"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 Four Year Review

Instructional Program

Electrical Technology

Period of Four Year Review

Fall 2009 to Summer 2013

Completed By: JERRY O. TAROY Date: 12/16/201
Program Instructor(s)

Program/Department Chair: JERRY O.TAROY Date: 12/16/201

Dean of Academic Affairs: ROBERT RAMARUI Date: 12/16/201

Program Review Narrative Summary

The narrative summary should include the following:

- **Summary of the academic program purpose**

  The electrical Technology Program is designed to provide students with technical knowledge, skills and proper work habits/attitude necessary for employment in this field. The program prepares students to work and advance in their careers as residential electricians, commercial/industrial electricians, electric machine rewinder, electrical maintenance personnel or power distribution personnel.

  The program will introduce students to the following areas:

  - Basic Electrical Wiring for Non-majors
  - Basic Electricity
  - Electric Machines
  - Residential Wiring
  - Motor Controls and Sequential Controllers
  - Industrial/Commercial Wiring
  - Electrical Management and Maintenance
  - Electrical Estimating
  - Blueprint Reading for Electricians

  The ET courses are designed to help students to acquire and develop technical knowledge and skills in electrical technology. This will enable students to utilize the acquired education and training in finding employment after graduation or pursue higher education in this field.

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

  PCC 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.

  The ET program supports the PCC Mission statement as ET helps to meet the technical, academic, cultural, social, and economic needs of students and communities by promoting learning opportunities and developing personal excellence. The ET program helps meet the **technical and academic** needs of students by providing relevant electrical skills currently needed in the island. Aside from having highly qualified faculty overseeing and periodically updating the program, ET courses are designed and consulted to local industries through technical panel to ensure that students receive technical skills and experience required by the local stakeholder for employment.

The ET program helps meet the **cultural** needs of students in the field by exposing them to the culture of electrical technology. Students are given the opportunity to learn the development of electrical technology from the time electricity was first discovered until such time of electricity driven sophisticated equipment was introduced. As a result, students learn to appreciate the advancement of the technology. The ET program helps meet the **social** needs of students by giving them the opportunity to work within the community as part of their practical activity and field related projects. Throughout their study, ET students are exposed to electrical jobs in the community as need arises. Such exposure not only helps improve students' social and communication skills but also helps them become more confident in their skills as well as build connections with individuals and organizations that may help them when they begin to seek employment. The ET program helps meet the **economic** needs of students by providing them the opportunity to learn necessary skills and obtain experiences needed to find employment after graduation or pursue higher education in the field. The ET program **promotes learning opportunities for students and communities** and **developing personal excellence** by hiring qualified faculty to teach courses and oversee the entire ET program.

- **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	Ave
Enrollment	35	30	3	36	30	2	36	36	6	34	25	4	23
Pass/Credit	86%	90%	100%	89%	67%	100%	94%	83%	100%	88%	100%	100%	91%
Fail/No Credit	9%	3%	0%	8%	33%	0%	3%	14%	0%	12%	0%	0%	7%
Audit	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Withdraw	6%	7%	0%	3%	0%	0%	3%	3%	0%	0%	0%	0%	2%

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. The difference between the passing and failing rates of students indicate that more students successfully pass ET courses. No 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.

Apparently during summer semester enrollment is very low due to the fact that the only course offered during summer is Internship Course.

Overall, the data indicates that majority of the students enrolled in ET courses successfully completed 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	0	0	0	0	0	0	0	0	0	0
AAS	2	1	4	1	0	1	0	6	0	0	1	2
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 Applied Science degree in electrical technology. It is imperative to understand that the data under (a) indicates the total enrollment in all ET courses. However, very few students completed the degree due to several reasons. Almost all electrical technology courses use applied mathematics which makes some students struggle to cope with most of the lessons, fall behind and eventually drop the course or change their major. Some students are not even ready to take college due to very poor mathematical and communications skills.

Though the number of students who have graduated from the program is very low, the need to have the program not only locally and regionally but also worldwide is evident. As a result, it is strongly recommended that the College continue to support and encourage students to pursue an Associate of Applied Science degree in electrical technology. It is also recommended to enhance the college admission policy to ensure readiness of students admitted in the college and consider reoffering of preparatory courses to help those students improve their core competencies.

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	Ave
Under 10 Students	100%	100%	100%	75%	50%	100%	75%	60%	100%	75%	100%	100%	86%
10 – 19 Students	0%	0%	0%	25%	50%	0%	25%	40%	0%	25%	0%	0%	14%
20 – 29 Students	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
30 or more Students	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TOTAL CLASSES	5	5	1	4	4	1	4	5	1	4	5	1	3.33

The table above (tabular view of Figure 3) shows the average class size for ET classes. ET is evident that majority of the classes have under 10 students. This is largely due to the fact that the total number of ET majors is very low. As a result, courses for ET majors only usually has anywhere between 1 to 7 students. Classes with more than 10 students which usually happens every Fall Semester are fundamental courses prerequisite to more advance courses on the following semester.

Courses offered in the summer are usually internship for students. Other courses are not offered during summer unless there is demand from graduating students who needs to take a particular ET course to be eligible for graduation on that semester.

d. Figure 4 – Class 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	Ave
Total Prog/Dept	5	5	1	4	4	1	4	5	1	4	5	1	3.33

Classes Taught													
Total Lecture ONLY Classes	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total Lab ONLY Classes	20%	20%	100%	0%	0%	100%	0%	20%	100%	0%	20%	100%	40%
Total Lecture and Lab Classes	80%	80%	0%	100%	100%	0%	100%	80%	0%	100%	80%	0%	60%
Total Online Classes	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

The table above (tabular view of Figure 4) illustrates the number and type of ET classes offered. Majority of the ET classes offered were lecture and lab courses. Such courses enable students to not only learn the terminologies, concepts, and theories in relation to the courses but also be able to apply the skills acquired in the form of activities, exercise, and/or projects.

Internship is the only course that is "lab only class". This course provides students the opportunity to apply or practice the knowledge, skills, and training acquired through all the ET courses. With the internship, students are assigned to an organization in which they will practice their skills as well as acquire more knowledge and technical skills in the 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	2	2	0	2	2	0	2	2	0	2	2	0
Part Time Faculty	1	1	1	0	0	1	0	1	1	0	1	1
TOTAL FACULTY	3	3	1	2	2	1	2	3	1	2	3	1

The table above (tabular view of Figure 5) represents the number of full time and part time faculty that teaches ET classes. Currently, there are two full time ET faculty who teach all ET courses except Internship which is handled by a part time faculty.

f. Table 1 – Faculty to Class Size Ratio 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 (F : S)	1:9	1:7	0:0	1:17	1:11	0:0	1:15	1:12	0:0	1:11	1:8	0:0
Part Time Faculty (F : S)	1:1	1:4	1:3	0:0	0:0	1:2	0:0	1:1	1:6	0:0	1:1	1:4

The table above (same as Table 1. Faculty-Class Size Ratio (program headcount)) shows the ratio of faculty to class size. Ratio of faculty to class size ranges from as low as 1 faculty to 1 students (1:1) per class to as high as 1 faculty to 17 students (1:17) per class. However, it is important to note that the numbers do not represent the ratio of faculty to

students but rather faculty to class size as some students are enrolled in more than one ET course. To view the numbers as being the ratio of faculty to student would be misleading as the numbers may be higher than they really are. For example, the table indicates that in Fall 2011, the full time faculty to class size ratio was 1:30. If John is enrolled in 2 ET courses then John is counted twice. As a result, the numbers may accurately represent the faculty to class size but not the faculty to student ratio as there is redundancy in the number of students.

