulations only, due to the reason that the actual components are not available in the lab. 4. Develop student's work habits and attitude.
		70% of the students achieved average (3) rating or higher on **criteria formulation**.	87.5% students got more than average rating on **criteria formulation**. The criterion for success was achieved.	
		70% of the students achieved average (3) rating on **creating I/O assignment**	87.5% students got average and above average rating on **creating I/O assignment**. The criterion for success was achieved.	
		70% of the students achieved average (3) rating on **diagramming.**	50% students got average rating on **diagramming**. The criterion for success was not achieved.	
		70% of the student achieved average (3) rating or higher on **timeliness/ completion**	100% of the students got average and more than average rating on **timeliness/completion**. The criterion for success was achieved.	

Appendix F

PALAU COMMUNITY COLLEGE

PORGRAM/DEPARTMENT NAME: GENERAL ELECTRONICS PROGRAM COURSE TITLE: GE 115 – ELECTRONIC TOOLS, TESTS INSTRUMENTS AND MEASUREMENT SEMESTER(Fall 2011) Cycle Number 2 Prepared by, Joel G. Yabes

Assessment Summary at a Glance

How many students were enrolled in this class? 16
How many students were included in the assessment 14 .
How many sections of the course were included? 1
What was the number of full-time faculty? 1 .

What was the number of adjunct faculty? 0
How many online sections were included? 0
On which campuses were the courses taught? PCC

EXPANDED STATEMENT OF INSTITUTIONAL PURPOSE	COURSE INTENDED LEARNING OUTCOMES	MEANS OF COURSE ASSESSMENT AND CRITERIA FOR SUCCESS	EXPECTED STUDENT PERFORMANCE	Summary of data collected	Use of results
Mission Statement: PCC Mission Statement Palau Community College is an accessible public education institution helping to meet the technical, academic, cultural, social and economic needs of the students and communities by promoting learning opportunities and developing personal. Excellence. **Institutional Goal Statement** **Program Description** The General Electronics Technology program is designed to provide students with technical knowledge, skills and proper work habits/attitudes necessary	Upon Completion of this course, students will be able to: A. . Solder and De-solder electronic components B. Design electronic printed circuit board, C. Check and measure the electrical properties of a circuit using analog and digital multi-meter D. Check and measure electrical properties of a signal using oscilloscope. E. Utilized other test instruments (AF	Student will be given a Practical test for soldering and de-soldering. Student will construct a power supply circuit to show their skills in PCB designing Student will be given practical activities to show their skills in the used of analog and digital tester Student will be given a performance test to show their skills in the used of oscilloscope Student will be given a performance test to	70% of the student should get at least a grade of 70 70% of the student should get at least a grade of 70 70% of the student should get at least a grade of 70 70% of the student should get at least a grade of 70 70% of the student should get at least a	50% of the student passed and received a grade of 70 and above on CLO1 50% of the student passed and received a grade of 70 and above on CLO2 57% of the student passed and received a grade of 70 and above on CLO3 71% of the student passed and received a grade of 70 and above on CLO4 71% of the student passed and received a grade of 70	57% of the student who participated on this assessment passed the course with a grade of 70 and above. CLO4 and CLO5 are doing fine with the student and no recommendations for improvement. However, CLO1, CLO2 and COL3 needs to do the following recommendation for improvement. 1. Student should always be advised to attend classes regularly. 2. Student should practice the basic math skill specially the division and multiplication.

for employment in the field of electronics. The program prepares students to work, advance in their career as electronic technicians, assemblers, testers, parts counter sales persons or operators of their own electronic parts distributor establishments, service repair shops, and prepares them for further education. **Course Description** This course is designed to train students to acquire knowledge and skills in the use of electronic hand tools, applications of soldering and de-soldering techniques and the use of electronic instruments necessary in making electronic test and measurements in various electronic circuits. It also requires the students to exercise laboratory safe practices	generator and RF signal generator)	show their skills in the used of function generator.	grade of 70	and above on CLO5	3. Purchased of 2 more unit of Oscilloscope, function generator, frequency counter, RF generator should be prioritized to strengthen instructional learning. 4. Student's personal tools and instruments should be made available on the store before the classes begin and require them to buy it. This will help them to practice even outside the class room. 5. Student should be given more exercises in oscilloscope and meter reading. Note ; 16 student enrolled in the class 2 of them withdrew from the class and 4 of them did not show up during the assessment

