Majmaah University

Annual Program Report (APR)

College:	College of Applied Medical Sciences
Academic Department:	Medical Equipment Technology
Program:	Bachelor of Medical Equipment Technology
Report Approval Date:	1439-1440H - **26 / 1 / 1441 H meeting number 3**

Muharram 1437 H

Annual Program Report

1. Institution:	**Majmaah University**	**Date of Report:**	**25/1/1441H**

2. College / Department: College of Applied Medical Sciences (CAMS) / Medical Equipment Technology Department (MET)

3. Dean: Dr. Mazen Alqahtani, PhD

4. List all branches / locations offering this program:

Campus Branch/Location	Approval by	Date
Main Campus		
Main Campus	**University council**	**7/3/1435 H**

A. Program Identification and General Information

1. Program title:	Bachelor of Medical Equipment Technology	**Code:**	MET

Name and position of person completing the APR

Dr. Mohamed Yacin Sikkandar, Head of MET Quality Committee
Email: m.sikkandar@mu.edu.sa
Phone: 0164042840

Academic year to which this report applies.

1439-1440 H – 2018-2019 G

B. Statistical Information

1. Number of students who started the program in the year concerned:	8

2. (a) Number of students who completed the program in the year concerned: 16

    Completed the final year of the program: 16

    Completed major tracks within the program (if applicable*)* ***NA***

2. (b) Completed an intermediate award specified as an early exit point (*if any*) ***NA***

3. Apparent completion rate:

(a) Percentage of students who completed the program, (Number shown in 2 (a) as a percentage of the number that started the program in that student intake.) • Number shown in 2 (a) = 16 • The number that started the program in that student intake = 26	84.2%
(b) Percentage of students who completed an intermediate award (if any)	NA

Comment on any special or unusual factors that might have affected the apparent completion rates

(e.g. Transfers between intermediate and full program, transfers to or from other programs).

1- Absent of the whole control of student registration system from the academic advisor, some student delete or delay some courses without any permission from academic advisor.

2- Weakness of student level who registered from preparatory year.

3- Increase the absent percentage.

4. Enrollment Management and Cohort Analysis (Table 1)

Cohort Analysis refers to tracking a specific group of students who begin a given year in a program and following them until they graduate (How many students actually start a program and stay in the program until completion).

A cohort here refers to the total number of students enrolled in the program at the beginning of each academic year, immediately after the preparatory year. No new students may be added or transfer into a given cohort. Any students that withdraw from a cohort may not return or be added again to the cohort.

Cohort Analysis (Illustration): **Table 1 and 2** provides complete tracking information for the most recent cohort to complete the program, beginning with their first year and tracking them until graduation (students that withdraw are subtracted and no new students are added). Update the years as needed.

Table: 1 Student Category	1435-36H 2014-15G	1436-37H 2015-16G	1437-38H 2016-17G	1438-39H 2017-18G
1. Total cohort enrollment	19	24	16	19
2. Retained till year end	19	26	16	19
3. Withdrawn	0	0	0	0
4. Cohort graduated successfully	13	0	0	0
5.Total graduated successfully	16	0	0	0

Enrollment Management and Cohort Analysis (*Table 2*)

Enrollment (1435-1436) (2014-2015)

Student Category	*PYP 2014 /2015	Years			
		3 Years Ago 2015 /2016	2 Years Ago 2016 /2017	1 Years Ago 2017 /2018	Current year 2018 /2019
Total cohort enrollment	*Preparatory Year*	19	19	19	14
Retained till year end		19	19	19	14
Withdrawn		0	0	0	0
Cohort Graduated successfully		0	0	5	13
Total Graduated successfully		0	0	0	16

Out of the 19 students who joined MET department in 2014-15, 18 have successfully graduated in 2018-19 with a success rate of 92.8. %. The

Year	2015 /2016	2016 /2017	2017 /2018	2018 /2019
Progression rate	100%	100%	100%	92.8%

progression rate of the cohort 2014-2015is as follows:

Enrollment Management and Cohort Analysis (*Table 3*)
Enrollment (1436-1437) (2015-2016)

Student Category	Years				
	*PYP 2014 /2015	3 Years Ago 2015 /2016	2 Years Ago 2016 /2017	1 Years Ago 2017 /2018	Current year 2018 /2019
Total cohort enrollment	NA	*Preparatory Year*	24	23	23
Retained till year end			23	23	23
Withdrawn			1	0	0
Cohort Graduated successfully			0	0	0
Total Graduated successfully					

5. Destination of graduates as shown in survey of graduating students *(Include this information in years in which a survey of employment outcomes for graduating students is conducted).*

Date of Survey | 15 / 01 / 1441 H

| Number Surveyed | 11 | Number Responded | 10 | Response Rate % | **95%** |

Destination	Not Available for Employment		Available for Employment		
	Further Study	**Other Reasons**	**Employed in Subject Field**	**Other Employment**	**Unemployed**
Number	-	-	3	0	7
Percent of Respondents	--	--	33.33%	0	66.33%

An employment survey was conducted in the month of September 2019, for the Medical Equipment Technology students who have completed their academic program including the compulsory hospital internship.

Analysis: List the <u>strengths</u> and <u>recommendations</u>

The Graduation survey was conducted among the MET students who have completed their academic program including the compulsory clinical internship. The target group were those who graduated during the academic year 1437-1438H. The students were invited to complete the survey consisting of basic information and the details about their current scenario in job market. The students were asked to mention their date of completion and were requested to choose whether they are employed, unemployed or progressed to higher education. The number of students who responded for the survey which was conducted using the different communication methods were 10 students out of 11 graduated students. The analysis of the available for employment is done for 10 students who did response with the all the required information.

If employed, then they are requested to specify -Job title, Name of the institution where they are working and their received remuneration. The students who are not available for employment were requested to mention the reasons for the same. The survey was completed through the e-mails, wats app communication, telephonic conversation and through direct interview of students who visit our college. Among 11 graduates 10 (95%) had responded to our communication. Graduates who had gone for higher studies are considered as Not Available for Employment.

Analysis: List the <u>strengths</u> and <u>recommendations</u>

Strengths:

- In the obtained data it is noted that around 33.33 % graduates are employed.
- The percentage of graduates who have gone for employment in another field is nil, it is around 0%.
- There are graduates who have joined some advance courses related to new techniques to help them develop in the field.
- Most of the graduates are planning for higher studies as they are more interested and inclined towards academics.
- The reported graduates who are employed in Medical Equipment field are in government hospitals and reputed private companies.
- They reported an average of 8000 Saudi riyals as their income in government sector.

Weakness:

- The percentage of unemployed graduates are 66.33% which is a considerable range to analyze the reasons.
- The percentage of employed graduates would have been more as some students could not involve themselves in the jobs due to personal family reasons.

Recommendations:

- A campus interview and selection procedure should be encouraged by the university with collaboration with the hospitals and private companies.
- The graduation survey methods should be more systematized.
- The communication systems through university portal to reach the alumni should be encouraged.
- The college alumni organization should be made proactive.
- Continuing professional development has to be arranged to bring the alumni students back to college to share their experiences.

C. Program Context

1 - Significant changes within the institution affecting the program *(if any)* during the past year.

- Majmaah University has successfully obtained NCAAA Accreditation which paves way for good Quality assurance.
- The college has introduced Blue Print for MCQ and short questions in the final exams.
- The college has organized many workshops on NCAAA Quality related processes.
- The college has organized many Research seminars.
- The university has decided to revise the curriculum for our program.
- CAMS campus has been shifted to new building because of packing and vacating the faculty rooms and labs.

Implications for the program

- Quality assurance and quality accreditation has improved the faculties' teaching and assessment, and practical training.
- Blue Print for MCQ and short questions in the final exams has improved our evaluation process.
- Medical Equipment Technology Program has improved its NCAAA Quality related processes and its assessment methods.
- Faculty research publications has increased.
- MET Academic Affairs Committee is working on new Curriculum.
- Moving CAMS campus to new building may take two/three months to re-establish labs, faculty rooms and arrange documents. There is a possibility of documents missing.
-

2 - Significant changes external to the institution affecting the program *(if any)* during the past year.

N.A

Implications for the program

N.A…

D. Course Reports Information Summary

- **1. Course Reports Results. Describe and analyze how the individual NCAAA "Course Reports" are utilized to assess the program and to ensure ongoing quality assurance**
- *(eg. Analysis of course completion rates, grade distributions, and trend studies.)*
-
- **(a.) Describe how the individual course reports are used to evaluate the program.**

  - The Course instructor after completing the course reports, discusses with Course Coordinator, send the recommendations to department council regarding revision of the module learning outcome, revision of the assessment mode, modification of course content, requirements for special tools/equipment for implementing the module objectives or any other difficulty faced during that semester.

  - All Course Instructors may be asked to fill Consolidated Course Information (CCI) sheets with their recommendations and requirements for further course improvement.

  - CCI sheets will be collated by Head of Quality Committee in the department and forward it to Head of the department for discussion in Department Council.

  - CCI reports and recommendations will be discussed in the Department Council to ensure ongoing quality assurance improves the process.

  - The feedback is also obtained from students during the Final exams to receive the opinions about the Question papers after the completion of respective exams.

(b.) Analyze the completion rates, grade distributions, and trends to determine strengths and recommendations for improvement.

(i.) Completion rate analysis:

Graduation Rate (GR) and **C**ourse **C**ompletion **R**ate (CCR) were analyzed using below mentioned formulas to measure as important indicators of educational quality standards at the Medical Equipment Technology department.

A. Graduation Rate

The formula for calculating the graduation rate is given below; **GR (%) =** [total cohort registration] ÷ [total cohort graduating in the minimum duration]
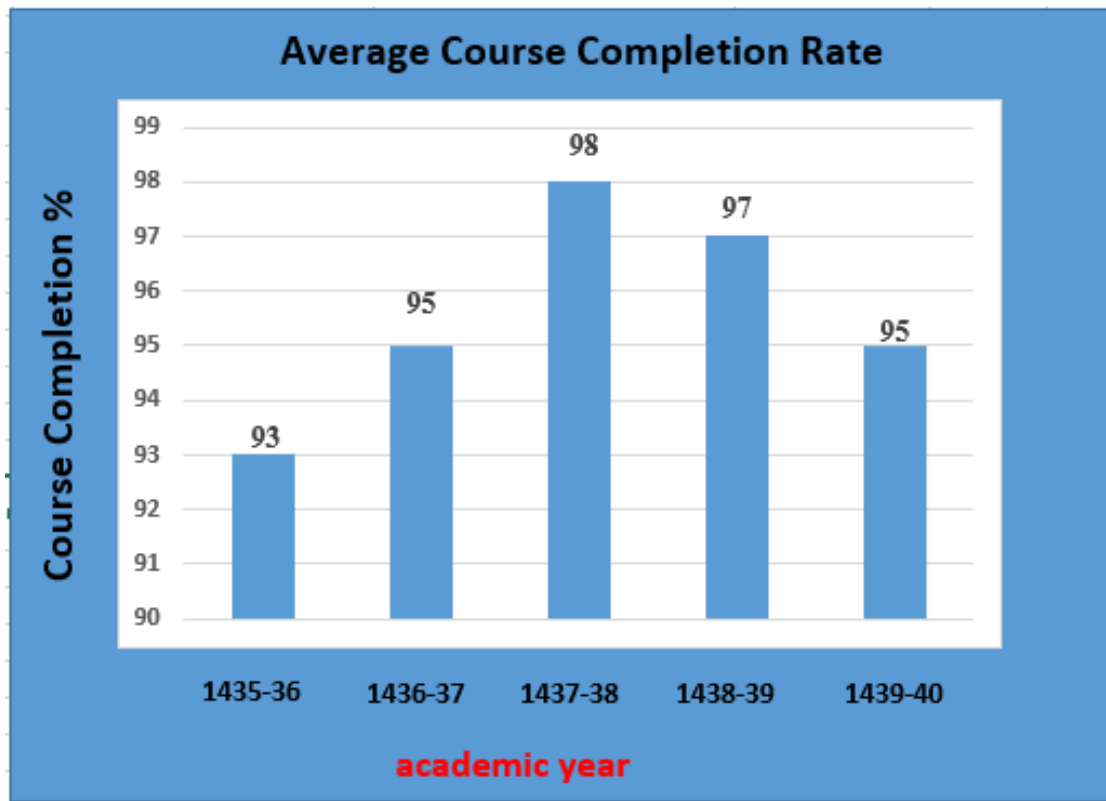
Figure 1 Average completion rate

The assessment committee works out for assessment of achievement of all course objectives and in turn, program objectives,

Course objective are considered as "achieved" if students average grades in questions for that objective are 70% or above as show in figure 1 the completion rate for 1439-1440H was 95%.

Program objectives are considered as "achieved" if objectives of different courses leading to this program objective are achieved

The course completion rate in 1437-38 was 98% shown in figure 1.

The course completion rate in 1438-39 was 97% shown in figure 1.

The course completion rate in 1439-40 was 95% shown in figure 1

B. Course Completion Rate

Passing percentage (Pass%) was calculated by the following formula;

Pass%= [total no of student appeared for exam] ÷ [total number of student passed]

Table 6. Course Completion Rate during 1439-40 H

Semester	Level	course	Number Starting	Number Completing and Passing	Percent Completing and Passing
391	3	232 MET	19	18	94.74%
		233 MET	19	16	84.21%
		234 MET	20	17	85.00%
		235 MET	19	15	78.95%
		237 MET	24	21	87.50%
		Average	**20.2**	**17.4**	**86.14%**
	5	351 MET	13	13	100.00%
		352 MET	13	13	100.00%
		353 MET	16	15	93.75%
		354 MET	13	13	100.00%
		355 MET	15	14	93.33%
		356 MET	17	17	100.00%
		Average	**14.5**	**14.17**	**97.70%**
	7	471 MET	24	22	91.67%
		472 MET	23	22	95.65%
		473 MET	22	22	100.00%
		474 MET	22	22	100.00%
		Average	**23**	**22**	**96.70%**
	8	481 MET	1	1	100.00%
		482 MET	4	3	75.00%
		483 MET	4	4	100.00%
		484 MET	5	5	100.00%

		486 MET	5	5	100.00%
		Average	**13.85**	**13.39**	**96.80%**
		591 MET	14	14	100.00%
		592 MET	15	14	93.33%
		593 MET	10	10	100.00%
		594 MET	15	15	100.00%
		596 MET	13	13	100.00%
		597 MET	9	9	100.00%
		Average	**9.1**	**8.87**	**97.76%**
392	3	232 MET	10	9	90.00%
		233 MET	11	11	100.00%
		234 MET	10	7	70.00%
		235 MET	9	7	77.78%
		237 MET	10	9	90.00%
		Average	**14**	**10**	**86.00%**
	4	MET 241	18	17	94.44%
		MET 242	18	18	100.00%
		MET 243	18	17	94.44%
		MET 244	18	17	94.44%
		MET 245	19	19	100.00%
		MET 246	22	21	95.45%
		Average	**19**	**18**	**96.5%**
	6	MET 361	15	15	100.0%
		MET 362	13	13	100.0%

		MET 363	13	13	100.0%
		MET 364	14	13	92.9%
		MET 365	14	13	92.9%
	Average		13.8	13.4	97.1%
	8	MET 481	22	22	100%
		MET 482	23	23	100%
		MET 483	22	22	100%
		MET 484	22	22	100%
		MET 486	21	21	100%
	Average		22	22	100%
	9	MET 591	1	1	100%
		MET 592	1	1	100%
		MET 593	1	1	100%
		MET 594	1	1	100%
		MET 596	5	5	100%
	Average		1.8	1.8	100%

Analysis:

- Table 6 shows the completion rate of each course during the academic year 1439-1440 H. There are 26 and 26 courses offered in Semester 391 and 392 respectively which amount to 52 courses cumulatively.
- In level 3, the completion rate has decreased to 86 % which is due to the fall in course completion rate of MET 234 – 70%.
- MET 233, out of 19 students registered, 1 was deprived, 2 were withdrawn and 0 students got failed and only 16 students completed the course.
- MET 235, out of 19 students registered, 1 was deprived, 1 were withdrawn and 2 students got failed and only 15 students completed the course.
- MET 482, out of 4 students registered, 1 were deprived.