- **Summary of Student Learning and Curriculum**

  There are a total of 9 ET courses offered here at the College. All 9 courses have CLOs. The course outlines and documentations for all 9 courses are currently undergoing 3-year validity updates. Such updates will include changes to student learning outcomes, materials and equipment, texts and references, task lists, and CLOs. There will be upcoming proposal for new courses on Renewable Energy which needs to be integrated in Electrical Technology curriculum to support the worldwide drive to use sustainable energy. 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 Spring 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?

  Currently ET program has 3 PLOs. The 3 PLOs cover the area of plant maintenance, installing and maintaining electrical installation for residential, commercial and industrial buildings and occupancy. Below were the initial PLOs of the program:

  1. To enable student to be employable in power utility companies as linemen, power plant electricians, or maintenance personnel.
  2. To prepare the students to be able to install and maintain electrical wiring for residential building.
  3. To prepare the students to be able to install and maintain electrical wiring in commercial and industrial building.

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

  Even though the ET program has set its PLOs, the PLOs themselves are not assessed independently. The program's PLOs identify the focus or goals of the program whereas such learning outcomes are assessed at the course level. For example, the courses that satisfy PLO 1, upon their assessment, PLO 1 will have been assessed. This set up or assessment model ensures that the PLOs are continuously being assessed when program courses are offered and assessed.

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

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

    - Train faculty in the use of technology as a support media to enhance lectures and content of the course. **Status: Ongoing**
    - Train the faculty for any electrical technology trainings to update the instructor's skills. **Status: Complete**
    - Obtain visual and audio teaching aids like PowerPoint presentations, instructional DVD to enhance existing teaching style **Status: Incomplete**
    - Upgrade faculties through trainings and seminars **Status: Ongoing**
    - Construct mock-up trainer to enhance teaching strategies and provide more hands-on training for the students. **Status: Ongoing**
    - Integrate "Electrical Test and Measurements" for ET program as new additional course **Status: Incomplete**
    - Obtain new electrical components, which are available only from off island for ET 210 – Motor Controls and Sequential Controllers to improve delivery of the course. **Status: Incomplete**
    - Obtain transformer rewinding machine and coil former to enhance the delivery and student success in ET 121 Electric Machine **Status: Ongoing**
    - Improve the delivery strategies for ET 111 Basic electricity by procuring some demonstration kits available online. **Status: Ongoing**
    - Obtain "estimating software" for ET 221 Electrical Estimating. **Status: Ongoing**
    - Obtain visual and audio teaching aids on electrical safety and maintenance for ET 220 **Status: Ongoing**

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

    Only one of the identified action plans in the last program review were completed (Refer to previous list items identified by Status: Complete):

    - Electrical Technology instructors were trained in Grid Connected PV-System, Design and Installation. Through these training instructors are now capable and confident in offering this course to ET students and to other stakeholders, public or private personnel who wish to acquire knowledge and skills in grid connected PV systems.

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

    Rest assured the improvement of student learning will be evaluated in Fall 2015 after the first offering of the new course in Fall 2015.

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

The plans that need to take place to ensure continuous support of student learning includes:

- Continue to review and update course outlines, CLOs, and other documentations
    - This plan ensures that all course outlines are up to date and that they are aligned with the CLOs, PLOs, and ILOs.
- Continue to review and update program documentations
    - This plan ensures that all program documentations are up to date including the PLOs and make sure that they are aligned with the ILOs.
- Support professional development for ET faculty
    - This plan ensures that ET faculty is up to date with the latest development in the field of electrical technology, and in turn, students are exposed to such knowledge and skills.
    - Professional development such as workshops, conferences, and trainings in electrical technology for ET faculty to keep up with the fast paced and constantly changing technological world. Professional developments needed are in the areas of:
        - Computer Literacy
        - Any other trainings/workshop in Renewable Energy
        - Teaching Methodology
- Upgrade ET laboratory and classroom
    - Improvise testing panels/working tables for students testing/working on their projects
    - This ensures that ET lab and classroom is conducive for learning.
- Integrate Grid Connected PV System Design and Installation Course in ET program.
- Construct Training facilities intended for renewable energy trainings for students.
    - New laboratory intended for conducting trainings in renewable energy
    - Infrastructure with various kinds of roof wherein student can experience installing solar panels in different roofing materials.

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

- Assessing 100% of ET courses, however, continuous assessments need to be done to ensure that all CLOs are being met.
- The ET program began course assessment using established CLO in Spring 2008. The assessment form or template used then did not really identify the signature assignments used for assessment, therefore, no evidence of student work were

collected and kept. Fall 2010 was the first semester in which assessments were done using a form or template similar to the one that is currently being used. This was the first semester in which signature assignments were identified and collected as evidence for CLO assessments.

- ET faculty had attended training in Renewable energy; Grid connected PV System, Design and Installation and Stand Alone PV System, Design and Installation.

- **Summary of Program Major Strengths**

a. Continuous enrollment in the program shows that the program is going strong with results reflected by the community members by sending their kids to attend the program.
b. Employment of the graduates is another good example of the strength of the program that enables them to be employable in the field.
c. Students are able to perform campus and community projects demonstrating skills learned from the program.
d. Campus projects that are performed by the students with positive results reflect the strength of the program.

- **Recommendations for Improvements**

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

Student assessment data alone is not quite enough to indicate overall program needs. Student learning is being assessed using available equipment which is sometimes outdated and needs to be replaced.

- **Summary of Action Plans**

The ET program's action plans for the next three (3) academic years include the action plans that were set in the last program review but were not completed and the ongoing plans identified in the last review. New plans that were identified in this review are as follows:

- Review and update course outlines, CLOs, and other documentations.
  - This plan ensures that all course outlines are up to date and that they are aligned with the CLOs, PLOs, and ILOs. This plan does not require any additional resources.
    - Note: All ET outlines were submitted and approved by CPC. Course outlines and other documentations will continue to be reviewed and revised, if necessary, therefore this plan is **ongoing**.
- Review and update program documentations.
  - This plan ensures that all program documentations are up to date including the PLOs and that they are aligned with the ILOs. This plan does not require any additional resources.

- Professional development.

    - This plan ensures that ET faculty are up to date with the latest development in electrical technology, and in turn, such newly acquired knowledge and skills can be passed on to the students. Although ET faculty were able to attend some trainings in renewable energy from the last 3 year cycle, we need to continue acquiring new technical knowledge and skills to keep us updated.

- **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?

  - Supplies (Office supplies)

    - This resource request addresses all ET program courses' CLOs, PLOs, and ILOs.

  - Acquire laboratory and classroom software)

    - This resource request addresses all ET program courses' CLOs, PLOs, and ILOs.