Appendix G

PALAU COMMUNITY COLLEGE
COURSE ASSESSMENT GRID

Program/Department Name: GEN ELECTRONICS TECH **Course Title:** GE 125 Digital Circuits and Applications **Semester / Year:** SPRING 2012 **Prepared by:** JERRY TAROY

Assessment Summary at a Glance

How many students were enrolled in this course?	8	What was the number of adjunct faculty?	0
How many students were included in this assessment?	6	How many online sections were included?	0
How many sections of the course were included?	1	On which campuses were the courses taught?	PCC
What was the number of full-time faculty?	2		

EXPANDED STATEMENT OF INSTITUTIONAL PURPOSE	Formulate and establish goals/objectives/learning outcomes (LOs) aligned to PCC mission	Assess criteria for achievement of goals/objectives/learning outcomes and develop assessment strategy.	Measure service provider and service receiver's performance/satisfaction using qualitative and quantitative methods via assessment instruments	Evaluate, analyze review, and interpret results for congruence between expected and actual outcomes. Use result to improve goals/objectives/LOs.	Develop/improve programs and services based from the results. Strengthen services by continuously evaluating, planning, allocating resources, and implementing new approaches.
Mission Statement: 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. **Institutional Goal Statement:** **Program Description:** The general electronics program is designed to provide students with technical knowledge, skills and proper	**COURSE INTENDED LEARNING OUTCOMES** Upon Completion of this course, students will be able to: A Read and Interpret digital circuit diagram B Design and construct logic controller circuit C Troubleshoot and repair logic controller circuit D Design and construct sequential controller circuit E Troubleshoot and repair sequential controller circuit	**MEANS OF COURSE ASSESSMENT AND CRITERIA FOR SUCCESS** The assessment is composed of two parts; knowledge test and skills assessment which cover all the course learning outcome. *We are satisfied if …..* **KNOWLEDGE TEST** 70% of the students achieved 70% or higher on written examination. **SKILLS ASSESSMENT** 70% of the students achieved average (3) rating or higher on **accuracy**. 70% of the students achieved average (3) rating or higher on **criteria formulation**.	**STUDENT PERFORMANCE** All the students got more than 70% on the **knowledge test**. The criterion for success was achieved. 100 % students got more than average rating on **accuracy**. The criterion for success is achieved. 67% of the students got more than average rating on **criteria formulation**. The criterion for success is not achieved.	**SUMMARY OF DATA COLLECTED** Based on the faculty discussion about the compiled result, the course assessment achieved all the criteria for success except criteria formulation. Most probably, this is a result of student's failure to follow written instruction because during our practice in this topic, they got it right. On the next round of assessment, we will put emphasis on developing students' ability to understand and follow written instruction.	**USE OF RESULTS / ADDITIONAL COMMENTS** **PLAN OF ACTION / ADDITIONAL COMMENTS** Despite the fact that the assessment leads to achieving good ratings on 4 out of 5 criteria, we are still proposing some improvement for the course due to the reason that the skills assessment done on this process was purely computer simulation only. We need to purchase the actual digital electronic components so that the students will be able to experience working on the actual components.

work habits/attitude necessary for employment in the field of electronics. The program prepares the students to work and advance their career as electronic technicians, assemblers, testers; parts counter salespersons or operators of their own electronic parts distributor establishments and service and repair shop **Course Description:** This course teaches the students about electrical quantities, laws and theorems that govern DC and AC electronic circuits. It also deals with basic electronic components, their circuit applications and how to test them using the multi-meter.		70% of the students achieved average (3) rating or higher on **creating I/O assignment**	100% students got more than average rating on **creating I/O assignment**. The criterion for success is achieved.		**Note: 2 out of 10 students did not take skills assessments**.
		70% of the students achieved average (3) rating or higher on **diagramming.**	100% students got more than average rating on **diagramming**. The criterion for success is achieved.		
		70% of the student achieved average (3) rating or higher on **timeliness/ completion**	100% of the students got more than average rating on **timeliness/completion**. The criterion for success is achieved.		

