



“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**

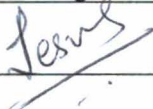
**Degree / Certificate Program**

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


**Period of Three Year Review**

**S.Y. 2015 - 2016; 2016 – 2017; 2017 - 2018**


Program Review Completed By:

Name	Title	Signature	Date
Jesna Nissam	Chairperson		11/14/2018

Program Review Certified By:

Name	Title	Signature	Date
Robert Ramarui	Dean, Academic Affairs		11/14/18

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

Name	Title	Signature	Date
Ligaya Sara	Institutional Researcher		11/14/2018

## **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 these 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.

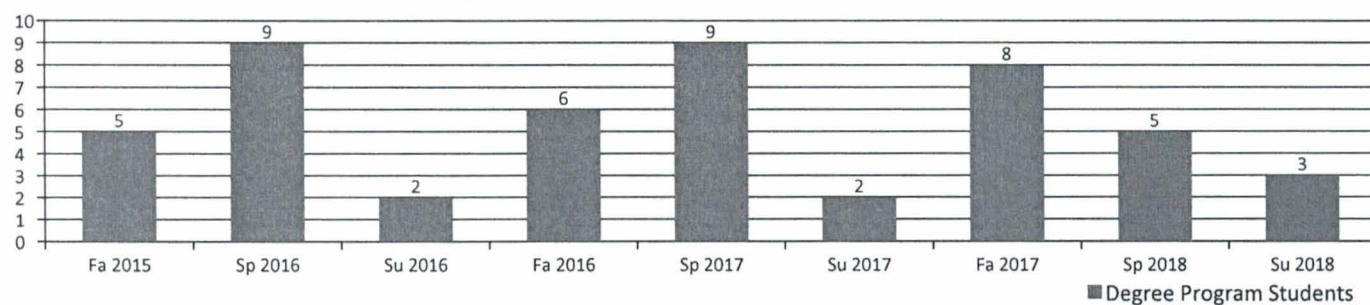
Development of the STEM program began in 2008. Following the official process for new programs, in 2010 approval was granted by the Committee on Programs and Curricula, the President of the College and the PCC Board of Trustees. A substantive change proposal was submitted to WASC ACCJC in 2012 and approval was granted in May 2012. The program was officially offered in fall 2012. Enrollment is low but starting to increase and there have already been four graduates since it was first offered. 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

Figure 1. Number of Students Enrolled in 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, Spring 2016 and Spring 2017 experienced the maximum number of students of 9 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 2015					FA 2016					FA 2017				
Course	Passed	Failed	Withdraw	Enrolled	Course	Passed	Failed	Withdraw	Enrolled	Course	Passed	Failed	Withdraw	Enrolled
IT110	4	0		4	IT105	1	0		1	IT110	1	1		2
MA111	2	0		2	IT110	1	0		1	MA111	0	1		1
MA112	1	0		1	MA111	2	0		2	MA112	2	0		2
					MA112	2	0		2	SC161	2	0		2
					SC161	4	0		4					

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

SP 2016					SP 2017					SP 2018				
Course	Passed	Failed	Withdraw	Enrolled	Course	Passed	Failed	Withdraw	Enrolled	Course	Passed	Failed	Withdraw	Enrolled
IT105	2	0		2	IT125	1	0		1	IT105	1	0		1
IT125	2	0		2	MA111	1	0		1	IT125	1	0		1
MA111	0	1		1	MA121	2	0		2	MA111	1	0		1
MA121	2	0		2	MA221	2	0		2	MA221	2	0		2
MA221	1	0		1	SC160	4	0		4	SC160	4	0		4
SC160	4	0		4	SC205	4	0		4	SC205	2	0		2
SC161	2	0		2										
SC205	2	0		2										



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

SU 2016					SU 2017					SU 2018				
Course	Passed	Failed	Withdraw	Enrolled	Course	Passed	Failed	Withdraw	Enrolled	Course	Passed	Failed	Withdraw	Enrolled
SC206	2	0		2	SC206	4	0		4	SC206	3	0		3

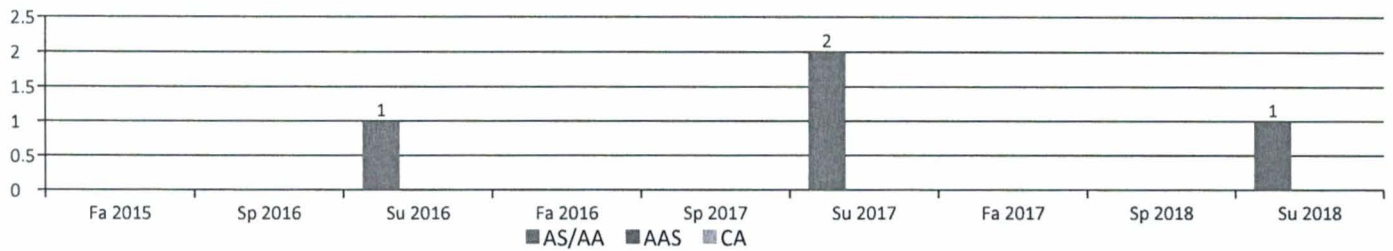
Provide summary of Tables 1a, 1b & 1c including its trends analysis.