  - Training (Professional development and training in ET related topics)

    - This resource request addresses all ET program courses' CLOs, PLOs, and ILOs.

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

  - Supplies (Office supplies)

    - Faculty are equip with the necessary office supplies to effectively teach and perform other teaching related activities.

  - Software (Estimating Software, Simulation Software)

    - Needed software is available for students and faculty teaching ET courses. Estimating software will enable students to be exposed in electrical estimating using state of the art software. Simulation software will help students in troubleshooting complicated circuits.

  - Training (Professional development and training in ET related topics)

- ET faculty is up to date with the latest technology and in turn, students are exposed to such knowledge and skills.

c. Describe the resource request in detail.

- Supplies (Office supplies)

  - Supplies such as pens, staplers, scotch tape, markers, and other office supplies necessary to support faculty teaching ongoing ET courses. Such resources ensure that faculty is equipped to teach and deliver course content effectively.

- Software (Upgrade laboratory classroom software)

  - "The Constructor 10" - this is a simulating software for motor controls and other electrical circuit that will enable students to troubleshoot electrical circuit through simulation. Another software that we need is electrical estimating software.

- Training (Professional development and training in electrical technology)

  - College needs to continue to support and encourage ET faculty and teaching assistant to participate in professional development and training in ET related topics. This is necessary to ensure that ET faculty and teaching assistant are up to date with the fast paced and constantly changing technological world. Professional development needed are in the areas of:

    - Teaching Methods
    - Training in Renewable Energy (Hybrid System, Wind Energy)

