



“We Strive to Guarantee Quality

and Excellence”

Palau Community College is an accessible public educational institution helping to meet the technical, academic, cultural, social, and economic needs of students and communities by promoting learning opportunities and developing personal excellence.

**T1 - Instructional Programs
(Academic Degree & Certificate Programs)**

Three Year Program Review

Degree / Certificate Program

Science, Technology, Engineering, & Mathematics (STEM) Disciplines

Period of Three Year Review

S.Y. 2018 - 2019; 2019 – 2020; 2020 - 2021

Program Review Completed By:

Name	Title	Signature	Date
Crisarjo Mel John Ulap	Chairperson		May 3, 2022

Program Review Certified By:

Name	Title	Signature	Date
Deikola Olikong	Dean, Academic Affairs		5.3.2022

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

Name	Title	Signature	Date
Ligaya Sara	IR		05/03/22

Purpose:

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

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



Instructions for completing Program Review:

1. Type your text into the boxes. The text boxes will expand to accommodate the amount of text spaces you need.
2. Individual instructions are included before each section. Examples are in **green**, remove when you start writing.
3. Submit completed and signed Program Review in both hard copy and electronic copy format to the Institutional Research & Evaluation Office.
4. Required supporting documents must be included during submission.

Appendix A: CLOs – PLOs – ILOs Mapping (e-copy only)

Appendix B: Most Updated & Approved Outlines within this cycle (e-copy only)

Appendix C: Most Updated Program Modification with PLOs within this cycle (e-copy only)

Appendix D: FAMED grid of all course assessment data within review cycle
(e-copy only)

5. Be sure to keep both hard and electronic copies for your file.

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

I. Academic Degree Program Purpose (Program Description) and Relationship to the College Mission

1. State the purpose of this academic degree program below.

There is a shortage of Micronesians in the STEM fields and the governments have had to rely on foreign workers to fill key positions in the STEM areas. It is hoped that once students complete the STEM program, they will continue on to a four year institution and upon graduation, return to their respective home nations to work.

The STEM Program will provide students a core education in science, engineering and technology to prepare them to enter into a four year degree program in these field. The program was also developed to assist the school system with qualified math and science teachers. With qualified graduates to move on and earn their bachelor degrees and possibly higher, there will then be qualified candidates for both the elementary and high schools which are in need of locally qualified teachers in the STEM fields.

2. How is the academic degree program supporting the overall mission of the College?

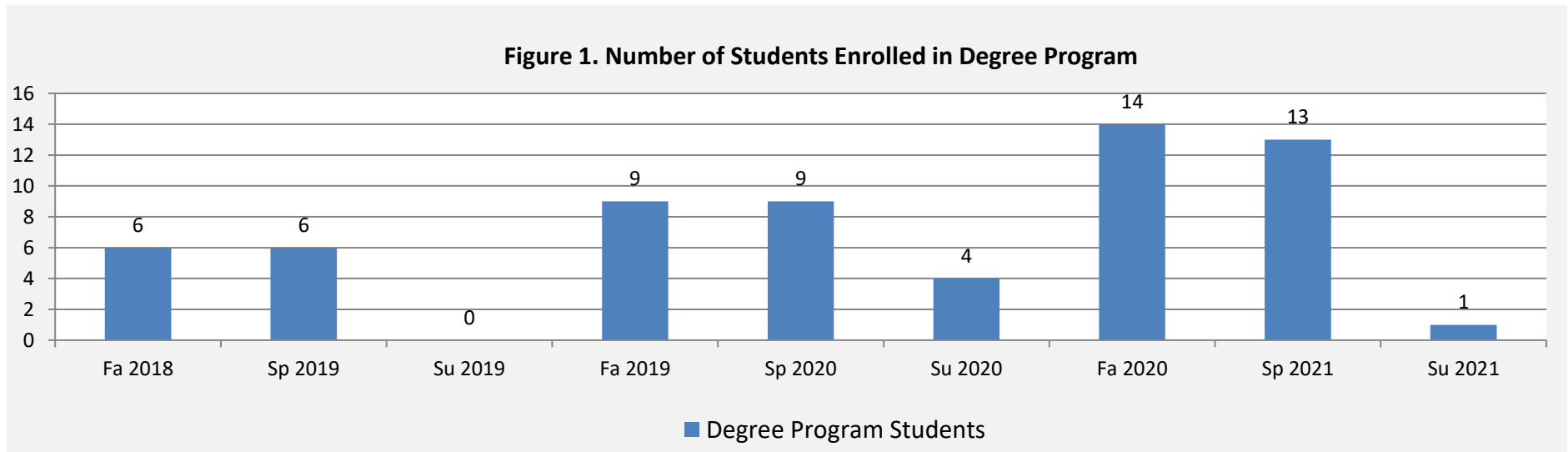
Through this program, students acquire lifelong technical and academic knowledge, skills and attitudes needed to continue their education careers in STEM or to work in STEM related fields. Students learn to develop personal excellence and develop socially and culturally through learning opportunities in courses covered in the STEM program. Their economic needs should be met upon graduating and acquiring jobs in the STEM field.

3. Provide a brief history of this academic degree program below. Include the updates of major changes and accomplishments since the last review.

Development of the STEM program began in 2008. Following the official process for new programs, in 2010 approval was granted by the Committee on Programs and Curricula, the President of the College and the PCC Board of Trustees. A substantive change proposal was submitted to WASC ACCJC in 2012 and approval was granted in May 2012. The program was officially offered in fall 2012. Enrollment is low but starting to gradually increase. Since the last review, there have been no changes to the program.

II. Program Data

Degree Program Students – Number of Students Enrolled in this Degree Program



Provide summary of Figure 1 including its trends analysis.

