

The Mechanical Engineering Program in Jouf University Key Performance Indicators Report

1439 – 1440 H.

Key Performance Indicators Data for Mechanical Engineering Program, Year 1439-1440 H.

With External Benchmark for Mechanical Engineering Program in Majmaah University and Mechanical and Material Engineering University of Jeddah

Code	Key Performance Indicators	Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark 1438-1439	External Benchmark		New Target Benchmark
					MU	UJ	
KPI-P- 01	Percentage of achieved indicators of the program operational plan objectives.	53%	70%	————	65.2 %	77 %	70%
KPI-P- 02	Students' Evaluation of quality of learning experience in the program	3.73	3.5	4.3	4.26	4.14	3.75
KPI- P- 03	Students' evaluation of the quality of the courses.	4.4	3.5	4.03	4.33	4.35	4.5
KPI- P - 04	Completion rate.	48.4 %	70 %	27%	72.7 %	68.18 %	70 %
KPI- P - 05	First-year students retention rate	38.7 %	70 %	18 %	93.3 %	97 %	70 %
KPI- P - 06	Students' performance in the professional and/or national examinations.	Not Available					
KPI- P - 07	Graduates' employability and enrolment in postgraduate programs.	26 %	50 %	————	55.6 %	83 %	50 %
		0	10 %	0 %	11.1 %	0 %	10 %
KPI- P - 08	Average number of students in the class.	13	12	15	8	31	12
KPI- P - 09	Employers' evaluation of the program graduates proficiency.	3.6	3.5	4	————	3.9	3.7
KPI- P - 10	Students' satisfaction with the offered services.	3.75	3.5	4.73	3.6	4.18	3.8
KPI- P - 11	Ratio of students to teaching staff.	11 :1	15 :1	9:1	7 : 1	12 : 1	10 :1

Code	Key Performance Indicators	Actual Benchmark 1439-1438	Target Benchmark	Internal Benchmark 1438-1439	External Benchmark		New Target Benchmark
					MU	UJ	
KPI- P - 12	Percentage of teaching staff distribution.	A: M. 100% B: 100 % C: Assist. P:80 % Assoc. P: 10 % Prof.: 10 %	A: M. 100% B: 100 % C: Assist. P: 70 % Assoc. P: 20 % Prof.: 10 %	A: M. 100% B: 100 % C: Assist. P: 85 % Assoc. P: 15 % Prof.: 0 %	A: M. 100% B: 100 % C: Lecturer: 6.7 % Assist. P:60 % Assoc. P: 33.3 % Prof.: 0 %	A: M. 100% B: 100 % C: Lecturer: 7 % Assist. P:33% Assoc. P: 60 % Prof.: 0 %	A: M. 100% B: 100 % C: Assist. P: 70 % Assoc. P: 20 % Prof.: 10 %
KPI- P - 13	Proportion of teaching staff leaving the program.	10 %	0 %	5 %	0 %	0 %	0 %
KPI- P - 14	Percentage of publications of faculty members.	27.2 %	60 %	38 %	86.7 %	92.7 %	60 %
KPI- P - 15	Rate of published research per faculty member.	0.81 : 1	1 : 1	0.95 : 1	0.62 : 1	2.2 : 1	1 : 1
KPI- P - 16	Citations rate in refereed journals per faculty member.	8.45 : 1	20 : 1	7.49 : 1	22 : 1	10 : 1	20 : 1
KPI- P - 17	Satisfaction of beneficiaries with the learning resources.	3.86	3.8	3.95	3.87	3.75	3.9
KPI- P - 18	Number of research groups in the program	0	2	0			2
KPI- P - 19	The number of subsidized research projects that the program's staff obtain annually	2	5	1			5
KPI- P - 20	Percentage of students participating in extra-curricular activities	8%	20%	6%			20%
KPI- P - 21	Employer's satisfaction with the program's mission, vision and objectives	3.4	3.3	3.2			3.5

وكالة الجامعة للتطوير والجودة
عمادة الجودة والاعتماد الأكاديمي



المملكة العربية السعودية
وزارة التعليم
جامعة الجوف

KPI- P - 22	Percentage of student graduation projects related to the community	30%	30%	25%			30%
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**Key Performance Indicators Data for Mechanical Engineering Program, Key
Performance Indicators Data for Mechanical Program,
College of Engineering in main campus,
Year 1438-1439 H.**

Code	Key Performance Indicators	KPI for Mechanical Program
KPI-P- 01	Percentage of achieved indicators of the program operational plan objectives.	53%
KPI-P- 02	Students' Evaluation of quality of learning experience in the program	3.73
KPI- P - 03	Students' evaluation of the quality of the courses.	4.4
KPI- P - 04	Completion rate.	48.4 %
KPI- P - 05	First-year students retention rate	38.7 %
KPI- P - 06	Students' performance in the professional and/or national examinations.	Not Available
KPI- P - 07	Graduates' employability and enrolment in postgraduate programs.	a. 26 % b. 0 %
KPI- P - 08	Average number of students in the class.	13
KPI- P - 09	Employers' evaluation of the program graduates proficiency.	3.6
KPI- P - 10	Students' satisfaction with the offered services.	3.75
KPI- P - 11	Ratio of students to teaching staff.	11 :1
KPI- P - 12	Percentage of teaching staff distribution.	A: M. 100% B: 100 % C: Assist. P:80 % Assoc. P: 10 % Prof.: 10 %
KPI- P - 13	Proportion of teaching staff leaving the program.	10 %
KPI- P - 14	Percentage of publications of faculty members.	27.2 %
KPI- P - 15	Rate of published research per faculty member.	0.81
KPI- P - 16	Citations rate in refereed journals per faculty member.	8.45
KPI- P - 17	Satisfaction of beneficiaries with the learning resources.	3.86
KPI- P - 18	Number of research groups in the program	0
KPI- P - 19	The number of subsidized research projects that the program's staff obtain annually	2
KPI- P - 20	Percentage of students participating in extra-curricular activities	8%
KPI- P - 21	Employer's satisfaction with the program's mission, vision and objectives	3.4
KPI- P - 22	Percentage of student graduation projects related to the surrounding community	30%

Standard 1: Mission and Goals

Table1: KPI-P-01: Percentage of achieved indicators of the program operational plan objectives.

NCAAA KPI Reference Number: KPI-P-01: Percentage of achieved indicators of the program operational plan objectives					
Mechanical Program KPI Reference Number: KPI-P-01					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
53%	70%	50%	65.2 %	77 %	70%

KPI Analysis of Percentage of achieved indicators of Mechanical Engineering program operational plan objectives

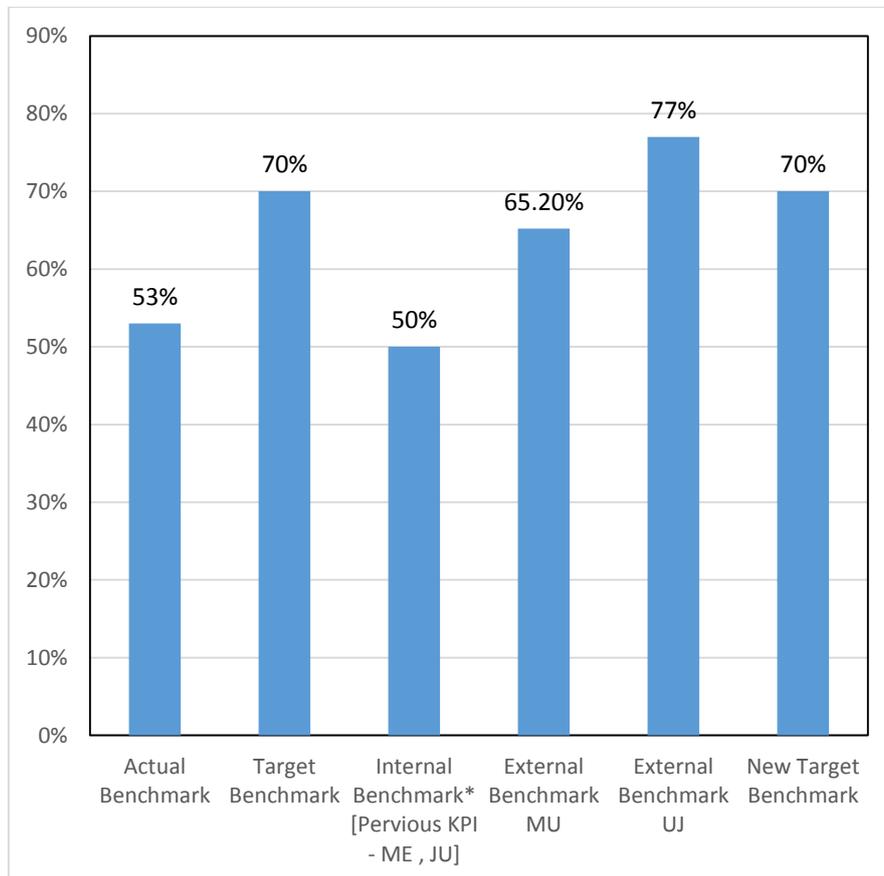


Figure 1: Percentage of achieved indicators of Mechanical Engineering program operational plan objectives

Figure 1: above shows that the actual benchmark (53%) is based on the Percentage of achieved indicators of Mechanical Engineering program operational plan objectives for the year 2018-2019. The percentage of completion is higher than in the

previous year (50%), but it needs more improvement. The quality committee has decided to retain the new target benchmark to 70%. It is less than the external benchmark provided by Jeddah University and of Majmaah University.

Strengths:

Achieved indicators of Mechanical Engineering program operational plan objectives are calculated annually.

Recommendations:

- Formation of a committee to investigate the cause for a low percentage of achieved indicators of Mechanical Engineering program operational plan goals.

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2019-2020) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

percentage of achieved indicators of Mechanical Engineering program operational plan objectives.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.
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2. How was the benchmark calculated?

- Percentage of achieved indicators of Mechanical Engineering program operational plan objectives.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah.

Standard 3: Teaching and Learning

Table 2: KPI-P-02 Students' evaluation of quality of learning experience in the program.

NCAAA KPI Reference Number: KPI-P- 02: Students' evaluation of quality of learning experience in the program.					
Mechanical Program KPI Reference Number: KPI-P-02					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
3.73	3.5	4.3	4.26	4.14	3.75

📊 KPI Analysis of Students' evaluation of quality of learning experience in Mechanical Engineering program.

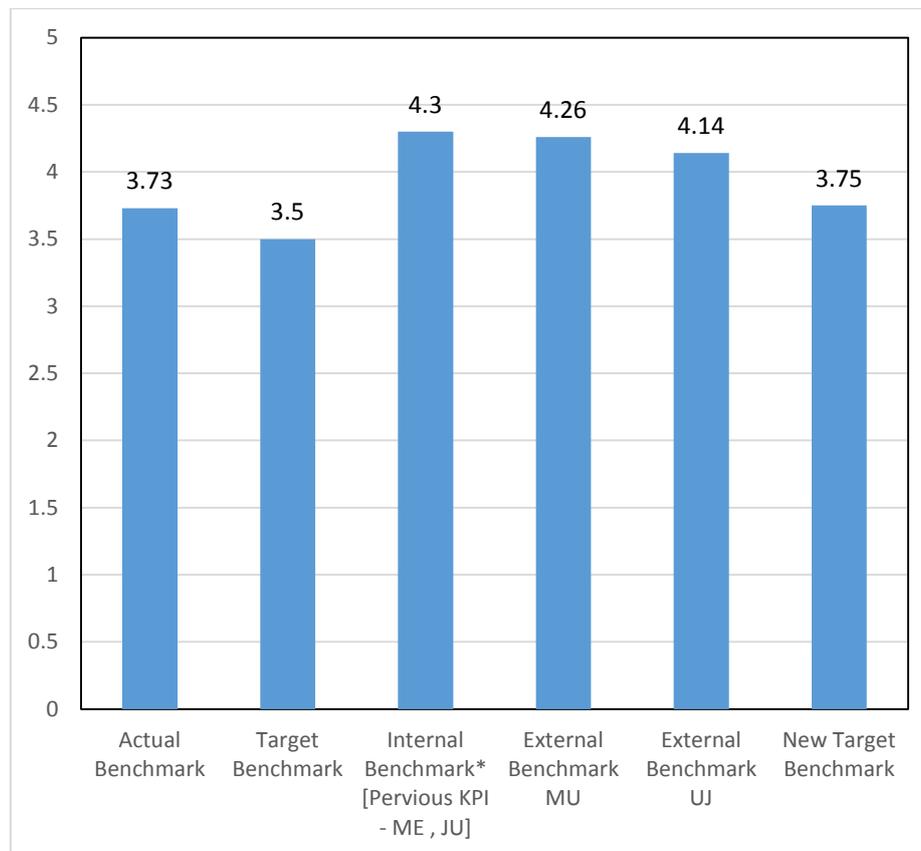


Figure 2: The Students' evaluation of quality of learning experience in Mechanical Engineering program at the University level.

Figure 2: above shows that the actual benchmark (3.73) is based on the survey “ME Students Survey on Evaluating the Mechanical Engineering Program” conducted among final year students for the year 2018-2019. The aspect included in the calculation of the actual benchmark is “Overall Evaluation”. We note that the actual benchmark value for year 2018-2019 is considerably lower than the actual value for the previous year (2017-2018) which also serves as the internal benchmark (4.3). The actual benchmark exceeds the target (3.5) comfortably and is reasonably close to the external benchmark provided by Jeddah University and higher than that of Majmaah University. The decline shows a lack of ME department’s commitment to improving the quality of learning experience. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to retain the new target benchmark to 3.75.

Strengths:

- Relevant surveys are conducted regularly which allows for consistent evaluation of the overall learning experience from final year students’ perspective
- The department attempts to improve all aspects of the students’ experience

Recommendations:

- Academic advisors during the orientation sessions should discuss the key points with the students in order to improve the overall quality of their learning experiences

* **Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program’s own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next. The Quality Unit of College in collaboration with DQAA conducts and collects regular evaluation surveys including among ME students. The results available in their database were considered an authentic and suitable measure for an internal benchmark.

2. How was the benchmark calculated?

The internal benchmark is based on the survey conducted among final year ME students for the year 2018-2019. “(ME) Students Survey on their Experiences in the University”. The internal benchmark is the average of all six aspects.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

** **Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

By Average of overall rating of final year students for the quality of learning experience in Mechanical Engineering program on a five-point scale in an annual survey.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 3: KPI-P-03 Students' evaluation of the quality of the courses.