Appendix A: Department Review Assessment Data

1.0 Program Data

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

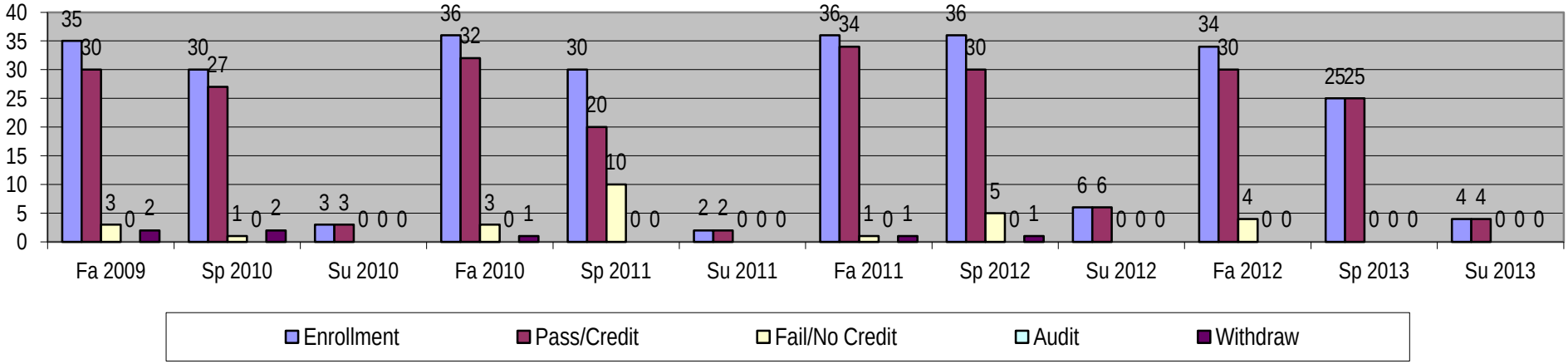


Figure 2. Number of Graduates

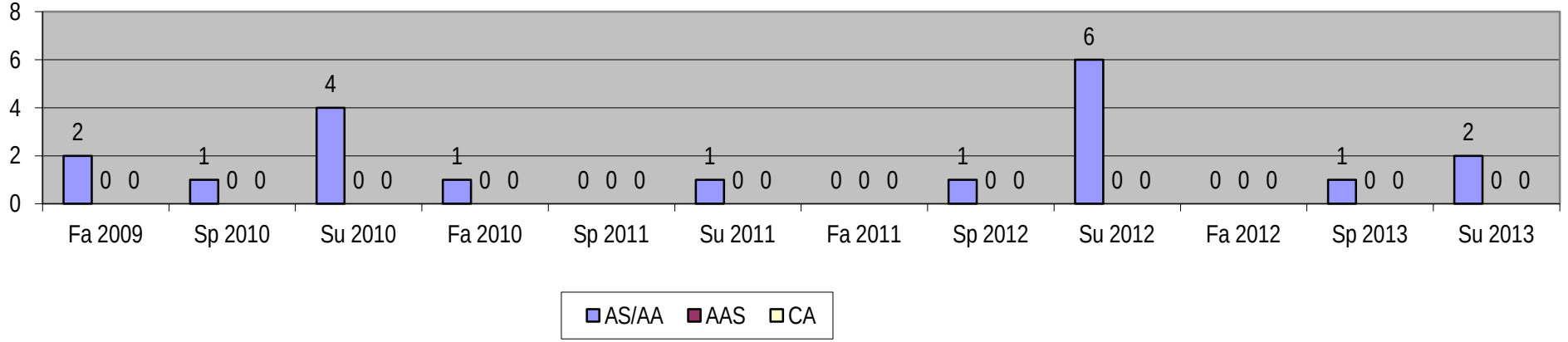


Figure 3. Number of Classes Based on Student Enrollment

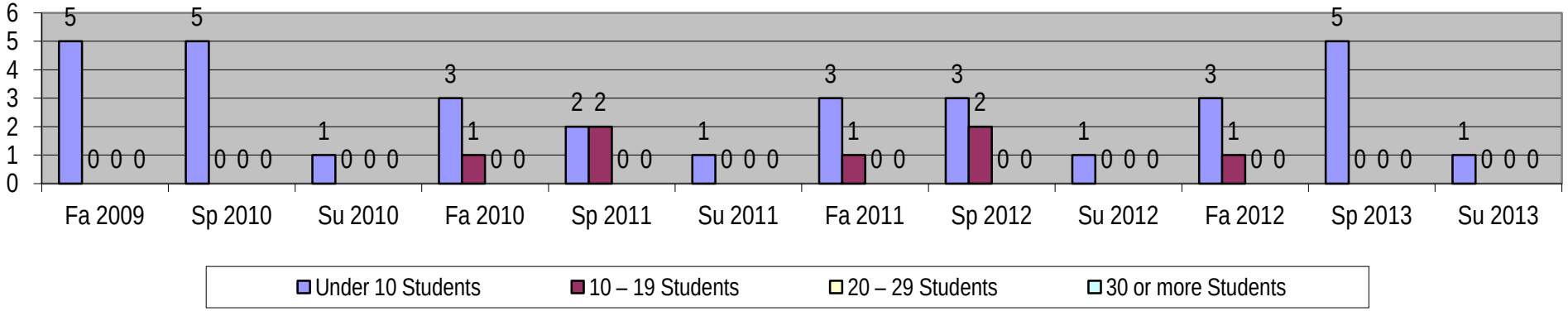


Figure 4. Class Offering

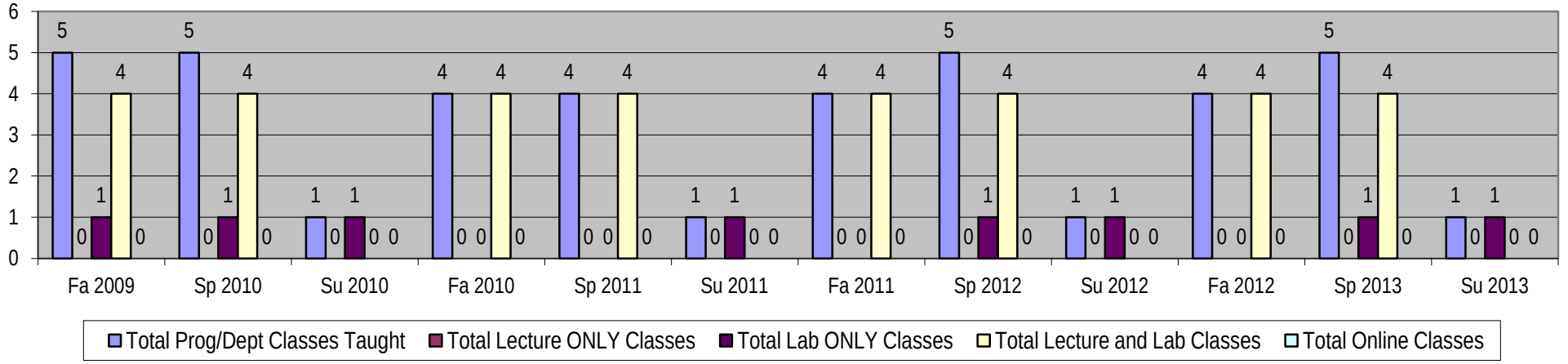
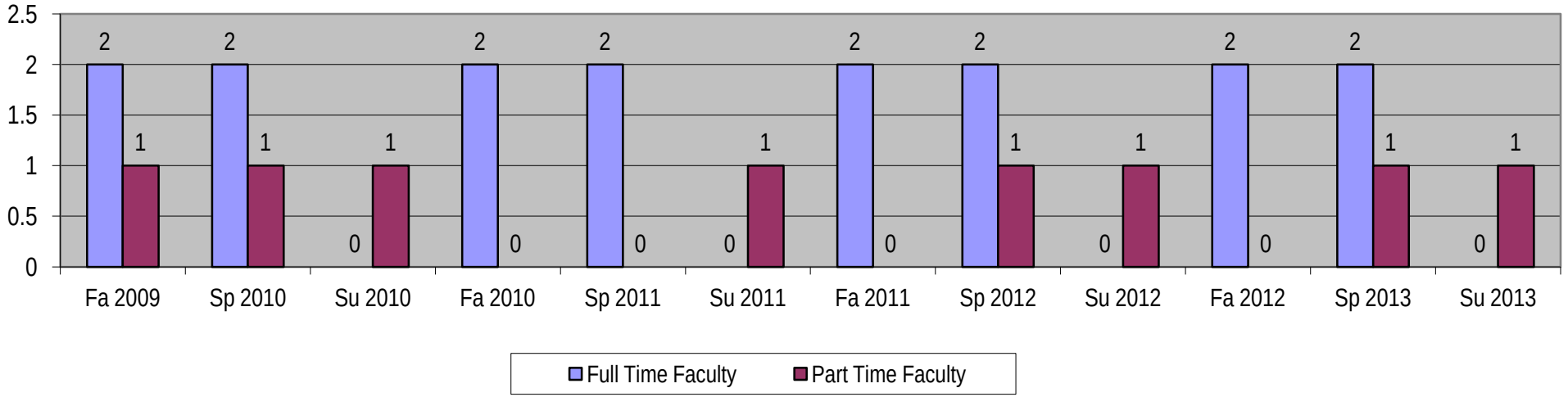


Figure 5. Faculty Head Count



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

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

	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)	1:9	1:7	0:0	1:17	1:11	0:0	1:15	1:12	0:0	1:11	1:8	0:0
Part Time Faculty (F : S)	1:1	1:4	1:3	0:0	0:0	1:2	0:0	1:1	1:6	0:0	1:1	1:4

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
9 *There are a total of 9 ET courses.	**100%** *All ET courses have CLOs. Such CLOs are currently being used to assess the courses.	**100%** *Note: All ET outlines were updated and submitted to CPC.	**100%** *Outline updates containing changes to textbooks and other resources were submitted to CPC in January 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 (FA09-SU10)

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2009	ET110	CLO 1 to 5 – PLO 1 to 3	A total of 100% of the students reached average and above average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
	ET111	CLO 1 to 5- PLO 1 to 3	A total of 100% of the students reached average and above average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
	ET210	CLO 1 to 5 – PLO 1 to 3	A total of 100% of the students reached average and above average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
	ET211	CLO 1 to 5 – PLO 1 & 3	A total of 100% of the students reached average and above average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
	ET222	CLO 1 to 5 PLO 1 to 3	A total of 100% of the students reached proficiency level. Two students were enrolled in ET 222: Internship in the Summer of 2011. Please refer to Internship Assessment for more detailed information. NOTE: All ET222: Internship assessment documentations are maintained by the Internship Coordinator.
Spring 2010	ET121	CLO 1 to 5- PLO 1 & 3	A total of 100% of the students achieved average and above average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
	ET122	CLO 1 to 5- PLO 2	A total of 100% of the students achieved average and above average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
	ET220	CLO 1 to 5-	A total of 83% of the students achieved average and above

		PLO 1 to 3	average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
	ET221	CLO 1 to 5- PLO 1 to 3	A total of 83% of the students achieved average and above average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
	ET222	CLO 1 to 5 - PLO 1 to 3	A total of 100% of the students reached proficiency level. Two students were enrolled in ET 222: Internship in the Summer of 2011. Please refer to Internship Assessment for more detailed information. NOTE: All ET222: Internship assessment documentations are maintained by the Internship Coordinator.
Summer 2010	ET222	CLO 1-PLO 1 to 3	A total of 100% of the students reached proficiency level. Two students were enrolled in ET 222: Internship in the Summer of 2011. Please refer to Internship Assessment for more detailed information. NOTE: All ET222: Internship assessment documentations are maintained by the Internship Coordinator.

Year 2: School Year 2010-2011 (FA10-SU11)

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2010	ET110	CLO 1 to 5 – PLO 1 to 3	A total of 100% of the students reached average and above average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
	ET111	CLO 1 to 5- PLO 1 to 3	4 students were evaluated. 80% answered correctly to 65% of questions in the final test. 75% of the students got "C" and above grade in the signature project. More than 75% of the students assessed passed and received 70 and above grades on CLO covered. 75% of the students who participated on this assessment passed the course with scores of seventy and above. At this time, there is no need for changes or action toward the CLO. Results are to be used as basis for the ongoing assessment process as well as courses improvement in terms of how well the student learned and performed in relation to the course outcomes.
	ET210	CLO 1 to 5 – PLO 1 to 3	50% of the students got more than 70% on the knowledge test. The criterion for success was not achieved. 75 % students got more than average rating on accuracy.