According to the records shown above 2 students failed overall in MA111 and 1 student failed in IT110. Overall though, students are able to move through the STEM courses in a timely manner.





Figure 2. Number of Graduates

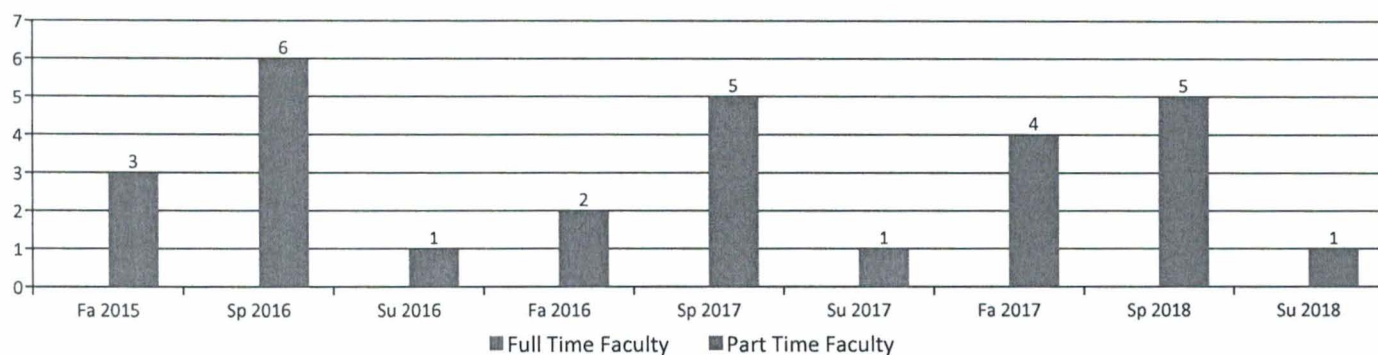


Provide summary of Figure 2 including its trends analysis.

Of 2 enrolled in Summer 2016, 1 graduated. Of 2 enrolled in Summer, 2017, 2 graduated. Of 3 enrolled in Summer 2018, 1 graduated. The student who graduated in summer 2016 enrolled in fall 2012 which shows the student took almost 4 years to graduate. This student had to repeat some mathematics, science and technology courses. The two graduates who graduated in summer 2017 both started in fall 2014, and the student who graduated in summer 2018 enrolled into the program in fall 2015.

The students should be able to graduate in a timely manner if courses do not need to be repeated provided they enroll in the summer sessions also.

Figure 3. Faculty Head Count



Provide summary of Figure 3 including its trends analysis.

Only one of the STEM courses (SC 206) was taught during summer sessions of 2016, 2017 and 2018, so only one instructor was needed. All the faculty come from different programs and departments to support the STEM program and so are considered part time faculty for the STEM program. During the fall and spring semesters, STEM students are enrolled into math, science and technology courses along with students from other majors. Faculty for those departments or programs are usually the instructors of their courses. Adjunct instructors may be hired when department or the other program faculty are fully loaded.

### III. Student Learning and Curriculum

	How many program courses are there? (refer to catalog or recent approval by CPC)	% of courses with Identified CLOs	List all revised program courses outlines or proposed new courses that received CPC approval within this review cycle	% of PLOs aligned with ILOs
FALL 2015	3	100%		100%
SPRING 2016	8	100%		100%
SUMMER 2016	1	100%		100%
FALL 2016	5	100%	SC160 & SC 205	100%
SPRING 2017	6	100%	SC 160 & SC 161	100%
SUMMER 2017	1	100%		100%
FALL 2017	4	100%		100%
SPRING 2018	6	100%		100%
SUMMER 2018	1	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.

Three of the courses were reviewed and revised.

SC160 and SC161 was last revised in the spring 2017 because the text book was outdated and no longer in print. The course descriptions, prerequisites and CLOs for SC160 and SC161 were also revised in spring 2016. The focus of the review was for the Environmental and Marine Science (ES) program and not STEM.

SC205 was revised in fall 2016 because the prerequisite was set too high and after conferring with both science and math faculty, it was agreed that the prerequisite should be change. The high prerequisite made it impossible for students to finish the program in less than three years. Now students are able to complete the program in two years although courses need to be taken during the summer also. This was the only change to the course.

