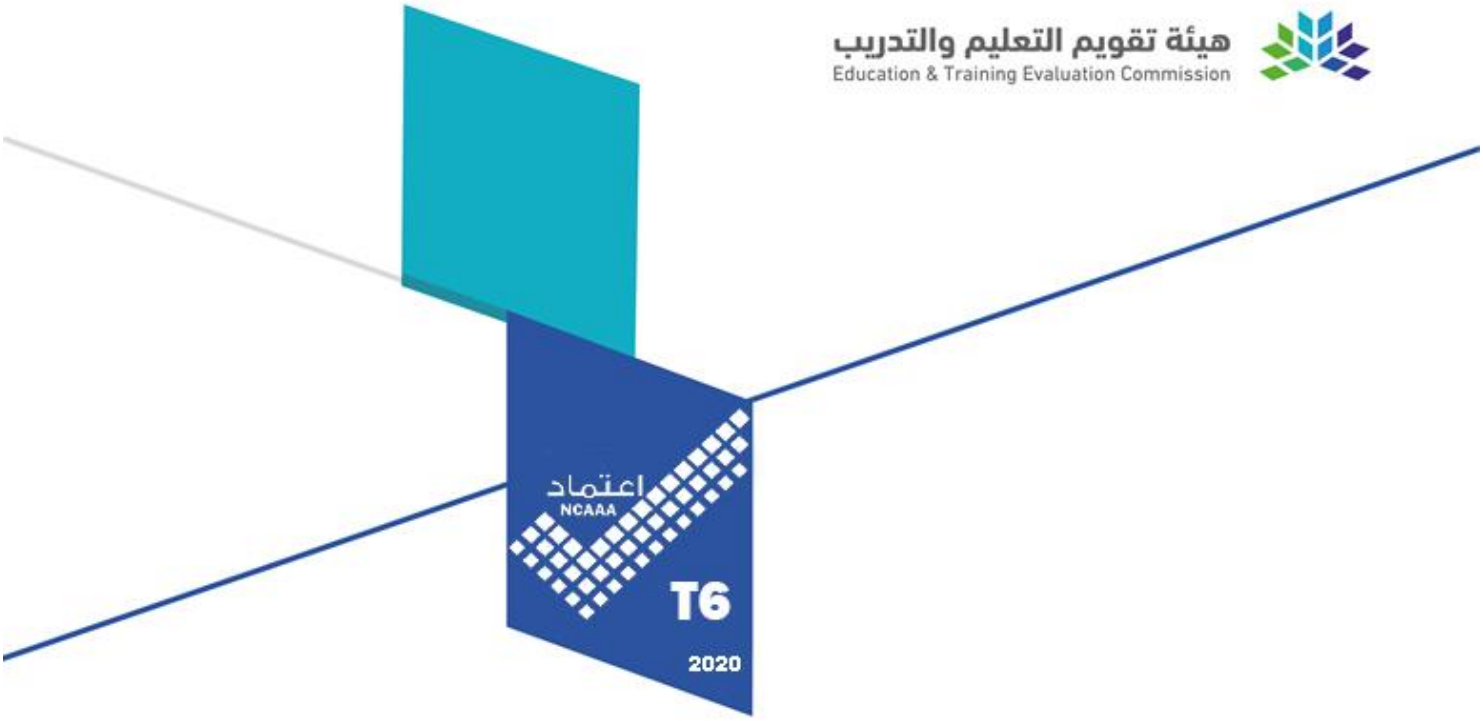
هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Annual Program Report

Program Name:	**Bachelor of Mechanical Engineering**
Qualification Level:	**Bachelor (Level 6)**
Department:	**Mechanical Engineering**
College:	**Engineering**
Institution:	**Jouf University**
Academic Year:	**2020/2021**
Main Location:	**Main University Campus - Sakaka**
Branches offering the Program:	N/A

Table of Contents

A. Implementation of Previous Action Plan

Considering the recommendations of previous year annual report, list the planned actions and their status.