			The criterion for success is achieved. 25% students got average rating on workmanship. The criterion for success is not achieved. 50% students got average and above average rating on safety, proper use of materials, tools and equipment. The criterion for success is not achieved. All four students got more than above average and excellent rating on timeliness/completion. The criterion for success is achieved. Based on the faculty discussion about the compiled result, the following conclusions were formulated. In the criteria "timeliness/completion" and "accuracy" the standards were met. This shows that the student's determination to finish their project on time and making sure that their project works is remarkable. But sacrificing "quality, safety, use of tools, materials and equipment" is far more beyond qualities of a good future electrician. Jeopardizing safety and wasting materials and failure to use tools and equipment properly is poor practices which lead to unpleasant workplace environment and discontented clients. It was found out that failure in achieving the set standard on criteria "safety, use of tools, materials and equipment" is due to student's failure to comply with safety standards and lack of knowledge in the use of tools, materials and equipment. The reason behind this could be the following; 1. Student's interest on the course 2. Students missing classes 3. Absenteeism 4. Student's work habits and attitude.
	ET211	CLO 1 to 5 – PLO 1 & 3	A total of 100% of the students reached average and above average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
Spring 2011	ET121	CLO 1 to 5- PLO 1 & 3	None of the students achieved 70% or higher rating on the knowledge test. The criterion for success was not achieved. 100 % of the students got excellent rating on accuracy. The criterion for success is achieved. 67% students got average rating on workmanship. The criterion for success is achieved.

			50% of the students got excellent rating on safety, proper use of materials, tools and equipment. The criterion for success is not achieved. 67% students got average and above average rating on timeliness/completion. The criterion for success is achieved. Based on the faculty discussion about the compiled result, the following conclusions were formulated. In the criteria "timeliness/completion" and "accuracy" the standards were met. This shows that the student's determination to finish their project on time and making sure that their project works is remarkable. But sacrificing "safety, use of tools, materials and equipment" is far more beyond qualities of a good future electrician. Jeopardizing safety and wasting materials and failure to use tools and equipment properly is poor practices which lead to unpleasant workplace environment and discontented clients. It was found out that failure in achieving the set standard on criteria "safety, use of tools, materials and equipment" is due to student's failure to comply with safety standards and lack of knowledge in the use of tools, materials and equipment. The reason behind this could be the following; 1. Student's interest on the course 2. Students missing classes 3. Absenteeism 4. Student's work habits and attitude.
	ET122	CLO 1 to 5-PLO 2	4 students were evaluated. 80% answered correctly to 65% of questions in the final test. 75% of the students got "C" and above grade in the signature project. More than 75% of the students assessed passed and received 70 and above grades on CLO covered. 75% of the students who participated on this assessment passed the course with scores of seventy and above. At this time, there is no need for changes or action toward the course CLOs. Results are to be used as basis for the ongoing assessment process as well as courses improvement in terms of how

			well the student learned and performed in relation to the course outcomes.
	ET220	CLO 1 to 5- PLO 1 to 3	A total of 100% of the students reached average and above average rating in all CLOs. No action needed at this time. Course will continue to be assessed.
	ET221	CLO 1 to 5- PLO 1 to 3	2 students were evaluated. Both answered correctly to 65% of questions in the midterm test. 75% of the students got "C" and above grade in the signature project. More than 75% of the students assessed passed and received 70 and above grades on CLO covered. 75% of the students who participated on this assessment passed the course with scores of seventy and above. At this time, there is no need for changes or action toward the course CLOs. Results are to be used as basis for the ongoing assessment process as well as courses improvement in terms of how well the student learned and performed in relation to the course outcomes.
Summer 2011	ET222	CLO 1 to 5 PLO 1 to 3	A total of 100% of the students reached proficiency level. Two students were enrolled in ET 222: Internship in the Summer of 2011. Please refer to Internship Assessment for more detailed information. NOTE: All ET222: Internship assessment documentations are maintained by the Internship Coordinator.

Year 3: School Year 2011-2012 (FA11-SU12)

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2011	ET110	CLO 1 to 5 – PLO 1 to 3	All the students got more than 88% on the knowledge test. The criterion for success is achieved. 38 % of students got more than average and higher rating on accuracy. The criterion for success is not achieved. 100% students got more than average and higher rating on workmanship. The criterion for success is achieved. 100% students got more than average and higher rating on safety, proper use of materials. Tools and equipment. The criterion for success is achieved.

			38% students got more than average and higher rating on timeliness/ completion. The criterion for success is not achieved. Based on the faculty discussion about the compiled result, the course assessment showed that 2 out of 5 dimensions of assessment did not achieved the criteria for success. These are “accuracy” and “timeliness/completion”. According to our observation, this is the result of students’ habitual tardiness and absenteeism. Next semester, it is agreed upon by the faculty to inculcate to the students the importance of punctuality. Furthermore, we planned to devise more strict attendance policy.
	ET111	CLO 1 to 5- PLO 1 to 3	All the students got more than 86% on the knowledge test. The criterion for success is achieved. 71 % students got more than average and higher rating on accuracy. The criterion for success is achieved. 100% students got more than average and higher rating on workmanship. The criterion for success is achieved. 100% students got more than average and higher rating on safety, proper use of materials. Tools and equipment. The criterion for success is achieved. 71% students got average and higher rating on timeliness/ completion. The criterion for success is achieved. Based on the faculty discussion about the compiled result, the course assessment achieved all the criteria for success and therefore no further actions need to be done to improve the course for the meantime.
	ET210	CLO 1 to 5 – PLO 1 to 3	100 % students achieved average rating and higher on accuracy. The criterion for success is achieved. 100% students achieved average rating and higher on workmanship. The criterion for success is achieved. 100% students got average and higher rating on safety, proper use of materials, tools and equipment. The criterion for success is achieved. 100% of the students achieved above average and excellent rating on timeliness/completion. The criterion for success is achieved. Based on the faculty discussion about the compiled result,

			the course assessment achieved all the criteria for success and therefore no further actions need to be done for the meantime to improve the course.
	ET211	CLO 1 to 5 – PLO 1 & 3	100 % students achieved average rating and higher on accuracy. The criterion for success is achieved. 100% students achieved average rating and higher on workmanship. The criterion for success is achieved. 100% students achieved average rating and higher on safety, proper use of materials, tools and equipment. The criterion for success is achieved. 100% of the students achieved above average rating and higher on timeliness/completion. The criterion for success is not achieved. Based on the faculty discussion about the compiled result, the course assessment achieved all the criteria for success and therefore no further actions need to be done for the meantime to improve the course.
Spring 2012	ET121	CLO 1 to 5- PLO 1 & 3	All the students got more than 70% on the knowledge test. The criterion for success is achieved. 100 % students got more than average and higher rating on accuracy. The criterion for success is achieved. 88% students got average and higher rating on workmanship. The criterion for success is achieved. 100% students got average and higher rating on safety, proper use of materials. Tools and equipment. The criterion for success is achieved. 88% students got average and higher rating on timeliness/ completion. The criterion for success is achieved. Based on the faculty discussion about the compiled result, the course assessment achieved all the criteria for success and therefore no further actions need to be done to improve the course for the meantime
	ET122	CLO 1 to 5- PLO 2	4 students were evaluated. 80% answered correctly to 65% of questions embedded in the final test. 75% of the students got “C” and above grade in the signature project. More than 75% of the students assessed passed and received 70 and above grades on CLO covered.