### IV. Course Assessment Data

Year 1: School Year S.Y. 2015 - 2016

Semester Assessed	Course Assessed	CLO-PLO-ILO Mapping	Results of Assessment
Fall 2015	IT110	CLO1- PLO1- ILO1/ ILO3	75.00% of the students assessed reached proficiency level.
		CLO2- PLO1- ILO1/ ILO3	75.00% of the students assessed reached proficiency level.
		CLO3- PLO1- ILO1/ ILO3	75.00% of the students assessed reached proficiency level.
		CLO4- PLO1- ILO1/ ILO3	75.00% of the students assessed reached proficiency level.
Fall 2015	MA111	CLO1- PLO1/PLO3- ILO1/ ILO3	100% of students achieved the expected performance with proficiency level 3 equivalents to Competent.
		CLO2- PLO1/PLO3- ILO1/ ILO3	100% of students achieved the expected performance with proficiency level 3 equivalents to Competent.
		CLO3- PLO1/PLO3- ILO1/ ILO3	100% of students achieved the expected performance with proficiency level 3 equivalents to Competent.
		CLO4- PLO1/PLO3- ILO1/ ILO3	100% of students achieved the expected performance with proficiency level 3 equivalents to Competent.
		CLO5- PLO1/PLO3- ILO1/ ILO3	100% of students achieved the expected performance with proficiency level 3 equivalents to Competent.
Fall 2015	MA112	CLO1- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
		CLO-3 PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
		CLO-4 PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
		CLO-5 PLO1/PLO3- ILO1/ ILO3	This CLO was not assessed by the instructor.



Semester s Assessed	Course Assessed	CLO-PLO-ILO Mapping	Results of Assessments
Spring 2016	IT105	CLO1- PLO2- ILO1/ ILO3	95% of the students assessed performed at the proficiency level.
		CLO2- PLO2- ILO1/ ILO3	30% of the students assessed performed at the proficiency level.
		CLO3- PLO2/PLO5- ILO1/ ILO3	92.5% of the students assessed performed at the proficiency level.
		CLO4- PLO2/PLO5- ILO1/ ILO3	70% of the students assessed performed at the proficiency level.
		CLO5- PLO2- ILO1/ ILO3	95% of the students assessed performed at the proficiency level
Spring 2016	IT125	CLO1- PLO1- ILO1/ ILO3	89% of the students assessed performed at the proficiency level.
		CLO2- PLO1- ILO1/ ILO3	89% of the students assessed performed at the proficiency level.
		CLO3- PLO1- ILO1/ ILO3	89% of the students assessed performed at the proficiency level.
		CLO4- PLO1- ILO1/ ILO3	89% of the students assessed performed at the proficiency level.
		CLO5- PLO1- ILO1/ ILO3	89% of the students assessed performed at the proficiency level.
Spring 2016	MA111	CLO1- PLO1/PLO3- ILO1/ ILO3	Mid Term papers were given back to students in teacher error. Hence it was not assessed this semester
		CLO2- PLO1/PLO3- ILO1/ ILO3	Mid Term papers were given back to students in teacher error. Hence it was not assessed this semester
		CLO3- PLO1/PLO3- ILO1/ ILO3	Mid Term papers were given back to students in teacher error. Hence it was not assessed this semester
		CLO4- PLO1/PLO3- ILO1/ ILO3	25% of the students performed at the proficiency level
		CLO5- PLO1/PLO3- ILO1/ ILO3	75% of the students performed at the competent level.
Spring 2016	MA121	CLO1- PLO1/PLO3- ILO1/ ILO3	69% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	92% of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/ ILO3	77% of the students performed at the proficiency level.
		CLO4- PLO1/PLO3- ILO1/ ILO3	48% of the students performed at the proficiency level.
		CLO5- PLO1/PLO3- ILO1/ ILO3	70% of the students performed at the proficiency level.
		CLO6- PLO1/PLO3- ILO1/ ILO3	70% of the students performed at the proficiency level.
		CLO7- PLO1/PLO3- ILO1/ ILO3	30% of the students performed at the proficiency level.

Spring 2016	MA221	CLO1- PLO1/PLO3- ILO1/ ILO3	100%of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	100%of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/ ILO3	100%of the students performed at the proficiency level.
		CLO4- PLO1/PLO3- ILO1/ ILO3	0%of the students performed at the proficiency level
		CLO5- PLO1/PLO3- ILO1/ ILO3	No data collected (instructor did not cover these topics)
		CLO6- PLO1/PLO3- ILO1/ ILO3	No data collected (instructor did not cover these topics)
Spring 2016	SC160	CLO1- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	CLO1 - 33% of the students assessed performed at the proficiency level on the Lab: Measurements and Density.  CLO1 - 100% of the students assessed performed at the proficiency level on the Midterm.
		CLO2- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	CLO2 - 33% of the students assessed performed at the proficiency level on Lab: Properties and Changes of Matter.
		CLO3- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	CLO3 - 100% of the students assessed performed at the proficiency level on the Midterm.
			CLO4 - 100% of the students assessed performed at the proficiency level on the Midterm. CLO4 - 66% of the students assessed performed at the proficiency level on Test 2.  CLO5 - 100% of the students assessed performed at the proficiency level on the Final Exam.
			CLO6 - 33% of the students assessed performed at the proficiency level on the Lab: Properties and Changes of Matter.
			CLO7- 66% of the students assessed performed at the proficiency level on the Lab: Properties and Changes of Matter.
			CLO8 - 100% of the students assessed performed at the proficiency level on the Final Exam.
			CLO9- 33% of the students assessed performed at the proficiency level on the Lab: Properties and Changes of Matter.