Strengths:

- About 60 % of program courses had 100% completion rate.
- Level 9 students' course completion rate was 100% in semester 391 and 100 % semester 392.

Recommendations for improvement:

- We did not meet the performance criteria of having 50% of program courses had 100% completion rate. We adjusted the performance criteria down from the prior year 100% to take into consideration the number of students who withdrew or were not academically engaged during the semester. The core group responsible for delivering the courses needs to address ways to improve the completion rate.
- Determine the reasons for withdrawn.

Percentage of Grade Distribution-S1, 1439-40
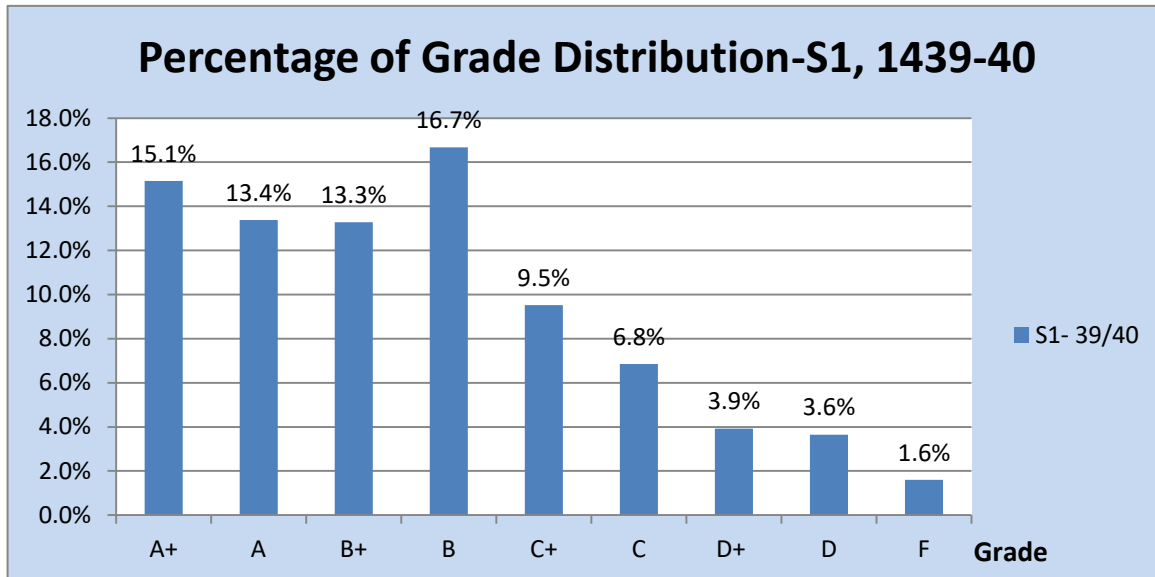
Figure 2. Grade distribution for S1, 1439-1440 H

First semester 1439-40:

  o   Students have 16.7 % grade B. 15.1% have grade A+ and 1.6% have grade F.

Strengths:

- Figure 2 shows accumulative percentage of the student's grad distribution the 15.1% of students have grade A+ or more through the program courses, 13.4 % have grade A or less and 1.6% have grade F

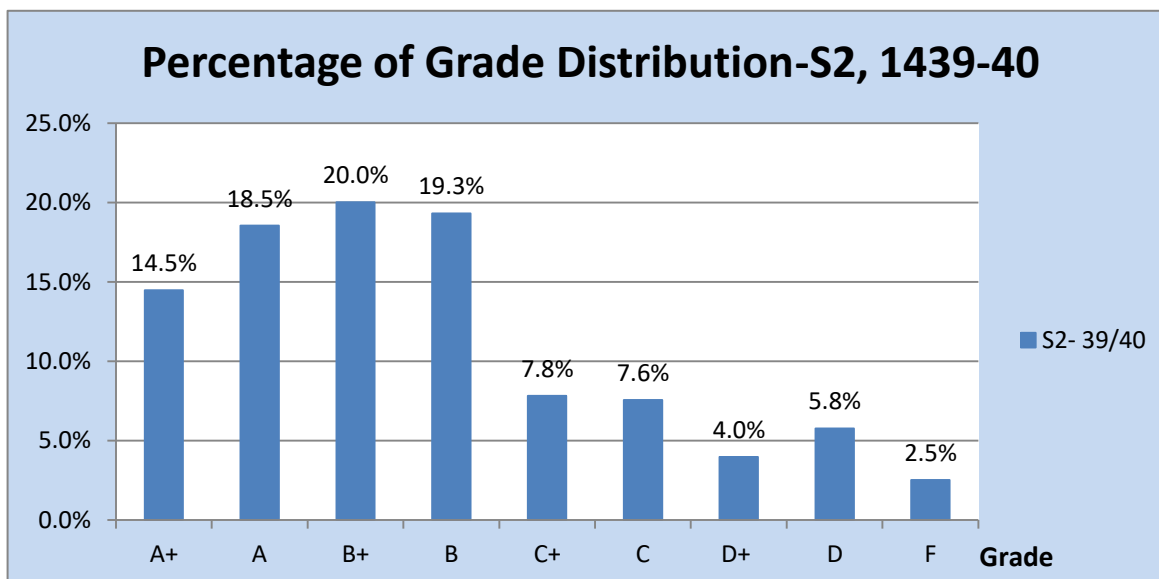## Percentage of Grade Distribution-S2, 1439-40

Figure 3. Grade distribution for 1439-1440 H , S2

Second Semester 1439-40:
  - Students have 20.00 % grade B+. 14.5 have grade A+ and 2.5% have grade F.

Strengths:
- Figure 3 shows accumulative percentage of the student's grad distribution the 14.5% of students have grade A+ or more through the program courses, 18.5 % have grade A or less and 2.5% have grade F

Recommendations for improvement:
- • Figure 3 shows accumulative percentage of the student's grad distribution the peak of the curve shifted toward the left and it should be normal distribution, the team of the quality responsible to make the analysis per course to determine the which courses affecting on grade distribution.

(iii.) Trend analysis *(a study of the differences, changes, or developments over time; normally several years)*:
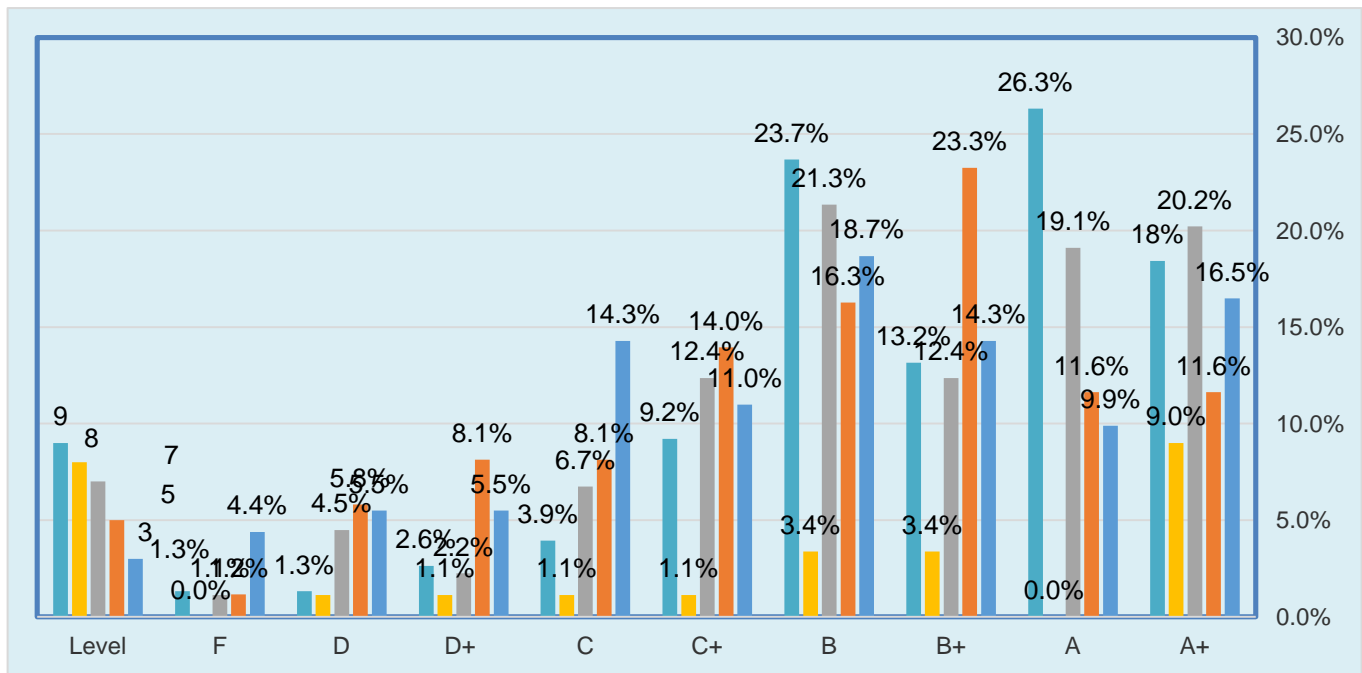

Figure 4. Grade distribution for First semester 1439-1440 H level wise
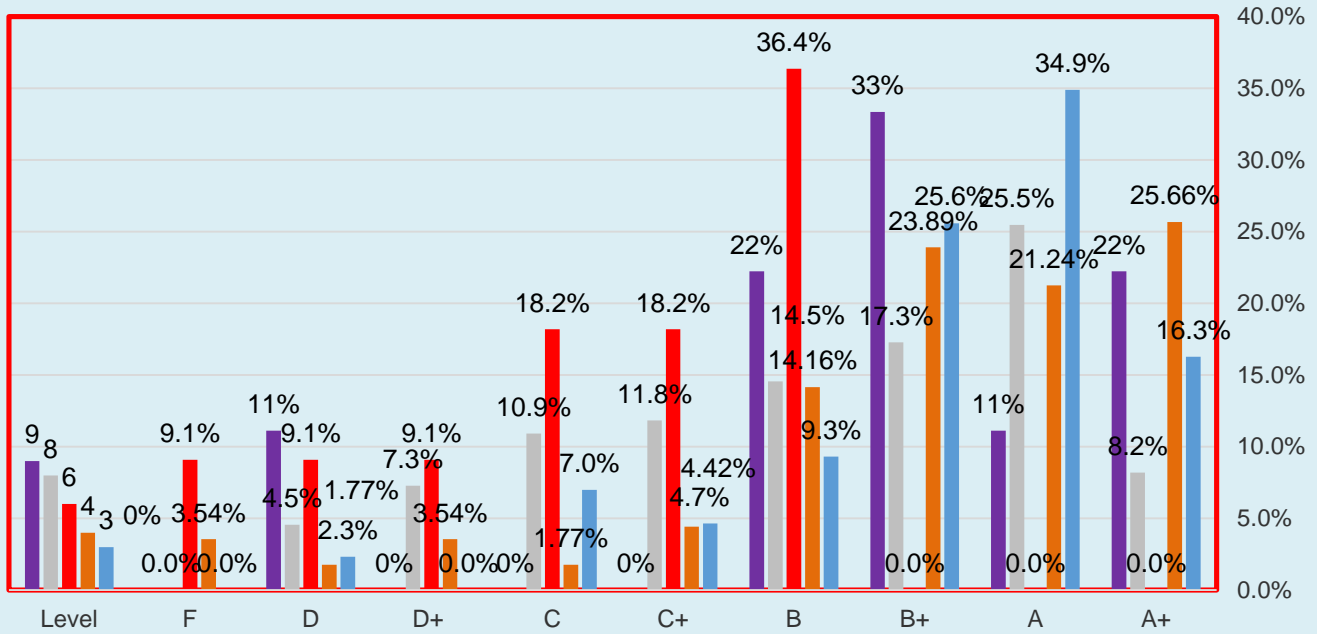
Figure 5. Grade distribution for Second semester 1439-1440 H level wise
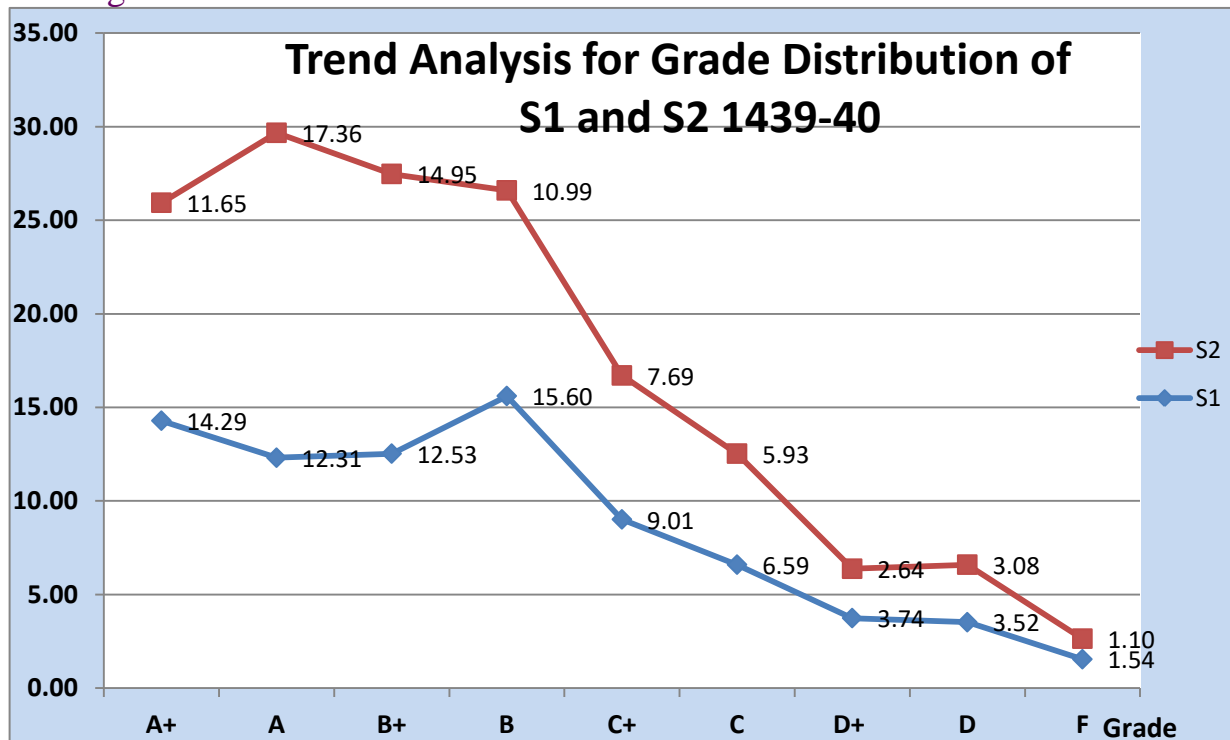
Figure 6. Trend analysis for grade distribution of S1 and S2 1439-40H
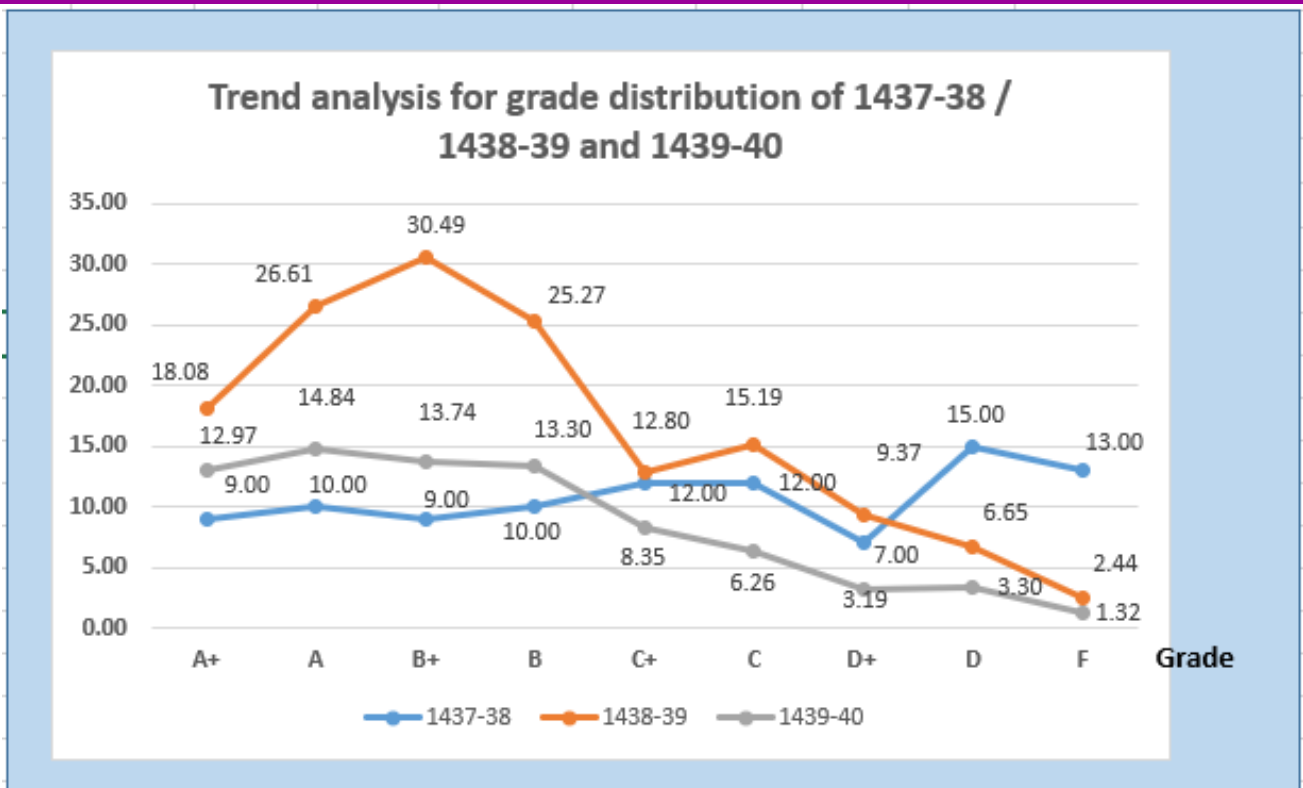
Figure 7. Trend analysis for grade distribution of 1437-38/ 1438-39 and 1439-40