			Results of evaluation on project-based assessments shows on CPA scale of 1-5, 75% of students score 3.. Based on faculty discussions on the compiled results, this assessment achieved the criterion for success this semester meeting our goal. At this time, there is no need for changes or action toward the CLO. Results are to be used as basis for the ongoing assessment process as well as courses improvement in terms of how well the student learned and performed in relation to the course learning outcomes.
	ET220	CLO 1 to 5- PLO 1 to 3	75% of the students got "C" and above grade in the signature project. More than 75% of the students assessed passed and received 70 and above grades on CLO covered. 5 students were evaluated. 80% answered correctly to 65% of questions in the final test. 75% of the students got "C" and above grade in the signature project. More than 75% of the students assessed passed and received 70 and above grades on CLO covered. 75% of the students who participated on this assessment passed the course with scores of seventy and above. At this time, there is no need for changes or action toward the CLO. Results are to be used as basis for the ongoing assessment process as well as courses improvement in terms of how well the student learned and performed in relation to the course outcomes.
	ET221	CLO 1 to 5- PLO 1 to 3	Seven students were evaluated. 80% answered correctly to 65% of questions in the final test. 75% of the students got "C" and above grade in the signature project. More than 75% of the students assessed passed and received 70 and above grades on CLO covered. 7 students were evaluated. 80% answered correctly to 65%

			of questions in the final test. 75% of the students got "C" and above grade in the signature project. More than 75% of the students assessed passed and received 70 and above grades on CLO covered. 75% of the students who participated on this assessment passed the course with scores of seventy and above. At this time, there is no need for changes or action toward the CLO. Results are to be used as basis for the ongoing assessment process as well as courses improvement in terms of how well the student learned and performed in relation to the course outcomes.
	ET222	CLO 1 to 5 PLO 1 to 3	A total of 100% of the students reached proficiency level. Two students were enrolled in ET 222: Internship in the Summer of 2011. Please refer to Internship Assessment for more detailed information. NOTE: All ET222: Internship assessment documentations are maintained by the Internship Coordinator.
Summer 2012	ET222	CLO 1 to 5 PLO 1 to 3	A total of 100% of the students reached proficiency level. Two students were enrolled in ET 222: Internship in the Summer of 2011. Please refer to Internship Assessment for more detailed information. NOTE: All ET222: Internship assessment documentations are maintained by the Internship Coordinator.

Year 4: School Year 2012-2013 (FA12-SU13)

Semester Assessed	Course Assessed	CLO - PLO Alignment	Results of Assessments
Fall 2012	ET110	CLO 1 to 5 – PLO 1 to 3	All the students got more than 88% on the knowledge test. The criterion for success is achieved. 38 % of students got more than average and higher rating on accuracy. The criterion for success is not achieved. 100% students got more than average and higher rating on workmanship. The criterion for success is achieved. 100% students got more than average and higher rating on safety, proper use of materials. Tools and equipment. The criterion for success is achieved.

			38% students got more than average and higher rating on timeliness/ completion. The criterion for success is not achieved. Based on the faculty discussion about the compiled result, the course assessment showed that 2 out of 5 dimensions of assessment did not achieved the criteria for success. These are “accuracy” and “timeliness/completion”. According to our observation, this is the result of students’ habitual tardiness and absenteeism. Next semester, it is agreed upon by the faculty to inculcate to the students the importance of punctuality. Furthermore, we planned to devise more strict attendance policy.
	ET111	CLO 1 to 5- PLO 1 to 3	All the students got more than 86% on the knowledge test. The criterion for success is achieved. 71 % students got more than average and higher rating on accuracy. The criterion for success is achieved. 100% students got more than average and higher rating on workmanship. The criterion for success is achieved. 100% students got more than average and higher rating on safety, proper use of materials. Tools and equipment. The criterion for success is achieved. 71% students got average and higher rating on timeliness/ completion. The criterion for success is achieved. Based on the faculty discussion about the compiled result, the course assessment achieved all the criteria for success and therefore no further actions need to be done to improve the course for the meantime.
	ET210	CLO 1 to 5 – PLO 1 to 3	83 % of the students got more than 70% on the knowledge test. The criterion for success is achieved. 100 % students got more than average and higher rating on accuracy. The criterion for success is achieved. 100% students got more than average and higher rating on workmanship. The criterion for success is achieved. 100% students got more than average and higher rating on safety, proper use of materials. Tools and equipment. The criterion for success is achieved. 100% students got more than average and higher rating on timeliness/ completion. The criterion for success is achieved.

			Based on the faculty discussion about the compiled result, the course assessment achieved all the criteria for success and therefore no further actions need to be done to improve the course for the meantime.
	ET211	CLO 1 to 5 – PLO 1 & 3	53 % of the students got more than 70% on the knowledge test. The criterion for success is not achieved. 71 % students achieved more than average rating and higher on accuracy. The criterion for success is achieved. 86% students achieved more than average rating and higher on workmanship. The criterion for success is achieved. 100% students achieved more than average rating and higher on safety, proper use of materials, tools and equipment. The criterion for success is achieved. 71% of the students achieved more than average and higher rating on timeliness/completion. The criterion for success is achieved. Based on the faculty discussion about the compiled result, the course assessment achieved all the criteria for success except for the knowledge test. Next semester, it is agreed upon by the faculty to provide handouts and other informative instructional materials that will help the students improve their cognitive skills in this course.
Spring 2013	ET121	CLO 1 to 5- PLO 1 & 3	100% of the students achieved more than 70% rating on the knowledge test. The criterion for success is achieved. 100 % students achieved average (3) and higher rating on accuracy. The criterion for success is achieved. 100% students achieved average (3) and higher rating on workmanship. The criterion for success is achieved. 100% students achieved average (3) and higher rating on safety, proper use of materials. Tools and equipment. The criterion for success is achieved. 100% students achieved average (3) and higher rating on timeliness/ completion. The criterion for success is achieved. Based on the faculty discussion about the compiled result, the course assessment achieved all the criteria for success and therefore no further actions need to be done to improve the course for the meantime.

	ET122	CLO 1 to 5- PLO 2	All the students got more than 75% on the knowledge test. The criterion for success is achieved. 75 % of students got more than average and higher rating on accuracy. The criterion for success is achieved. 100% students got more than average and higher rating on workmanship. The criterion for success is achieved. 100% students got more than average and higher rating on safety, proper use of materials. Tools and equipment. The criterion for success is achieved. 75% students got more than average and higher rating on timeliness/ completion. The criterion for success is achieved. Based on the faculty discussion about the compiled result, the course assessment showed that 1 out of 5 dimensions of assessment did not achieved the criteria for success. These are "timeliness/completion". According to our observation, this is the result of students' habitual tardiness and absenteeism. Next semester, it is agreed upon by the faculty to inculcate to the students the importance of punctuality. Furthermore, we planned to devise more strict attendance policy.
	ET220	CLO 1 to 5- PLO 1 to 3	All the students got more than 75% on the knowledge test. The criterion for success is achieved. 75 % of students got more than average and higher rating on accuracy. The criterion for success is achieved. 100% students got more than average and higher rating on workmanship. The criterion for success is achieved. 100% students got more than average and higher rating on safety, proper use of materials. Tools and equipment. The criterion for success is achieved. 75% students got more than average and higher rating on timeliness/ completion. The criterion for success is achieved. Continue the usual administrative support to ensure students' success.
	ET221	CLO 1 to 5- PLO 1 to 3	All the students got more than 75% on the knowledge test. The criterion for success is achieved.