			CLO10 - 66% of the students assessed performed at the proficiency level on the Lab: Properties and Changes of Matter.
			CLO11 - 100% of the students assessed performed at the proficiency level on the Final Exam.

Year 2: School Year S.Y. 2016 - 2017

Semester Assessed	Course Assessed	CLO-PLO-ILO Mapping	Results of Assessments
Fall 2016	IT105	CLO1- PLO2- ILO1/ ILO3	83% of the students assessed performed at the proficiency level.
		CLO2- PLO2- ILO1/ ILO3	70% of the students assessed performed at the proficiency level.
		CLO3- PLO2/PLO5- ILO1/ ILO3	100% of the students assessed performed at the proficiency level.
		CLO4- PLO2/PLO5- ILO1/ ILO3	100% of the students assessed performed at the proficiency level.
		CLO5- PLO2- ILO1/ ILO3	100% of the students assessed performed at the proficiency level.
Fall 2016	IT110	CLO1- PLO1- ILO1/ ILO3	CLO 1 Midterm project: 100.00% of the students assessed performed at the proficiency level.  CLO 1 Final project: 100.00% of the students assessed performed at the proficiency level.
		CLO2- PLO1- ILO1/ ILO3	CLO 2 Midterm project: 100.00% of the students assessed performed at the proficiency level.  CLO 2 Final project: 100.00% of the students assessed performed at the proficiency level.
		CLO3- PLO1- ILO1/ ILO3	CLO 3 Midterm project: 100.00% of the students assessed performed at the proficiency level.  CLO 3 Final project: 100.00% of the students assessed performed at the proficiency level.
		CLO4- PLO1- ILO1/ ILO3	CLO 4 Midterm project: 100.00% of the students assessed performed at the proficiency level.  CLO 4 Final project: 100.00% of the students assessed performed at the proficiency level.
Fall 2016	MA 111	CLO1- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.



		CLO4- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
		CLO5- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
		CLO6- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
Fall 2016	MA112	CLO1- PLO1/PLO3- ILO1/ ILO3	Two students were evaluated. 100% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	Two students were evaluated. 100% of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/ ILO3	Two students were evaluated. 100% of the students performed at the proficiency level.
		CLO4- PLO1/PLO3- ILO1/ ILO3	Two students were evaluated. 100% of the students performed at the proficiency level.
Spring 2017	IT125	CLO1- PLO1- ILO1/ ILO3	CLO 1 Midterm project: 88% of the students assessed performed at the proficiency level.  CLO 1 Final project: 79% of the students assessed performed at the proficiency level.
		CLO2- PLO1- ILO1/ ILO3	CLO 2 Midterm project: 88% of the students assessed performed at the proficiency level.  CLO 2 Final project: 79% of the students assessed performed at the proficiency level.
		CLO3- PLO1- ILO1/ ILO3	CLO 3 Midterm project: 88% of the students assessed performed at the proficiency level.  CLO 3 Final project: 79% of the students assessed performed at the proficiency level.
		CLO4- PLO1- ILO1/ ILO3	CLO 4 Midterm project: 88% of the students assessed performed at the proficiency level.  CLO 4 Final project: 79% of the students assessed performed at the proficiency level.
		CLO5- PLO1- ILO1/ ILO3	CLO 5 Midterm project: 88% of the students assessed performed at the proficiency level.  CLO 5 Final project: 79% of the students assessed performed at the proficiency level.
Spring 2017	MA - 111	CLO1- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	16% of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/	66% of the students performed at the proficiency level.