At this time enrollment into the STEM Program remains fairly low. For this cycle of review, Fall 2020 and Spring 2021 experienced the maximum number of students of 14 and 13 respectively that are enrolled under this program. Department members could help recruit by counseling, guiding and encouraging students to take up these courses. Current students in math courses who show interest and aptitude in the STEM areas could be encouraged to enroll in this program

Program Courses Data
(Course Completion Data of Program Students in each Program Course)

You may insert more rows as needed

Table 1a. Course Completion of Program Courses (Fall)

FA 2018					FA 2019					FA 2020				
<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled
IT110	1	0	0	1	IT105	1	0	0	1	IT105	1	0	0	1
MA111	1	0	0	1	IT110	5	0	0	5	IT110	1	0	0	1
SC161	1	0	0	1	MA111	1	0	0	1	MA111	1	0	0	1
					MA112	4	0	0	4	MA112	1	1	0	2
					SC161	4	0	0	4	SC161	1	0	0	1
					SC206	1	0	0	1	SC206	4	0	0	4

Table 1b. Course Completion of Program Courses (Spring)

SP 2019					SP 2020					SP 2021				
<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled
IT105	5	0	0	5	IT105	1	0	0	1	IT105	2	0	1	3
MA111	4	0	0	4	IT125	2	0	1	3	IT125	3	0	1	4
MA121	1	0	0	1	MA111	2	0	0	2	MA111	2	0	0	2
SC160	5	0	0	5	MA121	0	0	1	1	MA121	4	0	1	5
SC205	1	0	0	1	MA221	4	0	0	4	MA221	0	0	1	1
					SC160	1	0	1	2	SC160	3	0	1	4
					SC205	4	0	0	4	SC205	1	0	0	1

Table 1c. Course Completion of Program Courses (Summer)

SU 20__					SU 20__					SU 20__				
<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled

Provide summary of Tables 1a, 1b & 1c including its trends analysis.

According to the records shown above students withdrew from IT125, MA 121 and SC160 in spring 2020. In spring 2021, students withdrew from IT105, IT125, MA121, MA221, and SC160. Overall there are no failures in the past 3 years review cycle and STEM students are able to move through STEM courses with no delay.

Program Courses Data
Course Completion Data of ALL Students in each Program Course
(Does not apply for LA and SD Programs)

You may insert more rows as needed

Table 2a. Course Completion of Program Courses (Fall)

FA 20__					FA 20__					FA 20__				
<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled

Table 2b. Course Completion of Program Courses (Spring)

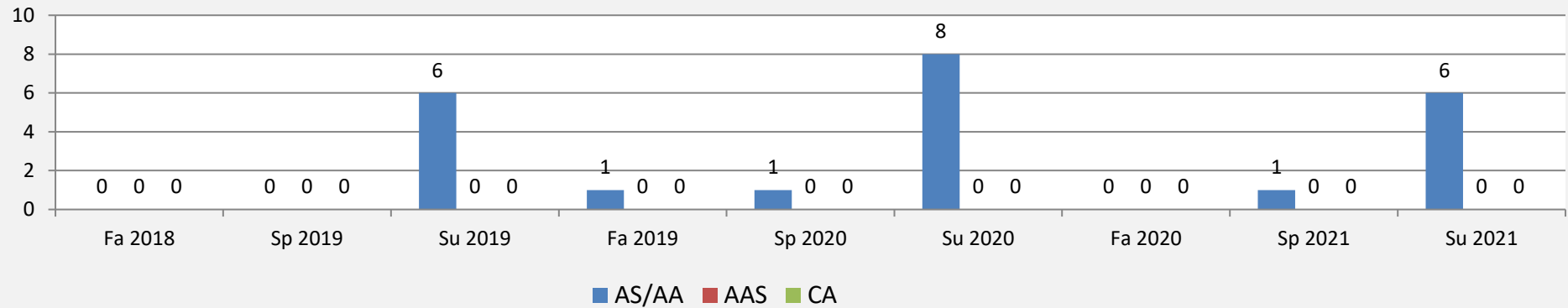
SP 20__					SP 20__					SP 20__				
<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled

Table 2c. Course Completion of Program Courses (Summer)

SU 20__					SU 20__					SU 20__				
<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled	<u>Course</u>	Passed	Failed	Withdraw	Enrolled

Provide summary of Tables 2a, 2b & 2c including its trends analysis.

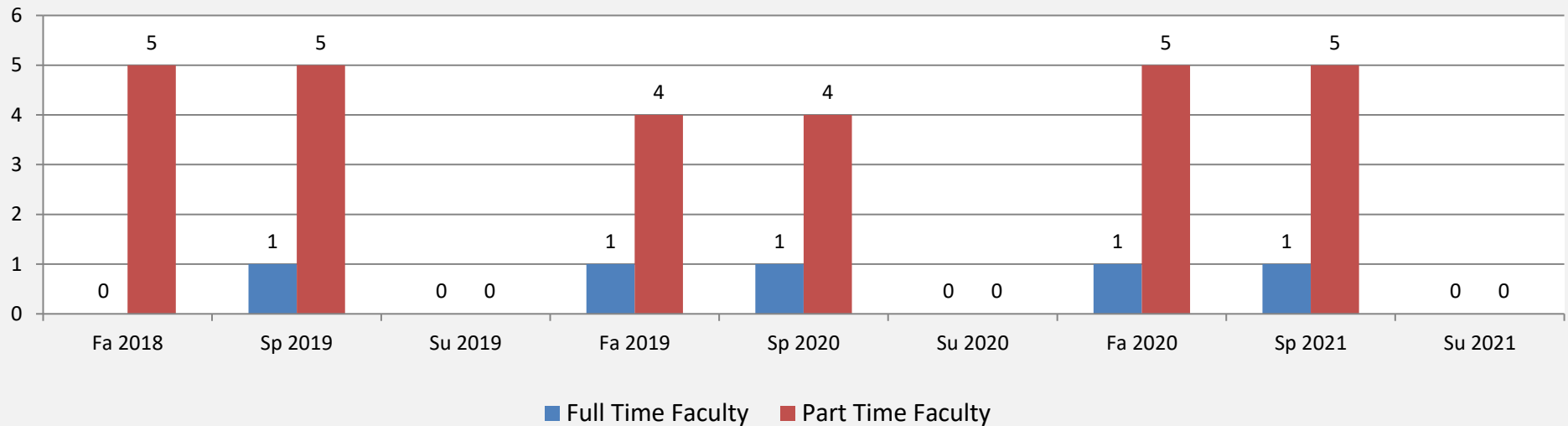
Figure 2. Number of Graduates



Provide summary of Figure 2 including its trends analysis.