			75 % of students got more than average and higher rating on accuracy. The criterion for success is achieved. 100% students got more than average and higher rating on workmanship. The criterion for success is achieved. 100% students got more than average and higher rating on safety, proper use of materials. Tools and equipment. The criterion for success is achieved. 75% students got more than average and higher rating on timeliness/ completion. The criterion for success is achieved. Continue the usual administrative support to ensure students' success.
	ET222	CLO 1 to 5 PLO 1 to 3	A total of 100% of the students reached proficiency level. Two students were enrolled in ET 222: Internship in the Summer of 2011. Please refer to Internship Assessment for more detailed information. NOTE: All ET222: Internship assessment documentations are maintained by the Internship Coordinator.
Summer 2013	ET222	CLO 1 to 5 PLO 1 to 3	A total of 100% of the students reached proficiency level. Two students were enrolled in ET 222: Internship in the Summer of 2011. Please refer to Internship Assessment for more detailed information. NOTE: All ET222: Internship assessment documentations are maintained by the Internship Coordinator.

4.0 Program Learning Outcomes (PLOs) Assessment

List PLOs	Proficiency Level	Results of Assessments
ET PLO #1	ET 110-CLO 1 to 3- 86% ET 111-CLO 1 to 5- 87% ET 121-CLO 1 to 5- 90% ET 210- CLO 1 to 5- 87% ET 211 - CLO 1 to 5- 94% ET 220 - CLO 1 to 5- 87% ET 221 - CLO 1 to 5- 91% ET 222 - CLO 1 to 5-100%	90.25% of the students reached the above average rating for ET PLO #1. No action is needed. NOTE: All ET 222: Internship assessment documentations are maintained by the Internship Coordinator.

ET PLO #2	ET 110-CLO 1 to 5- 86% ET 111-CLO 1 to 5- 87% ET 210- CLO 1 & 5- 87% ET 220 - CLO 1 to 5- 87% ET 221 - CLO 1 to 5- 91% ET 222 - CLO 1 to 3- 100%	89.67% of the students reached the above average rating for ET PLO #2. No action is needed. NOTE: All ET 222: Internship assessment documentations are maintained by the Internship Coordinator.
ET PLO #3	ET 110-CLO 1 to 3- 86% ET 111-CLO 1 to 5- 87% ET 121-CLO 1 to 5- 90% ET 210- CLO 1 to 5- 87% ET 211 - CLO 1 to 5- 94% ET 220 - CLO 1 to 5- 87% ET 221 - CLO 1 to 5- 91% ET 222 - CLO 2 to 5- 100%	90.25% of the students reached the proficiency level for ET PLO #3. No action is needed. NOTE: All ET222: Internship assessment documentations are maintained by the Internship Coordinator.

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
Train faculty in the use of technology as a support media to enhance lectures and content of the course.	Ongoing	Pushing it through on this cycle
Train the faculty for any electrical technology trainings to update the instructor's skills.	Complete	Last June 2013, Faculty attended training in Grid Connected PV Systems, Design and Installation. Although this action plan is marked completed, it is a necessity to continue acquiring new skill in electrical technology to keep the faculty updated.
Obtain visual and audio teaching aids like PowerPoint presentations, instructional DVD to enhance existing teaching style	Ongoing	Pushing it through on this cycle
Upgrade faculties through trainings and seminars	Ongoing	Last June 2013, Faculty attended training in Grid Connected PV Systems, Design and Installation. Although this action plan is marked completed, it is a necessity to continue acquiring new skill in electrical technology to keep the faculty updated.
Construct mock-up trainer to enhance teaching strategies and provide more hands-on training for the students.	Ongoing	Pushing it through on this cycle
Integrate "Electrical Test and Measurements" for ET program as new additional course	Ongoing	On this review cycle, we will try to review the program as to how we would be able to include this new course.
Obtain new electrical components, which are available only from off island for ET 210 – Motor Controls and Sequential Controllers to improve delivery of the course.	Incomplete	Requisitions were made but these supplies and materials were not procured and we were not informed for the reasons of those decisions.
Obtain transformer rewinding machine and coil former to enhance the delivery and student success in ET 121 Electric Machine	Ongoing	Requisitions were made but these supplies and materials were not procured and we were not informed for the reasons of those decisions.
Improve the delivery strategies for ET 111 Basic electricity by procuring some demonstration kits available online.	Ongoing	Requisitions were made but these supplies and materials were not procured and we were not informed for the reasons of those decisions.
Obtain "estimating software" for ET 221 Electrical Estimating.	Ongoing	Pushing it through on this cycle
Obtain visual and audio teaching aids on electrical safety and maintenance for ET 220	Ongoing	Pushing it through on this cycle

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 course outlines, CLOs, and other documentations	This plan ensures that all course outlines are up to date and that they are aligned with the CLOs, PLOs, and ILOs.	None	Spring 2013 & ongoing
Review and update program documentations	This plan ensures that all program documentations are up to date including the PLOs and that they are aligned with the ILOs.	None	
Professional development	This plan ensures that ET faculty is up to date with the latest in the ET field, and in turn, students are exposed to such knowledge and skills.	Funding to allow ET faculty to attend trainings, workshops, and conferences in ET related topics.	Ongoing
Integrate Grid Connected PV System Design and Installation Course in ET program.	This plan ensure that the student is exposed to the use of renewable energy	None	Fall 2014
Construct Training facilities intended for renewable energy trainings for students.	This plan ensures student learning by providing them real life experience through installing solar panels in different roofing materials.	Supplies and materials needed for constructing roof. Manpower	Spring 2014
Obtain visual and audio teaching aids on electrical safety and maintenance	This plan ensures that student learning is achieved through the use of audio-visual teaching aid and materials.	Software	Fall 2015
Obtain "estimating software" for ET 221 Electrical Estimating.	This plan ensures that student learning is achieved through the use of calculating and simulation software.	Software	Spring 2014
Train faculty in the use of technology as a support media to enhance lectures and content of the course.	This plan ensures that the faculty is well equipped with appropriate media and technology in delivering lectures.	Funding	Fall 2015
Construct mock-up trainer to enhance	This plan ensures that students are learning by doing activities on the	Supplies and materials	Fall 2015

teaching strategies and provide more hands-on training for the students.	mock-up trainer.		
Integrate "Electrical Test and Measurements" for ET program as new additional course	Students are equipped with knowledge and skill in testing and measuring electrical quantities which are relevant to electrical technology field.	None	Fall 2015
Obtain new electrical components, which are available only from off island for ET 210 – Motor Controls and Sequential Controllers to improve delivery of the course.	Students are exposed with more practical and hand's on activities in motor controls.	Funding	Fall 2014- Fall 2016
Obtain transformer rewinding machine and coil former to enhance the delivery and student success in ET 121 Electric Machine	Students are exposed to the use of machine in rewinding transformer and motors.	Funding	Fall 2014- Fall 2017
Improve the delivery strategies for ET 111 Basic electricity by procuring some demonstration kits available online.	This plan ensures that the faculty is well equipped with appropriate media and technology in delivering lectures and demonstration on electrical theories and principles.	Funding	Fall 2014- Fall 2017