Planned Actions	Responsibility of Action	Planned Completion Date	Level of Completion		If Not Completed	
			Completed	Not Completed	Reasons	Proposed Actions
1. Student achievement standards to be verified in each semester	Academic affairs & Assessment and Analysis Committee	Fall-2020 & Spring-2021	Yes			
2. Course evaluation survey to be discussed with students, in order to explain the importance of each section in the survey	Course instructors	Sep 2020	Yes			
3. An appropriate strategy needs to be developed through focused group discussions with all the relevant stakeholders to improve the quality of the counselling services. In addition, steps need to be taken to ensure the continuity of providing academic advice to those students who need it, and to further increase students' awareness of the availability of counselling available at department, college, and institute levels	Academic Advisors	Sep 2020 to Oct 2020	Yes			
4. Students' life-long learning to be improved	Scientific Research Committee and Student Activity Committee	Nov 2020	Yes			
5. Teamwork rubrics to be introduced and update the Ethics Rubrics	Course Instructors / Program Coordinator	Fall-2020	Yes			

B. Program Statistics

1. Students Statistics (in the year concerned)

No.	Item	Results
1	Number of students who started the program	**17**
2	Number of students who graduated	**30**
3	Number of students who completed major tracks within the program (if applicable)	N/A
4	**a.** Number of students who completed the program in the minimal time	**17**
5	**a.** Percentage of students who completed the program in the minimal time (Completion rate)	**60.71%**
6	Number of students who completed an intermediate award specified as an early exit point (if any)	N/A
7	Percentage of students who completed an intermediate award specified as an early exit point (if any)	N/A

Comment on any special or unusual factors that might have affected the completion rates:
None

2 . Cohort Analysis of Current Graduate Batch

Student Categories / Years		Total cohort enrollment	Withdrawn	Retained till year end	Not passed	Passed	Passing rate
Three Years Ago	M	28	0	28	3	25	89.3%
	F	-	-	-	-	-	-
	Total	28	0	28	3	25	89.3%
Two Years Ago	M	25	2	23	2	21	91.3%
	F	-	-	-	-	-	-
	Total	25	2	23	2	21	91.3%
Last Year	M	21	0	21	1	20	95.2%
	F	-	-	-	-	-	-
	Total	21	0	21	1	20	95.2%
Current Year	M	20	1	19	2	17	89.5%
	F	-	-	-	-	-	-
	Total	20	1	19	2	17	89.5%

Comments on the results:
Current batch analysis:
The number of students who entered the program in 1438-1439 = 28
The number of those who graduated in 1441-1442 at the end of the first and second semesters = 17 with a completion rate of 60.7%. Failure of students to adhere to the timeline for registering courses according to the program's study plan leads to a decrease in the completion rate

* add more rows for further years (if needed)
** attach separate cohort analysis report for each branch – Annex 8.0

3.Analysis of Program Statistics

(including strengths, areas for improvement, and priorities for improvement)

Strengths :

- Increasing the passing rate across the years of the program means that the students are interested in their study and this encouraged them for more achievement.
- Decreasing in withdrawal rate relatively across the years of the program means that the students becoming satisfied and stick to this program

Areas for Improvement:

- Students are required to adhere to the timeline for registering courses according to the study plan of the program in order to improve the completion rate.
- The decrease in the rate of withdrawal to reach zero annually

Priorities for Improvement:

Students are encouraged to adhere to the course registration schedule as per the program's study plan in order to improve the achievement rate.