Appendix H

PALAU COMMUNITY COLLEGE COURSE ASSESSMENT GRID

Prog/Dept. Name: GENERAL ELECTRONICS PROGRAM Course/Title: GE 124 – ANALOG CIRCUITS AND APPLICATIONS Sem/Yr: SPRING 2013 Prep. By: YABES

Assessment Summary at a Glance

How many students were enrolled in this course? 10
How many students were included in this assessment? 8
How many sections of the course were included? 1
What was the number of full-time faculty? 1
What was the number of adjunct faculty? 0
How many online sections were included? 0
On which campuses were the courses taught? PCC

EXPANDED STATEMENT OF INSTITUTIONAL PURPOSE	F *Formulate and establish goals/objectives/learning outcomes (Los) aligned to PCC mission*	A *Assess criteria for achievement of goals/objectives/learning outcomes and develop assessment strategy*	M *Measure service provider and service receiver's performance/satisfaction using qualitative and quantitative methods via assessment instruments*	E *Evaluate, analyze, review, and interpret results for congruence between expected and actual outcomes. Used result to improve goals/objectives/Los*	D *Develop/improve programs and service based from the results. Strengthen services by continuously evaluating, planning, allocating resources, and implementing new approaches.*
	COURSE INTENDED LEARNING OUTCOMES	**MEANS OF COURSE ASSESSMENT AND CRITERIA FOR SUCCESS**	**EXPECTED STUDENT PERFORMANCE**	**Summary of data collected**	**Use of Results/Additional Comments**
Mission Statement: PCC Mission Statement Palau Community College is an accessible public education institution helping to meet the technical, academic, cultural, social and economic needs of the students and communities by promoting learning opportunities and developing personal. Excellence. **Institutional Goal Statement** **Program Description** The General Electronics	Upon Completion of this course, students will be able to: A. Design and Construct Power supply circuit B. Troubleshoot and Repair Power Supply circuit C. Design and Construct an amplifier circuit	Student will be given a performance test and project to build, in order to assess the level of their proficiency	70% of the student should get a grade of 70 or above in all CLOs	63 % of the student achieve proficiency level in all CLOs of this course	All CLO are doing fine with the student and no recommendations for improvement. However, lack of training materials, tools and instruments may lose the motivation of the students to continue the training. Therefore: the following recommendation should be made. 1. Always advice the student to attend classes regularly. 2. Training materials, tools and instruments must be provided

Technology program is designed to provide students with technical knowledge, skills and proper work habits/attitudes necessary for employment in the field of electronics. The program prepares students to work, advance in their career as electronic technicians, assemblers, testers, parts counter sales persons or operators of their own electronic parts distributor establishments, service repair shops, and prepares them for further education. **Course Description** This course is designed to familiarize students with the different electronic devices, analog circuits, techniques and their respective functions and applications. Such circuits are: diode circuits, power supply circuits, transistor circuits, FET circuits, oscillator and multivibrator circuits, Op-amp circuits, wave shaping circuits, thyristor circuits and optoelectronic circuits. It includes testing and troubleshooting	D. Troubleshoot and Repair Amplifier Circuit E. Troubleshoot and Repair Frequency Generator Circuit F. Troubleshoot and Repair Signal Processing circuit				3. Remind the administration for their support on the needed training materials by the student to achieved level of success. Note ; 10 student enrolled in the class 2 of them withdrew from the class and 3 of them did not show up during the assessment

Appendix I

PALAU COMMUNITY COLLEGE COURSE ASSESSMENT GRID

Prog/Dept. Name: GENERAL ELECTRONICS PROGRAM Course/Title: GE 126 – SPRINCIPLESOFELECTRONICSCOMMUNICATION SYSTEMS Sem/Yr: SPRING 2013 Prep. By: YABES

Assessment Summary at a Glance

How many students were enrolled in this course? 10
How many students were included in this assessment? 8
How many sections of the course were included? 1
What was the number of full-time faculty? 1
What was the number of adjunct faculty? 0
How many online sections were included? 0
On which campuses were the courses taught? PCC