		ILO3	
		CLO4- PLO1/PLO3- ILO1/ ILO3	66% of the students performed at the proficiency level.
		CLO5- PLO1/PLO3- ILO1/ ILO3	66% of the students performed at the proficiency level.
Spring 2017	MA - 121	CLO1- PLO1/PLO3- ILO1/ ILO3	96.5% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	86.5% of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the competent level.
		CLO4- PLO1/PLO3- ILO1/ ILO3	96.5% of the students performed at the competent level.
		CLO5- PLO1/PLO3- ILO1/ ILO3	90% of the students performed at the competent level.
		CLO6- PLO1/PLO3- ILO1/ ILO3	89.5% of the students performed at the competent level.
		CLO7- PLO1/PLO3- ILO1/ ILO3	79.5% of the students performed at the competent level.
Spring 2017	MA - 221	CLO1- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the competent level
		CLO2- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the competent level
		CLO3- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the competent level
		CLO4- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the competent level
		CLO5- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the competent level
		CLO6- PLO1/PLO3- ILO1/ ILO3	No data collected (did not cover these topics)
Spring 2017	SC - 160	CLO1- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	100% of the students assessed performed at the proficiency level
		CLO2- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	88.89% of the students assessed performed at the proficiency level
		CLO3- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	77.78% of the students assessed performed at the proficiency level
Spring 2017	SC - 205	CLO1- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level
		CLO2- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level
		CLO3- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level
		CLO4- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level
		CLO5- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level
		CLO6- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level



		ILO3	proficiency level
		CLO7- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level

Year 3: School Year \_\_\_\_\_ S.Y. 2017 – 2018

Semester Assessed	Course Assessed	CLO-PLO-ILO Mapping	Results of Assessments
Fall 2017	IT - 110	CLO1- PLO1- ILO1/ ILO3	CLO 1 Midterm project: 100.00% of the students assessed performed at the proficiency level.  CLO 1 Final project: 100.00% of the students assessed performed at the proficiency level.
		CLO2- PLO1- ILO1/ ILO3	CLO 2 Midterm project: 83.33% of the students assessed performed at the proficiency level.  CLO 2 Final project: 40% of the students assessed performed at the proficiency level.
		CLO3- PLO1- ILO1/ ILO3	CLO 3 Midterm project: 83.33% of the students assessed performed at the proficiency level.  CLO 3 Final project: 40.00% of the students assessed performed at the proficiency level.
		CLO4- PLO1- ILO1/ ILO3	CLO 4 Midterm project: 83.33% of the students assessed performed at the proficiency level.  CLO 4 Final project: 40.00% of the students assessed performed at the proficiency level.
Fall 2017	MA - 111	CLO1- PLO1/PLO3- ILO1/ ILO3	93.33% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/ ILO3	73.33% of the students performed at the proficiency level.
		CLO4- PLO1/PLO3- ILO1/ ILO3	86.67% of the students performed at the proficiency level.
		CLO5- PLO1/PLO3- ILO1/ ILO3	80% of the students performed at the proficiency level.
Fall 2017	MA - 112	CLO1- PLO1/PLO3- ILO1/ ILO3	Two students were evaluated. 75% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	Two students were evaluated. 100% of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/ ILO3	Two students were evaluated. 100% of the students performed at the proficiency level.
		CLO4- PLO1/PLO3- ILO1/ ILO3	75% of the students performed at the proficiency level.
		CLO5- PLO1/PLO3- ILO1/ ILO3	100% of the students performed at the proficiency

		ILO3	level.
Fall 2017	SC - 161	CLO1- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	42.86% of the students performed at the proficiency level.
		CLO2- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	100.00% of the students performed at the proficiency level.
		CLO3- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	33.33% of the students performed at the proficiency level.
Spring 2018	IT - 105	CLO1- PLO2- ILO1/ ILO3	100% of the students assessed performed at the proficiency level.
		CLO2- PLO2- ILO1/ ILO3	76% of the students assessed performed at the proficiency level.
		CLO3- PLO2/PLO5- ILO1/ ILO3	96% of the students assessed performed at the proficiency level.
		CLO4- PLO2/PLO5- ILO1/ ILO3	100% of the students assessed performed at the proficiency level.
		CLO5- PLO2- ILO1/ ILO3	100% of the students assessed performed at the proficiency level.
Spring 2018	IT - 125	CLO2- PLO2- ILO1/ ILO3	CLO 1 Midterm project: 100.00% of the students assessed performed at the proficiency level.  CLO 1 Final project: 75.00% of the students assessed performed at the proficiency level.
		CLO3- PLO2/PLO5- ILO1/ ILO3	CLO 2 Midterm project: 100.00% of the students assessed performed at the proficiency level.  CLO 2 Final project: 75.00% of the students assessed performed at the proficiency level.
		CLO4- PLO2/PLO5- ILO1/ ILO3	CLO 3 Midterm project: 100.00% of the students assessed performed at the proficiency level.  CLO 3 Final project: 75.00% of the students assessed performed at the proficiency level.
		CLO5- PLO2- ILO1/ ILO3	CLO 4 Midterm project: 100.00% of the students assessed performed at the proficiency level.  CLO 4 Final project: 75.00% of the students assessed performed at the proficiency level.
		CLO5- PLO1- ILO1/ ILO3	CLO 5 Midterm project: 100.00% of the students assessed performed at the proficiency level.  CLO 5 Final project: 75.00% of the students assessed performed at the proficiency level.
Spring 2018	MA - 111	CLO1- PLO1/PLO3- ILO1/ ILO3	88.9% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	77.78% of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/ ILO3	88.89% of the students performed at the proficiency level.



