CAL MARITIME

ANNUAL PROGRAM REPORT

Academic Program	Engineering Technology (MET and FET)
Reporting for Academic Year	2019-2020
Department Chair	Dinesh Pinisetty
Date Submitted	12/1/2020

1. SELF-STUDY (about 1 page)

A. Five-year Review Planning Goals

The Engineering Technology Accreditation Commission (ETAC) of Accreditation Board of Engineering and Technology (ABET) has evaluated the Facilities Engineering Technology (FET) and Marine Engineering Technology (MET) programs and submitted their final audit report in August 2020.

The ABET report identified the following strengths for both the programs:

FET Program

The equipment and training facilities available for teaching are outstanding. Students often use full-sized equipment, full-sized simulators, and engaging laboratories that enable them to choose their careers as well as improve their learning experiences and satisfaction."

MET Program

1. California State University Maritime Academy marine engineering technology curriculum includes a training model of three 60-day shipboard experiences consisting of two trips aboard its superb training vessel coupled with a sailing experience aboard a commercial vessel. The cultural experience and professional skills gained from these experiences are extraordinary and a major cornerstone of the strategic vision of global engagement, applied technology, and leadership development.
2. The equipment and training facilities available for teaching are outstanding. Students use full-sized equipment, full- sized simulators, and engaging laboratories that enable them to choose their careers as well as improve their learning experiences and satisfaction.

No Deficiencies, Weaknesses, or Concerns have been identified for both MET and FET programs.

B. Five-year Review Planning Goals Progress

The Student Learning Outcomes (SLOs) for both the program FET and MET programs are listed in section 2.A. Each program has 10 SLOs (a-j) and the following table lists the plan for the next six years before the next ABET accreditation.

Table 1. The five-year plan to review Student Learning Outcomes (SLOs)

SLO	**2019-2020**		**2020-2021**		**2021-2022**		**2022-2023**		**2023-2024**		**2024-2025**	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
a		**X**	**X**	**X**				**X**			**X**	
b			**X**		**X**		**X**				**X**	
c			**X**				**X**	**X**	**X**	**X**	**X**	**X**
d		**X**				**X**			**X**	**X**		
e			**X**	**X**	**X**	**X**	**X**		**X**	**X**	**X**	
f		**X**		**X**		**X**						**X**
g		**X**		**X**		**X**		**X**		**X**		**X**
h			**X**	**X**		**X**			**X**			**X**
i			**X**	**X**	**X**	**X**	**X**				**X**	**X**
j				**X**	**X**				**X**	**X**		**X**

Note: In Spring 2020 the SLOs were not assessed at this time due to the pivot of face-to-face (F2F) course delivery into online modality for certain classes. But we will consider assessing the feedback that was received for the cadets who participated in the Commercial Cruise and Internships/Co-Ops.

C. Program Changes and Needs

Program Changes: There are no program changes currently.

Program Needs: It has to be noted that in just one-year (**2019 to 2020**) the number of licensed faculty has reduced by ***two (2) Tenure Track (TT) faculty (Mike Hoffman {moved to another job}, Mike Andrews {retired}) and one (1) FERP faculty (Robert Jackson {ended the FERP})***. This is significant drop causing reduction in licensed faculty in addition to all the constraints that we have in place to teach licensing classes. Also, currently the full-time lecturer who is teaching licensing classes is above the age of 66 and he is expected to retire in the next two years. The one FERP faculty who is teaching licensing class will end the FERP program in 2.5 yrs.