Comparing the last review cycle number of graduates, there is a large gap in the number of graduates from the previous of 1 graduate per school year to 8 graduates at most this cycle. As shown in the graph, 23 STEM students have graduated during this review cycle.

Figure 3. Faculty Head Count



Provide summary of Figure 5 including its trends analysis.

Because of the nature of the STEM program, most of the faculty teaching the course under STEM discipline are part time faculty/instructors but are full time faculty/instructors to each department where they belong except for 1 full time faculty for STEM program. Maximum of 5 part time instructors are needed from other departments to provide help in STEM discipline to ensure the success of the program.

III. Student Learning and Curriculum

School Year	How many program courses are there? (refer to catalog or recent approval by CPC)	% of courses with Identified CLOs	List all revised program courses outlines or proposed new courses that received CPC approval within this review cycle	% of PLOs aligned with ILOs
2018-2019	11	100%		100%
2019-2020	11	100%	SC 206, IT110, IT105, IT125, MA111, MA112, MA 121	100%
2020-2021	11	100%		100%

Provide Summary of Student Learning and Curriculum in the box below. Summary should include reasons for course revisions and course proposals. If any course and/or the degree or the certificate program went through the validity process, include the information here.

Seven of the courses were review and revised.

SC 206 was revised to accommodate the 5-year validity and CLO rubric rating scale.

IT105 was revised to update its course description, CLO, and added IT100 as prerequisite. IT110 and IT125 were revised to update to 5-year validity and its course description.

MA111 was revised to update its CLO rubric rating scale.
 MA112 was revised to update CLO validity and to change text book.
 MA121 was revised to update CLO validity and to update text book edition.

IV. Course Assessment Data

Year 1: School Year: S.Y. 2018-2019

Semesters Assessed	Course Assessed	CLO-PLO-ILO Mapping	Results of Assessments
Fall 2018	IT110	CLO1- PLO4- ILO1,2,3,6 CLO2- PLO4- ILO1,2,3,6 CLO3- PLO4- ILO1,2,3,6 CLO4- PLO4- ILO1,2,3,6	CLO 1: 81.82% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level.
Fall 2018	MA111	CLO1- PLO6- ILO1/ ILO3 CLO2- PLO6- ILO1/ ILO3 CLO3- PLO6- ILO1/ ILO3 CLO4- PLO6- ILO1/ ILO3 CLO5- PLO6- ILO1/ ILO3	CLO 1: 88.89% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level.

			<p>CLO 3: 100% of students assessed performed at the proficiency level.</p> <p>CLO 4: 100% of students assessed performed at the proficiency level.</p> <p>CLO 5: 100% of students assessed performed at the proficiency level.</p>
Fall 2018	SC161	<p>CLO1- PLO1, PLO2- ILO1,2,3</p> <p>CLO2- PLO1, PLO2- ILO1,2,3</p> <p>CLO3- PLO1, PLO2- ILO1,2,3</p>	<p>CLO 1: 100% of students assessed performed at the proficiency level.</p> <p>CLO 2: 100% of students assessed performed at the proficiency level.</p> <p>CLO 3: 75% of students assessed performed at the proficiency level.</p>
Spring 2019	IT105	<p>CLO1- PLO3- ILO1,2,3,6</p> <p>CLO2- PLO3- ILO1,2,3,6</p> <p>CLO3- PLO3- ILO1,2,3,6</p> <p>CLO4- PLO3- ILO1,2,3,6</p> <p>CLO5- PLO3- ILO1,2,3,6</p>	<p>CLO 1: 100% of students assessed performed at the proficiency level.</p> <p>CLO 2: 37.5% of students assessed performed below the proficiency level.</p> <p>CLO 3: 100% of students assessed performed at the proficiency level.</p> <p>CLO 4: 77.78% of students assessed performed at the proficiency level.</p> <p>CLO 5: 100% of students assessed performed at the proficiency level.</p>
Spring 2019	MA111	<p>CLO1- PLO6- ILO1/ ILO3</p> <p>CLO2- PLO6- ILO1/ ILO3</p> <p>CLO3- PLO6- ILO1/ ILO3</p> <p>CLO4- PLO6- ILO1/ ILO3</p> <p>CLO5- PLO6- ILO1/ ILO3</p>	<p>CLO 1: 93.33% of students assessed performed at the proficiency level.</p> <p>CLO 2: 86.67% of students assessed performed at the proficiency level.</p> <p>CLO 3: 93.33% of students assessed performed at the proficiency level.</p> <p>CLO 4: 93.33% of students assessed performed at the proficiency level.</p> <p>CLO 5: 73.33% of students assessed performed at the proficiency level.</p>
Spring 2019	MA121	<p>CLO1- PLO5- ILO1/ ILO3</p> <p>CLO2- PLO5- ILO1/ ILO3</p> <p>CLO3- PLO5- ILO1/ ILO3</p> <p>CLO4- PLO5- ILO1/ ILO3</p> <p>CLO5- PLO5- ILO1/ ILO3</p> <p>CLO6- PLO5- ILO1/ ILO3</p> <p>CLO7- PLO5- ILO1/ ILO3</p>	<p>CLO 1: 81% of students assessed performed at the proficiency level.</p> <p>CLO 2: 81% of students assessed performed at the proficiency level.</p> <p>CLO 3: 86% of students assessed performed at the proficiency level.</p> <p>CLO 4: 69% of students assessed performed below the proficiency level.</p> <p>CLO 5: 69% of students assessed performed below the proficiency level.</p> <p>CLO 6: 69% of students assessed performed below the proficiency level.</p> <p>CLO 7: 100% of students assessed performed at the proficiency level.</p>
Spring 2019	SC160	<p>CLO1- PLO1, PLO2- ILO1,2,3</p> <p>CLO2- PLO1, PLO2- ILO1,2,3</p> <p>CLO3- PLO1, PLO2- ILO1,2,3</p>	<p>CLO 1: 50% of students assessed performed below the proficiency level.</p> <p>CLO 2: 25% of students assessed performed below the proficiency level.</p> <p>CLO 3: 12.5% of students assessed performed below the proficiency level.</p>