Analysis:

- Figure 7 shows increasing in percentage of the students who have grade from A^+ or more with respect to behavior of the 2 years ago about 20 %

Strengths:

- Improvement in the grade distribution of the student during the year
- Decreasing in the percentage of falls students

Recommendations for improvement:

The curve still not normal distribution the peak of the curve shifted toward the left, the team of the quality responsible to make the analysis per course to determine the which courses affecting on grade distribution.

2. Analysis of Significant Results or Variations *(25 % or more).*

List any courses where completion rates, grade distribution, or trends are significantly skewed, high or low results, or departed from policies on grades or assessments. For each course indicate what was done to investigate, the reason for the significant result, and what action has been taken.

The result variation was calculated by difference between the course completion rates of individual year.

Table 7: Significant Result of Variation of course completion 1439-40H

S.No.	Course Code	No. Of Students	Variation of Completion rate
		Variation of course completion 1439-40	
1	MET 232	29	12.60%
2	MET 233	30	12.07%
3	MET 234	30	-17.14%
4	MET 235	28	-15.41%
5	MET 237	34	5.36%
6	MET 241	18	-2.02%
7	MET 242	18	3.54%
8	MET 243	18	-2.02%
9	MET 244	18	-2.02%
10	MET 245	19	3.54%
11	MET 246	22	-1.01%
12	MET 351	13	2.30%
13	MET 352	13	2.30%
14	MET 353	16	-3.95%
15	MET 354	13	2.30%
16	MET 355	15	-4.37%
17	MET 356	17	2.30%
18	MET 361	15	2.9%
19	MET 362	13	2.9%
20	MET 363	13	2.9%
21	MET 364	14	-4.2%
22	MET 365	14	-4.2%
23	MET 471	24	-6.03%
24	MET 472	23	-2.05%
25	MET 473	22	2.30%
26	MET 474	22	2.30%
27	MET 481	23	2.24%
28	MET 482	27	-22.76%
29	MET 483	26	2.24%
30	MET 484	27	2.24%
31	MET 486	26	2.24%
32	MET 591	15	2.06%
33	MET 592	16	-4.19%
34	MET 593	11	2.06%
35	MET 594	16	2.06%
36	MET 596	14	2.06%
37	MET 597	14	2.06%

Table 8: Significant Individual Course Grading Variations of 39-40 compared with previous years

S.No.	Course Code	A (avg. of A+ & A)	B (avg. of B+ & B)	C (avg. of C+ & C)	D (avg. of D+ & D)	F
		Grade Variation 1439-40H				
1	MET 232	21%	70%	5%	4%	0%
2	MET 233	48%	41%	11%	0%	0%
3	MET 234	29%	42%	13%	17%	0%
4	MET 235	28%	28%	24%	12%	8%
5	MET 237	25%	22%	41%	6%	6%
6	MET 241	61%	22%	6%	6%	6%
7	MET 242	67%	28%	6%	0%	0%
8	MET 243	33%	44%	11%	6%	6%
9	MET 244	28%	50%	11%	6%	6%
10	MET 245	58%	26%	5%	11%	0%
11	MET 246	36%	55%	0%	5%	5%
12	MET 351	23%	23%	31%	23%	0%
13	MET 352	8%	31%	31%	31%	0%
14	MET 353	31%	25%	25%	13%	6%
15	MET 354	15%	54%	23%	8%	0%
16	MET 355	7%	71%	14%	7%	0%
17	MET 356	47%	35%	12%	6%	0%
18	MET 361	7%	13%	53%	27%	0%
19	MET 362	31%	23%	46%	0%	0%
20	MET 363	62%	23%	8%	8%	0%
21	MET 364	31%	62%	8%	0%	0%
22	MET 365	0%	29%	64%	0%	7%
23	MET 471	43%	39%	4%	9%	4%
24	MET 472	5%	32%	55%	9%	0%
25	MET 473	32%	55%	14%	0%	0%
26	MET 474	77%	9%	5%	9%	0%
27	MET 481	52%	39%	9%	0%	0%
28	MET 482	46%	38%	12%	4%	0%
29	MET 483	8%	12%	46%	35%	0%
30	MET 484	15%	52%	26%	7%	0%
31	MET 486	58%	19%	12%	12%	0%
32	MET 591	87%	13%	0%	0%	0%
33	MET 592	25%	25%	31%	13%	6%
34	MET 593	9%	45%	27%	18%	0%
35	MET 594	44%	50%	6%	0%	0%
36	MET 596	44%	50%	6%	0%	0%
37	MET 597	44%	56%	0%	0%	0%

2.1 Grad distribution Variations

There is not a variation of more than 25% in all courses during this university year.

a. Course	
Significant result or variation	
Investigation undertaken	
Reason for significant result or variation	
Action taken (if required)	
b. Course	
Significant result or variation	
Investigation undertaken	
Reason for significant result or variation	
Action taken (if required)	
c. Course	
Significant result or variation	
Investigation undertaken	
Reason for significant result or variation	
Action taken (if required)	

3. Delivery of Planned Courses

(a) List any courses that were planned but not taught during this academic year and indicate the reason and what will need to be done if any compensating action is required.

Course title and code	Explanation	Compensating action if required
N.A	N.A	N.A

(b) Compensating Action Required for Units of Work Not Taught in Courses that were Offered. *(Complete only where units not taught were of sufficient importance to require some compensating action)*

a. Course	
Unit of work	
Reason	
Compensating action if required	
b. Course	
Unit of work	
Reason	
Compensating action if required	

E. Program Management and Administration

List difficulties *(if any)* encountered in management of the program	Impact of difficulties on the achievement of the program objectives	Proposed action to avoid future difficulties in Response
Lack of technicians	The Psychomotor outcome is not completely achieved	Employment technicians
Shortage in practical materials	The Psychomotor outcome is not completely achieved	Providing the required facilities for the practical work before the beginning of each semester
Shortage in hospital visits	Acquired training skills is not enough	Put strategy for training in hospitals
Some courses need to be merged because they are similar in some parts	Repeating for some topics	Change the curriculum

F. Summary Program Evaluation

1. Graduating Students Evaluation *(To be reported on in years when surveys are undertaken)*

Date of Survey: Conducted in the Mid of April 201**9**

April / 2019

Attach: survey reports Attached as annexure

Total students graduated (1438-1439) and completed Internship during 1439-1440 is 23. Out of 23 graduates, 15 responded

Destination	Not Available for Employment		Available for Employment		
	Further Study	Other Reasons	Employed in Subject Field	Other Employment	Unemployed
Number	-	-	8	3	6
Percent of Respondents	--	--	53.33%	20.00%	40.00%

All four parameters Help and Support for my Learning, Resources to Support my Learning, Evaluation of my Learning and Overall Evaluation of my Learning were relatively high (above 4.0) which has improved drastically from previous year assessment.

ANALYSIS OF STUDENT EVALUATION SURVEY FOR MEDICAL EQUIPMENT TECHNOLOGY PROGRAM FOR THE ACADEMIC YEAR 1439-1440 H — **Number of Student taking the Survey: 15**

Item No	Questionair Items	Number of students answered						Converted Scores into %					Average Ratings		
		Strogly Agree	Agree	True Sometimes	Disagree	Strongly Disagree		1	2	3	4	5	Total	Grade (Max 5)	Star Rating
I.	Help and Support for my Learning	8	5	2	0	0								4.4	****
1	Adequate academic and career counselling was available for me throughout the program.	8	6	1	0	0		40	24	3	0	0	67	4.5	****
2	The instructors were available for consultation and advice when I needed to speak with them.	8	5	2	0	0		40	20	6	0	0	66	4.4	****
3	The instructors in the program inspired me to do my best.	9	5	0	0	0		45	20	0	0	0	65	4.3	****
4	The instructors in the program gave me helpful feedback on my work.	8	4	3	0	0		40	16	9	0	0	65	4.3	****
5	The instructors in the program had thorough knowledge of the content of the courses they taught.	9	4	2	0	0		45	16	6	0	0	67	4.5	****
6	The instructors were enthusiastic about the program.	7	6	2	0	0		35	24	6	0	0	65	4.3	****
7	The instructors cared about the progress of their students.	9	4	2	0	0		45	16	6	0	0	67	4.5	****
II.	Resources to Support my Learning	8	5	1	0	0		41.429	21.143	3.8571	0.5714	0	67	4.5	****
8	Study materials in courses were up to date and useful.	8	5	2	0	0		40	20	6	0	0	66	4.4	****
9	Library resources were adequate and available when I needed them.	5	8	2	0	0		25	32	6	0	0	63	4.2	****
10	Classroom facilities (for lectures, laboratories, tutorials etc) were of good quality.	9	6	0	0	0		45	24	0	0	0	69	4.6	*****
11	Student computing facilities were sufficient for my needs.	9	4	2	0	0		45	16	6	0	0	67	4.5	****
12	Adequate facilities were available for extra curricular activities (including sporting and recreational activities).	9	4	1	2	0		45	16	3	4	0	68	4.5	*****
13	Adequate facilities were available for religious observances.	10	4	1	0	0		50	16	3	0	0	69	4.6	*****
14	Field experience programs (internship, practicum, cooperative training) were effective in developing my skills. (Omit this item if not applicable to your program)	8	6	1	0	0		40	24	3	0	0	67	4.5	****
III.	Evaluation of my Learning	8	5	2	1	0		39.286	18.286	6.8571	2.2857	0.1429	66.857	4.5	****
15	What I have learned in this program will be valuable for my future.	9	4	2	1	0		45	16	6	2	0	69	4.6	*****
16	The program has helped me to develop sufficient interest to want to continue to keep up to date with new developments in my field of study.	9	3	3	1	0		45	12	9	2	0	68	4.5	*****
17	The program has developed my ability to investigate and solve new problems.	7	6	3	1	0		35	24	9	2	0	70	4.7	*****
18	The program has improved my ability to work effectively in groups.	8	4	2	1	0		40	16	6	2	0	64	4.3	****
19	The program has improved my skills in communication.	7	6	1	2	0		35	24	3	4	0	66	4.4	****
20	The program has helped me to develop good basic skills in using technology to investigate issues and communicate results.	9	4	2	1	0		45	16	6	2	0	69	4.6	*****
21	I have developed the knowledge and skills required for my chosen career.	6	5	3	1	1		30	20	9	2	1	62	4.1	****
IV.	Evaluation of my Learning	9	5	1	0	0	0	45	20	3	0	0	68	4.5	*****
22	Overall I was satisfied with the quality of my learning experiences at this institution.	9	5	1	0	0		45	20	3	0	0	68	4.5	*****
	Vice Deanship of Quality & Skills Development			Strongly Disagree	1	Disagree	2	True Sometimes	3	Agree	4	Strogly Agree	5		

a. List most important recommendations for improvement, strengths and suggestions	Analysis (e.g. Assessment, action already taken, other considerations, strengths and recommendation for improvement.)
PES (Program Evaluation Survey) Strengths: 1. On an average, throughout the Program, a greater number of students appreciated the "adequate availability of resources in support of their learning" and "help and support for their learning". Weakness: 1. Students self-assessment of learning scored less when compared to other type of questions.	1. As this survey was collected from some of the graduate students only, the sample size for the survey is small when compared to total number of students at various levels in the department. Recommendation/Suggestions for Improvement: 1. The University, College and Department Council can gather feedback from students at various levels during the current year on a frequent basis to maintain and achieve effective program and student evaluation results during the current and future academic year. 2. Steps must be taken at department level to assess the level of student learning by

	improvement of the teaching strategies and assessment methods.
	<u>Action already taken:</u> Smart Board class room, modern E Podiums, Blackboard platform for study material and advanced learning resources added to the existing resources.

b. Changes proposed in the program *(if any)* in response to this analysis and feedback.

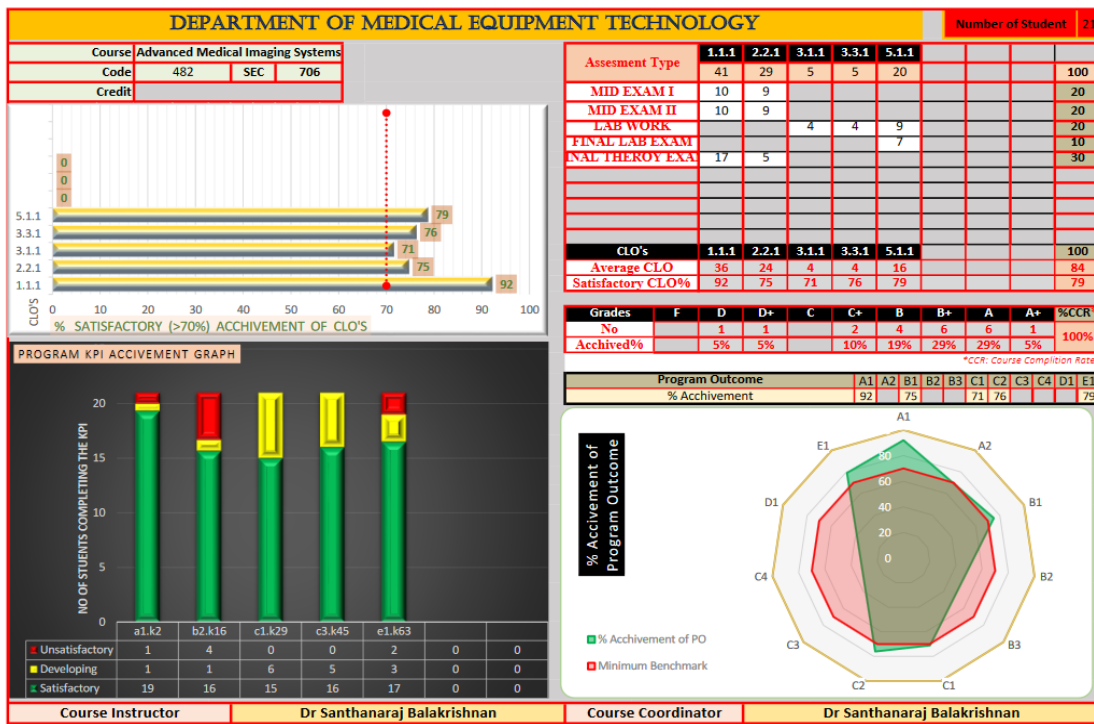- Procurement of training & research grade equipment's.
- Continuous inculcation of soft skills among students by organizing frequent for personality development programmes.
- Already Started Master program in Biomedical Engineering at MET Department.
- Students must be encouraged to participate in the co-curricular activities.