NCAAA KPI Reference Number: KPI-P- 03: Students' evaluation of the quality of the courses					
Mechanical Program KPI Reference Number: KPI-P-03					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
4.4	3.5	4.03	4.33	4.35	4.5

KPI Analysis of Students' evaluation of the quality of the courses in Mechanical Engineering program

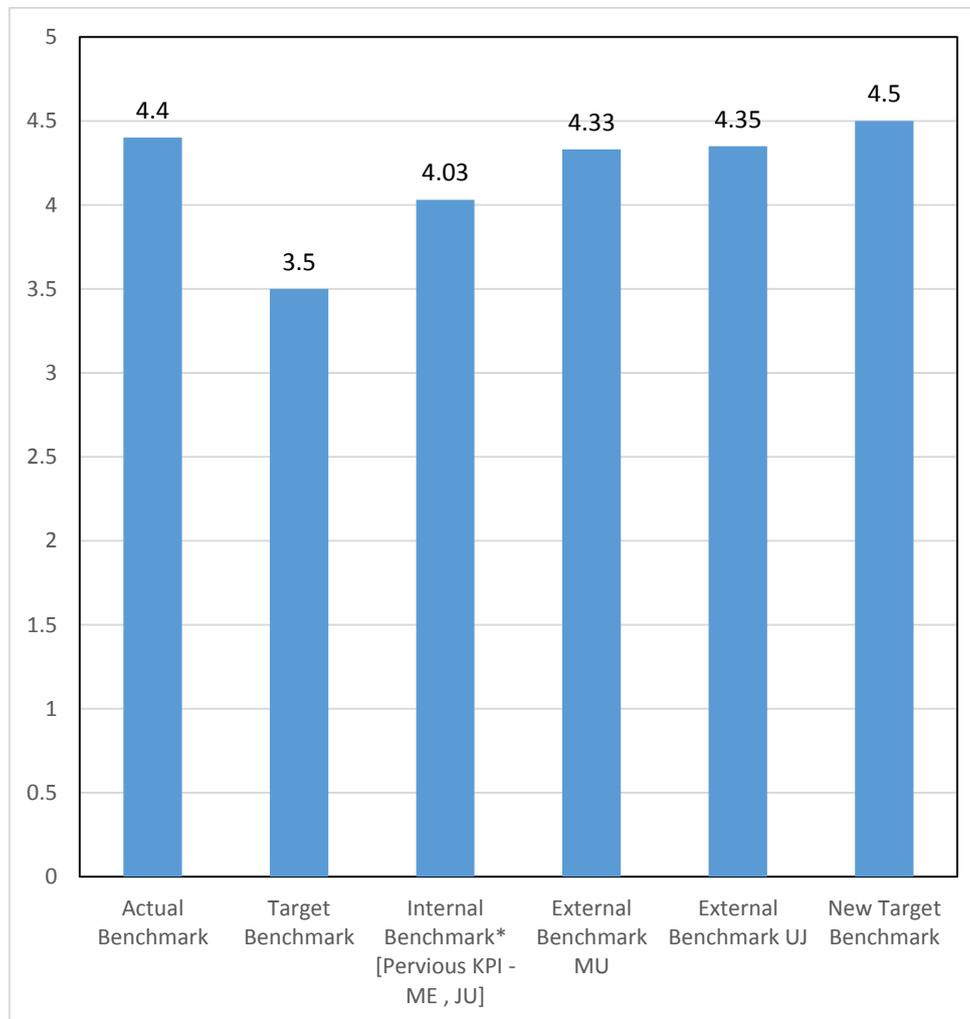


Figure 3: The Students' evaluation of the quality of the courses in Mechanical Engineering program at the University level.

Figure 3: above shows that The actual benchmark (4.4) is based on several course evaluation surveys conducted among the ME students for course given in the year 2018-2019. We note that although the actual benchmark value is considerably higher than the external benchmark provided Jeddah. University and university of Majmaah. It is higher than the target (3.5), and reasonably close to the previous cycle (4.03) which also serves as the internal benchmark. The considerable improvement shows the ME department's staff to improving the quality of the courses, that means improving and diversifying in teaching strategies. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to retain the target benchmark at 4.5.

Strengths:

- Course evaluation surveys are conducted regularly which allows for consistent evaluation of the course quality from ME students' perspective

Recommendations:

- Continuing to educate students about the importance of Course evaluation surveys

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next. The Quality Unit of College in collaboration with DQAA conducts and collects regular evaluation surveys including among ME students. The results available in their database were considered an authentic and suitable measure for an internal benchmark.

2. How was the benchmark calculated?

The internal benchmark performance level was calculated through the average rating of students' satisfaction with the various services provided by the academic program for the past year on a five-point scale in the year 2018-2019.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit.

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.

- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

Average students overall rating for the quality of courses on a five-point scale in an annual survey.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 4: KPI-P-04 Completion rate.

NCAAA KPI Reference Number: KPI-P- 04: Completion rate					
Mechanical Program KPI Reference Number: KPI-P-04					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
48.4%	70 %	27%	72.7 %	68.18 %	70 %

KPI Analysis of Completion rate in Mechanical Engineering program.

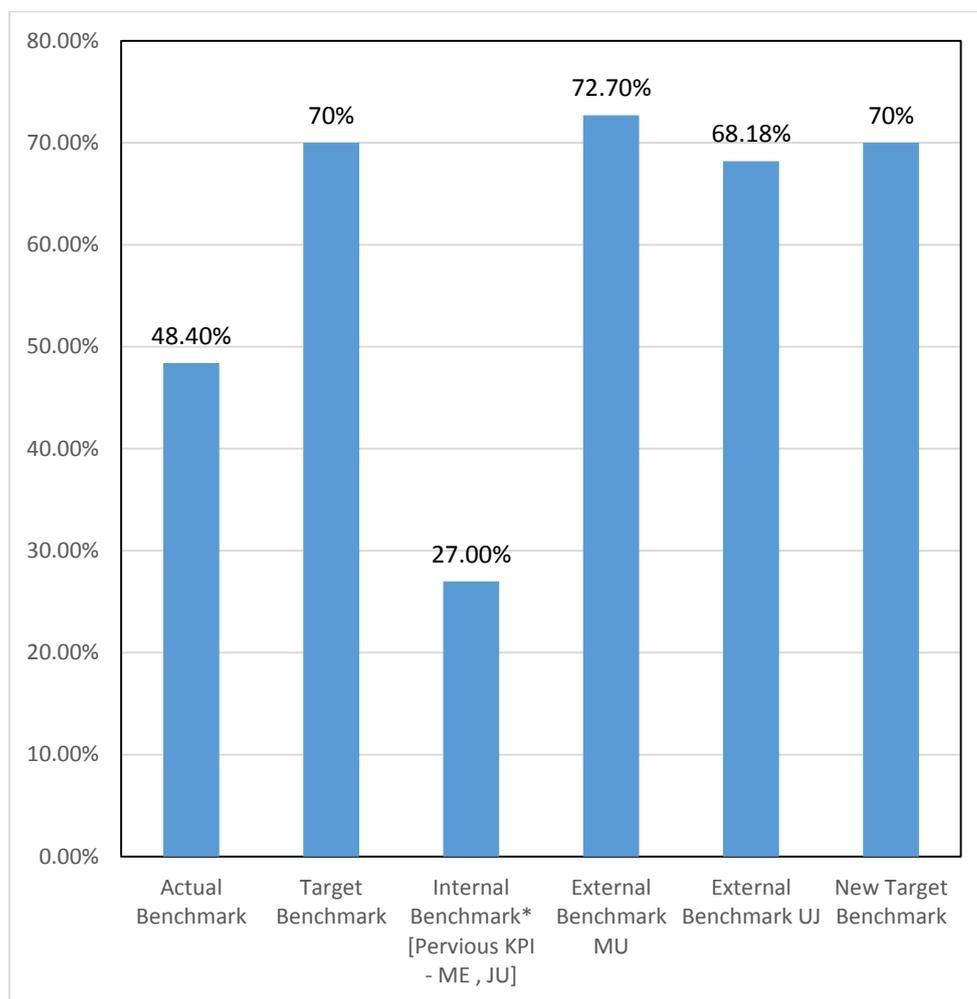


Figure 4: The completion rate in Mechanical Engineering Program at the University level.

Figure 4: above shows that the Actual value (48.8%) indicates the percentage of students who entered the undergraduate program and completed the program in minimum time, and is based on a detailed cohort analysis (for the years 2018-2019). The actual value is lower than the target values (70%), the internal benchmark (27.2%) and external benchmarks at Majmaah University and university of Jeddah

72.7% and 68.18 %. The department clearly needs to address this issue and adopt measurement to improve the overall teaching process such that a student entering the program has better chances of completing in minimum time. The department seeks to increase the faculty members for the next year. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee retain the new target benchmark at 70%.

Strengths:

- Each student is assigned an advisor from among the faculty

Recommendations:

- The department must find out the real reasons for students' stumbles.
- Making arrangements to provide more counseling to students

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

The internal benchmark indicates the percentage of ME students who complete the program in minimum time.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 5: KPI-P-05 First-year students retention rate.

NCAAA KPI Reference Number: KPI-P- 05: First-year students retention rate					
Mechanical Program KPI Reference Number: KPI-P-05					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
38.7 %	70 %	18 %	93.3 %	97 %	70 %

KPI Analysis of first-year students' retention rate in Mechanical Engineering program.

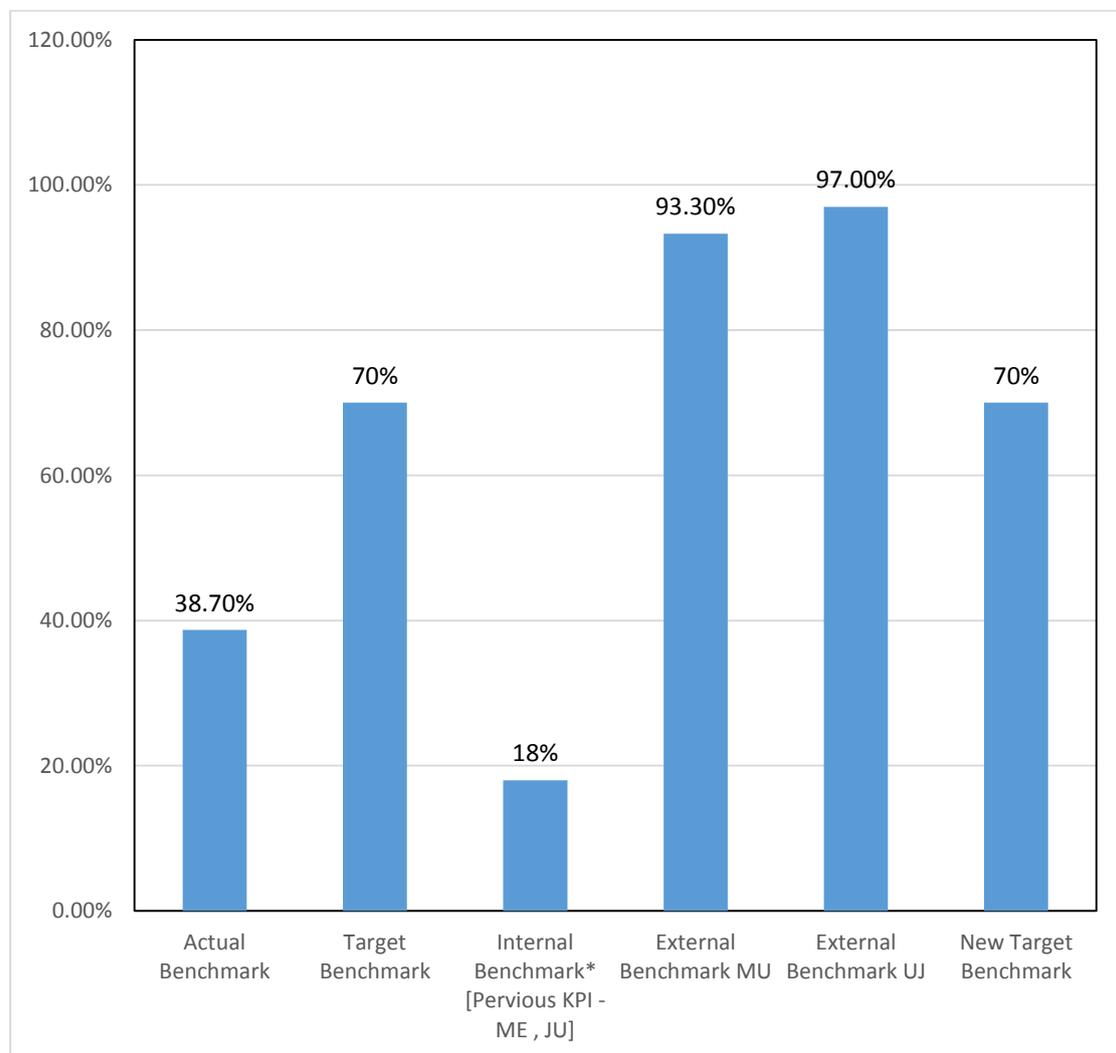


Figure 5: The first-year students retention rate in Mechanical Engineering program at the University level.

Figure 5: above shows that the Actual value (38.70%) indicates the percentage of students who entered and successfully completed first year of the program (for the year (2018-2019). The current value exceeds the target (70%) and is also exceeds the actual value for the previous year (2018-2019) which also serves as the internal benchmark (18%). We note that the actual benchmark is less than the external benchmarks (93.3%, 97%). All statistics indicate that the department needs to address this problem and that there is a shortcoming in the student's successful completion of the first year. This means that there is a problem in the educational process for that year. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to retain the target benchmark at 70%.

Strengths:

- Each student is assigned with an advisor from the faculty members, and there is a periodic follow-up for student's progress.

Recommendations:-

- the department needs to address the issue of students failing in various courses and adopt measurement to improve the overall teaching process such that a student entering the program has better chances of achieving the learning outcomes in the minimum time.
- Strengthening the role of academic advising and urging the importance of communicating with the academic advisor

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

Percentage of first-year undergraduate students who continue at the program the next year to the total number of first-year students in the same year.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.

- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

Percentage of first-year undergraduate students who continue at the program the next year to the total number of first-year students in the same year.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 6: KPI-P-06 Students' performance in the professional and/or national examinations.

NCAAA KPI Reference Number: KPI-P- 06: Students' performance in the professional and/or national examinations.					
Mechanical Program KPI Reference Number: KPI-P-06					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
Not Available					

KPI Analysis of Students' performance in the professional and/or national examinations for Mechanical Engineering program.

Mechanical Engineering program at the University level:

Figure : The Students' performance in the professional and/or national examinations for Mechanical Engineering program at the University level.

Strengths:

Recommendations:

*** Explain:**

1. Why this internal benchmark provider was chosen?

2. How was the benchmark calculated?

Percentage of students or graduates who were successful in the professional and / or national examinations, or their score average and median (if any)

3. Name of the internal benchmark provider.

**** Explain:**

1. Why this external provider was chosen?

2. How was the benchmark calculated?

Percentage of students or graduates who were successful in the professional and / or national examinations, or their score average and median (if any)

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 7: KPI-P-07 Graduates' employability and enrolment in postgraduate programs.