Spring 2019	SC205	<p>CLO1- PLO1, PLO2- ILO1,2,3</p> <p>CLO2- PLO1, PLO2- ILO1,2,3</p> <p>CLO3- PLO1, PLO2- ILO1,2,3</p> <p>CLO4- PLO1, PLO2- ILO1,2,3</p> <p>CLO5- PLO1, PLO2- ILO1,2,3</p> <p>CLO6- PLO1, PLO2- ILO1,2,3</p>	<p>CLO 1: 100% of students assessed performed at the proficiency level.</p> <p>CLO 2: 100% of students assessed performed at the proficiency level.</p> <p>CLO 3: 100% of students assessed performed at the proficiency level.</p> <p>CLO 4: 100% of students assessed performed at the proficiency level.</p> <p>CLO 5: 100% of students assessed performed at the proficiency level.</p> <p>CLO 6: 100% of students assessed performed at the proficiency level.</p>

Year 2: School Year S.Y. 2019-2020

Semester Assessed	Course Assessed	CLO-PLO-ILO Mapping	Results of Assessments
Fall 2019	IT105	<p>CLO1- PLO3- ILO1,2,3,6</p> <p>CLO2- PLO3- ILO1,2,3,6</p> <p>CLO3- PLO3- ILO1,2,3,6</p> <p>CLO4- PLO3- ILO1,2,3,6</p> <p>CLO5- PLO3- ILO1,2,3,6</p>	<p>CLO 1: 100% of students assessed performed at the proficiency level.</p> <p>CLO 2: 76.47% of students assessed performed at the proficiency level.</p> <p>CLO 3: 95.24% of students assessed performed at the proficiency level.</p> <p>CLO 4: 94.44% of students assessed performed at the proficiency level.</p> <p>CLO 5: 100% of students assessed performed at the proficiency level.</p>
Fall 2019	IT110	<p>CLO1- PLO4- ILO1,2,3,6</p> <p>CLO2- PLO4- ILO1,2,3,6</p> <p>CLO3- PLO4- ILO1,2,3,6</p> <p>CLO4- PLO4- ILO1,2,3,6</p>	<p>CLO 1: 87.12% of students assessed performed at the proficiency level.</p> <p>CLO 2: 87.12% of students assessed performed at the proficiency level.</p> <p>CLO 3: 87.12% of students assessed performed at the proficiency level.</p> <p>CLO 4: 87.12% of students assessed performed at the proficiency level.</p>
Fall 2019	MA111	<p>CLO1- PLO6- ILO1/ ILO3</p> <p>CLO2- PLO6- ILO1/ ILO3</p> <p>CLO3- PLO6- ILO1/ ILO3</p> <p>CLO4- PLO6- ILO1/ ILO3</p> <p>CLO5- PLO6- ILO1/ ILO3</p> <p>CLO6- PLO6- ILO1/ILO3</p>	<p>CLO 1: 100% of students assessed performed at the proficiency level.</p> <p>CLO 2: 88.89% of students assessed performed at the proficiency level.</p> <p>CLO 3: 100% of students assessed performed at the proficiency level.</p> <p>CLO 4: 100% of students assessed performed at the proficiency level.</p> <p>CLO 5: 88.89% of students assessed performed at the proficiency level.</p> <p>CLO 6: 100% of students assessed performed at the proficiency level.</p>
Fall 2019	MA112	<p>CLO1- PLO5- ILO1/ ILO3</p> <p>CLO2- PLO5- ILO1/ ILO3</p> <p>CLO3- PLO5- ILO1/ ILO3</p>	<p>CLO 1: 100% of students assessed performed at the proficiency level.</p>