		CLO4- PLO1/PLO3- ILO1/ ILO3	77.78% of the students performed at the proficiency level.
		CLO5- PLO1/PLO3- ILO1/ ILO3	55.56% of the students performed at the proficiency level.
Spring 2018	MA - 121	CLO1- PLO1/PLO3- ILO1/ ILO3	67.86% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	85.71% of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/ ILO3	89.29% of the students performed at the proficiency level.
		CLO4- PLO1/PLO3- ILO1/ ILO3	72% of the students performed at the proficiency level.
		CLO5- PLO1/PLO3- ILO1/ ILO3	72% of the students performed at the proficiency level.
		CLO6- PLO1/PLO3- ILO1/ ILO3	56% of the students performed at the proficiency level.
		CLO7- PLO1/PLO3- ILO1/ ILO3	72% of the students performed at the proficiency level.
Spring 2018	MA - 221	CLO1- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the proficiency level.
		CLO2- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the proficiency level.
		CLO3- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the proficiency level.
		CLO4- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the proficiency level.
		CLO5- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the proficiency level.
		CLO6- PLO1/PLO3- ILO1/ ILO3	100.00% of the students performed at the proficiency level.
Spring 2018	SC - 160	CLO1- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	62.5% of the students assessed performed at the proficiency level
		CLO2- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	62.5% of the students assessed performed at the proficiency level
		CLO3- PLO1,PLO2,PLO3- ILO1,ILO2, ILO3	100.00% of the students assessed performed at the proficiency level
Spring 2018	SC - 205	CLO1- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level
		CLO2- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level
		CLO3- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level
		CLO4- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level
		CLO5- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the proficiency level
		CLO6- PLO1/PLO3- ILO1/ ILO3	100% of the students assessed performed at the

		ILO3	proficiency level
		CLO7- PLO1/PLO3- ILO1/ ILO3	100% of the 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. For Spring 2016 SC160 course, the CLO-PLO-ILO mapping is done for only 3 CLOs because the mapping chart showed only 3 CLOs whereas the FAMED course assessment showed 11 CLOs as assessed. Initially there were 11 CLOs which were revised to 3 when a course revision was done. Overall, math proficiency tends to be lower in math required courses compared to science and technology required program courses.

## V. Program Learning Outcomes (PLOs) Assessment

### Program Learning Outcomes Assessment Results

Year Assessed	PLO Assessed	Proficiency Levels	Results of Assessments
<b>FALL 2015</b>	STEM PLO-1	SC161 CLO 1 SC161 CLO 2 SC161 CLO 3	No STEM student was enrolled for the course during FALL 2015.
	STEM -PLO2	SC161 CLO 1 SC161 CLO 2 SC161 CLO 3	No STEM student was enrolled for the course during FALL 2015.
	STEM -PLO3	IT105 CLO1 IT105 CLO2 IT105 CLO3 IT105 CLO4 IT105 CLO5	No STEM student was enrolled for the course during FALL 2015.
	STEM -PLO4	IT105 CLO1 IT105 CLO2 IT105 CLO3 IT105 CLO4 IT105 CLO5  IT110 CLO1 – 75% IT110 CLO2 – 75% IT110 CLO3 – 75% IT110 CLO4 – 75%	No STEM student was enrolled for the course during FALL 2015.  75% of the students assessed performed at the proficiency level
	STEM -PLO5	MA112 CLO1-100% MA112 CLO2-100% MA112 CLO3-100% MA112 CLO4-100% MA112 CLO5-NOT ASSESSED	100% of the students assessed performed at the proficiency level
	STEM -PLO6	MA111 CLO1-100% MA111 CLO2-100% MA111 CLO3-100%	100% of the students assessed performed at the proficiency level



		MA111 CLO4-100% MA111 CLO5-100%	
<b>Spring 2016</b>	STEM –PLO1	SC160 CLO1 100% SC160 CLO1 33% SC160 CLO2 33% SC160 CLO3 100% SC160 CLO4 100% SC160 CLO4 66% SC160 CLO5 100% SC160 CLO6 33% SC160 CLO7 66% SC160 CLO8 100% SC160 CLO9 33% SC160 CLO10 66% SC160 CLO11 100%	71.5% of the students assessed performed at the proficiency level
	STEM –PLO2	SC160 CLO1 100% SC160 CLO1 33% SC160 CLO2 33% SC160 CLO3 100% SC160 CLO4 100% SC160 CLO4 66% SC160 CLO5 100% SC160 CLO6 33% SC160 CLO7 66% SC160 CLO8 100% SC160 CLO9 33% SC160 CLO10 66% SC160 CLO11 100%	71.5% of the students assessed performed at the proficiency level
	STEM –PLO3	IT105 CLO1 95% IT105 CLO2 30% IT105 CLO3 92.5% IT105 CLO4 70% IT105 CLO5 95%	76.5% of the students assessed performed at the proficiency level
	STEM –PLO4	IT125 CLO1 89% IT125 CLO2 89% IT125 CLO3 89% IT125 CLO4 89% IT125 CLO5 89%	89% of the students assessed performed at the proficiency level