Table 7 A: KPI-P-07 Graduates' employability

NCAAA KPI Reference Number: KPI-P- 07: Graduates' employability.					
Mechanical Program KPI Reference Number: KPI-P-07					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
26 %	50 % -	—	55.6 %	83 %	50 %

KPI Analysis of the employability of graduates of Mechanical Engineering program.

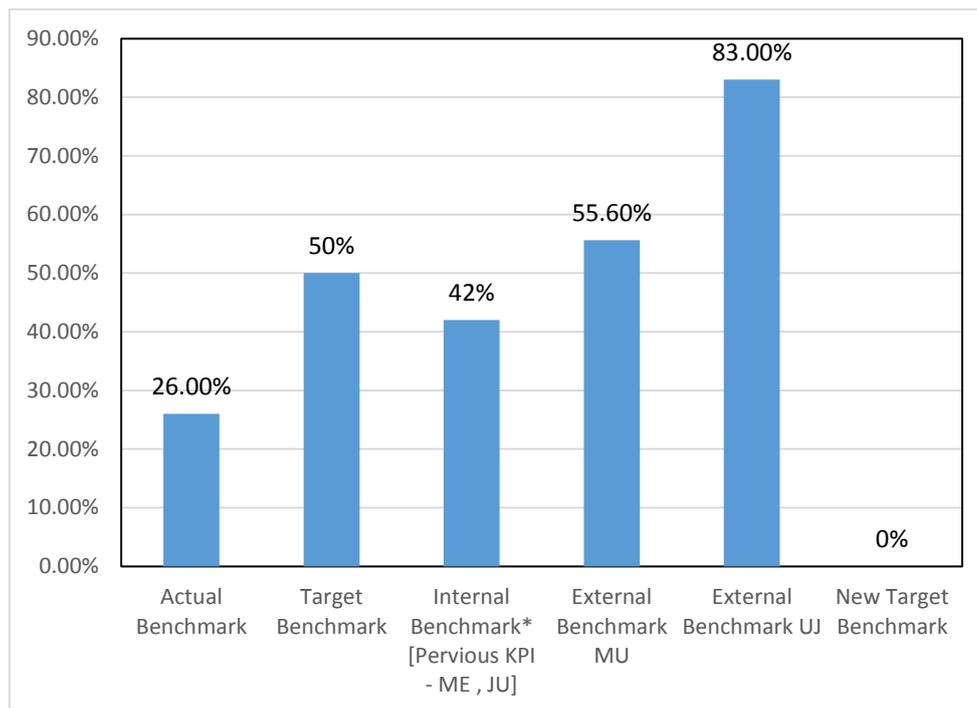


Figure 6: The employability of graduates of Mechanical Engineering program. At the University level:

Figure 6: above shows that the Actual benchmark value is based on information collected from the program graduates, and it represents the percentage of graduates from the ME program who within a year of graduation were employed during the first year of their graduation to the total number of ME graduates in the same year, calculated for the cycle 2018-2019. As is clear from the KPI table, the proportion of graduates finding employment within a year of graduation is considerably lower than all the other references values. The department clearly needs to address this issue and

adopt measures to improve the employability of its graduates. To this end, a committee needs to be formed to investigate causes of students failing to find jobs and to provide clear actionable recommendation for the next cycle. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to retain the target benchmark at 50%

Strengths:

- Each student is assigned an advisor from among the faculty, who can also guide the student in job/higher-studies related matters

Recommendations

- Making arrangements to provide more counseling to students.
- Invite more companies and businessmen in the employment forum

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next

2. How was the benchmark calculated?

The internal benchmark represents the percentage of graduates from the ME programs who within a year of graduation were employed during the first year of their graduation to the total number of ME graduates in the same year, calculated for the cycle 2018-2019.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

the percentage of graduates from the ME program who within a year of graduation were employed during the first year of their graduation to the total number of ME graduates in the same year, calculated for the cycle 2018-2019

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 7 B: KPI-P-07 Graduates' enrolment in postgraduate programs.

NCAAA KPI Reference Number: KPI-P- 07: Graduates' enrolment in postgraduate programs.					
Mechanical Program KPI Reference Number: KPI-P-07					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
0	10 %	0 %	11.1 %	0 %	10 %

KPI Analysis of the enrolment graduates ' of Mechanical Engineering program in postgraduate programs.

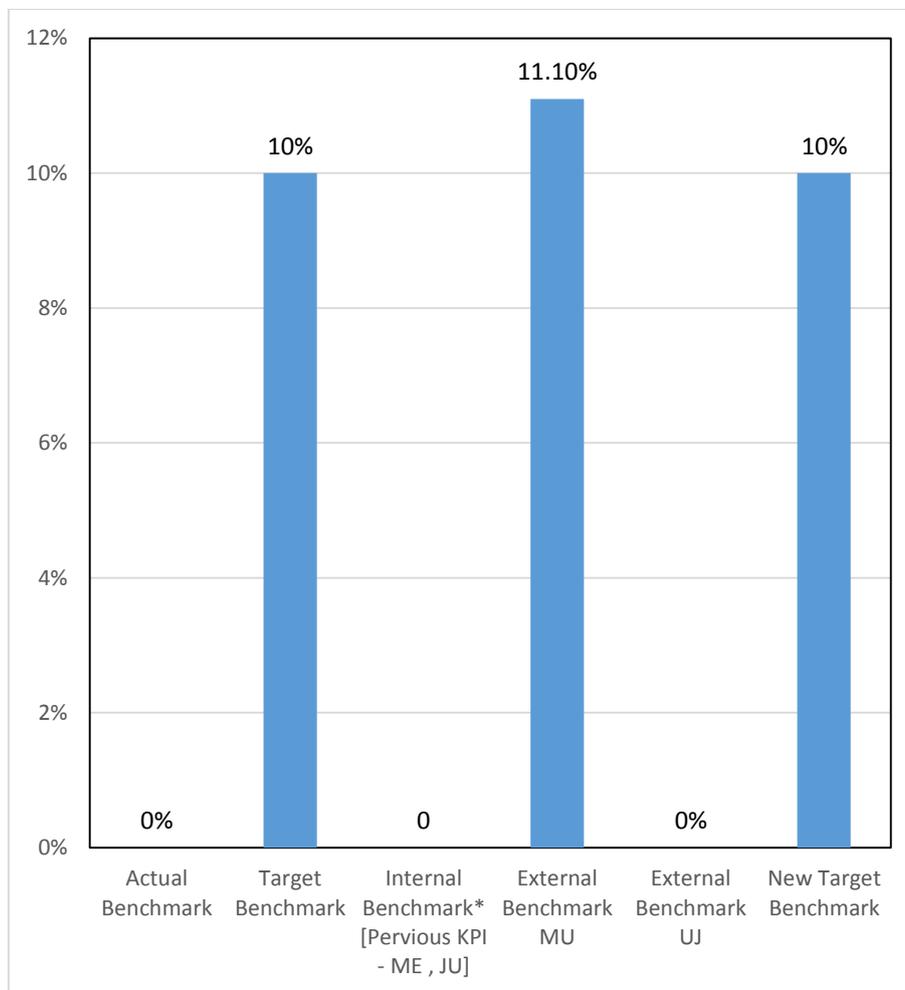


Figure 7: The enrolment graduates ' of Mechanical Engineering program in postgraduate programs. At the University level:

Figure 7: above shows that the Actual benchmark value is based on information collected from the program graduates, and it represents the percentage of graduates

from the ME program who are in higher-studies related matters during the first year of their graduation to the total number of ME graduates in the same year, calculated for the cycle 2018-2019. The department clearly needs to address this issue and adopt measures to improve the higher study of its graduates. To this end, Create a postgraduate program in the department. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to retain the target benchmark at 10%

Strengths:

- Graduates' enrolment in postgraduate programs is still under process.

Recommendations:

- Data regarding students enrolled in higher studies and those not seeking studies were not available. Steps need to be taken to ensure that such data is carefully collected every year
- International external benchmark is recommended to compare actual benchmarks to similar programs given internationally.
- Making arrangements to provide more counseling to students

* **Explain:**

1. Why this internal benchmark provider was chosen?

2. How was the benchmark calculated?

Percentage of graduates from the program who within a year of graduation were:
Enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the same year.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

** **Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

Percentage of graduates from the program who within a year of graduation were enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the same year

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 8: KPI-P-08 Average number of students in the class.

NCAAA KPI Reference Number: KPI-P- 08: Average number of students in the class.					
Mechanical Program KPI Reference Number: KPI-P-08					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
13	12	15	8	31	12

KPI Analysis of average number of students in the class in Mechanical Engineering program.

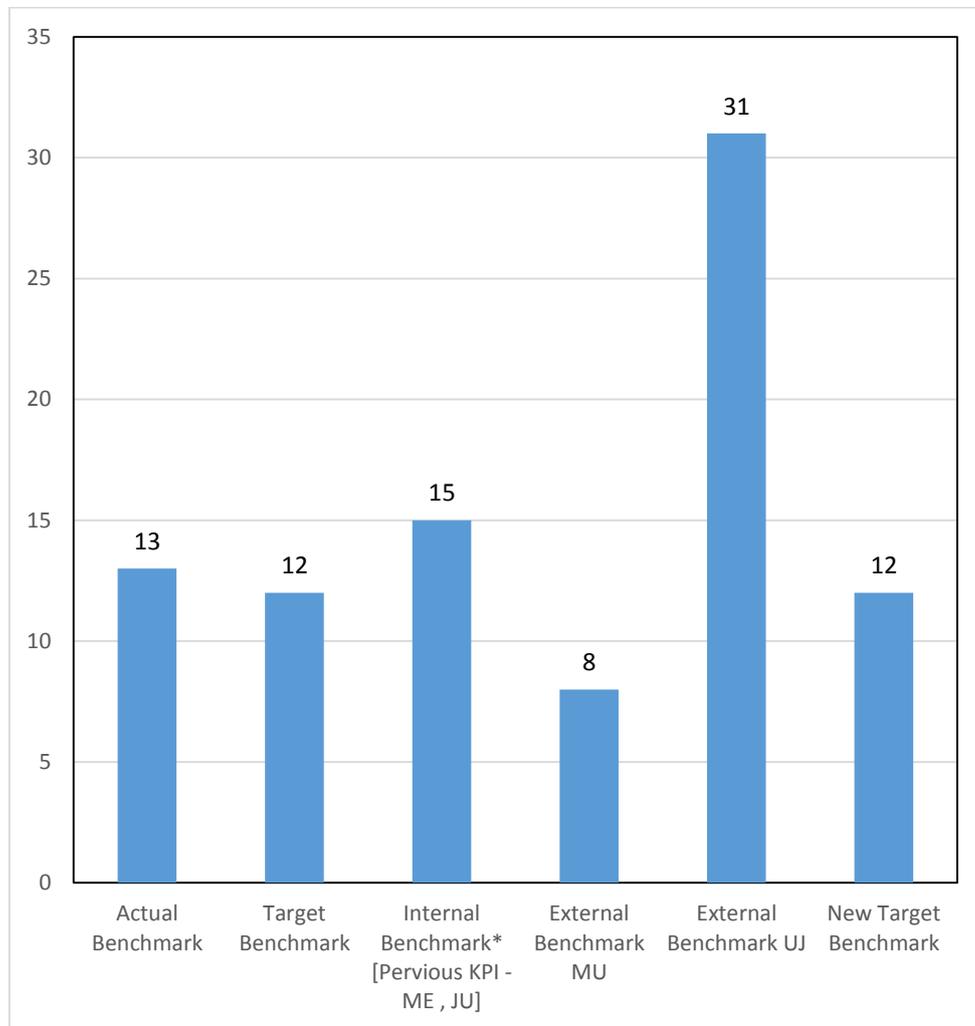


Figure 8: The average number of students in the class in Mechanical Engineering program at the University level.

Figure 8: above shows that the actual benchmark (13) is based on average number of the ME students in the class for courses given in the year 2018-2019. We note that it is higher than the target (12) and the actual benchmark for the previous cycle (15) which also serves as the internal benchmark. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to retain the new target benchmark to 12. This may be achieved by, e.g., dividing some of the very large classes into more sections.

 **Strengths:**

The average number of students per class is reasonably low making instruction easier.

 **Recommendations:**

- Decreasing the average number of students in each class for course.

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

Average number of students per class (in each teaching session/activity: lecture, small group, tutorial, laboratory or clinical session).

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.

- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

Average number of students per class (in each teaching session/activity: lecture, small group, tutorial, laboratory or clinical session).

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 9: KPI-P-09 Employers' evaluation of the program graduates proficiency.

NCAAA KPI Reference Number: KPI-P- 09: Employers' evaluation of the program graduates proficiency.					
Mechanical Program KPI Reference Number: KPI-P-09					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
3.6	3.5	4	—	3.9	3.7

KPI Analysis of employers' evaluation of Mechanical Engineering program graduates proficiency

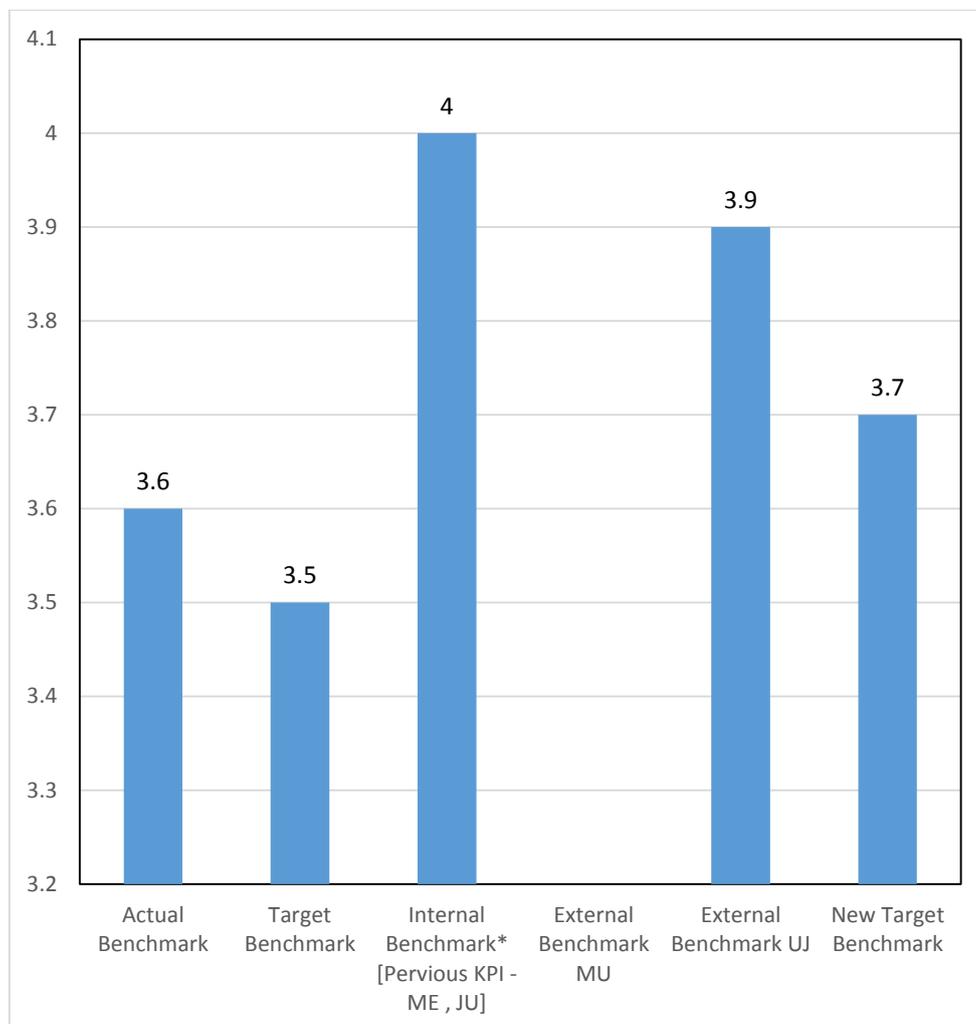


Figure 9: The employers' evaluation of Mechanical Engineering program graduates proficiency at the University level.