C. Program Learning Outcomes Assessment

1. Program Learning Outcomes Assessment Results.

#	Program Learning Outcomes	Assessment Methods (Direct and Indirect)	Performance Target	Results
Knowledge and Understanding				
K1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	Direct: • Exams • Assignments • Class Discussions • Reports • Projects • Teamwork • Presentations Indirect: Surveys	75%	ATT 88% AVG 67% Indirect 90%
K2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		75%	ATT 86% AVG 75% Indirect 90%
Skills				
S1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		75%	ATT 89% AVG 70% Indirect 94%
S2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		75%	ATT 98% AVG 89% Indirect 93%
S3	An ability to communicate effectively with a range of audiences.		75%	ATT 97% AVG 85% Indirect 95%
S4	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.		75%	ATT 94% AVG 83% Indirect 90%
Values				
V1	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.		75%	ATT 96% AVG 100% Indirect 96%
V2	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		75%	ATT 100% AVG 95% Indirect 86%
V3	An ability to function effectively on a team whose members together		75%	ATT 50% AVG 56%

	provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.			Indirect 96%

Comments on the Program Learning Outcome Assessment results.

The program is doing very well in terms of achieving its learning outcome especially for category of skills. The program successfully achieved as well the majority of the Knowledge and Understanding and Values learning outcomes. However, the students lack the ability to apply principles of engineering, science, and mathematics and to identify, formulate, and solve complex engineering problems. More effort has be done in regard to this issue. In addition, the program still as well lacks nurturing and achieving the value of team-working. More work and has to be done in terms of encouraging students to work effectively in teams.

* Include the results of measured learning outcomes during the year of the report according to the program plan for measuring learning outcomes

** Attach a separate report on the program learning outcomes assessment results for male and female sections and for each branch (if any) – Annex 7.1 and Annex 7.2

2. Analysis of Program Learning Outcomes Assessment

(including strengths, Areas for Improvement:, and priorities for improvement)

Strengths :

PLOs K1, S1-S4, and V1-2 were fairly achieved based on the direct and indirect assessments of the learning outcomes. This shows that seven out of nine of the program learning outcomes have been successfully achieved. More attention has to be paid for PLOs K2 and V3.

Areas for Improvement:

PLOs K2 and V3 were not fairly achieved. More work has to be done in terms of enabling the students to apply principles of engineering, science, and mathematics and to identify, formulate, and solve complex engineering problems and to practice working as a team.

Priorities for Improvement:

PLOs K2 and V3 represent priority for improvement as the first is related to fundamental knowledge and the latter is concerned with very important workplace skill.

D. Summary of Course Reports

1. Teaching of Planned Courses / Units

List the courses / units that were planned and not taught during the academic year, indicating the reasons and compensating actions.

Course	Units/Topics	Reasons	Compensating Actions
ENGC 001	-		
ITC 001	-		
MATHC 001	-		
PHYSC 001	-		
PYPC 001	-		
EECS 002	-		
ENGC 002	-		
ITC 002	-		
MATHC 002	-		
PHYSC 002	-		

Course	Units/Topics	Reasons	Compensating Actions
ENGL 101	-		
CSC 101	-		
PHYS 101	-		
MATH 101	-		
CHEM 101	-		
IC 101	-		
ENGL 102	-		
MATH 102	-		
PHYS 102	-		
ARAB 101	-		
IC 102	-		
ARAB 103	-		
MATH 201	-		
GE 104	-		
GE 201	-		
ME 371	-		
ME 251	-		
ENGL 214	-		
IC 103	-		
MATHE 204	-		
STAT 325	-		
GE 202	-		
ME 241	-		
ME 372	-		
IC 105	-		
EE 318	-		
MATH 254	-		
ME 383	-		
ME 381	-		
ME 352	-		
ME 353	-		
IC 104	-		
ME 384	-		
ME 341	-		
ME 361	-		
ME 374	-		
ME 387	-		
ME 331	-		
GE 401	-		
EE 338	-		
ME 466	-		
ME 447	-		
ME 498	-		
CE 402	-		
ME 471	-		
ME 469	-		

Course	Units/Topics	Reasons	Compensating Actions
ME 472	-		
ME 499	-		
ME 399	-		

2. Courses with Variations

List courses with marked variations in results that are stated in the course reports, including: (completion rate, grade distribution, student results, etc.), and giving reasons for these variations and actions taken for improvement.