	STEM -PLO5	MA121 CLO1 69% MA121 CLO2 92% MA121 CLO3 77% MA121 CLO4 48% MA121 CLO5 70% MA121 CLO6 70% MA121 CLO7 30%  MA212 CLO1 100% MA212 CLO2 100% MA212 CLO3 100% MA212 CLO4 0% MA212 CLO5 No data collected (did not cover the topic) MA212 CLO6 No data collected (did not cover the topic)	85.1% of the students assessed performed at the proficiency level
	STEM -PLO6	MA111 CLO1 Midterm papers were given back to students in teacher's error, hence no assessment shown. MA111 CLO2 Midterm papers were given back to students in teacher's error, hence no assessment shown.  MA111 CLO3 Midterm papers were given back to students in teacher's error, hence no assessment shown.  MA111 CLO4 25% MA111 CLO5 75%  MA212 CLO1 100% MA212 CLO2 100%	66.6% of the students assessed performed at the proficiency level

		MA212 CLO3 100% MA212 CLO4 0% MA212 CLO5 No data collected (did not cover the topic) MA212 CLO6 No data collected (did not cover the topic)	
FALL 2016	STEM -PLO1	NO RECORDS FOUND for SC160, SC161, SC205 and SC206.	NO RECORDS FOUND
	STEM -PLO2	NO RECORDS FOUND for SC160, SC161, SC205 and SC206.	NO RECORDS FOUND
	STEM -PLO3	IT105 CLO1 83% IT105 CLO2 70% IT105 CLO3 100% IT105 CLO4 100% IT105 CLO5 100%	90.6% of the students assessed performed at the proficiency level
	STEM -PLO4	IT105 CLO1 83% IT105 CLO2 70% IT105 CLO3 100% IT105 CLO4 100% IT105 CLO5 100%  IT110 CLO1 Midterm Project: 100.00% of the students assessed performed at the proficiency level.  Final Project: 100.00% of the students assessed performed at the proficiency level.  IT110 CLO2 Midterm Project: 100.00% of the students assessed performed at the proficiency level.	96.4% of the students assessed performed at the proficiency level

		<p>Final Project: 100.00% of the students assessed performed at the proficiency level.</p> <p>IT110 CLO3 Midterm Project: 100.00% of the students assessed performed at the proficiency level.</p> <p>Final Project: 100.00% of the students assessed performed at the proficiency level.</p> <p>IT110 CLO4 Midterm Project: 100.00% of the students assessed performed at the proficiency level.</p> <p>Final Project: 100.00% of the students assessed performed at the proficiency level.</p>	
	STEM -PLO5	<p>MA111 CLO1 100%</p> <p>MA111 CLO2 100%</p> <p>MA111 CLO3 100%</p> <p>MA111 CLO4 100%</p> <p>MA111 CLO5 100%</p>	100% of the students assessed performed at the proficiency level
	STEM -PLO6	<p>MA112 CLO1 40%</p> <p>MA112 CLO2 60%</p> <p>MA112 CLO3 40%</p> <p>MA112 CLO4 80%</p> <p>MA112 CLO5 80%</p> <p>MA112 CLO6</p>	63.3% of the students assessed performed at the proficiency level

		80%	
SPRING 2017	STEM -PLO1	SC160 CLO1 100% SC160 CLO2 88.89% SC160 CLO3 77.78%	88.89% of the students assessed performed at the proficiency level
	STEM -PLO2	SC160 CLO1 100% SC160 CLO2 88.89% SC160 CLO3 77.78%	94.4% of the students assessed performed at the proficiency level
		SC205 CLO 1- 100% SC205 CLO 2- 100% SC205 CLO 3- 100% SC205 CLO 4- 100% SC205 CLO 5- 100% SC205 CLO 6- 100% SC205 CLO 7- 100%	
	STEM -PLO3	IT105 CLO1 IT105 CLO2 IT105 CLO3 IT105 CLO4 IT105 CLO5	No STEM student was enrolled for the course during FALL 2015.
	STEM -PLO4	IT125 CLO1 Midterm Project: 88.00% of the students assessed performed at the proficiency level.  Final Project: 79.00% of the students assessed performed at the proficiency level.  IT125 CLO2 Midterm Project: 88.00% of the	94.5% of the students assessed performed at the proficiency level