Figure 9: above shows that the actual benchmark (3.6) is based on evaluation surveys conducted in the year 2018-2019 among employers of ME program graduates. The actual benchmark value represents the average of overall rating of employers for the proficiency of the program graduates on a five-point scale in the annual survey. We note that the actual benchmark value is lower than the actual benchmark for the previous cycle (4) which also serves as the internal benchmark. The actual benchmark also meets the target (3.5). This indicates the relative decline in the level of graduates, and this is considered a shortcoming in achieving learning outcomes. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to increase the target benchmark to 3.7

Strengths:

Employers' evaluation of the program graduates' proficiency is conducted regularly which allows for consistent evaluation of quality of ME students

Recommendations:

- Increase the number of participants from employers in the evaluation process for graduates of the program to identify deficiencies in the educational process.
- National and international external benchmarks are recommended to compare actual benchmarks to similar programs at local and international level.

* **Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

The benchmark is based on evaluation surveys conducted among employers of ME program graduates. The benchmark value represents the average of overall rating of employers for the proficiency of the program graduates on a five-point scale in the annual survey.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

** **Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

The benchmark is based on evaluation surveys conducted among employers of ME program graduates. The benchmark value represents the average of overall rating of employers for the proficiency of the program graduates on a five-point scale in the annual survey.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Standard 4: Students

Table 10: KPI-P-10 Students' satisfaction with the offered services.

NCAAA KPI Reference Number: KPI-P- 10: Students' satisfaction with the offered services.					
Mechanical Program KPI Reference Number: KPI-P-10					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
3.75	3.5	4.73	3.6	4.18	3.8

📊 KPI Analysis of Students' satisfaction with the offered services in Mechanical Engineering program.

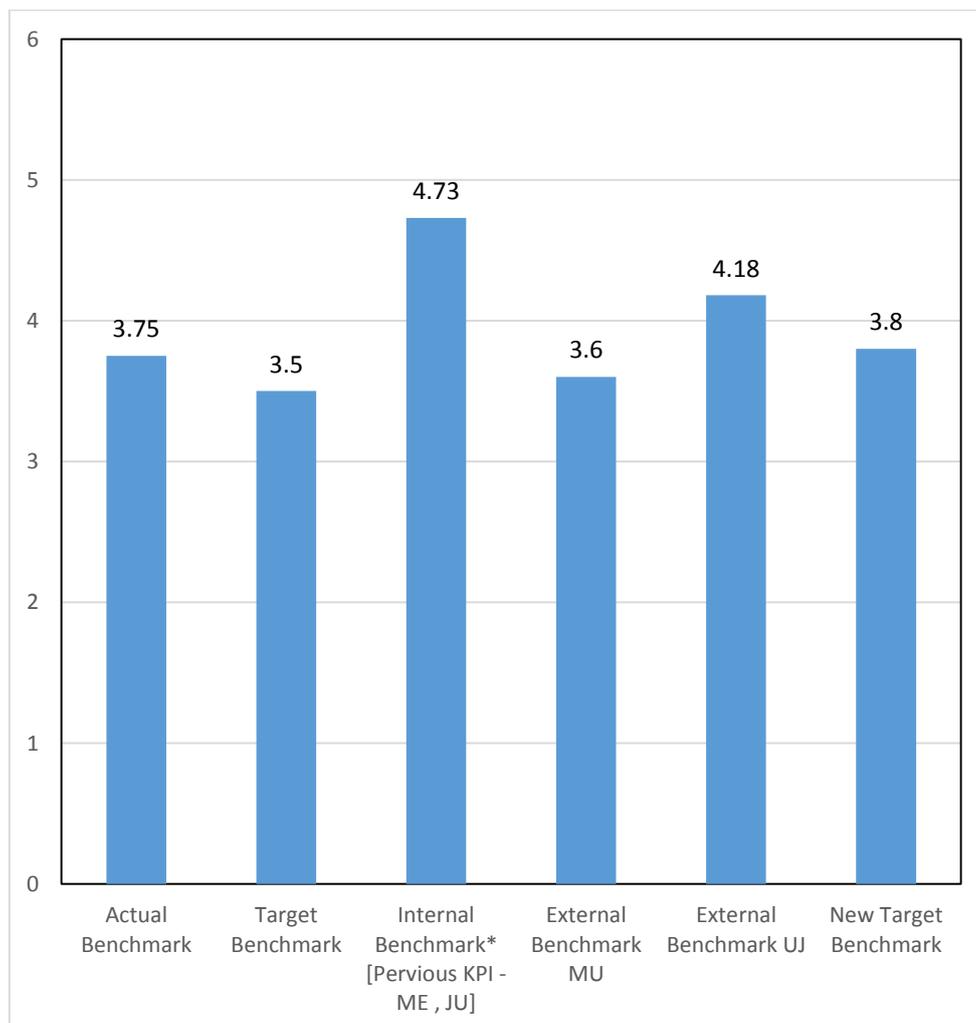


Figure 10: The Students' satisfaction with the offered services in Mechanical Engineering program at the University level.

Figure 10: above shows that the actual benchmark value for 2018-2019 is 3.75 and is based on t survey “ME Students Survey on Evaluating Program Facilities and special Equipment” conducted among ME students for the year 2018-2019. The actual benchmark value represents the average of students’ satisfaction rate with the various services offered by the ME program on a five-point scale in the annual survey. We note that the actual benchmark is considerably lower than the actual value for the previous year (2018-2019) which also serves as the internal benchmark (4.73). This indicates the institute’s and department’s maintain success in improving the available facilities and equipment. The actual benchmark comfortably exceeds the external benchmark (3.6) provided by our benchmarking Majmaah University. Keeping in view the actual and internal benchmarks, and the ambitions of the program, the quality committee has decided to retain the new target benchmark to 3.8.

Strengths:

- Relevant surveys are conducted regularly which allows for consistent evaluation of the facilities and equipment.
- A new campus has been established for the university where a wide range of quality facilities and equipment are available to the program stakeholders.

Recommendations:

- An appropriate strategy needs to be developed through focused group discussions with all the relevant stakeholders to improve the quality of facilities and equipment available to the program.

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program’s own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next. The Quality Unit of College in collaboration with DQAA conducts and collects regular evaluation surveys including among ME students. The results available in their database were considered an authentic and suitable measure for an internal benchmark.

2. How was the benchmark calculated?

Average of students’ satisfaction rate with the various services offered by the program on a five-point scale in an annual survey.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

Average of students' satisfaction rate with the various services offered by the program (restaurants, transportation, sports facilities, academic advising,) on a five-point scale in an annual survey.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Standard 5: Teaching Staff

Table 11: KPI-P- 11 Ratio of students to teaching staff.

NCAAA KPI Reference Number: KPI-P- 11: Ratio of students to teaching staff.					
Mechanical Program KPI Reference Number: KPI-P-11					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
11 :1	9 :1	9:1	7 : 1	12 : 1	10 :1

KPI Analysis of the Ratio of students to teaching staff in Mechanical Engineering program.

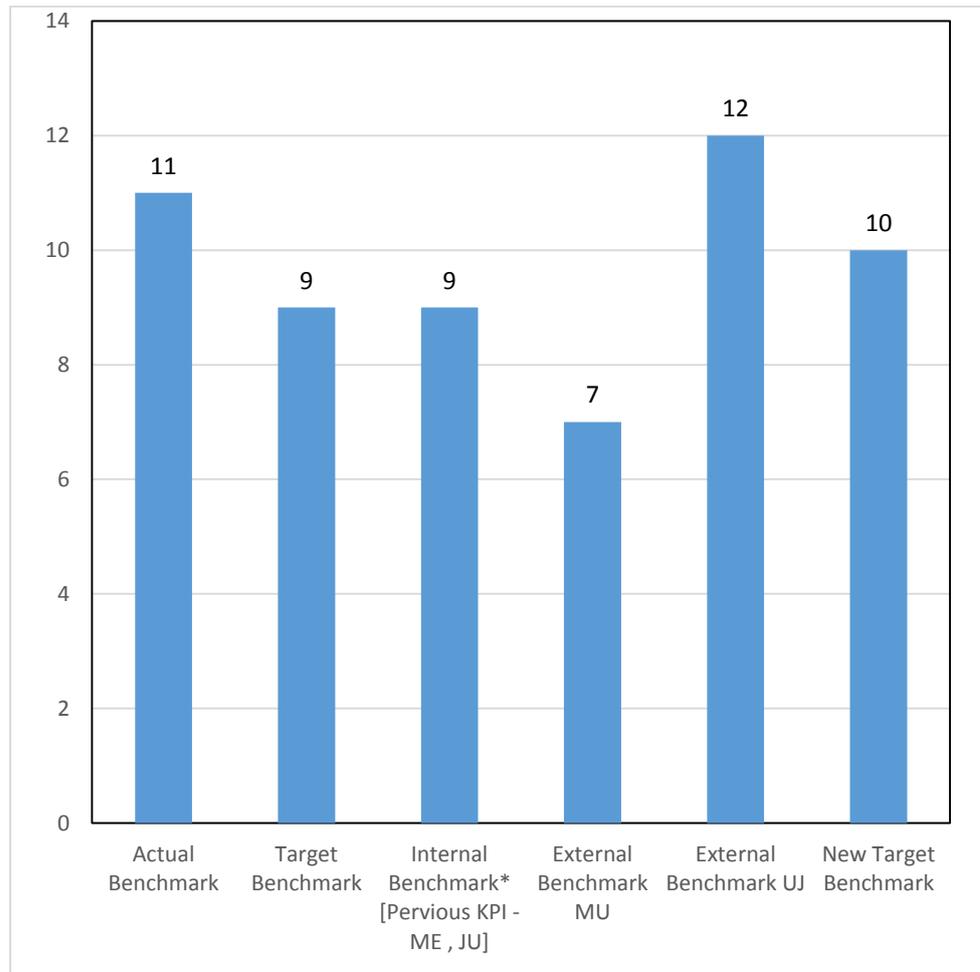


Figure 11: The ratio of students to teaching staff in Mechanical Engineering program at the University level.

Figure 11: above shows that the Actual value (11:1) of this KPI is calculated by dividing the number of ME students by the number of full-time teaching staff at the

department during the year 2018-2019. the actual KPI is significantly higher than the actual value for the previous year (2018-2019) which also serves as the internal benchmark (9:1). The actual benchmark higher than the target (9:1) and is reasonably close to the external benchmark provided by Majmaah University and university of Jeddah. The percentage of last year is lower than this year because some members left the program. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to retain the new target benchmark to 10:1

Strengths:

The ME program provides sufficient number of full-time teaching staff to the students.

Recommendations:

- Most of the PhD teaching staff are Assistant Professors. There is a need to increase the proportion of Associate and Full Professors in the ME department.

* **Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

Ratio of the total number of students to the total number of full-time and fulltime equivalent teaching staff in the program.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

* * **Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

By the ratio of the total number of students to the total number of full-time and fulltime equivalent teaching staff in the program.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 12: KPI-P- 12 Percentage of teaching staff distribution.

Table 12 A: KPI-P- 12 Percentage of teaching staff distribution based on gender.

NCAAA KPI Reference Number: KPI-P- 12: Percentage of teaching staff distribution based on gender.					
Mechanical Program KPI Reference Number: KPI-P-12					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
A: M. 100%	A: M. 100%	A: M. 100%	A: M. 100%	A: M. 100%	A: M. 100%

KPI Analysis of the Percentage of teaching staff distribution based on gender in Mechanical Engineering program.

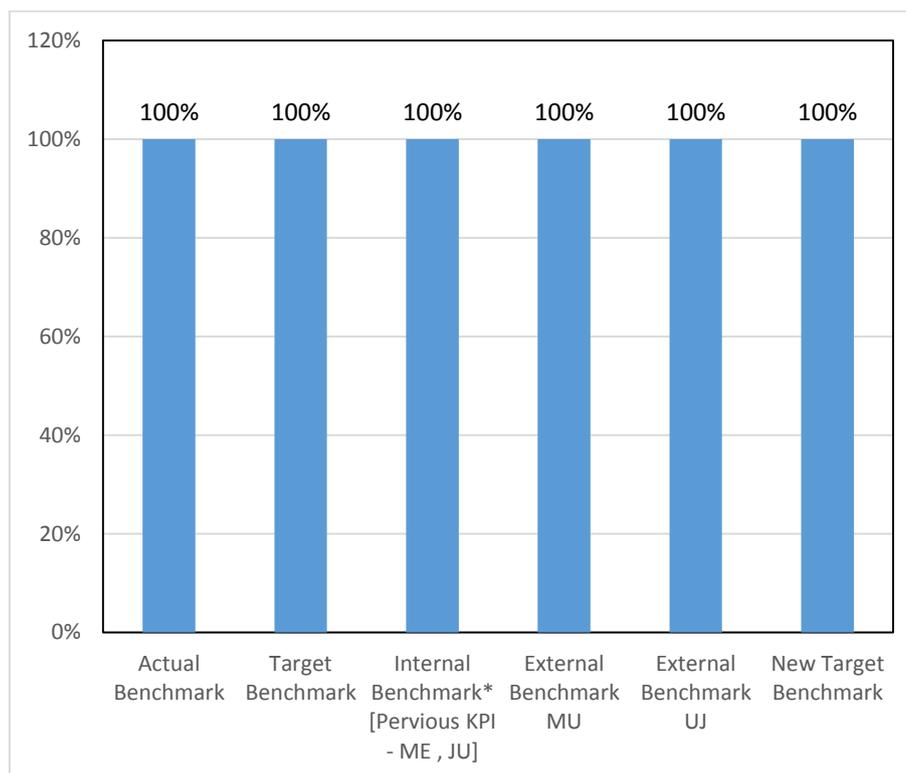


Figure 12: The percentage of teaching staff distribution based on gender in Mechanical Engineering program at the University level.