		CLO4- PLO5- ILO1/ ILO3 CLO5- PLO5- ILO1/ ILO3	CLO 2: 93.75% of students assessed performed at the proficiency level. CLO 3: 93.75% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level.
Fall 2019	SC161	CLO1- PLO1, PLO2- ILO1,2,3 CLO2- PLO1, PLO2- ILO1,2,3 CLO3- PLO1, PLO2- ILO1,2,3	CLO 1: 80% of students assessed performed at the proficiency level. CLO 2: 80% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level.
Fall 2019	SC206	CLO1- PLO1, PLO2- ILO1,2,3 CLO2- PLO1, PLO2- ILO1,2,3 CLO3- PLO1, PLO2- ILO1,2,3 CLO4- PLO1, PLO2- ILO1,2,3 CLO5- PLO1, PLO2- ILO1,2,3	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level.
Spring 2020	IT105	CLO1- PLO3- ILO1,2,3,6 CLO2- PLO3- ILO1,2,3,6 CLO3- PLO3- ILO1,2,3,6 CLO4- PLO3- ILO1,2,3,6 CLO5- PLO3- ILO1,2,3,6	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level.
Spring 2020	IT125	CLO1- PLO4- ILO1,2,3,6 CLO2- PLO4- ILO1,2,3,6 CLO3- PLO4- ILO1,2,3,6 CLO4- PLO4- ILO1,2,3,6 CLO5- PLO4- ILO1,2,3,6	CLO 1: 57.14% of students assessed performed below the proficiency level. CLO 2: 57.14% of students assessed performed below the proficiency level. CLO 3: 57.14% of students assessed performed below the proficiency level. CLO 4: 57.17% of students assessed performed below the proficiency level. CLO 5: 57.14% of students assessed performed below the proficiency level.
Spring 2020	MA111	CLO1- PLO6- ILO1/ ILO3 CLO2- PLO6- ILO1/ ILO3 CLO3- PLO6- ILO1/ ILO3 CLO4- PLO6- ILO1/ ILO3 CLO5- PLO6- ILO1/ ILO3 CLO6- PLO6- ILO1/ILO3	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level.

			CLO 5: 97.05% of students assessed performed at the proficiency level. CLO 6: 100% of students assessed performed at the proficiency level.
Spring 2020	MA121	CLO1- PLO5- ILO1/ ILO3 CLO2- PLO5- ILO1/ ILO3 CLO3- PLO5- ILO1/ ILO3 CLO4- PLO5- ILO1/ ILO3 CLO5- PLO5- ILO1/ ILO3 CLO6- PLO5- ILO1/ ILO3 CLO7- PLO5- ILO1/ ILO3	CLO 1: 78% of students assessed performed at the proficiency level. CLO 2: 78% of students assessed performed at the proficiency level. CLO 3: 72% of students assessed performed at the proficiency level. CLO 4: 73% of students assessed performed at the proficiency level. CLO 5: 73% of students assessed performed at the proficiency level. CLO 6: 73% of students assessed performed at the proficiency level. CLO 7: No data collected (did not cover these topics).
Spring 2020	MA221	CLO1- PLO5, PLO6- ILO1/ ILO3 CLO2- PLO5, PLO6- ILO1/ ILO3 CLO3- PLO5, PLO6- ILO1/ ILO3 CLO4- PLO5, PLO6- ILO1/ ILO3 CLO5- PLO5, PLO6- ILO1/ ILO3	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 86% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level.
Spring 2020	SC160	CLO1- PLO1, PLO2- ILO1,2,3 CLO2- PLO1, PLO2- ILO1,2,3 CLO3- PLO1, PLO2- ILO1,2,3	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 0% of students assessed performed below the proficiency level.
Spring 2020	SC205	CLO1- PLO1, PLO2- ILO1,2,3 CLO2- PLO1, PLO2- ILO1,2,3 CLO3- PLO1, PLO2- ILO1,2,3 CLO4- PLO1, PLO2- ILO1,2,3 CLO5- PLO1, PLO2- ILO1,2,3 CLO6- PLO1, PLO2- ILO1,2,3	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level. CLO 6: 50% of students assessed performed below the proficiency level.

Year 3: School Year S.Y. 2020-2021

Semester Assessed	Course Assessed	CLO-PLO-ILO Mapping	Results of Assessments
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Fall 2020	IT105	CLO1- PLO3- ILO1,2,3,6 CLO2- PLO3- ILO1,2,3,6 CLO3- PLO3- ILO1,2,3,6 CLO4- PLO3- ILO1,2,3,6 CLO5- PLO3- ILO1,2,3,6	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 50% of students assessed performed below the proficiency level. CLO 3: 82.61% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level.
Fall 2020	IT110	CLO1- PLO4- ILO1,2,3,6 CLO2- PLO4- ILO1,2,3,6 CLO3- PLO4- ILO1,2,3,6 CLO4- PLO4- ILO1,2,3,6	CLO 1: 60.72% of students assessed performed below the proficiency level. CLO 2: 60.72% of students assessed performed below the proficiency level. CLO 3: 60.72% of students assessed performed below the proficiency level. CLO 4: 60.72% of students assessed performed below the proficiency level.
Fall 2020	MA111	CLO1- PLO6- ILO1/ ILO3 CLO2- PLO6- ILO1/ ILO3 CLO3- PLO6- ILO1/ ILO3 CLO4- PLO6- ILO1/ ILO3 CLO5- PLO6- ILO1/ ILO3 CLO6- PLO6- ILO1/ILO3	CLO 1: 75% of students assessed performed at the proficiency level. CLO 2: 75% of students assessed performed at the proficiency level. CLO 3: 80% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 80% of students assessed performed at the proficiency level. CLO 6: No data collected (did not cover these topics).
Fall 2020	MA112	CLO1- PLO5- ILO1/ ILO3 CLO2- PLO5- ILO1/ ILO3 CLO3- PLO5- ILO1/ ILO3 CLO4- PLO5- ILO1/ ILO3 CLO5- PLO5- ILO1/ ILO3 CLO6- PLO5- ILO1/ ILO3	CLO 1: 86% of students assessed performed at the proficiency level. CLO 2: 86% of students assessed performed at the proficiency level. CLO 3: 92% of students assessed performed at the proficiency level. CLO 4: 92% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level. CLO 6: 100% of students assessed performed at the proficiency level.
Fall 2020	SC161	CLO1- PLO1, PLO2- ILO1,2,3 CLO2- PLO1, PLO2- ILO1,2,3 CLO3- PLO1, PLO2- ILO1,2,3	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: This CLO was not assessed for 2020
Fall 2020	SC206	CLO1- PLO1, PLO2- ILO1,2,3	CLO 1: 100% of students assessed performed at the proficiency level.