		students assessed	
		performed at the	
		proficiency level.	
		Final Project: 79.00% of the students assessed	
		performed at the proficiency level	
		IT125 CLO3 Midterm Project: 88.00% of the students assessed performed at the proficiency level.	
		Final Project: 79.00% of the students assessed performed at the proficiency level	
		IT125 CLO3 Midterm Project: 88.00% of the students assessed	
		performed at the proficiency level.	
		Final Project: 79.00% of the	
		students assessed	
		performed at the proficiency level	
		IT125 CLO3 Midterm Project: 88.00% of the students assessed performed at the proficiency level.	
		Final Project: 79.00% of the students assessed performed at the proficiency level	

	STEM -PLO5	MA121 CLO1 96.5% MA121 CLO2 86.5% MA121 CLO3 100% MA121 CLO4 96.5% MA121 CLO5 90% MA121 CLO6 89.5% MA121 CLO7 79.5%  MA221 CLO1 100% MA221 CLO2 100% MA221 CLO3 100% MA221 CLO4 100% MA221 CLO5 100% MA221 CLO6 No data collected (did not cover these topics)	95.6% of the students assessed performed at the proficiency level
	STEM -PLO6	MA111 CLO1 100% MA111 CLO2 16% MA111 CLO3 66% MA111 CLO4 66% MA111 CLO5 66%  MA221 CLO1 100% MA221 CLO2 100% MA221 CLO3 100% MA221 CLO4 100% MA221 CLO5 100%	81.4% of the students assessed performed at the proficiency level



		MA221 CLO6 No data collected (did not cover these topics)	
FALL 2017	STEM PLO-1	SC161 CLO 1 42.86% SC161 CLO 2 100.00% SC161 CLO 3 33.33%	58.73% of the students assessed performed at the proficiency level
	STEM -PLO2	SC161 CLO 1 42.86% SC161 CLO 2 100.00% SC161 CLO 3 33.33%	58.73% of the students assessed performed at the proficiency level
	STEM -PLO3	IT105 CLO1 IT105 CLO2 IT105 CLO3 IT105 CLO4 IT105 CLO5	No STEM student was enrolled for the course during Fall 2017.
	STEM -PLO4	IT105 CLO1 IT105 CLO2 IT105 CLO3 IT105 CLO4 IT105 CLO5  IT110 CLO1 Midterm Project: 100.00% of the students assessed performed at the proficiency level.  Final Project: 100.00% of the students assessed performed at the proficiency level.  IT110 CLO2 Midterm Project: 83.33% of the students assessed performed at the proficiency level.	No STEM student was enrolled for the course during Fall 2017.  71.3% of the students assessed performed at the proficiency level

		<p>Final Project: 40.00% of the students assessed performed at the proficiency level.</p> <p>IT110 CLO3 Midterm Project: 83.33% of the students assessed performed at the proficiency level.</p> <p>Final Project: 40.00% of the students assessed performed at the proficiency level</p> <p>IT110 CLO4 Midterm Project: 83.33% of the students assessed performed at the proficiency level.</p> <p>Final Project: 40.00% of the students assessed performed at the proficiency level</p>	
	STEM -PLO5	<p>MA112 CLO1-75%</p> <p>MA112 CLO2-100%</p> <p>MA112 CLO3-100%</p> <p>MA112 CLO4-75%</p> <p>MA112 CLO5-100%</p>	88.35% of the students assessed performed at the proficiency level
	STEM -PLO6	<p>MA111 CLO1-93.33%</p> <p>MA111 CLO2-100%</p> <p>MA111 CLO3-73.33%</p> <p>MA111 CLO4-86.67%</p>	

		MA111 CLO5- 80%	
SPRING 2018	STEM -PLO1	SC160 CLO1 62.5% SC160 CLO2 62.5% SC160 CLO3 100.00%	75% of the students assessed performed at the proficiency level
	STEM -PLO2	SC160 CLO1 62.5% SC160 CLO2 62.5% SC160 CLO3 100.00%  SC205 CLO 1- 100% SC205 CLO 2- 100% SC205 CLO 3- 100% SC205 CLO 4- 100% SC205 CLO 5- 100% SC205 CLO 6- 100% SC205 CLO 7- 100%	87.5% of the students assessed performed at the proficiency level
	STEM -PLO3	IT105 CLO1 100% IT105 CLO2 76% IT105 CLO3 96% IT105 CLO4 100% IT105 CLO5 100%	94.4% of the students assessed performed at the proficiency level
	STEM -PLO4	IT125 CLO1 Midterm Project: 100.00% of the students assessed performed at the proficiency level.	87.5% of the students assessed performed at the proficiency level