Figure 12: above shows that the Mechanical Engineering program at JU is offered only at the main campus and is available only to male students. Therefore, the corresponding actual and target benchmarks are 100%. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to retain the new target benchmark to 100%.

Strengths:

Mechanical Engineering program at JU is offered only at the main campus and is available only to male students

Recommendations

- Hire more faculty members at Associate and Full Professor ranks.
- International external benchmark is recommended to compare actual benchmarks to similar programs given internationally.

* **Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

The internal benchmark values give the percentage of ME teaching staff distribution based on Gender

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

** **Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

The internal benchmark values give the percentage of ME teaching staff distribution based on Gender

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 12 B: KPI-P- 12 Percentage of teaching staff distribution based on branches.

NCAAA KPI Reference Number: KPI-P- 12: Percentage of teaching staff distribution based on Branches.					
Mechanical Program KPI Reference Number: KPI-P-12					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
B: 100 %	B: 100 %	B: 100 %	B: 100 %	B: 100 %	B: 100 %

KPI Analysis of the percentage of teaching staff distribution based on Branches in Mechanical Engineering program.

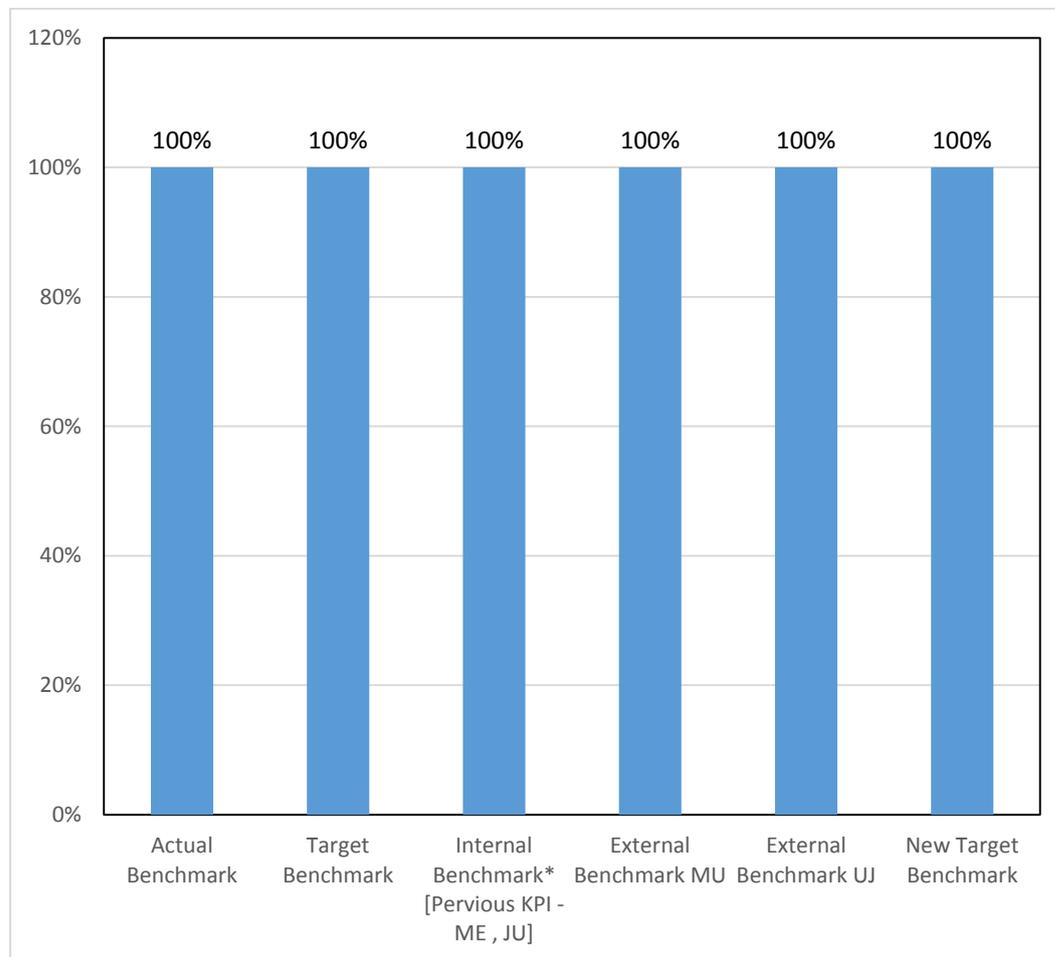


Figure 13: The percentage of teaching staff distribution based on Branches in Mechanical Engineering program at the University level.

Figure 13: above shows that the Mechanical Engineering program at JU is offered only at the main campus and is available only to male students. Therefore, the corresponding actual and target benchmarks are 100%. Keeping in view the actual,

internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to retain the new target benchmark to 100%

Strengths:

Mechanical Engineering program at JU is offered only at the main campus and is available only to male students

Recommendations

- Hire more faculty members at Associate and Full Professor ranks due to expected increase in male students
- International external benchmark is recommended to compare actual benchmarks to similar programs given internationally.

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

The internal benchmark values give the percentage of ME teaching staff distribution based on Branches

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

The internal benchmark values give the percentage of ME teaching staff distribution based on Branches

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 12 C: KPI-P- 12 Percentage of teaching staff distribution based on Academic Ranking.

NCAAA KPI Reference Number: KPI-P- 12: Percentage of teaching staff distribution based on Academic Ranking.					
Mechanical Program KPI Reference Number: KPI-P-12					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
Assist. P: 80 % Assoc. P: 10 % Prof.: 10 %	Assist. P: 70 % Assoc. P: 20 % Prof.: 10 %	Assist. P: 85 % Assoc. P: 15 % Prof.: 0 %	Lecturer: 6.7 % Assist. P: 60 % Assoc. P: 33.3 % Prof.: 0 %	Lecturer: 7.14 % Assist. P: 35.72 % Assoc. P: 50 % Prof.: 7.14 %	Assist. P: 70 % Assoc. P: 20 % Prof.: 10 %

PI Analysis of the percentage of teaching staff distribution based on Academic Ranking in Mechanical Engineering program.

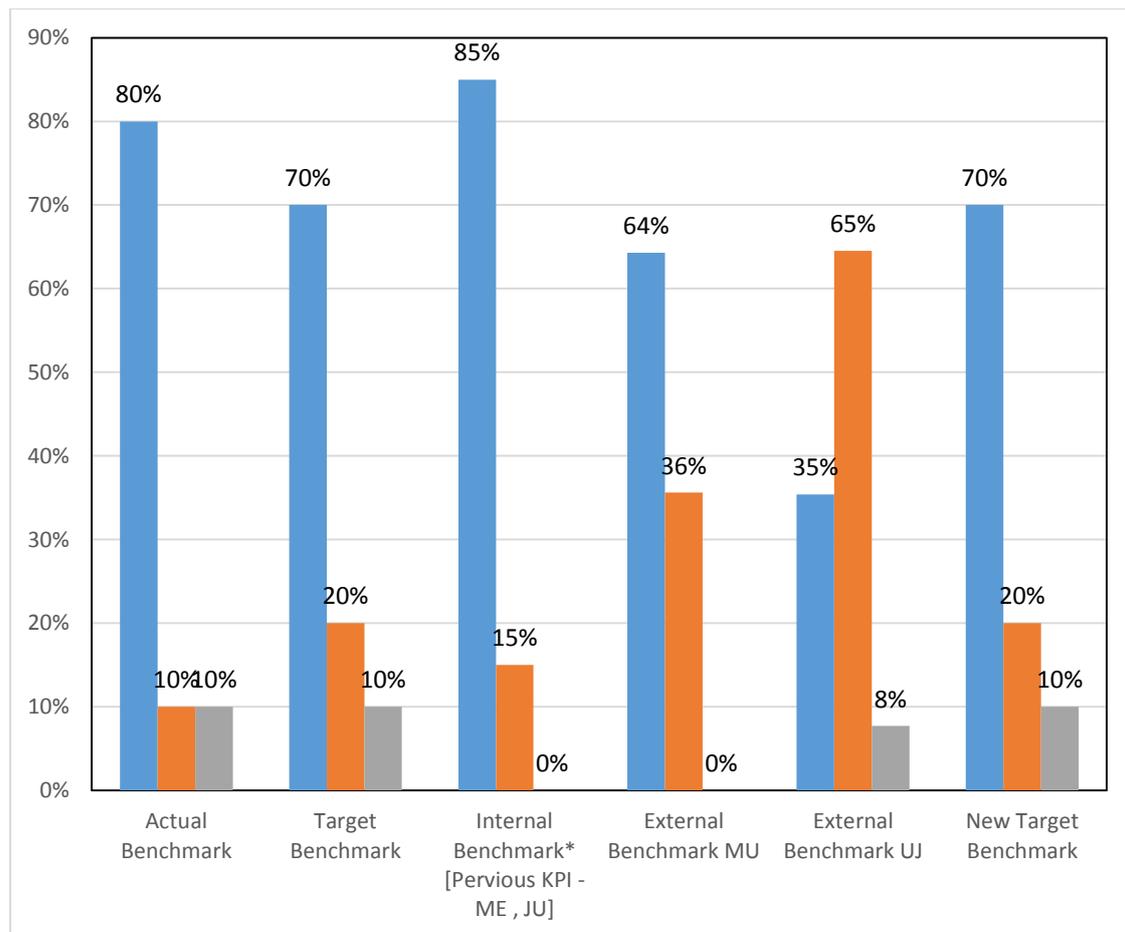


Figure 14: The percentage of teaching staff distribution based on Academic Ranking in Mechanical Engineering program at the University level.

- **Figure 14:** above shows that the distribution of the Mechanical Engineering program at JU by rank, we note that there are currently 10 % Full Professors in the department, while the distribution of Associate and Assistant Professors is 10% and 80% respectively. The number of Associate and Full Professor must be increased by announcing the appointment of associate professors and encouraging assistant professors for promotion. Keeping in view the actual, and target benchmarks, the quality committee has decided to retain the target benchmark. i.e. 10% Full Professor, 20% Associate Professor, and 70% Assistant Professor.

Strengths:

Teaching staff members are distributed due to their Academic Ranking among the faculty members.



Recommendations

- Hire more faculty members at Associate and Full Professor ranks.

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

The internal benchmark values give the percentage of ME teaching staff distribution based on Academic Ranking

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

The internal benchmark values give the percentage of ME teaching staff distribution based on Academic Ranking

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 13: KPI-P- 13 Proportion of teaching staff leaving the program.

NCAAA KPI Reference Number: KPI-P- 13: Proportion of teaching staff leaving the program.					
Mechanical Program KPI Reference Number: KPI-P-13					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
10 %	0 %	5 %	0 %	0 %	0 %

KPI Analysis of the proportion of teaching staff leaving the Mechanical Engineering program.

✚ Mechanical Engineering program at the University level:

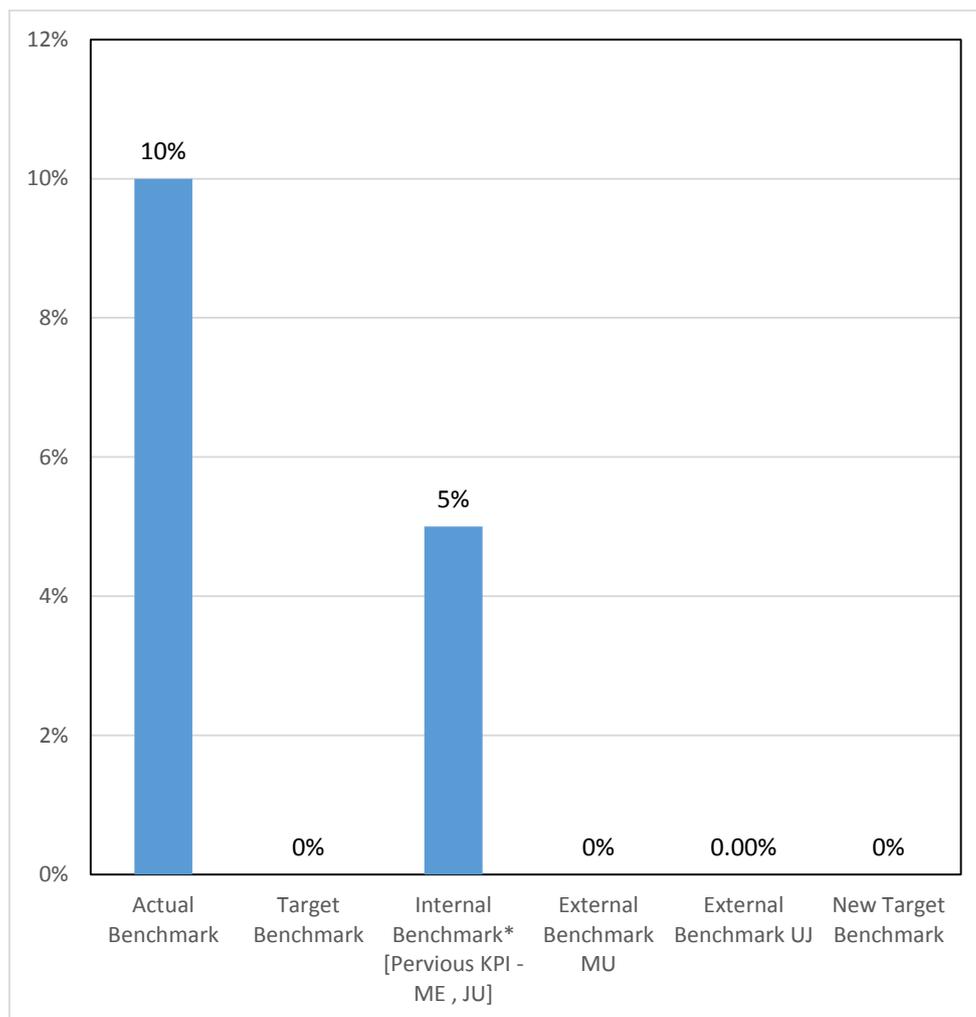


Figure 15: The proportion of teaching staff leaving Mechanical Engineering program at the University level.

Figure 15: above shows that the Actual value (10%) of this KPI is calculated by dividing the number of staff members leaving (for reasons other than retirement) by the total full-time staff at the ME department during the year 2018-2019. This is higher than to the actual value for the previous year (2017-2018) which also serves as the internal benchmark (5%). The actual benchmark is higher than the target that was set at 0%. This is a bad indication, so the department must work to stabilize and increase the number of staff. Keeping in view the actual, internal and external benchmarks, the quality committee has decided to retain the new target benchmark to 0%, reflecting the department's aims to improve the working environment and to consequently reduce the attrition rate even further

Strengths:

There is job satisfaction in the department, which leads to higher retention rates.

Recommendations

- It is recommended to continue the efforts to obtain feedback from the teaching staff regarding their job satisfaction in order to rectify their issues and promote sense of ownership in the faculty members.