2. SUMMARY OF ASSESSMENT (about 1 page)

A. Program Student Learning Outcomes

Facilities Engineering Technology (FET) Program	Marine Engineering Technology (MET) Program
a. Mastery of the knowledge, techniques, skills and modern tools of facilities engineering technology. b. An ability to gain knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly- defined engineering problems associated with facilities equipment, systems and vehicles. c. An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes and design. d. An ability to function effectively as a member or leader on a technical team. e. An ability to design systems, components, or processes meeting specific needs for broadly defined engineering problems appropriate to facilities equipment, systems and structures. f. An ability to apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and an ability to identify and use appropriate technical literature. g. Ability to understand and apply concepts of professional, ethical and social responsibilities. h. Respect for diversity and a knowledge of contemporary professional, societal and global issues. i. Ability to engage in the operation, maintenance, analysis and management of modern facilities including power plants, HVAC and energy conservation. j. Commitment to quality, safety, timeliness and continuous improvement.	a. Mastery of the knowledge, techniques, skills and modern tools of marine engineering technology. b. An ability to gain knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly- defined engineering problems associated with marine equipment, systems and vehicles. c. An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes and design. d. An ability to function effectively as a member or leader on a technical team. e. An ability to design systems, components, or processes meeting specific needs for broadly defined engineering problems appropriate to marine equipment, systems and vehicles. f. An ability to apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and an ability to identify and use appropriate technical literature. g. Ability to understand and apply concepts of professional, ethical and social responsibilities. h. Respect for diversity and a knowledge of contemporary professional, societal and global issues. i. Ability to receive a USCG License as a Third Assistant Engineer. j. Ability to engage in the operation, maintenance, analysis and management of modern marine power plants, associated equipment and systems.

B. Program Student Learning Outcome(s) Assessed

As listed in the Table 1, the SLOs that are a part of the plan to be assessed for the academic year (AY) 2019-2020 are a, d, f, and g.

C. Summary of Assessment Process

For each SLO various courses are identified in the programs and the assessment is performed by the instructor at the course level. At this time the assessment if performed in the individual courses. After the assessment data is collected for Spring 2020, a thorough analysis will be performed for the academic year 2019-2020 as a part of continuous improvement process in the programs.

D. Summary of Assessment Results

SLO data for each course is collected by a course instructor, typically by a faculty member who teaches the respective course most frequently or by a faculty who has been identified as the 'course coordinator' for a course. Each coordinator identifies the exam question, assignment, or project that best reflects achievement of each targeted SLO for that class. SLO assessment scores reflect the degree of learning on a course concept and, therefore, these scores are different and separate from the overall grade assigned for a student in the source for assessment.

Assessment Metric: Typically for lab reports and projects an appropriate scoring rubric is used. For heavy problems-based courses, a homework or exam questions are assessed based on the weightage of that source.

Target: The expected level of attainment for each SLO is typically, a minimum 70% of the students must receive 70% average for all direct measures.

At this time the assessment data is available only at the course level and has not been analyzed. Hence, a summary of the overall SLOs assessment results cannot be provided for this report.

3. STATISTICAL DATA

Statistical data is meant to enhance and support program development decisions. These statistics will be attached to the Annual Report of the Program Unit. This statistical document will contain the same data as required for the five-year review including student demographics of majors, faculty and academic allocation, and course data.

Program	Fall 2019
A. Students	
1. Undergraduate	169
2. Postbaccalaureate	-
B. Degrees Awarded	
C. Faculty	
Tenured/Track Headcount	
1. Full-Time	12
2. Part-Time	2 (FERP)
3a. Total Tenure Track	12
3b. % Tenure Track	54.5
Lecturer Headcount	
4. Full-Time	3
5. Part-Time	5
6a. Total Non-Tenure Track	8
6b. % Non-Tenure Track	45.5
7. Grand Total All Faculty	22
Instructional FTE Faculty (FTEF)	
8. Tenured/Track FTEF	
9. Lecturer FTEF	
10. Total Instructional FTEF	
Lecturer Teaching	
11a. FTES Taught by Tenure/Track	
11b. % of FTES Taught by Tenure/Track	
12a. FTES Taught by Lecturer	
12b. % of FTES Taught by Lecturer	
13. Total FTES taught	
14. Total SCU taught	
D. Student Faculty Ratios	
1. Tenured/Track	
2. Lecturer	
3. SFR By Level (All Faculty)	
4. Lower Division	
5. Upper Division	
E. Section Size	
1. Number of Sections Offered	105
2. Average Section Size	
3. Average Section Size for LD	
4. Average Section Size for UD	
6. LD Section taught by Tenured/Track	41
7. UD Section taught by Tenured/Track	25
8. GD Section taught by Tenured/Track	-
9. LD Section taught by Lecturer	30
10. UD Section taught by Lecture	9