Encouraging students to attend co-curricular/extra activities in outside campuses.

2. Other Evaluation (*e.g. Evaluations by employers or other stakeholders, external review*)
Describe evaluation process: Academic Advising Survey and Direct assessment evaluation & KPIs achievement evaluation (Attached below)

ANALYSIS OF INTERNSHIP EVALUATION SURVEY FOR MEDICAL EQUIPMENT TECHNOLOGY PROGRAM
FOR THE ACADEMIC YEAR 1439-1440 H

Number of Student taking the Survey	6

Item No	Questionair Items	Number of students answered					Converted Scores into %					Average Ratings		
		Strogly Agree	Agree	True Sometimes	Disagree	Strongly Disagree	1	2	3	4	5	Total	Grade (Max 5)	Star Rating
I.	Advice and Support	3	2	1	0	0							4.4	****
1	The outcomes of internship were clear for me before starting	4	2	0	0	0	20	8	0	0	0	28	4.7	*****
2	This experience gave me a realistic preview of this career field.	3	3	0	0	0	15	12	0	0	0	27	4.5	*****
3	As a result of my internship, I have a better understanding of concepts, theories, and skills in my course of study.	3	3	0	0	0	15	12	0	0	0	27	4.5	*****
4	I had regular meetings with my academic advisor and received constructive, on-going feedback.	3	3	0	0	0	15	12	0	0	0	27	4.5	*****
5	I was provided levels of responsibility consistent with my ability and was given additional responsibility as my experience increased.	1	4	1	0	0	5	16	3	0	0	24	4.0	****
6	My onsite supervisor was available and accessible when I had questions/concerns.	5	0	1	0	0	25	0	3	0	0	28	4.7	*****
7	The work I performed was challenging and motivating.	1	4	1	0	0	5	16	3	0	0	24	4.0	****
8	I had a good working relationship with my co-workers.	3	2	1	0	0	15	8	3	0	0	26	4.3	****
9	There were ample opportunities for learning.	1	4	1	0	0	5	16	3	0	0	24	4.0	****
10	I feel that I am better prepared to enter the world of work after this experience.	5		1	0	0	25	0	3	0	0	28	4.7	*****
11	As a result of my internship training my ability to investigate and solve new and complex problems are increased	4	0	2	0	0	20	0	6	0	0	26	4.3	****
12	My ability to effectively communicate the results of investigations I undertake is improved because of my internship training.	3	3	0	0	0	15	12	0	0	0	27	4.5	*****
13	I have learnt to work effectively in group activities.	1	4	1	0	0	5	16	3	0	0	24	4.0	****
14	Overall I am satisfied with my experience as an Internee.	4	0	2	0	0	20	0	6	0	0	26	4.3	****
	Vice Deanship of Quality & Skills Development		Strongly Disagree	1	Disagree	True Sometimes	3	Agree	4	Strogly Agree	5			

DEPARTMENT OF MEDICAL EQUIPMENT TECHNOLOGY

		Number of Student	21

Course	Advanced Medical Imaging Systems
Code	482	SEC	706
Credit	

Assesment Type	1.1.1	2.2.1	3.1.1	3.3.1	5.1.1					
	41	29	5	5	20					100
MID EXAM I	10	9								20
MID EXAM II	10	9								20
LAB WORK			4	4	9					20
FINAL LAB EXAM					7					10
FINAL THEROY EXA	17	5								30

CLO's	1.1.1	2.2.1	3.1.1	3.3.1	5.1.1					100
Average CLO	36	24	4	4	16					84
Satisfactory CLO%	92	75	71	76	79					79

Grades	F	D	D+	C	C+	B	B+	A	A+	%CCR
No		1	1		2	4	6	6	1	100%
Acchived%		5%	5%		10%	19%	29%	29%	5%	

*CCR: Course Complition Rate

Program Outcome	A1	A2	B1	B2	B3	C1	C2	C3	C4	D1	E1
% Acchivement	92		75			71	76				79

Course Instructor	Dr Santhanaraj Balakrishnan	Course Coordinator	Dr Santhanaraj Balakrishnan

"DAS: Ver_05012018 " Quality Assurance Unit   Vicedeanship of Quality Skills Development   College of Applied Medical Science

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At the end of each semester all the courses taught in that semester is evaluated, through a DIRECT ASSESMENT PR developed by the Vice Deanship of Quality & Skill Development, CAMS. This process is being practiced at the CAM years and found to be efficient and effective in measuring the course learning outcomes as required by NCAAA. All t assessment and results are in an online direct assessment excel sheet. The automated sheets provided the course outco and other results, which are used for course and program evaluation.

a. List most important recommendations for improvement, strengths and suggestions for improvement.	e.g. Analysis of recommendations for improvement: *(Are recommendations valid and what action will be taken, action already taken, or other considerations?)*
1. There is a need to review the KPIs which are not used in MET courses. 2. These KPIs may be covered by organizing workshops and training programs.	If the KPIs achievement is less than 70% then finding the issues and improving it up to at least 70%. However, the KPIs whose achievement is more than 70% must maintain at least 70%.

b. Changes proposed in the program (if any) in response to this feedback.

Students will be motivated to do lifelong learning using our curriculum and NCAAA regulations.

3. Ratings on Sub-Standards of Standard 4 by program faculty and teaching staff; 4.1 to 4.10.

(a) Standard 4 Sub-Standards. Are the "Best Practices" followed; Yes or No? Provide a revised rating for each sub-standard. Indicate action proposed to improve performance (if any).

Sub-Standards	Best Practices Followed (Y / N)	5 Star Rating	List priorities for Improvement
4.1	Y	****	SLOs are achieved and revising of curriculum is recommended based on industry need.
4.2	Y	***	Independent evaluation for these strategy has to be done
4.3	Y	***	Use the course report template of NCAAA
4.4	Y	****	Assessment unit has to verify consistency between assessment tools and ILO's
4.5	Y	***	Encourage high performing students
4.6	Y	***	The effectiveness of different planned teaching strategies in achieving learning outcomes in different domains of learning have to be reviewed by external reviewers
4.7	Y	***	The extent to which teaching staff are involved in professional development to improve quality of teaching have to monitored continuously
4.8	Y	***	Teaching team has to include some experienced and highly skilled professionals in the field
4.9	Y	***	Follow up meetings or classes are to be organized in which students can reflect on and generalize from their experience
4.10	N	NA	We don't have any partnership with other institutions

Analysis of Sub-standards. List the strengths and recommendations for improvement of the program's self-evaluation of following best practices.

Strengths:
1. Very good curriculum to meet the community need.
1. Strong KPIs for the program
2. Intended learning outcomes are consistent with the Qualifications Framework
3. Intended learning outcomes are consistent with requirements for professional practice in Saudi Arabia in the fields concerned.

Weakness:
1. Students level of understanding the mathematical concepts is very low.
2. Students finds it difficult to get internship from medical devices industries.
3. No partnerships or MoU with other institutions for collaborations on student exchange program

Recommendations:
1. The present curriculum may be revised to meet the futuristic industrial needs
2. More modern laboratory equipments must be demonstrated to students
3. Innovation skills must be inculcated among students
4. Collaborations with other institutions must be encouraged

G. Program Course Evaluation

1. List courses taught during the year. Indicate for each course whether student evaluations were undertaken and/or other evaluations made of quality of teaching. For each course indicate if action is planned to improve teaching.

New Curriculum

Course Code	Course Title	Student Evaluations		Other Evaluation (specify)	Action Planned	
		Yes	No		Yes	No
CAMS 231	Emergency Care	✓			✓	
MET 232	Fundamentals of Anatomy	✓			✓	
MET 233	Basic Mathematics	✓			✓	
MET 234	Bio-Physics	✓			✓	
MET 235	Bio-Mechanics	✓			✓	
MET 237	Basics of Physiology	✓			✓	
MET 241	Applied Mathematics 1	✓			✓	
MET 242	Physics for Medical Equipment	✓			✓	
MET 243	Electrical Circuits	✓			✓	
MET 244	Electrical Skills	✓			✓	
MET 245	Computer & Systems	✓			✓	
MET 246	Bio-Materials	✓			✓	
MET 351	Applied Mathematics 2	✓			✓	
MET 352	Basic Analogue Electronics	✓			✓	

Code	Course					
MET 353	Medical Electrical Measurements	✓			✓	
MET 354	Basic Digital Electronics	✓			✓	
MET 355	Biomedical Mechanical Equipment	✓			✓	
MET 356	Computer Programming	✓			✓	
MET 361	Medical Analogue Signal Processing	✓			✓	
MET 362	Advanced Medical Analogue Electronics	✓			✓	
MET 363	Advanced Medical Digital Electronics	✓			✓	
MET 364	Electro Mechanical & Pneumatic Equipment	✓			✓	
MET 365	Advanced Medical Mechanical Equipment	✓			✓	
MET 471	Medical Digital Signal Processing	✓			✓	
MET 472	Medical Electronic Equipment	✓			✓	
MET 473	Medical Imaging Systems	✓			✓	
MET 474	Medical Equipment Management & Maintenance	✓			✓	
MET 481	Computer Applications for Biomedical Systems	✓			✓	
MET 482	Advanced Medical Imaging Systems	✓			✓	
MET 483	Optical & Laboratory Medical Equipment	✓			✓	
MET 484	Advanced Medical Electronic Equipment	✓			✓	
MET 591	Project(practical)	✓			✓	
MET 592	Digital Image Processing(lecture)	✓			✓	
MET 593	Control of Biomedical Systems(lecture)	✓			✓	
MET 594	Safety in Hospital(lecture)	✓			✓	
MET 485	Reverse engineering in medical equipment	✓			✓	
MET 486	Medical Equipment Design	✓			✓	
MET 595	Molecular Sensors & Nano-Scale Devices	✓			✓	
MET 596	Introduction to Telemedicine	✓			✓	
MET 597	Artificial Intelligence	✓			✓	
MET 598	Pattern Recognition	✓			✓	

Individual scores of each course are mentioned in the course reports which is available in course portfolio (Soft and Hard copies).

2. List courses taught by this program this year and for the program that are in other programs.

Preparatory Year	Semester – 1 st	PENG 111	English (1) for Preparatory Year	Required	8	14	Deanship of Preparatory
		PMTH 112	Introduction to Mathematics (1)	Required	2		

29 Credits		PCOM 113	Computer Skills	Required	2		year
	Semester 2	PSSC 114	Learning and Communication Skills	Required	2		
		PENG 121	English (2) for Preparatory Year	Required	6		
		PENG 122	English for Medical Specialties	Required	2		
		PCHM 124	Introduction to Chemistry	Required	2	15	
		PPHS 125	Physics for Health Purposes	Required	2		
		PBIO 126	Biology Science	Required	3		
1st Year Semester 1 17 Credits		MET 237	Basics of Physiology	Required	2		Department
		MET 232	Fundamentals of Anatomy	Required	2		
		MET 233	Basic Mathematics	Required	2		
		MET 234	Bio-Physics	Required	3		
		MET 235	Bio-Mechanics	Required	2		
		CAMS 231	Emergency Care	Required	2		College
		CAMS***	CAMS Elective Course	Elective	2		
		MU***	MU Elective Course	Elective	2		University
1st Year Semester 2 16 Credits		MET 241	Applied Mathematics 1	Required	2		Department
		MET 242	Physics for Medical Equipment	Required	3		
		MET 243	Electrical Circuits	Required	3		
		MET 244	Electrical Skills	Required	2		
		MET 245	Computer & Systems	Required	2		
		MET 246	Bio-Materials	Required	2		
		CAMS***	CAMS Elective Course	Elective	2		College
2nd Year Semester 1 16 Credits		MET 351	Applied Mathematics 2(lecture)	Required	2		Department
		MET 352	Basic Analogue Electronics	Required	3		
		MET 353	Medical Electrical Measurements	Required	3		
		MET 354	Basic Digital Electronics	Required	3		
		MET 355	Biomedical Mechanical Equipment	Required	3		
		MET 356	Computer Programming	Required	2		
2nd Year Semester 2 16 Credits		MET 361	Medical Analogue Signal Processing	Required	2		Department
		MET 362	Advanced Medical Analogue Electronics	Required	3		
		MET 363	Advanced Medical Digital Electronics	Required	3		
		MET 364	Electro Mechanical & Pneumatic Equipment	Required	3		
		MET 365	Advanced Medical Mechanical Equipment	Required	3		
		MU***	MU Elective Course	Elective	2		University
3rd Year Semester 1 15 Credits		MET 471	Medical Digital Signal Processing	Required	3		Department
		MET 472	Medical Electronic Equipment	Required	3		
		MET 473	Medical Imaging Systems	Required	3		
		MET 474	Medical Equipment Management & Maintenance	Required	2		
		MU***	MU Elective Course	Elective	2		University
		MU***	MU Elective Course	Elective	2		
3rd Year		MET 481	Computer Applications for Biomedical Systems	Required	3		Department

Semester 2	MET 482	Advanced Medical Imaging Systems	Required	3	
	MET 483	Optical & Laboratory Medical Equipment	Required	3	
16 Credits	MET 484	Advanced Medical Electronic Equipment	Required	3	
	MET ***	MET Elective Course	Elective	2	
	MU***	MU Elective Course	Elective	2	University
4th Year Semester 1	MET 591	Project(practical)	Required	2	Department
	MET 592	Digital Image Processing(lecture)	Required	2	
	MET 593	Control of Biomedical Systems(lecture)	Required	3	
	MET 594	Safety in Hospital(lecture)	Required	2	
15 Credits	MET ***	MET Elective Course	Elective	2	
	MET ***	MET Elective Course	Elective	2	
	MU***	MU Elective Course	Elective	2	University

MU Elective Course

SALM 101	Introduction to Islamic Culture	2	
SALM 102	Islam and Society Development	2	The student should study 3 / 4
SALM 103	Islamic Economic System	2	
SALM 104	Fundamentals of Islamic Politics	2	
ARAB 101	Arabic Language Skills	2	The student should study 1 / 2
ARAB 103	Arabic Editing	2	
ENG 101	English Language	2	
SOCI 101	Contemporary Societal Issues	2	
HAF 101	Fundamentals of Health and Physical Fitness	2	
ENT 101	Entrepreneurship	2	The student should study 2 / 7
LHR 101	Legislations and Human Rights	2	
FCH 101	Family and Childhood	2	
VOW 101	Voluntary Work	2	

CAMS Elective Course

CAMS 232	Medical Terminology	2	
CAMS 233	Biostatistics	2	The student should study 2 / 3
CAMS 234	Quality of Health Care	2	

MET Elective Course

MET 485	Reverse engineering in medical equipment	2	The student should study 1 / 2
MET 486	Medical Equipment Design	2	
MET 595	Molecular Sensors & Nano-Scale Devices	2	
MET 596	Introduction to Telemedicine	2	The student should study 2 / 4
MET 597	Artificial Intelligence	2	
MET 598	Pattern Recognition	2	

3. Program Learning Outcome Assessment:

*Provide a report on the program learning outcomes assessment plan using an assessment cycle (a four to six-year cycle is recommended). All program learning outcomes are to be directly assessed at least once during the cycle. By the end of the cycle each program learning outcome will be assessed and recorded using a separate **KPI** Assessment Table (see below);*

KPI #	NQF Learning Domains and Learning Outcomes	Method of Assessment for LOs	Date of Assessment
1.0	**Knowledge**		
1.1	a knowledge of the impact of engineering technology solutions in societal and global context	Exams, long and short essays, log books, analytical reports, group reports, lab reports, debates, peer evaluations, demonstrations, discussion forums, interviews,	Semester
1.2	an ability to select and apply knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;		
2.0	**Cognitive Skills**		
2.1	an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;	Exams, long and short essays, log books, analytical reports, case studies, video analysis, group reports, lab reports, peer evaluations, videos, graphs, tables, demonstrations, graphic organizers, interviews,	Semester
2.2	an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;		
2.3	an ability to identify, analyze, and solve broadly-defined engineering technology problems;		
3.0	**Interpersonal Skills & Responsibility**		
3.1	an ability to function effectively as a member or leader on a technical team;	Exams, portfolios, analytical reports, individual and group presentations, case studies, video analysis, group reports, lab reports, debates, speeches, peer evaluations, self-evaluations, tables, demonstrations, graphic organizers, interviews,	Semester
3.2	an understanding of the need for and an ability to engage in self-directed continuing professional development;		
3.3	an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;		
3.4	a commitment to quality, timeliness, and continuous improvement.		
4.0	**Communication, Information Technology, Numerical**		

4.1	an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;	Long and short essays, log books, analytical reports, individual and group presentations, group reports, lab reports, peer evaluations, videos, graphs, tables, graphic organizers, interviews,	Semester
5.0	**Psychomotor**		
5.1	an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;	Log books, analytical reports, case studies, group reports, lab reports, peer evaluations, graphs, tables, demonstrations, graphic organizers,	Semester

Provide an analysis of the Program Learning Outcome Assessment Cycle (List strengths and recommendations for improvement).