		<p>CLO2- PLO1, PLO2- ILO1,2,3 CLO3- PLO1, PLO2- ILO1,2,3 CLO4- PLO1, PLO2- ILO1,2,3 CLO5- PLO1, PLO2- ILO1,2,3</p>	<p>CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level.</p>
Spring 2021	IT105	<p>CLO1- PLO3- ILO1,2,3,6 CLO2- PLO3- ILO1,2,3,6 CLO3- PLO3- ILO1,2,3,6 CLO4- PLO3- ILO1,2,3,6</p>	<p>CLO 1: 87.5% of students assessed performed at the proficiency level. CLO 2: 63.64% of students assessed performed below the proficiency level. CLO 3: 91.67% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level.</p>
Spring 2021	IT125	<p>CLO1- PLO4- ILO1,2,3,6 CLO2- PLO4- ILO1,2,3,6 CLO3- PLO4- ILO1,2,3,6 CLO4- PLO4- ILO1,2,3,6 CLO5- PLO4- ILO1,2,3,6</p>	<p>CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level.</p>
Spring 2021	MA111	<p>CLO1- PLO6- ILO1/ ILO3 CLO2- PLO6- ILO1/ ILO3 CLO3- PLO6- ILO1/ ILO3 CLO4- PLO6- ILO1/ ILO3 CLO5- PLO6- ILO1/ ILO3</p>	<p>CLO 1: 75% of students assessed performed at the proficiency level. CLO 2: 83% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level.</p>
Spring 2021	MA121	<p>CLO1- PLO5- ILO1/ ILO3 CLO2- PLO5- ILO1/ ILO3 CLO3- PLO5- ILO1/ ILO3 CLO4- PLO5- ILO1/ ILO3 CLO5- PLO5- ILO1/ ILO3 CLO6- PLO5- ILO1/ ILO3 CLO7- PLO5- ILO1/ ILO3</p>	<p>CLO 1: 62% of students assessed performed below the proficiency level. CLO 2: 92% of students assessed performed at the proficiency level. CLO 3: 92% of students assessed performed at the proficiency level. CLO 4: 62% of students assessed performed below the proficiency level. CLO 5: 69% of students assessed performed below the proficiency level. CLO 6: 92% of students assessed performed at the proficiency level. CLO 7: 77% of students assessed performed at the proficiency level.</p>
Spring 2021	MA221	<p>CLO1- PLO5, PLO6- ILO1/ ILO3</p>	<p>CLO 1: No assessment done due to student course withdrawal.</p>

		CLO2- PLO5, PLO6- ILO1/ ILO3 CLO3- PLO5, PLO6- ILO1/ ILO3 CLO4- PLO5, PLO6- ILO1/ ILO3 CLO5- PLO5, PLO6- ILO1/ ILO3	CLO 2: No assessment done due to student course withdrawal. CLO 3: No assessment done due to student course withdrawal. CLO 4: No assessment done due to student course withdrawal. CLO 5: No assessment done due to student course withdrawal.
Spring 2021	SC160	CLO1- PLO1, PLO2- ILO1,2,3 CLO2- PLO1, PLO2- ILO1,2,3 CLO3- PLO1, PLO2- ILO1,2,3	CLO 1: 83.33% of students assessed performed at the proficiency level. CLO 2: 83.33% of students assessed performed at the proficiency level. CLO 3: 83.33% of students assessed performed at the proficiency level.
Spring 2021	SC205	CLO1- PLO1, PLO2- ILO1,2,3 CLO2- PLO1, PLO2- ILO1,2,3 CLO3- PLO1, PLO2- ILO1,2,3 CLO4- PLO1, PLO2- ILO1,2,3 CLO5- PLO1, PLO2- ILO1,2,3 CLO6- PLO1, PLO2- ILO1,2,3	CLO 1: 100% of students assessed performed at the proficiency level. CLO 2: 100% of students assessed performed at the proficiency level. CLO 3: 100% of students assessed performed at the proficiency level. CLO 4: 100% of students assessed performed at the proficiency level. CLO 5: 100% of students assessed performed at the proficiency level. CLO 6: 100% of students assessed performed at the proficiency level.

Provide Summary of Course Assessment Data with analysis results in the box below. Summary should include how assessment results have led to improvement of course and program learning outcomes, student learning and student achievement.

For the above grids the CLO-PLO-ILO mapping is done strictly based on the individual programs and departments. Moreover, students from other programs are also enrolled in these courses and included in the course assessment. Overall, IT courses with the average of 83.20% achievement rating tends to have the lower proficiency compared to math and science courses.

V. Program Learning Outcomes (PLOs) Assessment

Program Learning Outcomes Assessment Results

Year Assessed	PLO Assessed	Proficiency Levels	Results of Assessments
S.Y. 2018-2019 Fall 2018	PLO 1	SC161-CLO1- 100% SC161-CLO2- 100% SC161-CLO3- 75%	91.67% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 2	SC161-CLO1- 100% SC161-CLO2- 100% SC161-CLO3- 75%	91.67% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 4	IT110-CLO1- 81.82% IT110-CLO2- 100% IT110-CLO3- 100% IT110-CLO4- 100%	95.46% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 6	MA111-CLO1- 88.9% MA111-CLO2- 100% MA111-CLO3- 100% MA111-CLO4- 100% MA111-CLO5- 100%	97.78% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
SPRING 2019	PLO 1	SC160-CLO1- 50% SC160-CLO2- 25% SC160-CLO3- 12.5% SC205-CLO1- 100% SC205-CLO2- 100% SC205-CLO3- 100% SC205-CLO4- 100% SC205-CLO5- 100% SC205-CLO6- 100%	76.39% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 2	SC160-CLO1- 50% SC160-CLO2- 25% SC160-CLO3- 12.5% SC205-CLO1- 100% SC205-CLO2- 100% SC205-CLO3- 100% SC205-CLO4- 100% SC205-CLO5- 100% SC205-CLO6- 100%	76.39% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 3	IT105-CLO1- 100% IT105-CLO2- 37.5% IT105-CLO3- 100% IT105-CLO4- 77.78% IT105-CLO5- 100%	83.06% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 5	MA121-CLO1- 81% MA121-CLO2- 81% MA121-CLO3- 86% MA121-CLO4- 69% MA121-CLO5- 69% MA121-CLO6- 69%	79.29% of students assessed performed at the proficiency level. The expected outcome of 70% was met.