7.0 Resource Requests

Type of Resource	Description	Estimated Amount Requested	Justification
Facilities	Roofing for Solar training	$3000.000	
Equipment	Transformer Rewinder	$600.00	
Supplies	Motor control components	$3000.00	
Software	The Constructor 10	$1500.00	
Training	Training on Hybrid System	$1000.00/faculty	
Other			
Other			
Total			

Appendix B: Provide Program Learning Outcomes (PLOs)

Palau Community College
Electrical Technology Program
Program Learning Outcomes

During the program experience, the ***Program Learning Outcomes*** (PLOs) will be assessed through the use of signature assignments of course learning outcomes which are aligned with the PLOs. A rating scale will be used to determine the students' proficiency level of each PLO using specifically aligned assignments. The numerical ratings of 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 focus on the level of student performance for each of the course learning outcomes listed below.

Rating Scale:
5----------Exellent
4----------Above Average
3----------Average
2----------Below Average
1----------Unaceptable

PLO #1: To enable student to be employable in power utility companies as linemen, power plant electricians, or maintenance personnel.

Numerical Value	Performance Criteria
5	The student is able to demonstrate traits and employability skills in power utility companies as linemen, power plant electricians, or maintenance personnel without any supervision and instruction
4	The student is able to demonstrate traits and employability skills in power utility companies as linemen, power plant electricians, or maintenance personnel with limited supervision but no instruction
3	The student is able to demonstrate traits and employability skills in power utility companies as linemen, power plant electricians, or maintenance personnel with limited supervision and limited instruction
2	The student is able to demonstrate traits and employability skills in power utility companies as linemen, power plant electricians, or maintenance personnel requires considerable supervision and instruction
1	The student is unable to demonstrate employability in power utility companies as linemen, power plant electricians, or maintenance personnel.

PLO#2: To prepare the students to be able to install and maintain electrical wiring for residential building.

Numerical Value	Performance Criteria
5	The student is able to demonstrate ability to install and maintain electrical wiring for residential building without any supervision and instruction

4	**The student is able to demonstrate ability to install and maintain electrical wiring for residential building with limited supervision but no instruction**
3	**The student is able to demonstrate ability to install and maintain electrical wiring for residential building with limited supervision and limited instruction**
2	**The student is able to demonstrate ability to install and maintain electrical wiring for residential building requires considerable supervision and instruction**
1	**The student is unable to demonstrate ability to install and maintain electrical wiring for residential building.**

PLO#3: To prepare the students to be able to install and maintain electrical wiring in commercial and industrial building.

Numerical Value	Performance Criteria
5	**The student is able to demonstrate ability to install and maintain electrical wiring in commercial and industrial building without any supervision and instruction**
4	**The student is able to demonstrate ability to install and maintain electrical wiring in commercial and industrial building with limited supervision but no instruction**
3	**The student is able to demonstrate ability to install and maintain electrical wiring in commercial and industrial building with limited supervision and limited instruction**
2	**The student is able to demonstrate ability to install and maintain electrical wiring in commercial and industrial building requires considerable supervision and instruction**
1	**The student is unable to demonstrate ability to install and maintain electrical wiring in commercial and industrial building.**

Note: It is recommended to have between 5-7 rubrics to adequately assess the general concepts of each course.

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

ELECTRICAL TECHNOLOGY PROGRAM MAP

Course	PLO 1 To enable student to be employable in power utility companies as linemen, power plant electricians, or maintenance personnel.	PLO 2 To prepare the students to be able to install and maintain electrical wiring for residential building.	PLO 3 To prepare the students to be able to install and maintain electrical wiring in commercial and industrial building.	*Institutional Learning Outcomes (ILOs)*
BP 116	CLO 1, 2, 3, 4, 5	CLO 1, 2, 3, 4, 5	CLO 1, 2, 3, 4, 5	***ILO 1,2, 3***
ET 110	CLO 1, 2, 3	CLO 1, 2, 3, 4, 5	CLO 1, 2, 3	***ILO 1, 2, 3, 5, 6***
ET 111	CLO 1, 2, 3, 4, 5	CLO 1, 2, 3, 4, 5	CLO 1, 2, 3, 4, 5	***ILO 1, 2, 3, 5, 6***
ET 121	CLO 1, 2, 3, 4, 5		CLO 1, 2, 3, 4, 5	***ILO 1, 2, 3, 5, 6***
ET 122		CLO 1, 2, 3, 4, 5		***ILO 1, 2, 3, 5, 6***
ET 210	CLO 1, 2, 3, 4, 5	CLO 1, 5	CLO 1, 2, 3, 4, 5	***ILO 1, 2, 3, 5, 6***
ET 211	CLO 1, 2, 3, 4, 5		CLO 1, 2, 3, 4, 5	***ILO 1, 2, 3, 5, 6***
ET 220	CLO 1, 2, 3, 4, 5	CLO 1, 2, 3, 4, 5	CLO 1, 2, 3, 4, 5	***ILO 1, 2, 3, 5, 6***
ET 221	CLO 1, 2, 3, 4, 5	CLO 1, 2, 3, 4, 5	CLO 1, 2, 3, 4, 5	***ILO 1, 2, 3, 5, 6***
ET 222	CLO 1, 2, 3, 4, 5	CLO 1, 3	CLO 2, 3, 4, 5	***ILO 1, 2, 3, 4,5, 6***

Appendix D: Provide signature assignment form

Electrical Technology Program

Course Number:	Course Title:	Semester Credit:	Signature Assignments:
BP 116	Blueprint reading for electricians	3	Written Examination for CLO 1 to CLO 2 Performance Exam/Project for CLO 3 to CLO 5
ET 110	Basic electrical wiring for non-majors	4	Written Exam for CLO 1 Performance Exam/Project for CLO's 2 to 5
ET 111	Basic electricity	4	Written Exam for CLO 1 Performance Exam/Project for CLO's 2 to 6
ET 121	Electric machines	4	Performance Exam/Project for each CLO
ET 122	Residential wiring	4	Performance Exam/Project for each CLO
ET 210	Motor controls and sequential controllers	5	Performance Exam/Project for each CLO
ET 211	Industrial/commercial wiring	4	Performance Exam/Project for each CLO
ET 220	Electrical Management and Maintenance	3	Final Exam Project-based Assessment
ET 221	Electrical estimating	3	Written Exam/Project for each CLO
ET 222	Internship	4	Interview