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

Proportion of teaching staff leaving the program annually for reasons other than age retirement to the total number of teaching staff.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

Proportion of teaching staff leaving the program annually for reasons other than age retirement to the total number of teaching staff.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 14: KPI-P- 14 Percentage of publications of faculty members.

NCAAA KPI Reference Number: KPI-P- 14: Percentage of publications of faculty members.					
Mechanical Program KPI Reference Number: KPI-P-14					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
27.2 %	60 %	38 %	86.7 %	92.7 %	60 %

KPI Analysis of the percentage of publications of faculty members in Mechanical Engineering program.

✚ Mechanical Engineering program at the University level:

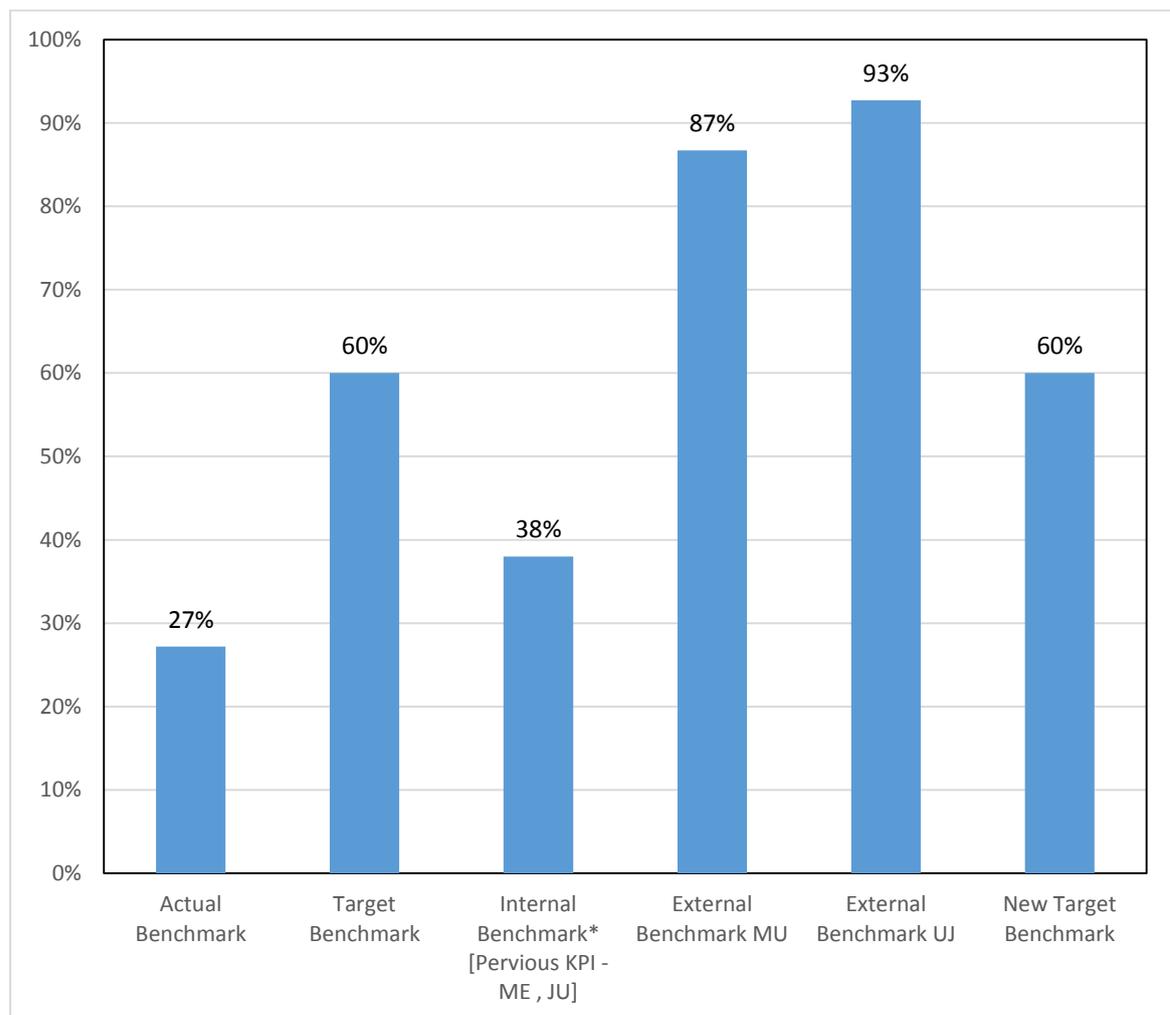


Figure 16: The percentage of publications of faculty members in Mechanical Engineering program at the University level.

Figure 16: above shows that the actual benchmark (27%) was calculated for the academic year 2018-2019. In comparison, the actual benchmark for the academic year 2018-2019, which also serves as the internal benchmark, was 38%, while the external benchmark by Majmaah University and university of Jeddah are 87% and 93%. This is a bad indicator, and this is because the program staffs are busy preparing for international accreditation ABET. Keeping in view the actual, internal, and external benchmarks, and the ambitions of the program, the quality committee has decided to retain the target benchmark to 60%.

Strengths:

- Most of the counted papers (all refereed) were published in ISI indexed journals
- The teaching staff is actively involved in research Although they are busy with other tasks

Recommendations

- Encouraging formation of research groups within the department would help create a stronger culture of collaboration while also affecting the KPI positively.
- Efforts need to be made to ensure an even higher proportion of publications are in ISI indexed journals.
- The department must disseminate more actively the positive outcomes of Faculty Members'

* **Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

Percentage of full-time faculty members who published at least one research during the year to total faculty members in the program.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

** **Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

Percentage of full-time faculty members who published at least one research during the year to total faculty members in the program.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 15: KPI-P- 15 Rate of published research per faculty member.

NCAAA KPI Reference Number: KPI-P- 15: Rate of published research per faculty member					
Mechanical Program KPI Reference Number: KPI-P-15					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
0.81 : 1	1 : 1	0.95 : 1	0.62 : 1	2.2 : 1	1 : 1

KPI Analysis of the rate of published research per faculty member in Mechanical Engineering program.

✚ Mechanical Engineering program at the University level:

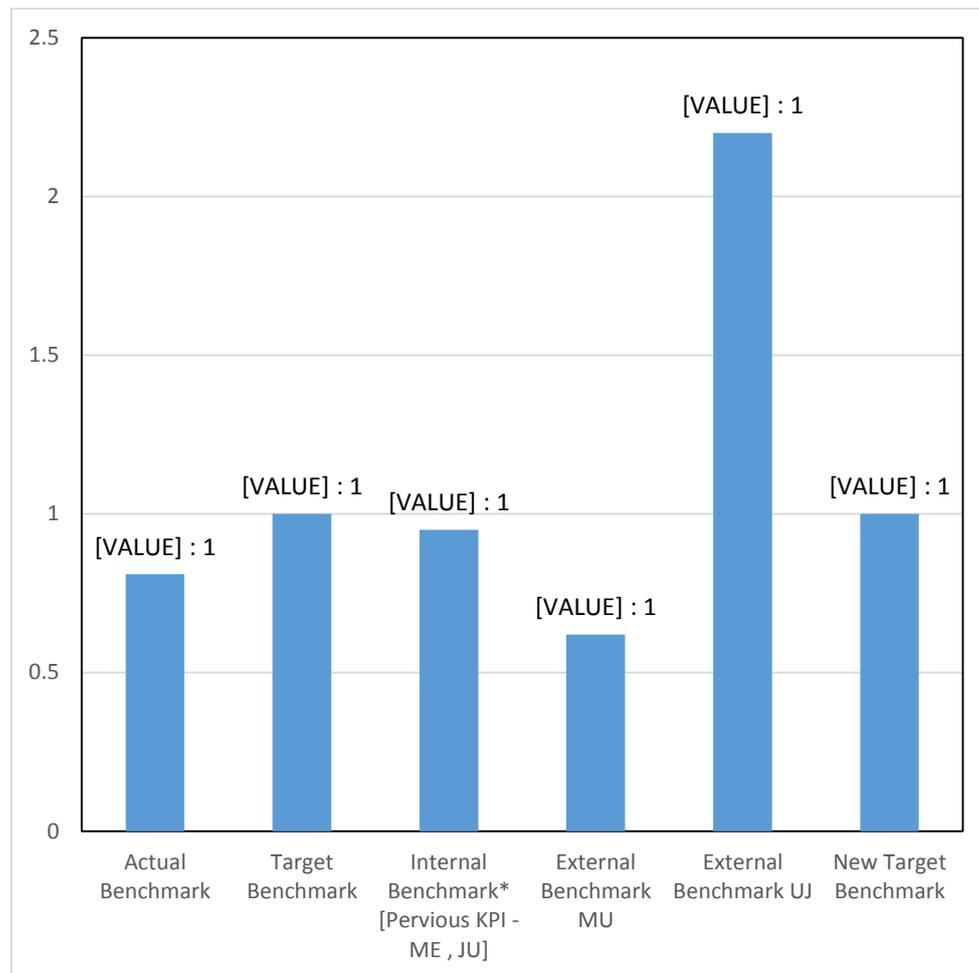


Figure 17: The rate of published research per faculty member in Mechanical Engineering program at the University level.

Figure 17: above shows that the actual benchmark (0.81) was calculated for the academic year 2018-2019. In comparison, the actual benchmark for the academic year 2018-2019 (which also serves as the internal benchmark) was 0.95. The actual benchmark also less than the target benchmark (1.0) by a significant margin. However, the achieved benchmark is considerably lower than external benchmark provided by Majmaah University and university of Jeddah are 0.62 and 2.2 respectively, indicating a clear need for improvement. Keeping in view the actual and internal benchmarks, and the ambitions of the program, the quality committee has decided to retain the new target benchmark to 1.

Strengths:

- The publishing rate is very close to the target, despite the members being busy with other Tasks.
- 75% of the counted papers (all refereed) were published in ISI indexed journals



Recommendations

- Efforts need to be made to ensure a higher proportion of publications are in ISI indexed journals.
- The department must disseminate more actively the positive outcomes of program staffs' Research Performance Evaluation and its impact on their promotional activities.

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

The average number of refereed and/or published research per each faculty member during the year (total number of refereed and/or published research to the total number of full-time or equivalent faculty members during the year).

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit.

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

The average number of refereed and/or published research per each faculty member during the year (total number of refereed and/or published research to the total number of full-time or equivalent faculty members during the year).

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Table 16: KPI-P- 16 Citations rate in refereed journals per faculty member.

NCAAA KPI Reference Number: KPI-P- 16: Citations rate in refereed journals per faculty member					
Mechanical Program KPI Reference Number: KPI-P-16					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
8.45 : 1	20 : 1	7.49 : 1	22 : 1	10 : 1	20 : 1

KPI Analysis of the Citations rate in refereed journals per faculty member in Mechanical Engineering program.

✚ Mechanical Engineering program at the University level:

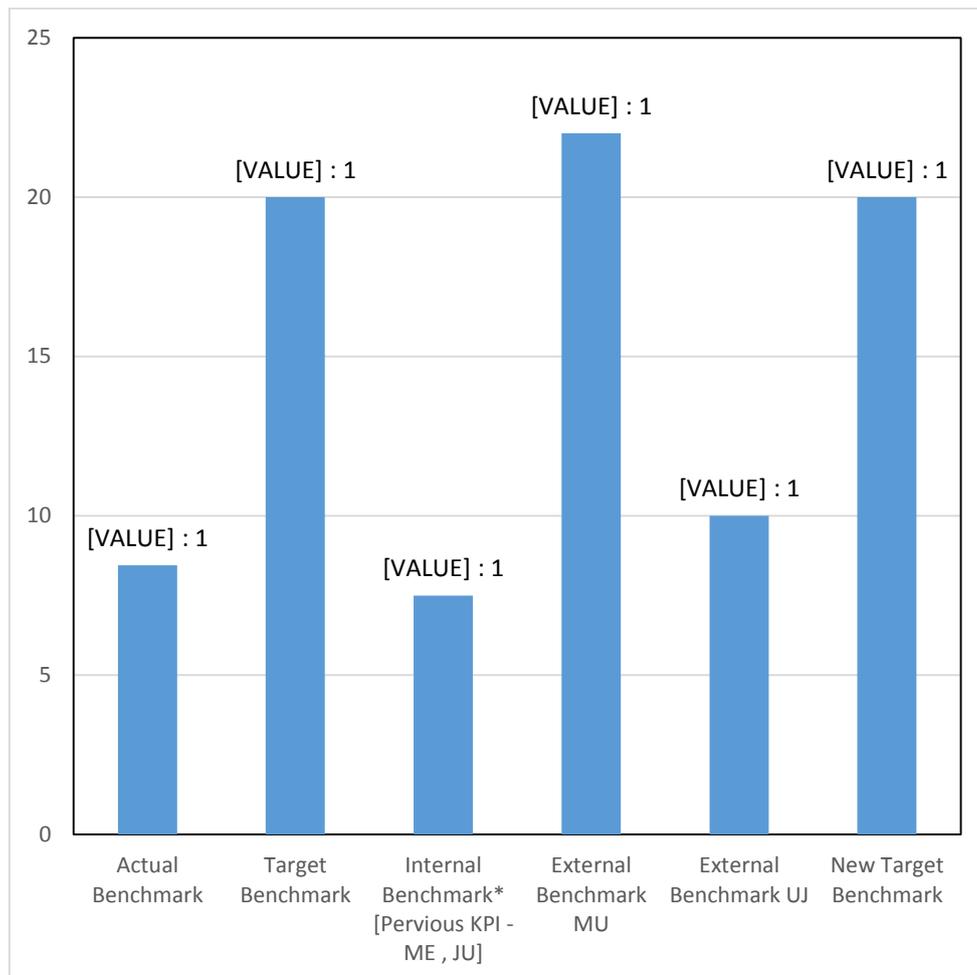


Figure 18: The Citations rate in refereed journals per faculty member in Mechanical Engineering program at the University level.

Figure 18: above shows that the actual benchmark (8.45) is calculated for the academic year 2019. The actual benchmark lower than the target (20) and is higher than the actual benchmark for the previous cycle (2018-2019) which also serves as the internal benchmark (7.49). In addition, the achieved benchmark is lower than external benchmark provided by Majmaah University (22) and lower than that of university of Jeddah (10), which indicates a clear need for improvement and more attention to research that deals with modern research points globally. Keeping in view the actual and internal benchmarks, and the ambitions of the program, the quality committee has decided to retain the new target benchmark to 20

Strengths:

Most of the papers were cited in ISI indexed journals

Recommendations:

- The department must disseminate more actively the positive outcomes of Faculty Members' Research Performance Evaluation and its impact on their promotional activities

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

The average number of citations in refereed journals from published research per faculty member in the program (total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total research published).

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

The average number of citations in refereed journals from published research per faculty member in the program (total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total research published).

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah

Standard 6: Learning Resources, Facilities, and Equipment

Table 17: KPI-P- 17 Satisfaction of beneficiaries with the learning resources.