		MA121-CLO7- 100%	
	PLO 6	MA111-CLO1- 93.3% MA111-CLO2- 86.7% MA111-CLO3- 93.3% MA111-CLO4- 93.3% MA111-CLO5- 73.3%	87.98% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
S.Y. 2019-2020 Fall 2019	PLO 1	SC161-CLO1- 80% SC161-CLO2- 80% SC161-CLO3- 100% SC206-CLO1- 100% SC206-CLO2- 100% SC206-CLO3- 100% SC206-CLO4- 100% SC206-CLO5- 100%	95% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 2	SC161-CLO1- 80% SC161-CLO2- 80% SC161-CLO3- 100% SC206-CLO1- 100% SC206-CLO2- 100% SC206-CLO3- 100% SC206-CLO4- 100% SC206-CLO5- 100%	95% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 3	IT105-CLO1- 100% IT105-CLO2- 74.47% IT105-CLO3- 95.24% IT105-CLO4- 94.44% IT105-CLO5- 100%	92.83% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 4	IT110-CLO1- 87.12% IT110-CLO2- 87.12% IT110-CLO3- 87.12% IT110-CLO4- 87.12%	87.12% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 5	MA112-CLO1- 100% MA112-CLO2- 93.8% MA112-CLO3- 93.8% MA112-CLO4- 100% MA112-CLO5- 100%	97.52% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 6	MA111-CLO1- 100% MA111-CLO2- 88.9% MA111-CLO3- 100% MA111-CLO4- 100% MA111-CLO5- 88.9% MA111-CLO6- 100%	96.3% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
Spring 2020	PLO 1	SC160-CLO1- 100% SC160-CLO2- 100% SC160-CLO3- 0% SC205-CLO1- 100% SC205-CLO2- 100% SC205-CLO3- 100%	79.17% of students assessed performed at the proficiency level. The expected outcome of 70% was met.

		SC205-CLO4- 100% SC205-CLO5- 100% SC205-CLO6- 50%	
	PLO 2	SC160-CLO1- 100% SC160-CLO2- 100% SC160-CLO3- 0% SC205-CLO1- 100% SC205-CLO2- 100% SC205-CLO3- 100% SC205-CLO4- 100% SC205-CLO5- 100% SC205-CLO6- 50%	79.17% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 3	IT105-CLO1- 100% IT105-CLO2- 100% IT105-CLO3- 100% IT105-CLO4- 100% IT105-CLO5- 100%	100% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 4	IT125-CLO1- 57.14% IT125-CLO2- 57.14% IT125-CLO3- 57.14% IT125-CLO4- 57.17% IT125-CLO5- 57.14%	57.14% of students assessed performed below the proficiency level. The expected outcome of 70% was not met.
	PLO 5	MA121-CLO1- 78% MA121-CLO2- 78% MA121-CLO3- 72% MA121-CLO4- 73% MA121-CLO5- 73% MA121-CLO6- 73% MA121-CLO7- No data MA221-CLO1- 100% MA221-CLO2- 100% MA221-CLO3- 86% MA221-CLO4- 100% MA221-CLO5- 100%	84.81% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 6	MA221-CLO1- 100% MA221-CLO2- 100% MA221-CLO3- 86% MA221-CLO4- 100% MA221-CLO5- 100% MA111-CLO1- 100% MA111-CLO2- 100% MA111-CLO3- 100% MA111-CLO4- 100% MA111-CLO5- 97.1% MA111-CLO6- 100%	98.46% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	S.Y. 2020-2021 Fall 2020	PLO 1	SC161-CLO1- 100% SC161-CLO2- 100% SC161-CLO3- No data

		SC206-CLO1- 100% SC206-CLO2- 100% SC206-CLO3- 100% SC206-CLO4- 100% SC206-CLO5- 100%	
	PLO 2	SC161-CLO1- 100% SC161-CLO2- 100% SC161-CLO3- No data SC206-CLO1- 100% SC206-CLO2- 100% SC206-CLO3- 100% SC206-CLO4- 100% SC206-CLO5- 100%	100% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 3	IT105-CLO1- 100% IT105-CLO2- 50% IT105-CLO3- 82.61% IT105-CLO4- 100% IT105-CLO5- 100%	86.52% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 4	IT110-CLO1- 60.72% IT110-CLO2- 60.72% IT110-CLO3- 60.72% IT110-CLO4- 60.72%	60.72% of students assessed performed below the proficiency level. The expected outcome of 70% was not met.
	PLO 5	MA112-CLO1- 86% MA112-CLO2- 86% MA112-CLO3- 92% MA112-CLO4- 92% MA112-CLO5- 100% MA112-CLO6- 100%	92.66% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 6	MA111-CLO1- 75% MA111-CLO2- 75% MA111-CLO3- 80% MA111-CLO4- 100% MA111-CLO5- 80% MA111-CLO6- No data	82% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
Spring 2021	PLO 1	SC160-CLO1- 83.3% SC160-CLO2- 83.3% SC160-CLO3- 83.3% SC205-CLO1- 100% SC205-CLO2- 100% SC205-CLO3- 100% SC205-CLO4- 100% SC205-CLO5- 100% SC205-CLO6- 100%	94.4% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 2	SC160-CLO1- 83.3% SC160-CLO2- 83.3% SC160-CLO3- 83.3% SC205-CLO1- 100% SC205-CLO2- 100% SC205-CLO3- 100%	94.4% of students assessed performed at the proficiency level. The expected outcome of 70% was met.