Course Name &Code	Variation	Reasons for variation	Actions taken
None			

3. Result Analysis of Course Reports

(including strengths, Areas for Improvement:, and priorities for improvement)

Strengths :

- The resources of course materials were available.
- There was an effective use of technology to support the teaching methods
- The amount of work in each course was proportional to the number of its credit hours

Areas for Improvement:

- The importance of each course needs to be explained during the first week of the semester
- The soft skills.

Priorities for Improvement:

- Increasing the importance with soft skills by various teaching methods

E. Program Activities

1. Student Counseling and Support

Activities Implemented	Brief Description*
Academic advising hours	All faculty members announced the academic advising hours in blackboard if they have any problems.
Individual academic advising	Most of advisers done an individual academic advising to their students during this academic year 1442 H
Group academic advising	Most of advisers done group academic advising to their students

Comment on Student Counseling and Support **

All the activities of the academic advising were done to support the students of Mechanical Engineering program during this academic year 1442 H

* including action time, number of participants, results and any other statistics.

** including performance evaluation on these activities

2. Professional Development Activities for Faculty and Other Staff

Activities Implemented	Brief Description*
Training and workshops to improve teaching skills of faculty members	Eight faculty members in the program have attended training and workshops to improve the their teaching skills. The workshops were conducted by the university center for development. They took place online for two hours each throughout the academic year
Attending scientific conferences	One faculty member has attended a scientific conference during the academic year.

Comment on Professional Development Activities for Faculty and Other Staff **

The program emphasizes on the continuous development of the faculty members working in the program. The annual assessment of the faculty members in the program includes some weight on the professional development and on organizing and participating in scientific conferences.

* including action time, number of participants, results and any other statistics.
** including performance evaluation on these activities

3. Research and Innovation

Activities Implemented	Brief Description*
Publications	The total number of publications during was 10 papers . All are cited in the data base WOS or SCOPUS
Research Projects	The total number of Research Projects was 1 for two faculty members together.
Group Research Projects	The total number of Group Research Projects was 2
Citations in 2020 - Scopus account	All Faculty members have SCOPUS accounts with total citations of 151 during the year 2020 only. H-index was between 3 and 9.

Comment on Research and Innovation **

Despite of the little number of faculty members in the mechanical engineering department and the many administrative duties, the are several participations in publications, research projects and group research projects. The publication rate was 1.25 paper per faculty member (Annex 10.0, KPIs 14, 15, 16, 18, 19)

* including action time, number of participants, results and any other statistics.
** including performance evaluation on these activities

4. Community Partnership

Activities Implemented	Brief Description*
Al-Jouf Electrical Power plant	Regularly, every semester, the Department of Mechanical Engineering organizes a student visit to Al- Jouf Electrical Power plant within the study plan of ME 471 Power and Desalination Plants course. The visit is supervised by the course instructor. Usually, all the students registered in the course participate in the visit. Such a visit is considered a practical application to the power plant theoretical part of the course. In addition, every year, during the summer break, about three to five students conduct their summer field training in Al-Jouf Electrical Power plant.
National Olives Festival	Every year, the province of Al-Jouf, holds two national festivals for olives and dates as famous products of the province. Each festival is held for 3-5 days. The Jouf University participates in these two festivals by holding an exhibit for the public. The Department of Mechanical Engineering participates in the university's exhibit. Such festivals are great opportunity for interaction with the community and educating the public about mechanical engineering aspects
National Dates Festival	

	that touches their lives such as the utilization of solar energy and wind energy as renewable energy sources, air conditioning, etc.

Comment on Community Partnership **

The program partnership with the community is not strong enough. The Department of Mechanical Engineering is eager to have a greater rule in the community and to create a stronger partnerships with industrial sector in the community such as Aramco Petroleum Company, Al-Jouf Airport, Municipality of the city of Sakaka, etc.