NCAAA KPI Reference Number: KPI-P- 17: Satisfaction of beneficiaries with the learning resources.					
Mechanical Program KPI Reference Number: KPI-P-17					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
3.86	3.8	3.95	3.87	3.75	3.9

KPI Analysis of the satisfaction of beneficiaries with the learning resources in Mechanical Engineering program.

🚩 Mechanical Engineering program at the University level:

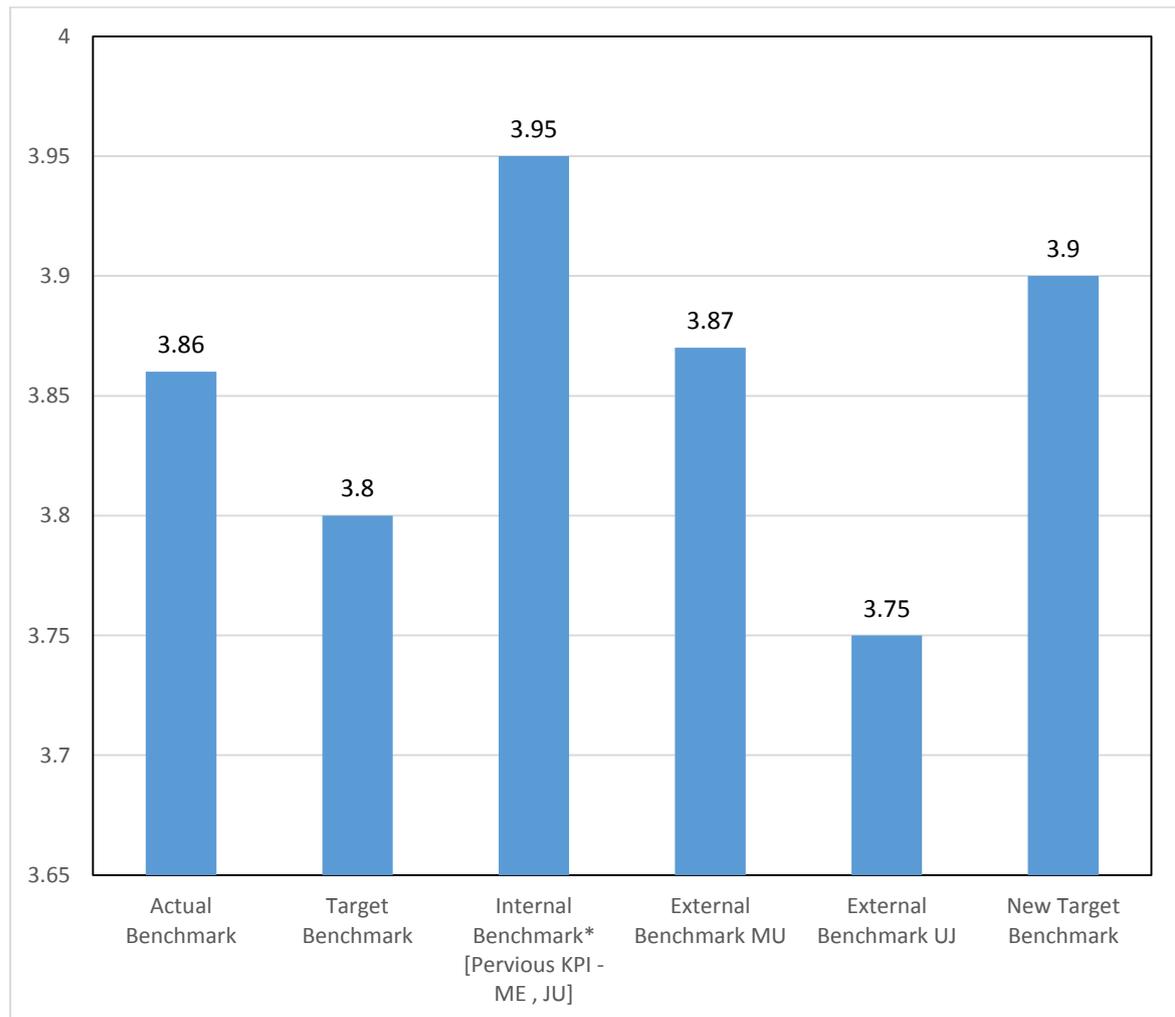


Figure 19: The satisfaction of beneficiaries with the learning resources in Mechanical Engineering program at the University level.

Figure 19: above shows that the actual benchmark value for 2018-2019 is 3.86 and is based on the two surveys “ME Students Survey on evaluating the learning resources” and “ME Staff Members Survey on evaluating the learning resources” conducted among ME students and staff, respectively, for the year 2018-2019. Response scores for the two surveys were averaged to obtain the actual benchmark. We note that the actual benchmark is higher than the actual value for the previous year (2017-2018) which also serves as the internal benchmark and stands at 3.95. In particular, the staff assigned high scores to the library website – clearly indicating a need for improvement in this area. The actual benchmark is also higher than the external benchmark provided by Majmaah University (3.87). and lower than that of university of Jeddah (3.75). Since the previous target was not met, the quality committee has decided to retain the same (i.e., 3.9) target for next year

✚ Strengths:

- A new detailed survey for evaluating the learning resources has been prepared and used during 2018-2019 which gives a better understanding of the aspects needing most improvement.
- The quality committee has decided to use the new detailed survey for evaluating the learning resources from 2018-2019 onwards, and it is expected to provide more consistent evaluation over the years.

✚ Recommendations

- An appropriate strategy needs to be developed through focused group discussions with all the relevant stakeholders to improve the quality of digital library resources. In particular, the website needs to be improved, as this aspect received a very low ranking.
- Further increasing the availability of resources, equipment for the research

* Explain:

1. Why this internal benchmark provider was chosen?

Using ME program’s own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next. The Quality Unit of CoE in collaboration with DQAA conducts and collects regular evaluation surveys including among ME students. The results available in their database were considered an authentic and suitable measure for an internal benchmark.

2. How was the benchmark calculated?

Average of beneficiaries’ satisfaction rate with the adequacy and diversity of learning resources (references, journals, databases... etc.) on a five-point scale in an annual survey.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit.

**** Explain:**

1. Why this external provider was chosen?

The justification of using the external benchmark Mechanical Engineering program in Majmaah University and Jeddah University are as follows -

- Majmaah University was chosen because it was recently being accredited by the NCAAA, in addition to its collaboration agreement with the JU to provide the required data for the NCAAA KPIs.
- Majmaah University similar to Jouf University and Jeddah University in governance, infrastructure and budgetary systems.
- Mechanical Engineering program at MU and JU is similar to the program offered by Jouf University and serve a similar demographic.

2. How was the benchmark calculated?

Average of beneficiaries' satisfaction rate with the adequacy and diversity of learning resources (references, journals, databases... etc.) on a five-point scale in an annual survey.

3. Name of the external provider.

The KPI is provided by Mechanical Engineering program at Majmaah University and university of Jeddah.

Table 18: KPI-P- 18. Number of research group in the program.

Additional KPI Reference Number: KPI-P- 18: Number of research group in the program.					
Mechanical Program KPI Reference Number: KPI-P-18					
Actual Benchmark 1439-14440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
0	2	0			2

KPI Analysis of the Number of research group in the program.

✚ Mechanical Engineering program at the University level:

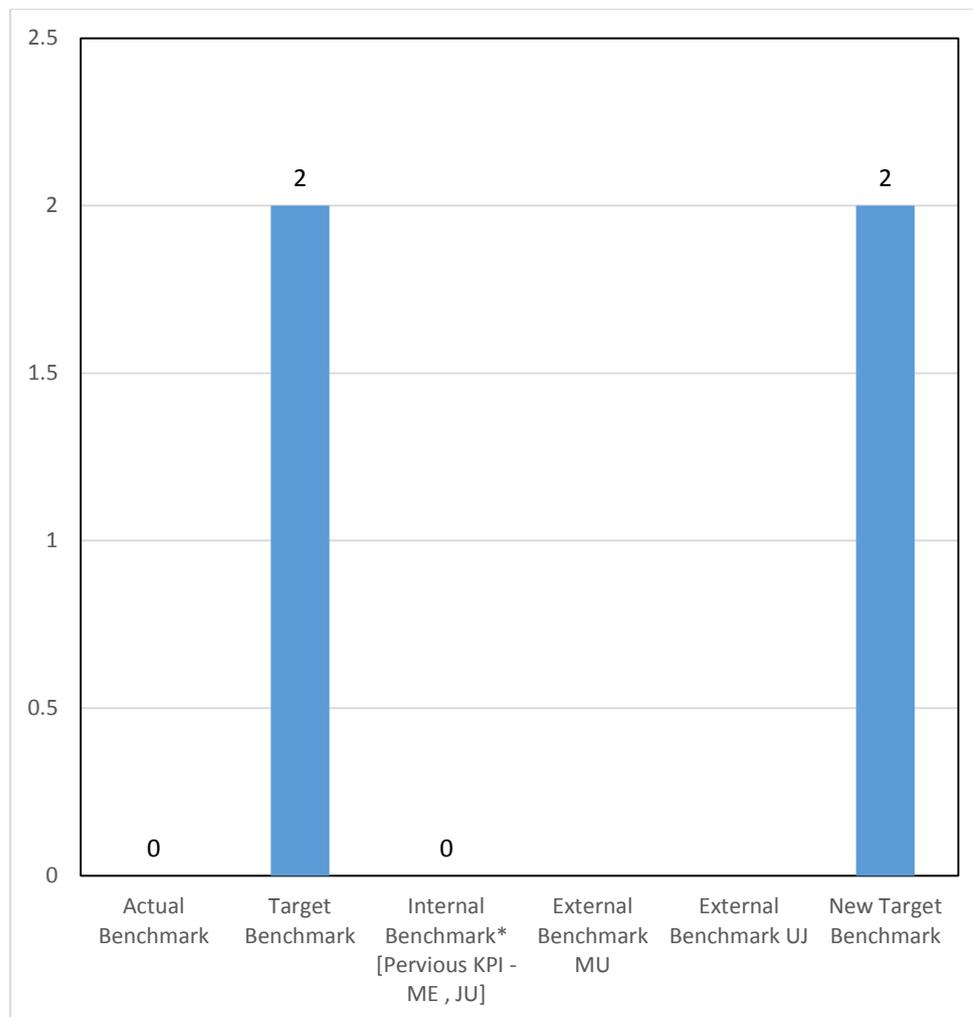


Figure 20: The Number of research group in the program.

Figure 20: above shows that the actual benchmark (0) was calculated for the academic year 2018-2019. In comparison, the actual benchmark for the academic year 2017-2018 (which also serves as the internal benchmark) was 0. This point represents a major shortcoming in the program and must be improved. The quality committee has decided to retain the new target benchmark to 2.

Strengths:

- No improvement in the overall research project at ME Department compared to previous academic year (2018-2019).

Recommendations

- The department must disseminate more actively the positive outcomes of staffs' Research Performance Evaluation and its impact on their promotional activities.

* Explain:

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

The number of research group during the year.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit.

** Explain:

1. Why this external provider was chosen?

- In progress.

2. How was the benchmark calculated?

The number of research group during the year.

3. Name of the external provider.

In progress

Table 19: KPI-P- 19. The number of subsidized research projects that the program's staff obtain annually.

Additional KPI Reference Number: KPI-P- 19: The number of subsidized research projects that the program's staff obtain annually.					
Mechanical Program KPI Reference Number: KPI-P-18					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
2	5	1			5

KPI Analysis of the rate of the number of subsidized research projects that the program's staff obtain annually.

Mechanical Engineering program at the University level:

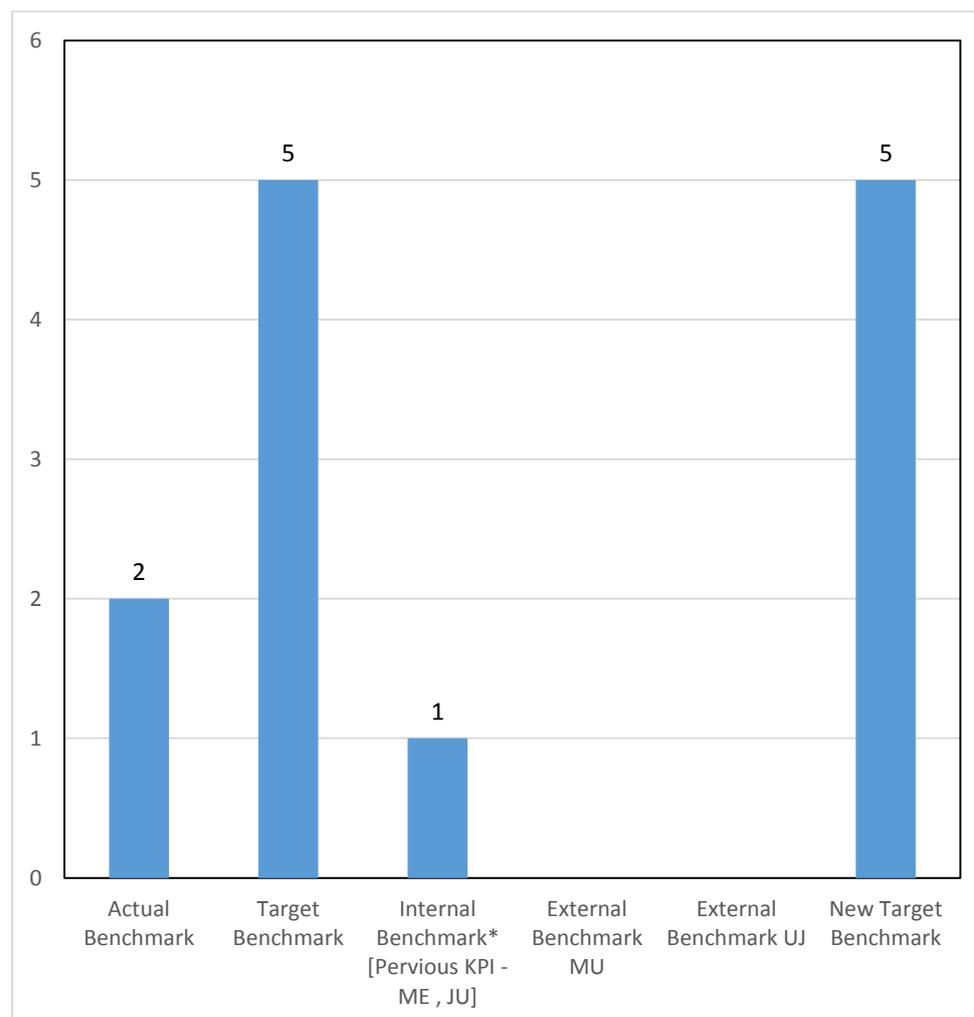


Figure 21: The number of subsidized research projects that the program's staff obtain annually..