Provide "direct assessments" for the current year's program learning outcomes, according to the dates provided above (G.3). A key performance indicator (KPI) table is provided below. Each learning outcome should utilize a separate KPI table. Over the four (five/six) year cycle, all program learning outcomes are to be assessed and reported in the Annual Program Report(s).

Note: Programs are to provide their own KPIs for directly measuring student performance.

The KPI Assessment Table is used to document directly assessed program learning outcomes. Each program learning outcome should use a separate table. Direct assessments methods may include: national or international standardized test results, rubrics, exams and learning outcome grade analysis, or learning achievement using an alternative scientific assessment system (copy the KPI Assessment Table and paste to make additional tables as needed).

4. Orientation programs for new teaching staff

Orientation programs provided ?   **Yes** [✓]   **NO** ………..

If offered how many participated ?   2

a. Brief Description

The objective of this induction program is to welcome new employees to our University and make them to understand the new faculties role and responsibilities, administrative system and academic quality subsystem in Majmaah University.

The Faculty orientation Program for the new Faculty members Dr. Hamdan Awaid Alunaizi, Mr Jihad of MET has conducted. The program started by welcoming the New Faculty members to the College of Applied Medical sciences. The program was started with detailed explanation about administrative system and academic quality subsystem in Majmaah University (College Level) and MET course curriculum (at department level). The description about department Vision, Mission, outcomes and the various Quality points were highlighted. The entire framework of NCAAA was presented for their orientation.

Subsequently, a brief orientation about the steps and format for writing a Course specification and Course report was presented. The process of Internal and Final examination was reported. The documents to be prepared and procedures practiced during the examination period were made clear with a model of Course portfolio. The orientation program was concluded with Questions session and by wishing those New Faculty members.

b. List recommendations for improvement by teaching staff.

It was suggested to help the new faculty about the initial official formalities to sign the contract.

Also, it was suggested that an old faculty can guide the new faculty to complete both official and personal requirements till they settle down in Majmaah city.

c. If orientation programs were not provided, give reasons.

………………………………………………………………………………………………………

5. Professional Development Activities for Faculty, Teaching and Other Staff

a. Activities Provided	How many Participated	
	Teaching Staff	Other Staff
Utilizing Clicker Technology in the Teaching-Learning Process	√	
How to Maximize the Use of E-Podium?	√	
Review of NCAAA Self Study Report	√	
How to Use D2L: Desire to Learn?	√	
Goals of Assessment Unit by Mr. Radhakrishnan Unnikrishnan	√	
Effective Use of CMS	√	
How to Prepare and Write Course	√	
Suggestions on Writing MCQs: Multiple Choice Questions	√	
How to Effectively Design Test Blueprint?	√	
How to Maximize the Use of E-Podium (New Faculty)	√	
Review Meeting for Quality (External Audit) Audit Preparedness	√	
Self-Study Report Review (Standard 4 – 7)	√	
Final Examination Guide	√	
OMR Scanning and Test Item Analysis	√	
Workshop on Self Evaluation Scale	√	
College Operation Plan: Concept, Preparation and Duties	√	
How to Prepare and Write Course Report?	√	
Writing Program Report	√	

b. Summary analysis on usefulness of activities based on participant's evaluations or other evaluation methods.

The main theme of above training session to make more effective teaching, efficiently using electronic portals and also to make the perfect documentation to teaching staff.

H. Independent Opinion on Quality of the Program

(e.g. head of another similar department/ program offering comment on evidence received and conclusions reached)

1. Matters Raised by Evaluator Giving Opinion	Comment by Program Coordinator
Quality audit was conducted by Deanship of Quality and CAMS Quality Units and outcomes of the audit was discussed in the department meeting • There is a measure of performance indicators for all college programs, but not all 34 performance indicators identified (updated) from the university have been measured. • There is an analysis of the results of performance indicators and recommendations for improvement, but these recommendations are not clearly reflected in the improvement plans. • The results of the performance indicators showed an improvement in 1438 - 1439 E from the previous year in some programs (e.g. medical devices)and on the other side showed a clear weakness in some areas such as: the percentage of students who completed the program in the least duration (50%), the percentage of members PhD faculty (50%) and some scientific research indicators. • The high results of students in the college (evaluations) tests are contrary to the results announced by the Health Testing Authority and no analysis of these results was included in the improvement plans. • No graduate surveys have been made for all programs. • Self-assessment measures have been prepared for program. • Self-assessment measures lack accuracy in	Most of the comments given by the teams were discussed in the MET council and implemented in the Program Improvement plan.

star rating and need to be updated.

• The self-study of some programs (medical devices- physiotherapy and health rehabilitation - medical laboratory sciences) has not been prepared for other programs.

• Existing self-studies need to be updated and include evidence and evidence.

• The optimization plans for most programs are inconsistent with the results of the self-evaluation of the same programs.

• Repeating line of improvement in annual reports for successive years.

• The results of the course reports are not reflected in the improvement plans.

• Statistical data in annual reports need to be checked.

• There are no advisory committees for each program, but a unified committee for the college.

• There is a general weakness in the formulation of learning outcomes for programs and this is reflected in the apparent discrepancy between Bloom's actions used with the learning output ranges within which they fall.

• There is a conflict between the evaluation methods used with the range of the learning output that measures it and this is reflected in the increase of the verification of these outputs to the target.

• Poor student research and lack of participation of students in conducting scientific research to train them in scientific research skills.

• There is no scientific research infrastructure (such as research work or animal house) and it is not included in the improvement plans.

• Failure to activate the Student Council.

• General weakness in college labs.

• There is no direct supervision from the college on the training of students in hospitals and there is no clear mechanism for evaluating students during the year of excellence.

• Lack of reference comparison and independent opinion.

Suggestions and recommendations:
• Work on graduate and employer surveys and analysis and inclusion of results in improvement plans.
• Auditing and updating self-assessment measures and preparing them for programs for which the metrics are not prepared.
• Checking and updating self-studies and preparing them for programs for which the self-study has not been prepared.
• Take care to prepare and update improvement plans and build them on multiple sources such as course reports and self-study results.
• Reformulate learning outcomes for programs and courses in accordance with learning outcomes ranges and re-select appropriate evaluation methods for these outcomes.
• Activating the Student Council.
• Choose an appropriate reference comparison and advisory boards for each program.
• A description of the mechanism of supervising practical training for students and training of students of excellence.
• Activating the Student Council.
• Choose an appropriate reference comparison and advisory boards for each program.
• A description of the mechanism of supervising practical training for students and training of students of excellence.

2. Implications for Planning for the Program

Students surveys were initiated and conducted on all necessary tasks such as PES, SES, Advising etc

Education KPI and Assessment Table (S1 1438 - 1439 H)

KPI #	KPIs Old	KPIs New	KPI Target Benchmark	KPI Actual Benchmark	KPI Internal Benchmarks	KPI External Benchmark s	KPI Analysis	KPI New Target Benchmark
1	a1.1	a1.k1	70%	55.8%	70%		Up to at least 70%	70%
2	a1.2	a1.k2	70%	57.5%	70%		Up to at least 70%	70%
3	a1.3	a1.k3	70%		70%		Up to at least 70%	70%
4	a1.4	a1.k4	70%	89%	70%		Up to at least 85%	95%
5	a2.1	a2.k5	70%	83%	70%		Up to at least 85%	95%
6	a2.2	a2.k6	70%	69.61%	70%		Up to at least 70%	75%
7	a2.3	a2.k7	70%	87%	70%		Up to at least 85%	90%
8	a2.4	a2.k8	70%		70%		Up to at least 70%	70%
9	a2.5	a2.k9	70%	79.5%	70%		Up to at least 80%	90%
10	a2.6	a2.k10	70%	24%	70%		Up to at least 70%	70%
11	a2.7	a2.k11	70%		70%		Up to at least 70%	70%
12	b1.1	b1.k12	70%	60%	70%		Up to at least 70%	70%
13	b1.2	b1.k13	70%	69.4%	70%		Up to at least 70%	75%
14	b1.3	b1.k14	70%	64%	70%		Up to at least 70%	75%
15	b1.4	b1.k15	70%		70%		Up to at least 70%	70%
16	b2.1	b2.k16	70%	68.3%	70%		Up to at least 70%	75%
17	b2.2	b2.k17	70%	83.75%	70%		Up to at least 85%	95%
18	b2.3	b2.k18	70%	63%	70%		Up to at least 70%	70%
19	b2.4	b2.k19	70%	100%	70%		Up to at least 70%	70%
20	b2.5	b2.k20	70%	68.33%	70%		Up to at least 70%	70%
21	b3.1	b3.k21	70%	75%	70%		Up to at least 80%	90%
22	b3.2	b3.k22	70%	80.25%	70%		Up to at least 85%	95%
23	b3.3	b3.k23	70%	92.4%	70%		Up to at least 85%	95%
24	b3.4	b3.k24	70%	92%	70%		Up to at least 85%	95%
25	b3.5	b3.k25	70%	22%	70%		Up to at least 70%	70%

26	c1.1	c1.k26	70%		70%		Up to at least 70%	70%
27	c1.2	c1.k27	70%	96.67%	70%		Keep it up at least	100%
28	c1.3	c1.k28	70%		70%		Up to at least 70%	70%
29	c1.4	c1.k29	70%	100%	70%		Up to at least 70%	70%
30	c1.5	c1.k30	70%		70%		Up to at least 70%	70%
31	c1.6	c1.k31	70%	78%	70%		Up to at least 70%	70%
32	c2.1	c2.k32	70%		70%		Up to at least 70%	70%
33	c2.2	c2.k33	70%		70%		Up to at least 70%	70%
34	c2.3	c2.k34	70%		70%		Up to at least 70%	70%
35	c2.4	c2.k35	70%	68%	70%		Up to at least 70%	75%
36	c2.5	c2.k36	70%	87.5%	70%		Up to at least 85%	95%
37	c2.6	c2.k37	70%	65.5%	70%		Up to at least 70%	70%
38	c2.7	c2.k38	70%		70%		Up to at least 70%	70%
39	c3.1	c3.k39	70%	75%	70%		Up to at least 85%	95%
40	c3.2	c3.k40	70%	100%	70%		Up to at least 70%	70%
41	c3.3	c3.k41	70%	100%	70%		Up to at least 70%	70%
42	c3.4	c3.k42	70%		70%		Up to at least 70%	70%
43	c3.5	c3.k43	70%	75%	70%		Up to at least 85%	95%
44	c3.6	c3.k44	70%	84%	70%		Up to at least 85%	95%
45	c3.7	c3.k45	70%	75%	70%		Up to at least 70%	70%
46	c4.1	c4.k46	70%		70%		Up to at least 70%	70%
47	c4.2	c4.k47	70%		70%		Up to at least 70%	70%
48	c4.3	c4.k48	70%		70%		Up to at least 70%	70%
49	c4.4	c4.k49	70%		70%		Up to at least 70%	70%
50	d1.1	d1.k50	70%	91%	70%		Maintain at least	100%
51	d1.2	d1.k51	70%	91%	70%		Maintain at least	90%
52	d1.3	d1.k52	70%		70%		Up to at least 70%	70%
53	d1.4	d1.k53	70%		70%		Up to at least 70%	70%
54	d1.5	d1.k54	70%		70%		Up to at least 70%	70%
55	d1.6	d1.k55	70%	84%	70%		Up to at least 85%	95%
56	d1.7	d1.k56	70%		70%		Up to at least 70%	70%

57	d1.8	d1.k57	70%		70%		Up to at least 70%	70%
58	d1.9	d1.k58	70%	41%	70%		Up to at least 70%	70%
59	d1.10	d1.k59	70%	82%	70%		Up to at least 85%	95%
60	e1.1	e1.k60	70%	93%	70%		Keep it up at least	95%
61	e1.2	e1.k61	70%	85.25%	70%		Up to at least 85%	95%
62	e1.3	e1.k62	70%	88.25%	70%		Up to at least 85%	95%
63	e1.4	e1.k63	70%	67.5%	70%		Up to at least 70%	75%
64	e1.5	e1.k64	70%	88.5%	70%		Up to at least 85%	95%

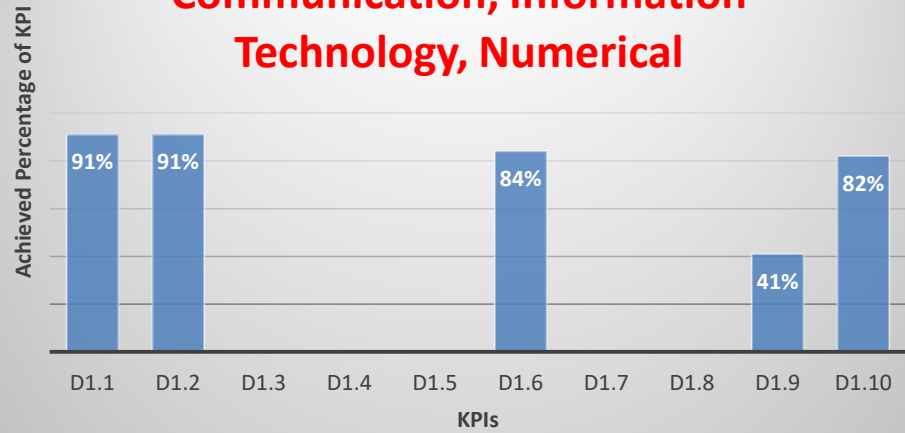## Whole Program Analysis of KPIs and Benchmarks: (list strengths and recommendations)

There is a need of review the KPIs which are not used in MET courses. These KPIs may be covered using organizing workshops and training programs during the study. Also, if the KPIs are less than 70% then finding the issues and increase up to at least 70%. Although, the KPIs are more than 70% then must maintain and try to be at least 70%. Some KPIs are not covered in this semester since there are some courses not offered in this semester. The uncovered KPIs along with others will be covered in the next semester.