* including action time, number of participants, results and any other statistics.
** including performance evaluation on these activities

5. Analysis of Program Activities

(including strengths, Areas for Improvement:, and priorities for improvement)

Strengths :

The program is doing a fair job in teaching mechanical engineering students and providing them with theories and concepts and fundamentals of Mechanical Engineering in order to nurture the students to become distinguished mechanical engineers who are can serve the community and the whole society.

Areas for Improvement:

In order for the our graduates to serve the community and the society better, they have to have a great background and awareness of contemporary issues such as water scarcity, energy demand, pollution, environmental issues, artificial intelligence, etc. Some elective courses can be dedicated to such contemporary issues. This will help our graduates to be more influential in the society.

Priorities for Improvement:

Due to the existence of Saudi Arabia in “the solar belt” in addition to the scarcity of water in Saudi Arabia, Renewable Energy and water desalination in general and solar energy utilization and solar desalination particularly can be considered crucial topics that have to have more attention in the mechanical engineering program especially, these topics are priorities for KSA vision 2030 and the strategic plan for the Jouf University.

F. Program Evaluation

1. Evaluation of Courses

Course Code	Course Title	Student Evaluation (Yes-No)	Other Evaluations (specify)	Developmental Recommendations
GE 104	Basics of Engineering Drawing	Yes	Employers survey report Annex S20 Teaching staff Survey on Evaluating the ME Program Annex S3 Students Survey on Evaluating the ME Program Annex S8	The course instructor should encourage students to fill out the questionnaires accurately after they know that their opinion will be taken into consideration and will have a role in developing the teaching of the course.
GE 201	Static	Yes		
ME 371	Thermodynamics (1)	Yes		
ME 251	Materials Engineering	Yes		
GE 202	Dynamics	Yes		
ME 241	ME Drawing & Graphics	Yes		
ME 372	Thermodynamics (2)	Yes		
ME 383	Thermo-fluid lab (1)	Yes		
ME 361	Mechanics of Machines	Yes		
ME 381	Fluid Mechanics	Yes		
ME 374	Heat Transfer	Yes		
ME 352	Mechanics of Materials	Yes		
ME 387	Thermo-fluids Lab (2)	Yes		
ME 353	Mech. of Materials Lab	Yes		
ME 331	Manufacturing Proc. (1)	Yes		
ME 384	Fluid Mechanics (2)	Yes		
ME 341	Mech. Eng. Design (1)	Yes		
GE 401	Engineering Economics	Yes		
ME 399	Summer Training	Yes		
CE 402	Engineering Projects Management	Yes		
EE 338	Electrical Machines	Yes		
ME 471	Power & Des. Plants	Yes		
ME466	Automatic Control	Yes		
ME 469	Mechanical Vibrations	Yes		
ME 447	Mech. Eng. Design (2)	Yes		
ME 472	Ref. & Air Conditioning	Yes		
ME 498	Senior Design Project (1)	Yes		
ME 499	Senior Design Project (2)	Yes		

2. Students Evaluation of Program Quality

Evaluation Date :	**Number of Participants:**
Students Feedback	**Program Response**
Strengths: • The teaching staff were available for guidance and advice when student needed to talk to them. • Computer labs were adequate for student's needs. • There are facilities suitable for performing religious	The evaluation results were studied and analyzed in order to take necessary measures towards these results.

rites. • An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics • An ability to communicate effectively with a range of audiences • An ability to acquire and apply new knowledge as needed, using appropriate learning strategies • Generally, students satisfied with the quality of their educational experience at the university.	
Areas for Improvement:: • Library resources must be appropriate and available whenever students needed. • Field training programs must be effective in developing student's skills**.**	Based on the study and analysis of the evaluation results, some points of improvement have been identified.
Suggestions for improvement: • Annually, library resources must be update. • Field training programs must updated and with institutions that have high level trainings.	Based on the study and analysis of the evaluation results, and on the suggested improvement points, a mechanism for implementing improvement processes was determined