		SC205-CLO4- 100% SC205-CLO5- 100% SC205-CLO6- 100%	
	PLO 3	IT105-CLO1- 87.5% IT105-CLO2- 63.64% IT105-CLO3- 91.67% IT105-CLO4- 100%	85.70% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 4	IT125-CLO1- 100% IT125-CLO2- 100% IT125-CLO3- 100% IT125-CLO4- 100% IT125-CLO5- 100%	100% of students assessed performed at the proficiency level. The expected outcome of 70% was met.
	PLO 5	MA121-CLO1- 62% MA121-CLO2- 92% MA121-CLO3- 92% MA121-CLO4- 62% MA121-CLO5- 69% MA121-CLO6- 92% MA121-CLO7- 77% MA221-CLO1- no data MA221-CLO2- no data MA221-CLO3- no data MA221-CLO4- no data MA221-CLO5- no data	78% of students assessed performed at the proficiency level. The expected outcome of 70% was met. No assessment was done due to student withdrawal from the course.
	PLO 6	MA111-CLO1- 75% MA111-CLO2- 83% MA111-CLO3- 100% MA111-CLO4- 100% MA111-CLO5- 100% MA221-CLO1- no data MA221-CLO2- no data MA221-CLO3- no data MA221-CLO4- no data MA221-CLO5- no data	91.6% of students assessed performed at the proficiency level. The expected outcome of 70% was met. No assessment was done due to student withdrawal from the course.

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

For the above grids the CLO-PLO mapping is done strictly based on STEM program

However, the courses were assessed using the PLOs/ILOs from the ES program and math and science departments and not the from the STEM program. In Spring 2020 and Fall 2020, students fell below the proficiency in PLO 4 which covers Information Technology. Furthermore, in Spring 2021 as part of PLO5 and PLO 6, no data was gathered for MA221 due to student withdrawal from the course.

Overall, students are improving in proficiency level compared to the last review cycle.

It is important to note that the course assessment assessing student learning outcomes at the course level are also assessing student learning outcomes at the program level as well as at the institutional level (PLO-ILO).

VI. Evaluation of Previous Program Review Action Plan(s)

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

Cycle: 3 years	Years: 2015-2016, 2016-2017, 2017-2018
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Action Plan Activity/Objectives	Status Complete/Ongoing/Incomplete	Updates of Action Plan/s (Report action plan individually.)
1. Revise STEM program to have it contain tracks for each area (math, engineering, technology and science).	Incomplete	Tracks under STEM program is not really needed given that other college/universities have the same design as our STEM program.
2. Expose students to the career learning objectives	Incomplete	This action plan was not started. The plan is not really needed as students choosing this major should know what STEM stands for and already have an idea of careers.
3. Introducing correlated studies in course program	Ongoing	STEM students are able to attend off-island conferences exposing them course related programs.
4. Search for grants for STEM programs	Ongoing	This plan is ongoing

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

The STEM program tracks were revised during this review cycle and was completed. Additionally, the tracks might have helped the program increase its number of students enrolled under STEM. The plan of students' exposure to their career learning objective has not started but the program Chair is considering the possibility of internship for the completion of the plan. STEM students are now invited and attending off-island science conferences under science grants. The annual SACNAS was hosted in Hawaii in 2019. Consistently, faculty/instructors are searching for grants for our students' exposure and improvement.

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VII. 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
1. Expose students to the career learning objectives	Students should be given a proper exposure on what are they going to take up as their career while or after completing this program. The program chair is considering integrating internship to its program. This plan will increase student experience in the field. And to encourage the student to proceed in a 4-year degree program under STEM discipline.	0	End Spring 2023
2. Introducing correlated studies in course program	Students now have a real time exposure to conferences annually. This improves the students' interest and curiosity to explore more on their career path.	0	Ongoing
3. Search for grants for STEM programs	There are many grants in the STEM field and funding will allow for a full-time faculty to spend time researching, revising and focusing on recruitment and teaching courses with a focus on STEM.	0	Ongoing

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

Review of the program clearly shows that student enrollment is showing promise as the trends goes higher so the most important aspect here is to continue to actively recruit to increase the student enrollment. Data showed that of the students enrolled, most were able to pass the required program courses and were able to graduate. Building the program is important as the need for such still exists. While the program review does not show data for labor, there is data in the government that shows there are more foreign workers than local workers specifically in Palau, including in STEM areas.

The action plan for STEM program is to consider internship as an elective. The student may choose from the following department or semi-government offices:

1. IREO(if possible)- exposure to data analysis and data encoding.
2. PPUC- exposure to electrical and water energy community consumption.
 - PPUC has requested if the program can provide interns for them to train.
3. PNCC- exposure to real time technology such as computers and technical skills.

This is only a plan that would work if the services will ask for intern assistance. It will ensure training for STEM students in the field.

VIII. Resource Requests

Itemize resource request below.

Type of Resource	Detailed Description	Estimated Amount Requested	Justification
Personnel			
Facilities			
Equipment			
Supplies	Office and Teaching Supplies	\$300	General office/teaching supplies for the next cycle review.
Software			
Training			
Other			
Total		\$300	

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

The STEM program does not need anything except routine office supplies. Full time faculty in the STEM courses who are in those departments or programs already teach the required program courses and no special facilities, equipment, software or training is needed.

Do not forget to include all your required evidence. Required evidence is listed on page 2 of this template.