Individual Semester wise KPI achievement Analysis S1 1438-1439
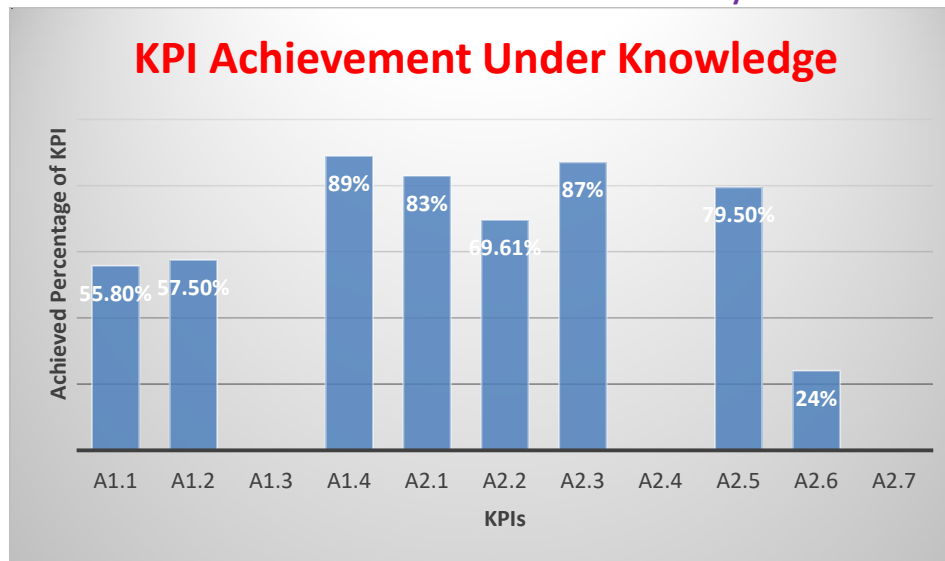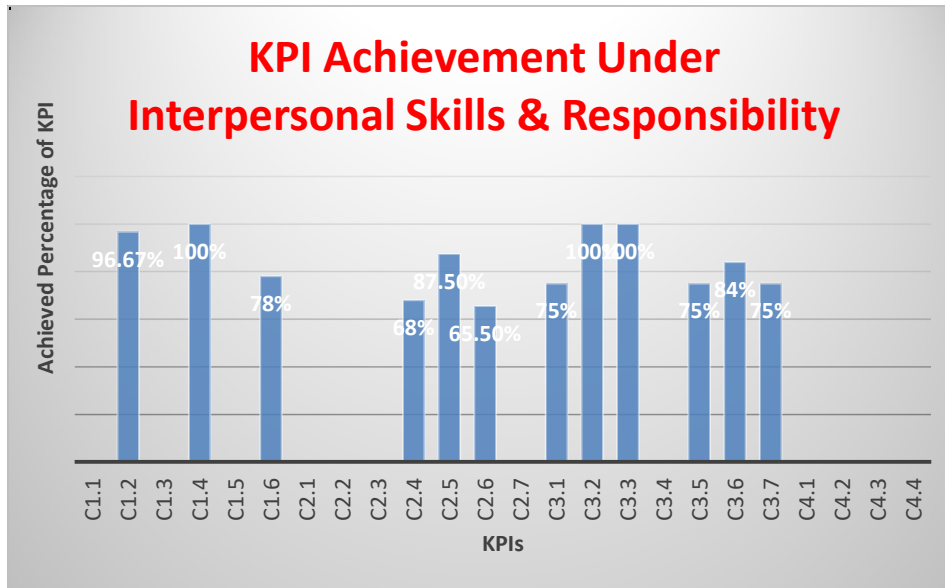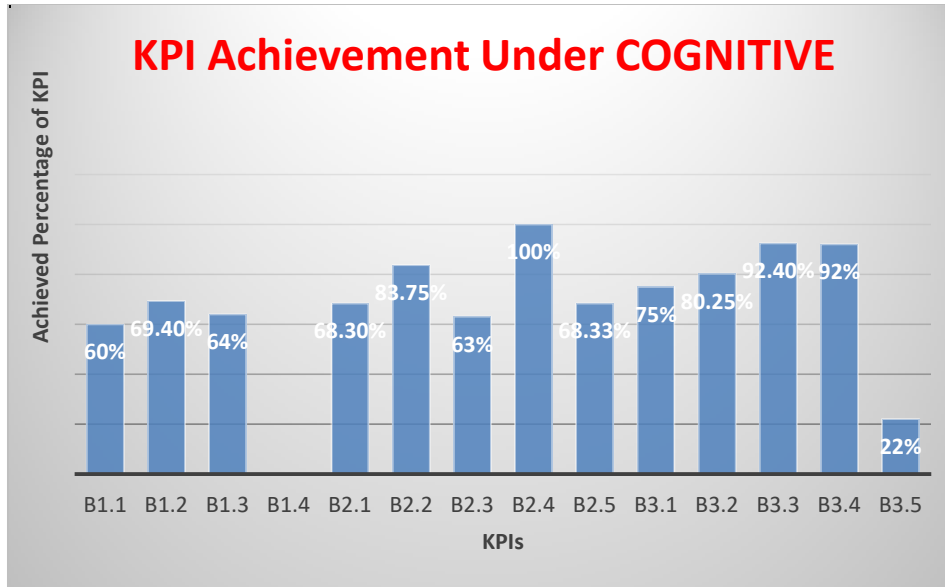
KPI Achievement Under Knowledge

KPI Achievement Under COGNITIVE

Achieved Percentage of KPI

KPI	Value
B1.1	60%
B1.2	69.40%
B1.3	64%
B2.1	68.30%
B2.2	83.75%
B2.3	63%
B2.4	100%
B2.5	68.33%
B3.1	75%
B3.2	80.25%
B3.3	92.40%
B3.4	92%
B3.5	22%

KPIs

KPI Achievement Under
Interpersonal Skills & Responsibility

Achieved Percentage of KPI

KPI	Value
C1.2	96.67%
C1.4	100%
C1.6	78%
C2.4	68%
C2.5	87.50%
C2.6	65.50%
C3.1	75%
C3.2	100%
C3.3	100%
C3.5	75%
C3.6	84%
C3.7	75%
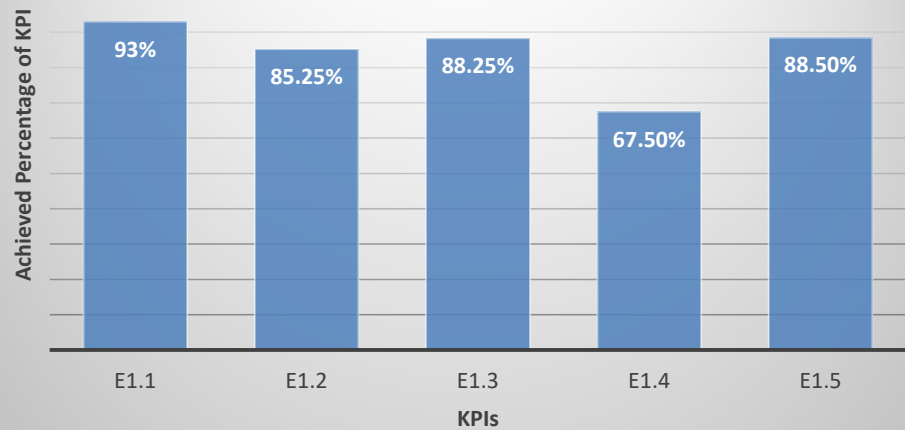
KPIs

Education KPI and Assessment Table (S2 1438 - 1439)

KPI #	KPIs Old	KPIs New	KPI Target Benchmark	KPI Actual Benchmark	KPI Internal Benchmarks	KPI External Benchmark s	KPI Analysis	KPI New Target Benchmark
1	a1.1	a1.k1	70%	79.1	70%		Maintain at least	90%
2	a1.2	a1.k2	70%	84.8	70%		Up to at least 75%	80%
3	a1.3	a1.k3	70%	Not Measured	70%		Up to at least 70%	70%
4	a1.4	a1.k4	70%	76.5	70%		Up to at least 85%	90%
5	a2.1	a2.k5	70%	83.8	70%		Up to at least 85%	90%
6	a2.2	a2.k6	70%	71.6	70%		Up to at least 80%	90%
7	a2.3	a2.k7	70%	94.0	70%		Up to at least 70%	70%
8	a2.4	a2.k8	70%	Not Measured	70%		Up to at least 85%	90%
9	a2.5	a2.k9	70%	76.0	70%		Up to at least 90%	95%
10	a2.6	a2.k10	70%	70.0	70%		Up to at least 90%	95%
11	a2.7	a2.k11	70%	**Not Measured**	70%		Up to at least 70%	70%
12	b1.1	b1.k12	70%	69.5	70%		Up to at least 70%	70%
13	b1.2	b1.k13	70%	69.3	70%		Up to at least 85%	90%
14	b1.3	b1.k14	70%	81.7	70%		Up to at least 70%	70%
15	b1.4	b1.k15	70%	Not Measured	70%		Up to at least 70%	70%
16	b2.1	b2.k16	70%	78.0	70%		Up to at least 80%	90%
17	b2.2	b2.k17	70%	64.3	70%		Up to at least 70%	70%
18	b2.3	b2.k18	70%	74.9	70%		Up to at least 80%	90%
19	b2.4	b2.k19	70%	Not Measured	70%		Up to at least 70%	70%
20	b2.5	b2.k20	70%	86.0	70%		Up to at least 80%	90%
21	b3.1	b3.k21	70%	87.5	70%		Up to at least 80%	90%
22	b3.2	b3.k22	70%	79.8	70%		Up to at least 80%	90%
23	b3.3	b3.k23	70%	83.7	70%		Up to at least 80%	90%
24	b3.4	b3.k24	70%	70.5	70%		Up to at least 90%	95%
25	b3.5	b3.k25	70%	91.5	70%		Up to at least 90%	95%

26	c1.1	c1.k26	70%	77.0	70%		Up to at least 90%	95%
27	c1.2	c1.k27	70%	100.0	70%		Up to at least 90%	95%
28	c1.3	c1.k28	70%	80.0	70%		Up to at least 70%	70%
29	c1.4	c1.k29	70%	100.0	70%		Up to at least 80%	90%
30	c1.5	c1.k30	70%	Not Measured	70%		Up to at least 70%	70%
31	c1.6	c1.k31	70%	87.5	70%		Up to at least 90%	95%
32	c2.1	c2.k32	70%	Not Measured	70%		Up to at least 70%	70%
33	c2.2	c2.k33	70%	Not Measured	70%		Up to at least 70%	70%
34	c2.3	c2.k34	70%	100.0	70%		Keep it up 100%	100%
35	c2.4	c2.k35	70%	100.0	70%		Keep it up 100%	100%
36	c2.5	c2.k36	70%	96.0	70%		Keep it up 100%	100%
37	c2.6	c2.k37	70%	100.0	70%		Keep it up 100%	100%
38	c2.7	c2.k38	70%	Not Measured	70%		Up to at least 70%	70%
39	c3.1	c3.k39	70%	92.0	70%		Keep it up 100%	100%
40	c3.2	c3.k40	70%	100	70%		Up to at least 70%	70%
41	c3.3	c3.k41	70%	**Not Measured**	70%		Keep it up 100%	100%
42	c3.4	c3.k42	70%	100	70%		Up to at least 70%	70%
43	c3.5	c3.k43	70%	100	70%		Up to at least 70%	70%
44	c3.6	c3.k44	70%	79	70%		Up to at least 70%	70%
45	c3.7	c3.k45	70%	47	70%		Up to at least 70%	70%
46	c4.1	c4.k46	70%	**Not Measured**	70%		Up to at least 75%	80%
47	c4.2	c4.k47	70%	**50.0**	70%		Keep it up 100%	100%
48	c4.3	c4.k48	70%	100	70%		Up to at least 70%	70%
49	c4.4	c4.k49	70%	90	70%		Up to at least 70%	70%
50	d1.1	d1.k50	70%	93	70%		Maintain at least	100%
51	d1.2	d1.k51	70%	100	70%		Maintain at least	90%
52	d1.3	d1.k52	70%	**Not Measured**	70%		Up to at least 70%	70%
53	d1.4	d1.k53	70%	88	70%		Up to at least 70%	70%
54	d1.5	d1.k54	70%	**Not Measured**	70%		Up to at least 70%	70%
55	d1.6	d1.k55	70%	98.25	70%		Up to at least 70%	70%
56	d1.7	d1.k56	70%	**Not Measured**	70%		Up to at least 70%	70%

57	d1.8	d1.k57	70%	**Not Measured**	70%		Up to at least 70%	70%
58	d1.9	d1.k58	70%	92.5	70%		Keep it up 100%	100%
59	d1.10	d1.k59	70%	90	70%		Up to at least 70%	70%
60	e1.1	e1.k60	70%	87.16666667	70%		Keep it up at least	95%
61	e1.2	e1.k61	70%	81	70%		Keep it up 100%	100%
62	e1.3	e1.k62	70%	90.33333333	70%		Up to at least 70%	70%
63	e1.4	e1.k63	70%	100	70%		Up to at least 70%	70%
64	e1.5	e1.k64	70%	92.33333333	70%		Keep it up 100%	100%

Whole Program Analysis of KPIs and Benchmarks: (list strengths and recommendations)
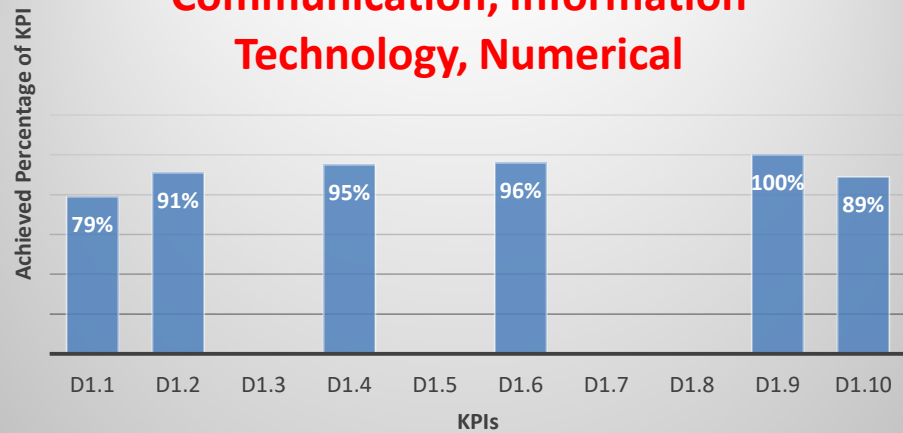
There is a need of review the KPIs which are not used in MET courses. These KPIs may be covered using organizing workshops and training programs during the study. Also, if the KPIs are less than 70% then finding the issues and increase up to at least 70%. Although, the KPIs are more than 70% then must maintain and try to be at least 70%. On the whole the coverage of KPIs are 100% through our MET courses.