EXPANDED STATEMENT OF INSTITUTIONAL PURPOSE	**F** *Formulate and establish goals/objectives/learning outcomes (Los) aligned to PCC mission*	**A** *Assess criteria for achievement of goals/objectives/learning outcomes and develop assessment strategy*	**M** *Measure service provider and service receiver's performance/satisfaction using qualitative and quantitative methods via assessment instruments*	**E** *Evaluate, analyze, review, and interpret results for congruence between expected and actual outcomes. Used result to improve goals/objectives/Los*	**D** *Develop/improve programs and service based from the results. Strengthen services by continuously evaluating, planning, allocating resources, and implementing new approaches.*
	COURSE INTENDED LEARNING OUTCOMES	**MEANS OF COURSE ASSESSMENT AND CRITERIA FOR SUCCESS**	**EXPECTED STUDENT PERFORMANCE**	**Summary of data collected**	**Use of Results/Additional Comments**
Mission Statement: PCC Mission Statement Palau Community College is an accessible public education institution helping to meet the technical, academic, cultural, social and economic needs of the students and communities by promoting learning opportunities and developing personal. Excellence. **Institutional Goal Statement**	**Upon Completion of this course, students will be able to:** A. Assemble the AM/FM radio transmitter circuit. B. Troubleshoot and Repair the AM/FM radio transmitter circuit. C. Assemble the AM/FM radio receiver circuit.	Student will be given a performance test and project to build, in order to assess the level of their proficiency	70% of the student should get a grade of 70 or above in all CLO	63 % of the student achieve proficiency level in all CLOs of this course	All CLO are doing fine with the student and no recommendations for improvement. However, lack of training materials, tools and instruments may lose the motivation of the students to continue the training. Therefore: the following recommendation should be made. 4. Always advice the student to attend classes regularly.

Program Description The General Electronics Technology program is designed to provide students with technical knowledge, skills and proper work habits/attitudes necessary for employment in the field of electronics. The program prepares students to work, advance in their career as electronic technicians, assemblers, testers, parts counter sales persons or operators of their own electronic parts distributor establishments, service repair shops, and prepares them for further education. **Course Description** This course is designed to provide the students a comprehensive understanding on the principles of electronic communication systems. It covers principles of radio communication, troubleshooting of AM/FM radio receivers, radio transmitter circuit and some experiments in telephone system and local-area networking	D. Troubleshoot and Repair the AM/FM radio receiver circuit. E. Splice and Connect house hold telephone and LAN cable.				5. Training materials, tools and instruments must be provided 6. Remind the administration for their support on the needed training materials by the student to achieved level of success Note : 10 student enrolled in the class 2 of them withdrew from the class and 3 of them did not show up during the assessment

Appendix J

Program Learning Outcome Assessment Data

Coursses	PLO1				Average	PLO2				Average	PLO3				Average	PLO4				Average	General
	F09-Sp10	F10-Sp11	F11-Sp12	F12-Sp13		F09-Sp10	F10-Sp11	F11-Sp12	F12-Sp13		F09-Sp10	F10-Sp11	F11-Sp12	F12-Sp13		F09-Sp10	F10-Sp11	F11-Sp12	F12-Sp13		Average
GE 113																		100	100	100	100
GE 114			100	100	100			100	100	100			100	100	100			100	100	100	100
GE 115	43	80	57	84	66	43	80	57	84	66	43	80	57	84	66	43	80	57	84	66	66
GE 214	100		100	100	100	100		100	100	100						100		100	100	100	100
GE 215						100		100	83	94						100		100	83	94	94
GE 124	40	75	86	63	66	40	75	86	63	66	40	75	86	63	66	40	75	86	63	66	66
GE 125		75	100	100	92		75	100	100	92		75	100	63	79		75	100	100	92	88
GE 126	40	80	86	63	67	40	80	86	63	67	40	80	86	63	67	40	80	86	63	67	67
GE 127											100		100	100	100						100
GE 216	75		100	100	92	75		100	100	92	75		100	100	92						92
GE 217													100	100	100						100
GE 222						85		100	100	95						85		100	100	95	95
GE 223																		100	100	100	100
GE 225		100	100	100	100		100	100	100	100		100	100	100	100		100	100	100	100	100
Average	60	82	91	89	80	69	82	93	89	83	60	82	92	86	80	68	82	94	90	83	82

Not related Not Assessed Average General Average Over all Average