Figure 21: above shows that the actual benchmark (2) was calculated for the academic year 2018-2019. In comparison, the actual benchmark for the academic year 2017-2018 (which also serves as the internal benchmark) was 1. Thus, there is increase in the research project compared to the previous cycle which shows a substantial growth of scientific research at the department. It is necessary to encourage members to obtain research projects that will improve the rate of publication, The actual benchmark also equal to the target benchmark (5.0) by a significant margin, the quality committee has decided to retain the new target benchmark to 5.

Strengths:

- Notable improvement in the overall research project at ME Department compared to previous academic year (2018-2019).



Recommendations

- The department must disseminate more actively the positive outcomes of Faculty Members' Research Performance Evaluation and its impact on their promotional activities.

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2017-2018) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

The number of subsidized research projects that the program's staff obtain annually.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit.

**** Explain:**

1. Why this external provider was chosen?

- In progress.

2. How was the benchmark calculated?

The number of subsidized research projects that the program's staff obtain annually.

3. Name of the external provider.

In progress

Table 20: KPI-P- 20 Percentage of students participating in extra-curricular activities

Additional KPI Reference Number: KPI-P- 20: Percentage of publications of program members.					
Mechanical Program KPI Reference Number: KPI-P-20					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
8%	20%	6%			20%

KPI Analysis of the Percentage of students participating in extra-curricular activities

Mechanical Engineering program at the University level:

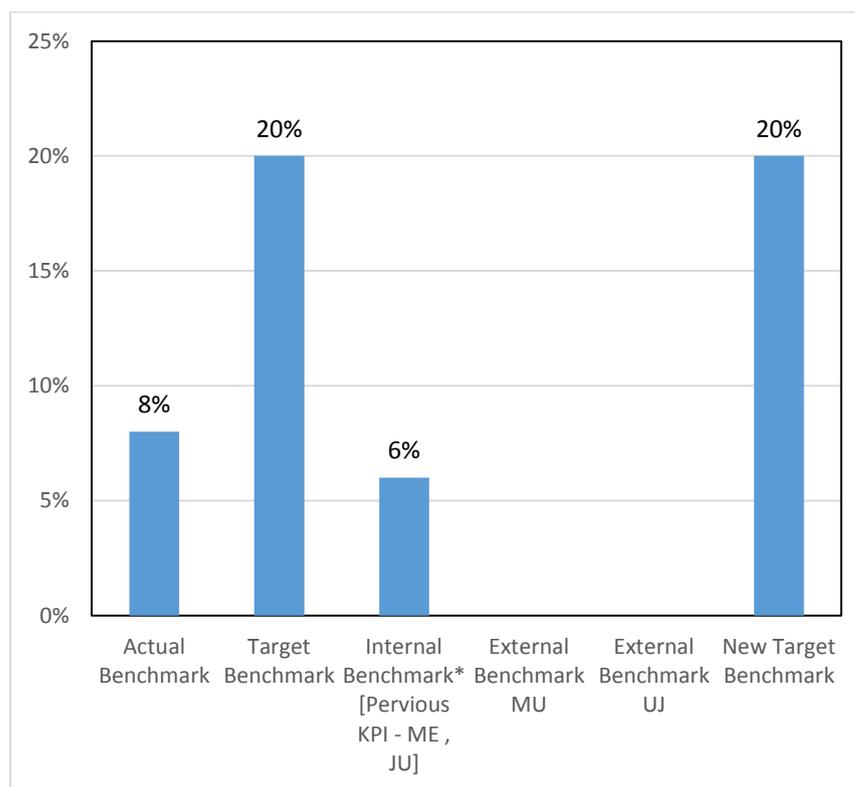


Figure 22: The Percentage of students participating in extra-curricular activities.

Figure 22: above shows that the actual benchmark (8%) was calculated for the academic year 2018-2019. In comparison, the actual benchmark for the academic year 2017-2018, which also serves as the internal benchmark, was 6%, There is improvement in this KPI which reflects the participation of ME student. But it is a weak participation of the students of the program in the activities, so students must be

sensitized to participate more effectively. The quality committee has decided to retain the target benchmark to 20%.

 **Strengths:**

- Notable improvement in the overall research project at ME Department compared to previous academic year (2018-2019).

 **Recommendations**

- Encouraging formation of student within the department would help create a stronger culture of collaboration while also affecting the KPI positively.

* **Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2019-2020) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

The Percentage of students participating in extra-curricular activities is calculated by divided the number of student participating in extra-curricular activities by the total number of student.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

* * **Explain:**

1. Why this external provider was chosen?

- In progress

2. How was the benchmark calculated?

The Percentage of students participating in extra-curricular activities is calculated by divided the number of student participating in extra-curricular activities by the total number of student.

3. Name of the external provider.

In progress

Table 21: KPI-P-21 Employer's satisfaction with the program's mission, vision and goals

Additional KPI Reference Number: KPI-P- 21: Employer's satisfaction with the program's mission, vision and goals					
Mechanical Program KPI Reference Number: KPI-P-21					
Actual Benchmark 1439-1440	Target Benchmark	Internal Benchmark* 1438-1439	External Benchmark**		New Target Benchmark
			MU	UJ	
3.4	3.3	3.2			3.5

KPI Analysis of Employer's satisfaction with the program's mission, vision and objectives in Mechanical Engineering program.

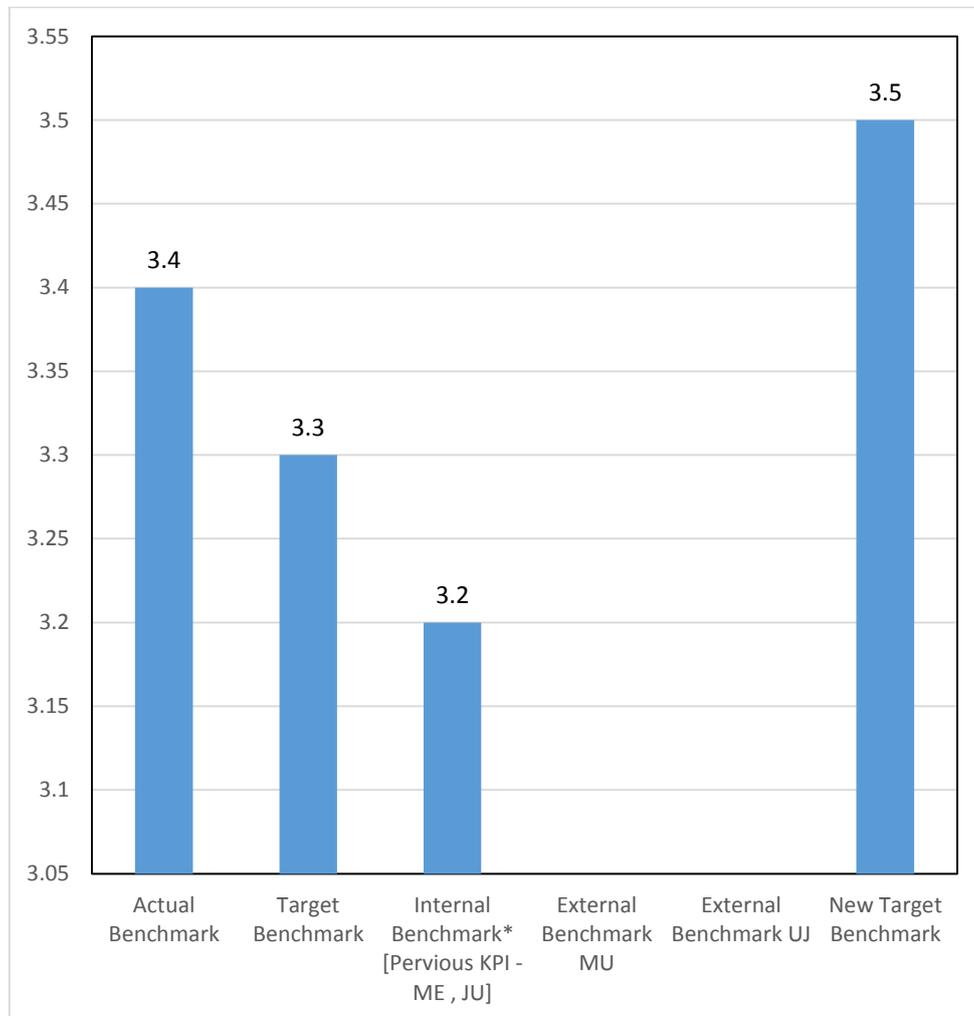


Figure 23: The Employer's satisfaction with the program's mission, vision and goals in Mechanical Engineering program at the University level.

Figure 23: above shows that the actual benchmark value for 2018-2019 is 3.4 and is based on the survey “Employer Feedback Survey on Mechanical Engineering Vision-Mission & Goals” for the year 2018-2019. We note that the actual benchmark is considerably higher than the target benchmark (3.5) and the pervious (3.2). This is evidence of the improvement in communication with the Employer and informing them of the program's mission and goals the quality. Committee has decided to retain the new target benchmark to 4.6.

Strengths:

- Relevant surveys are conducted regularly which allows for consistent evaluation of the program’s mission, vision and goals.

Recommendations:

- An appropriate strategy needs to be developed through focused group discussions with all the relevant stakeholders to review the program’s mission, vision and goals annually.

*** Explain:**

1. Why this internal benchmark provider was chosen?

Using ME program’s own actual benchmark from the previous cycle provides a good internal measure for program improvement from one cycle to the next. The Quality Unit of College in collaboration with DQAA conducts and collects regular evaluation surveys including among Employer. The results available in their database were considered an authentic and suitable measure for an internal benchmark.

2. How was the benchmark calculated?

Average of Employer’s satisfaction rate with the program’s mission, vision and objectives is calculated on a five-point scale in an annual survey.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

**** Explain:**

1. Why this external provider was chosen?

- In progress

2. How was the benchmark calculated?

Average of Employer’s satisfaction rate with the program’s mission, vision and objectives is calculated on a five-point scale in an annual survey.

3. Name of the external provider.

In progress

Table 22: KPI-P- 22 Percentage of students graduation projects related to the community

Additional KPI Reference Number: KPI-P- 22: Percentage of students graduation projects related to the community					
Mechanical Program KPI Reference Number: KPI-P-22					
Actual Benchmark 1438-1439	Target Benchmark	Internal Benchmark* 1437-1438	External Benchmark**		New Target Benchmark
			MU	UJ	
30%	30%	25%			30%

KPI Analysis of the Percentage of students graduation projects related to the community

Mechanical Engineering program at the University level:

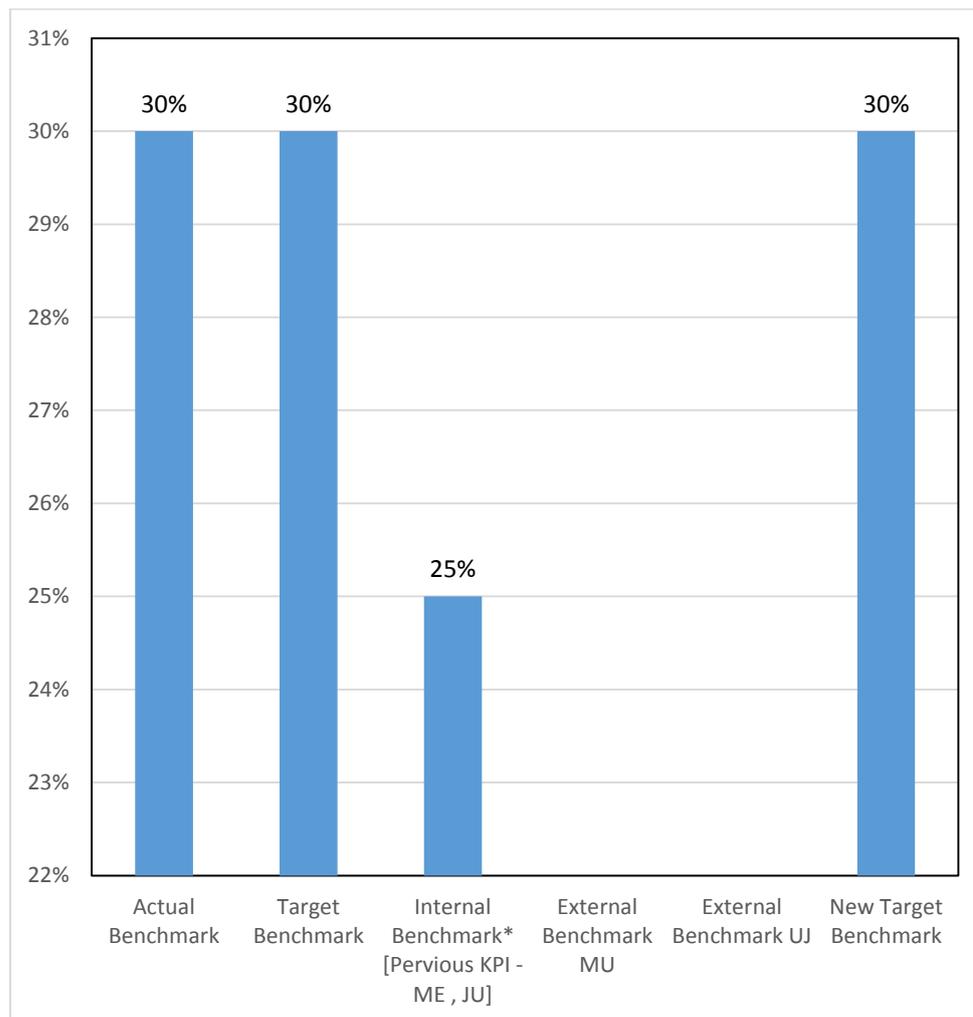


Figure 22: The Percentage of students graduation projects related to the community

Figure 22: above shows that the actual benchmark (30.%) was calculated for the academic year 2018-2019. In comparison, the actual benchmark for the academic year 2017-2018, which also serves as the internal benchmark, was 25%, the improvement in the performance indicator from the previous year means the interest in the issues of projects that serve the community, and the department encourages the staffs of the program to pay more attention. There is improvement in this KPI. The quality committee has decided to retain the target benchmark to 30%.

Strengths:

- The participation of ME student to serve the community.

Recommendations

- Encouraging the student within the department would help create a stronger culture of collaboration to serve the community.

* Explain:

1. Why this internal benchmark provider was chosen?

Using ME program's own actual benchmark from the previous cycle (2019-2020) provides a good internal measure for program improvement from one cycle to the next.

2. How was the benchmark calculated?

Percentage of student graduation projects related to the community is calculated by divided the number of graduation projects related to the community by the total number of graduation projects.

3. Name of the internal benchmark provider.

Department of Mechanical Engineering, JU, through College Quality Unit

** Explain:

1. Why this external provider was chosen?

- In progress

2. How was the benchmark calculated?

The Percentage of students participating in extra-curricular activities is calculated by divided the number of student participating in extra-curricular activities by the total number of student.

3. Name of the external provider.

In progress