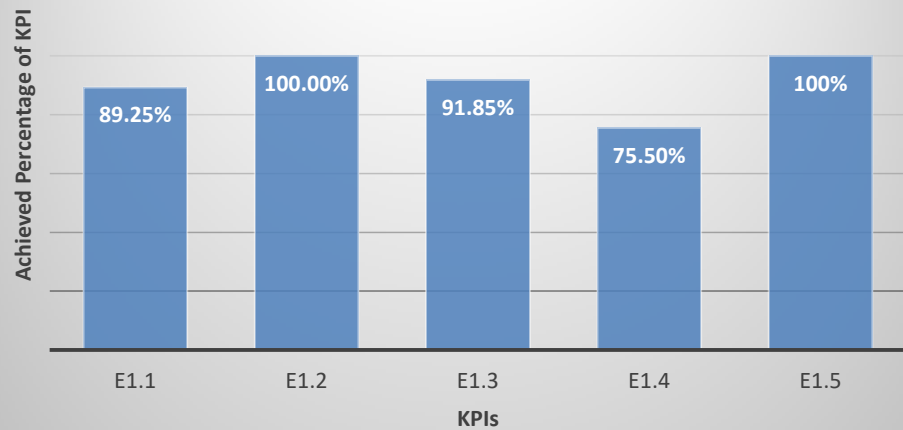Individual Semester wise KPI achievement Analysis S2 1438-1439

KPI Achievement Under Knowledge

KPI Achievement Under COGNITIVE

KPI Achievement Under Interpersonal Skills & Responsibility
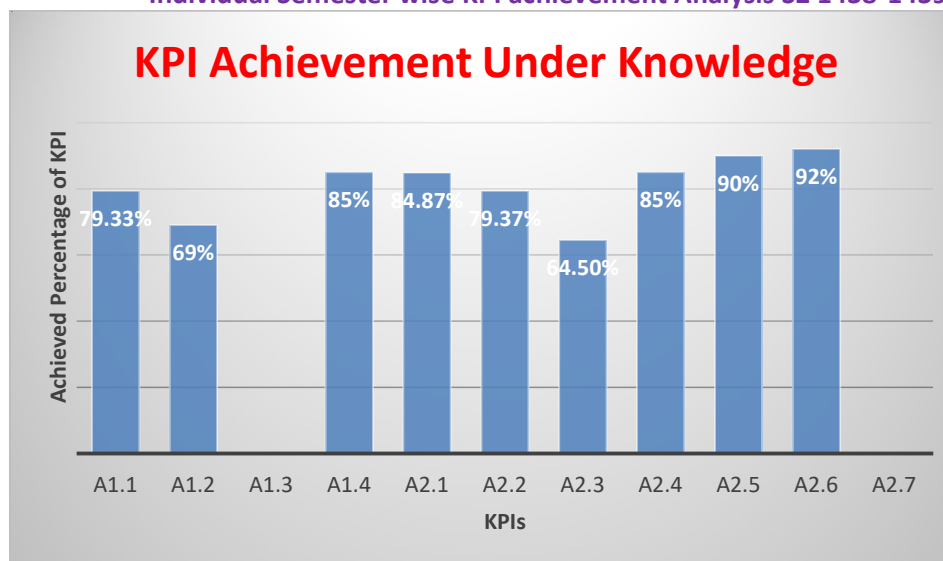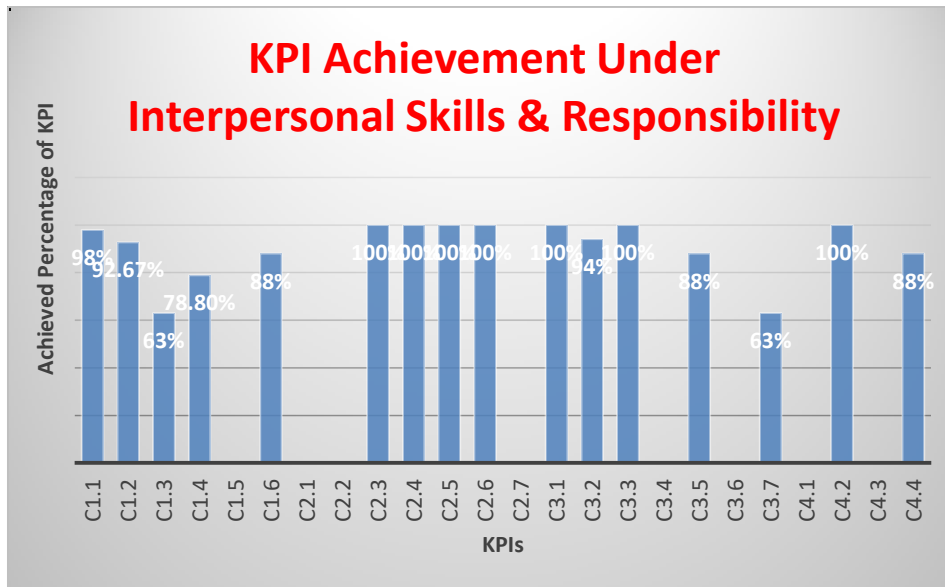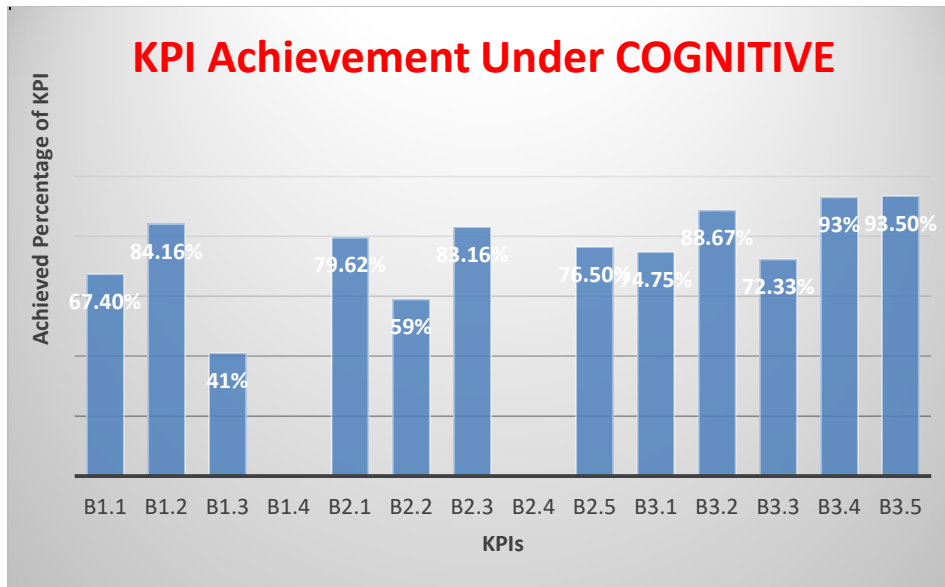
KPI Achievement Under Communication, Information Technology, Numerical

Achieved Percentage of KPI

D1.1 79%
D1.2 91%
D1.4 95%
D1.6 96%
D1.9 100%
D1.10 89%

KPIs: D1.1, D1.2, D1.3, D1.4, D1.5, D1.6, D1.7, D1.8, D1.9, D1.10

KPI Achievement Under Psychomotor

Achieved Percentage of KPI

E1.1 89.25%
E1.2 100.00%
E1.3 91.85%
E1.4 75.50%
E1.5 100%

KPIs: E1.1, E1.2, E1.3, E1.4, E1.5

Education KPI and Assessment Table (S1 1439 – 1440 H)

KPI #	KPIs Old	KPIs New	KPI Target Benchmark	KPI Actual Benchmark	KPI Internal Benchmarks	KPI External Benchmark s	KPI Analysis	KPI New Target Benchmark
1	a1.1	a1.k1	70%	79.4	70%		Maintain at least	90%
2	a1.2	a1.k2	70%	80.3	70%		Up to at least 75%	90%
3	a1.3	a1.k3	70%	**Not Measured**	70%		Up to at least 70%	70%
4	a1.4	a1.k4	70%	74.5	70%		Up to at least 75%	80%
5	a2.1	a2.k5	70%	73.7	70%		Maintain at least	90%
6	a2.2	a2.k6	70%	72.8	70%		Up to at least 70%	75%
7	a2.3	a2.k7	70%	80.7	70%		Maintain at least	95%
8	a2.4	a2.k8	70%	98.0	70%		Up to at least 70%	70%
9	a2.5	a2.k9	70%	85.0	70%		Up to at least 75%	80%
10	a2.6	a2.k10	70%	93.0	70%		Up to at least 70%	80%
11	a2.7	a2.k11	70%	**Not Measured**	70%		Up to at least 70%	70%
12	b1.1	b1.k12	70%	75.7	70%		Up to at least 70%	75%
13	b1.2	b1.k13	70%	79.2	70%		Up to at least 70%	70%
14	b1.3	b1.k14	70%	**Not Measured**	70%		Up to at least 70%	70%
15	b1.4	b1.k15	70%	**Not Measured**	70%		Up to at least 70%	70%
16	b2.1	b2.k16	70%	83.4	70%		Maintain at least	80%
17	b2.2	b2.k17	70%	79.0	70%		Maintain at least	70%
18	b2.3	b2.k18	70%	80.5	70%		Up to at least 70%	75%
19	b2.4	b2.k19	70%	90.0	70%		Up to at least 70%	70%
20	b2.5	b2.k20	70%	78.5	70%		Up to at least 85%	90%
21	b3.1	b3.k21	70%	73.0	70%		Up to at least 85%	90%
22	b3.2	b3.k22	70%	70.3	70%		Maintain at least	90%
23	b3.3	b3.k23	70%	59.0	70%		Maintain at least	90%
24	b3.4	b3.k24	70%	85.0	70%		Up to at least 70%	75%
25	b3.5	b3.k25	70%	71.0	70%		Up to at least 90%	95%

26	c1.1	c1.k26	70%	90.0	70%		Maintain at least	90%
27	c1.2	c1.k27	70%	100.0	70%		Keep it up at least	100%
28	c1.3	c1.k28	70%	95.5	70%		Up to at least 85%	90%
29	c1.4	c1.k29	70%	79.3	70%		Keep it up at least	100%
30	c1.5	c1.k30	70%	**Not Measured**	70%		Up to at least 70%	70%
31	c1.6	c1.k31	70%	78.0	70%		Up to at least 75%	80%
32	c2.1	c2.k32	70%	100.0	70%		Up to at least 70%	70%
33	c2.2	c2.k33	70%	**Not Measured**	70%		Keep it up 100%	100%
34	c2.3	c2.k34	70%	100.0	70%		Up to at least 70%	70%
35	c2.4	c2.k35	70%	100.0	70%		Up to at least 70%	70%
36	c2.5	c2.k36	70%	46.0	70%		Up to at least 95%	100%
37	c2.6	c2.k37	70%	100.0	70%		Keep it up at least	100%
38	c2.7	c2.k38	70%	**Not Measured**	70%		Up to at least 70%	70%
39	c3.1	c3.k39	70%	**Not Measured**	70%		Maintain at least	95%
40	c3.2	c3.k40	70%	**Not Measured**	70%		Keep it up at least	100%
41	c3.3	c3.k41	70%	100	70%		Up to at least 70%	70%
42	c3.4	c3.k42	70%	100	70%		Keep it up at least	100%
43	c3.5	c3.k43	70%	100	70%		Keep it up at least	100%
44	c3.6	c3.k44	70%	**Not Measured**	70%		Up to at least 75%	85%
45	c3.7	c3.k45	70%	100	70%		Up to at least 90%	100%
46	c4.1	c4.k46	70%	**100.0**	70%		Keep it up at least	100%
47	c4.2	c4.k47	70%	**100.0**	70%		Up to at least 70%	70%
48	c4.3	c4.k48	70%	73	70%		Keep it up at least	100%
49	c4.4	c4.k49	70%	100	70%		Up to at least 80%	90%
50	d1.1	d1.k50	70%	74	70%		Maintain at least	100%
51	d1.2	d1.k51	70%	78	70%		Maintain at least	90%
52	d1.3	d1.k52	70%	**Not Measured**	70%		Up to at least 70%	70%
53	d1.4	d1.k53	70%	77	70%		Up to at least 85%	90%
54	d1.5	d1.k54	70%	**Not Measured**	70%		Up to at least 70%	70%
55	d1.6	d1.k55	70%	**Not Measured**	70%		Keep it up at least	100%
56	d1.7	d1.k56	70%	**Not Measured**	70%		Up to at least 70%	70%

57	d1.8	d1.k57	70%	Not Measured	70%		Up to at least 70%	70%
58	d1.9	d1.k58	70%	100	70%		Up to at least 90%	95%
59	d1.10	d1.k59	70%	94	70%		Up to at least 95%	100%
60	e1.1	e1.k60	70%	100	70%		Keep it up at least	95%
61	e1.2	e1.k61	70%	96.5	70%		Maintain at least	90%
62	e1.3	e1.k62	70%	85.66666667	70%		Up to at least 70%	70%
63	e1.4	e1.k63	70%	84	70%		Keep it up at least	100%
64	e1.5	e1.k64	70%	88.5	70%		Keep it up at least	100%

Whole Program Analysis of KPIs and Benchmarks: (list strengths and recommendations)

There is a need of review the KPIs which are not used in MET courses. These KPIs may be covered using organizing workshops and training programs during the study. Also, if the KPIs are less than 70% then finding the issues and increase up to at least 70%. Although, the KPIs are more than 70% then must maintain and try to be at least 70%.

This KPI has been improved as discussed in APR of 1439-1440. Now again there is a need of review the KPI achieved percentages which are less than the KPI target benchmark. Also, we did the workshop for the improvement. Also, we have a plan of more effective workshop for the next semester 1441-1442. and training programs during the study. The KPIs are less than 70% then finding the issues and increase up to at least 70%. Although, the KPIs are more than 70% then have to maintain and try to be at least 70%.

Educational KPI Analysis- AY 1439-40

Medical Equipment and Technology

NQF Learning Domain	Program Outcomes	Program Outcome Achievement %			Achievement of Target Benchmark (>=70%)
		S391	S392	Average	
Knowledge	A1	80.1	78.1	79.1	Achieved
	A2	79.1	83.9	81.5	Achieved
Cognitive	B1	73.5	77.4	75.5	Achieved
	B2	75.8	82.3	79.0	Achieved
	B3	82.6	71.7	77.1	Achieved
Interpersonal skills & responsibility	C1	88.9	88.6	88.7	Achieved
	C2	99.0	89.2	94.1	Achieved
	C3	86.3	100.0	93.2	Achieved
	C4	80.0	93.3	86.6	Achieved
Communication, IT, Numerical	D1	93.6	84.6	89.1	Achieved
Psychomotor	E1	90.2	90.9	90.6	Achieved

Educational KPI Analysis- AY 1439-40

Medical Equipment and Technology

Educational KPI	Satisfactory CLO Achievement %			Achievement of Target Benchmark (>=70%)
	S391	S392	S391 + S392	
a1.k1	79.1	79.4	79.3	Achieved
a1.k2	84.8	80.3	82.5	Achieved
a1.k3	Not Measured	Not Measured	Not Measured	Not Measured
a1.k4	76.5	74.5	75.5	Achieved
a2.k5	83.8	73.7	78.7	Achieved
a2.k6	71.6	72.8	72.2	Achieved
a2.k7	94.0	80.7	87.3	Achieved
a2.k8	Not Measured	98.0	98.0	Achieved
a2.k9	76.0	85.0	80.5	Achieved
a2.k10	70.0	93.0	81.5	Achieved
a2.k11	Not Measured	Not Measured	Not Measured	Not Measured
b1.k12	69.5	75.7	72.6	Achieved
b1.k13	69.3	79.2	74.2	Achieved
b1.k14	81.7	Not Measured	81.7	Achieved
b1.k15	Not Measured	Not Measured	Not Measured	Not Measured
b2.k16	78.0	83.4	80.7	Achieved
b2.k17	64.3	79.0	71.7	Achieved
b2.k18	74.9	80.5	77.7	Achieved
b2.k19	Not Measured	90.0	90.0	Achieved
b2.k20	86.0	78.5	82.3	Achieved

b3.k21	87.5	73.0	**80.3**	**Achieved**
b3.k22	79.8	70.3	**75.1**	**Achieved**
b3.k23	83.7	59.0	**71.3**	**Achieved**
b3.k24	70.5	85.0	**77.8**	**Achieved**
b3.k25	91.5	71.0	**81.3**	**Achieved**
c1.k26	77.0	90.0	**83.5**	**Achieved**
c1.k27	100.0	100.0	**100.0**	**Achieved**
c1.k28	80.0	95.5	**87.8**	**Achieved**
c1.k29	100.0	79.3	**89.7**	**Achieved**
c1.k30	Not Measured	**Not Measured**	**Not Measured**	**Not Measured**
c1.k31	87.5	78.0	**82.8**	**Achieved**
c2.k32	Not Measured	100.0	**100.0**	**Achieved**
c2.k33	Not Measured	**Not Measured**	**Not Measured**	**Not Measured**
c2.k34	100.0	100.0	**100.0**	**Achieved**
c2.k35	100.0	100.0	**100.0**	**Achieved**
c2.k36	96.0	46.0	**71.0**	**Achieved**
c2.k37	100.0	100.0	**100.0**	**Achieved**
c2.k38	Not Measured	**Not Measured**	**Not Measured**	**Not Measured**
c3.k39	92.0	**Not Measured**	**92.0**	**Achieved**
c3.k40	100	**Not Measured**	**100.0**	**Achieved**
c3.k41	**Not Measured**	100	**100.0**	**Achieved**
c3.k42	100	100	**100.0**	**Achieved**
c3.k43	100	100	**100.0**	**Achieved**
c3.k44	79	**Not Measured**	**79.0**	**Achieved**
c3.k45	47	100	**73.5**	**Achieved**

c4.k46	Not Measured	100.0	100.0	Achieved
c4.k47	50.0	100.0	75.0	Achieved
c4.k48	100	73	86.5	Achieved
c4.k49	90	100	95.0	Achieved
d1.k50	93	74	83.5	Achieved
d1.k51	100	78	89.0	Achieved
d1.k52	Not Measured	Not Measured	Not Measured	Not Measured
d1.k53	88	77	82.5	Achieved
d1.k54	Not Measured	Not Measured	Not Measured	Not Measured
d1.k55	98.25	Not Measured	98.3	Achieved
d1.k56	Not Measured	Not Measured	Not Measured	Not Measured
d1.k57	Not Measured	Not Measured	Not Measured	Not Measured
d1.k58	92.5	100	96.3	Achieved
d1.k59	90	94	92.0	Achieved
e1.k60	87.16666667	100	93.6	Achieved
e1.k61	81	96.5	88.8	Achieved
e1.k62	90.33333333	85.66666667	88.0	Achieved
e1.k63	100	84	92.0	Achieved
e1.k64	92.33333333	88.5	90.4	Achieved

The KPIs covered in the above table are through courses and practicals. The uncovered KPIs are mostly covered in the Project and internship program. In this year 1440-1441, we are planning to realign the KPIs based on the stake holders feedback and program curriculum.

NOTE   The following definitions are provided to guide the completion of the above table for Program KPI and Assessment.

KPI refers to the key performance indicators the program used in its SSRP. This includes both the NCAAA suggested KPIs chosen and all additional KPIs determined by the program (including 50% of the NCAAA suggested KPIs and all others).

Target Benchmark refers to the anticipated or desired outcome (goal or aim) for each KPI.

Finding Benchmark refers to the actual outcome determined when the KPI is measured or calculated.

Internal Benchmarks refer to comparable benchmarks (actual findings) from inside the program (like data results from previous years or data results from other departments within the same college).

External Benchmarks refer to comparable benchmarks (actual findings) from similar programs that are outside the program (like from similar programs that are national or international).

KPI Analysis refers to a comparison and contrast of the benchmarks to determine strengths and recommendations for improvement.

New Target Benchmark refers to the establishment of a new anticipated or desired outcome for the KPI that is based on the KPI analysis.

Institutional Key performance indictors Report
Medical Equipment Technology (MET)
1439/1440

The main performance indicators proposed for academic programs for *the academic year* 1439-1440 H

Target performance level New	Performance level Reference Internal	External reference performance level	Target performance level	Actual performance level 1439-1440	Description	Key Performance Index	Icon	Standard
Not measured	*Not measured*	*Not measured*	*Not measured*	*Not measured*	Percentage of the objective indicators of the program's operational plan that achieved the annual target level to the total target indicators for these goals in the year.	**Percentage achieved from the objectives of the program's operational plan**	**KPI-P01**	*1-* *Message and goals*
4	4	4	4	3	Average satisfaction rating for community services provided by the program on a five-level scale in an annual survey	**The government's ability to provide services to the community is also a matter of concern.**	**KPI-P02**	*2-* *Program management and quality assurance*
4.5	4.5	4.5	4.5	4.1	*The average overall grade of final-year students for the quality of learning experiences in the program is on a five-level scale in an annual survey.*	**Student assessment of the quality of learning experiences in the program**	**KPI-P03**	*3-* *Education and learning*
4.0	4.0	4.0	4.0	3.75	*Average student general estimate of course quality on a five-point scale in an annual survey*	**Students' assessment of the quality of courses**	**KPI-P04**	
95%	95%	95%	90%	%90	*The percentage of bachelor students who have completed the program in the minimum period of the program period of each class.*	**Virtual completion rate**	**KPI-P05**	
%90	%90	%90	%90	80%	*The percentage of students in the first year of the program who continue in the program*	**First-year retention rate**	**KPI-P06**	

					for the following year to the total number of students for the first year of the same year.			
Not Applicable	*Not Applicable*	*Not Applicable*	*Not Applicable*	*Not Applicable*	*Percentage of students or graduates who are successful in professional and/or national or average tests and intermediate degrees, if any.*	**The level of performance of students in professional and/or national tests**	**KPI-P07**	
				Not measured	*Percentage of program graduates who:* *Ĺ Hire b- Join graduate programs* *During the first year of their graduation to the total number of graduates in the same year*	**Recruiting graduates and enrolling in postgraduate programs**	**KPI-P08**	
6	*6*	*6*	*6*	*6*	*Average number of students in class (per meeting -teaching activity: lecture, small group panel discussions, laboratory or clinical lessons).*	**Average number of students per class**	**KPI-P09**	
				Not measured	*The average general estimate of recruits for the efficiency of the program graduates is on a scale of five levels of annual survey.*	**Evaluating recruiters for the efficiency of program graduates**	**KPI-P10**	*4- Students*
				Not measured	*Average student satisfaction rating for the various services provided by the program _)))))))))) (restaurants, transportation, facilities, sports, restaurants, academic guidance....) on a scale of five levels in an annual survey.*	**Student satisfaction with the services provided**	**KPI-P11**	
%0	*%0*	*%0*	*%0*	*%10*	*The percentage of students who receive an alert and more in the program to the total number of students in the*	**Percentage of students receiving more and more**	**MU-P1**	

					program.	warning		
%2	%2	%2	%2	%2	*Percentage of students who have been denied entry to the final exam of the course for exceeding the legally permitted percentage of the total number of students in the program.*	**Percentage of disadvantaged students**	**MU-P2**	
10	10	10	10	3	*Number of student research published or presented at scientific conferences during the past year*	**Number of student surveys**	**MU-P3**	
1:10	1:10	1:10	1:10	1:5.47	*The ratio of the total number of students to the number of full-time faculty or equivalent to the program.*	**Student-to-faculty ratio**	**KPI-P12**	*5-Faculty*
2:2:4:3	2:2:4:3	2:2:4:3	2:2:4:3	1:1:6:5 (P:ASoP:AP:L) – All Male	*Percentage of the distribution of faculty categories in terms of:* *A. Sex B. Branches C. Scientific Rank.*	**Percentage of faculty distribution**	**KPI-P13**	
%0	%0	%0	%20	%0	*The proportion of faculty who leave the program annually for reasons other than reaching retirement age to the total number of faculty.*	**Percentage of the drop-out of the faculty in the program**	**KPI-P14**	
%90	%90	%90	%80	80%	*The percentage of full-time faculty members who published at least one research during the year to the total faculty members of the program.*	**Percentage of scientific publication of faculty members**	**KPI-P15**	
3	3	3	3	1.5	*Average number of research conducted and/or published per faculty member during the year (total number of research held and/or published to the total number of full-time or equivalent faculty members*	**Published research rate per faculty member**	**KPI-P16**	

					during the year)			
10	10	10	10	5	*Average number of quotations in journals from published scientific research per faculty member in the programme (Total number of quotations in journals from published scientific research for full-time faculty members or equivalent to total published research)*	**Quote rate in court journals for each faculty member**	**KPI-P17**	
%90	%85	%85	%85	%85	*Percentage of full-time faculty members who provided professional development activities inside or outside the university during the year to the total faculty members of the program.*	**Percentage of faculty participating in professional development activities**	**MU-P4**	
4.5	4.5	4.5	4.5	3.9	*Average estimate of the satisfaction of beneficiaries on the adequacy and diversity of learning sources (references - periodicals - information bases ... etc.) on a scale of five levels in an annual survey.*	**Satisfaction of beneficiaries with learning resources.**	**KPI-P18**	*6- Sources of learning, facilities and equipment*

Analysis of the results of measuring indicators:

1- *Program strengths*

➢ *research and ,ucationand values are all directly related to our community needs and the role that we serve in the community in terms of medical ed ,mission ,The vision .n clearly identifies the changing nature of healthcare needs of the Saudi communityThe undergraduate program's missio .healthcare*

➢ *With a rapidly growing population and diversity of nationalities and ethnic backgrounds medical practice is .These complies with Majmaah university Mission and goals .issues of health prevention and education are becoming increasingly important ,With increasing awareness and modernization .lengingchal*

- ➢ *Faculty members are enough to teach program curriculum*
- ➢ *Faculty are Highly proficient and specialties in the program.*

2- *Points that need to be improved in the program*

- ➢ *it is in ,Although .college plans/the institution There is a more need of program goals and its implementation linked to appropriate operational plans that are consistent with .progress*

- ➢ *.ion and goals are not periodically done with the participation of relevant stakeholders and are developed accordinglyThe review of program miss*

- ➢ *SML reports and NQF and the an evidence as .needs and national needs (community)The procedure is needed for the analysis of its appropriateness with the society .social aspects of the community*

- ➢ *The average general estimate of recruits for the efficiency of the program graduates is on a scale of five levels of annual survey not measured*

3- *Priorities for improvement (start-ups with the program improvement plan)*
- ➢ *.nd are reviewed periodicallyA structured plan is needed to periodically review the program mission and goals with the participation of all stakeholders a*
- ➢ *Average student satisfaction rating for the various services provided by the programneed to be conducted*
- ➢ *Percentage of program graduates who: Hire b- Join graduate programs During the first year of their graduation to the total number of graduates in the same year*

Program Action Plan Table

Directions: Based on the "Analysis of KPIs and Benchmarks" provided in the above Program KPI and Assessment Table, list the Recommendations identified and proceed to establish a continuous improvement action plan.

No.	Recommendations	Actions	Assessment Mechanism or Criteria	Responsible Person	Start Date	Completion Date
1	Proposals for Changes to Program Structure (units/credit-hours, compulsory or optional courses, other)	Academic Affairs Committee	Increase Actual KPI measurement	Department council	1-1-1441	17-9-1441
2	Review Course Learning Outcome Assessment for all the courses	Academic Affairs Committee		Course coordinators committee	1-1-1441	17-9-1441
3	Peer review of course delivery: Teaching observation	Academic Affairs Committee		Department council	1-1-1441	17-9-1441
4	Review course matrix with program outcome	Academic Affairs Committee		Department council	1-1-1441	17-9-1441
5	Faculty participation in core research areas and submit proposals	Research Committee		Department council and all faculty	1-1-1441	17-9-1441
6	Faculty participation in Community services	Community Services Committee		Department council and all faculty	1-1-1441	17-9-1441

Action Plan Analysis (List the strengths and recommendations for improvement of the Program Action Plan).

1. *<u>Proposals for Changes to Program Structure (units/credit-hours, compulsory or optional courses, other)</u>*

   <u>Strengths:</u>
   1. The current MET program structure is well defined mostly in all aspects.

   <u>Recommendations for improvement:</u>

   1. To keep the students aligned with very rapid advancements in the field of Medical Equipment Technology, the academic affairs committee in coordination with department council must invite inspections, feedback and guidance from technologists working in external medical equipment companies and hospitals to gather proposals.
   2. The introduction of new compulsory or optional courses and their credit hours, increase in credit hours of existing courses is dependent on these external industry proposals.

2. *<u>Review Course Learning Outcome Assessment for all the courses</u>*

   <u>Strengths:</u>
   1. The CLO-KPI assessment is a regular process and very important indicator of student's achievement in a course. CLO assessment outcome is dependent primarily on the teaching methodologies and strategies used by the instructors, student's successful completion of pre-requisites, their timely dedication, understanding and performance in various assessments. The CAMS and MET QA committee generates an individual CLO-KPI achievement analysis for each course.

   <u>Recommendations for improvement:</u>
   1. It is recommended that the academic affairs committee in coordination with department council must seriously analyze the CLO assessment outcomes for each course (one-by-one) during previous four semesters in which it was offered. In case of significant negative observations, proper steps must be taken to identify the reasons and resolve them.

3. *<u>Peer review of course delivery: Teaching observation</u>*

   <u>Strengths:</u>
   1. The adequate planning and implementation of course delivery in each course is significant to objectives and effective outcomes achievement of the course and program as well. Currently course coordinators and head of department are involved in this process.

Recommendations for improvement:

1. It is recommended that the academic affairs committee in coordination with department council must regularly plan and implement peer review process of course delivery by inviting the faculty members from other colleges and universities who possess an expertise in the course area.

4. *Review course matrix with program outcome*

   Strengths:

   1. Well planned and executed course matrices reflects successful execution of entire program. The course matrices and program outcomes are already defined.

   Recommendations for improvement:

   1. It is recommended that the academic affairs committee in coordination with department council must form a special committee for regular review of all course matrices with program outcome and study the various factors impacting them.

5. *Faculty participation in core research areas and submit proposals*

   Strengths:

   1. Research is a valuable aspect that keeps the faculty members updated about current advancements and latest applications in their field. It is one of the important indicators for effective execution of the program. Most of the department faculty members are actively involved in research and patents achievements.

   Recommendations for improvement:

   1. The research committee at department level must regularly monitor the research activity of faculty members and provide motivation, support and guidance for submission of more research proposals.

6. *Faculty participation in Community services*

   Strengths:

   1. The department community services committee members provide motivation, guidance and information for faculty members to participate in community services.

> **<u>Recommendations for improvement:</u>**
>
> 1. **The community services committee at department level must regularly monitor the community service activity of faculty members and plan on giving some extra appreciations to the faculty members who are actively involved in community services.**

I. Action Plan Progress Report

1. Progress on Implementation of Previous Year's Action Plans

Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
• The credits hours for the graduation project course has to be increased or delivered in more than one level	First semester 2019/2020	Department council	In progress	In the next curriculum revision it will be taken (Presently the Academic affairs committee is working on it) – Proof attached
• Encourage student and faculty to propose projects in collaboration with hospitals or industrial company	First semester 2019/2020	All faculty	In progress	All faculties are requested to submit project/research proposals in collaboration with industries/ hospitals in the this year (Till date 6 of our faculty members submitted research proposals)
• Organize more industrial visits for students in higher levels	First semester 2019/2020	Community services Committee	In progress	All faculties are requested arrange visits to industries/ hospitals
• Provide new equipment's to cover all the learning outcomes	First semester 2019/2020	Labs & equipment committee	Completed	A proposal has been submitted to lab Unit to process (An order has been placed by Lab committee)
• Provide technical documents for many medical equipment's	First semester 2018/2019	Labs & equipment committee	Completed	A proposal has been submitted to lab Unit to process (Presently the documents are available in all MET Labs)

• introduce the web-based exams in some course using D2L system	First semester 2018/2019	All faculty	Completed	Introduced
• reduce the number of students in lab session (especially the higher level courses)	First semester 2018/2019	Academic Affairs committee	Completed	Introduced

Program Chair/ Coordinator Name :   **Dr. Abdulaziz Alkathiry (39-40)**

Signature :   ……………………………..   **Date Report Completed:**   **25/01/1441 H**

Received by: **Dean**   **Dr. Mazen Alqahtani**

Signature: د.عبدالعزيز بن عبدالله الكثيري   **Date:**   **26 / 01 / 1441 H**