* Attach report on the students evaluation of program quality – Annex S8

3. Other Evaluations

(e.g. Evaluations by independent reviewer, program advisory committee, and stakeholders (e.g., faculty members, alumni, and employers)

Evaluation method : Alumni Survey	**Date: Fall 2020**	**Number of Participants : 7**
Summary of Evaluator Review		**Program Response**
Strengths: • Number of alumni that find a job after their graduation within 6 months is 3 with a percentage of 43% • Number of alumni that find a job after their graduation more than 6 months is 4 with a percentage of 57%		The evaluation results were studied and analyzed in order to take necessary measures towards these results.
Points for Improvements:: • 0% of alumni are self-employed • Number of alumni that had a position lined up before graduating is zero		Based on the study and analysis of the evaluation results, some points of improvement have been identified.
Suggestions for improvement • More communication with employers and stockholders to know what they need • Updating and improving the study plan to face job market needs		Based on the study and analysis of the evaluation results, and on the suggested improvement points, a mechanism for implementing improvement processes was determined

* Attach independent reviewer's report and stakeholders' survey reports (if any): Assessment, Analysis Internal Auditing committee Report and reports by independent evaluator Annex 4 (a) and Annex 4 (b).

Evaluation method : Graduating Student Evaluations (surveys)	**Date: Fall 2020**	**Number of Participants : 27**

Summary of Evaluator Review	Program Response
Strengths: • 84.23%of students are satisfied with the first axis of the survey "the assistance and support provided to my education". • 84.79% of the students are satisfied with the second aspect "resources for educational support" • 87.69% of students are satisfied with the third aspect "Evaluation of the education that I got • 86.67%%of students are satisfied with the fourth aspect "Overall evaluation of the Mechanical engineering program".	The evaluation results were studied and analyzed in order to take necessary measures towards these results.
Points for Improvements:: • Soft skills need an improvement	Based on the study and analysis of the evaluation results, some points of improvement have been identified.
Suggestions for improvement • During the tutorial classes, session should be arranged to discuss the soft skills and how to improve them.	Based on the study and analysis of the evaluation results, and on the suggested improvement points, a mechanism for implementing improvement processes was determined

4. Key Performance Indicators (KPIs)

List the results of the program key performance indicators (including the key performance indicators required by the National Center for Academic Accreditation and evaluation)

No	KPI	Target Benchmark	Actual Value	Internal Benchmark	External Benchmark*		Analysis	New Target Benchmark
					MU	UJ		
KPI-P-01	Percentage of achieved indicators of the program operational plan objectives.	70%	59.5%	57%	77.7 %	78 %	the actual benchmark (63%) is based on the Percentage of achieved indicators of Mechanical Engineering program operational plan objectives for the year 2020-2021	70%
KPI-P-02	Students' Evaluation of quality of learning experience in the program.	4.7	4.37	4.57	4.21	4.25	the actual benchmark (4.37) is based on the survey "ME Students Survey on Evaluating the Mechanical Engineering Program" conducted among final year students for the year 2020-2021	4.7
KPI-P-03	Students' evaluation of the quality of the courses.	4.6	4.26	4.35	4.48	3.65	The actual benchmark (4.26) is based on several course evaluation surveys conducted among the ME students for course given in the year 2020-2021.	4.6
KPI-P-04	Completion rate.	70 %	60.71	47.62 %	41.7 %	66.67	the Actual value (60.7%) 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 2020-2021).	70%
KPI-P-05	First-year students retention rate.	100%	100%	100%	100 %	100 %	the Actual value (100%) indicates the percentage of students who entered and successfully completed first year of the program (for the year (2020-2021).	100%
KPI-P-06	Students' performance in the professional and/or national examinations.	——	0	——	——	——		10%
KPI-P-07	Graduates' employability and enrolment in postgraduate programs.	50%	40%	29%	72.2 %	70 %	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	50%

							the cycle 2020-2021	
		10%	0	2%	9.1 %	0 %	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 2020-2021	10%
KPI-P-08	Average number of students in the class.	9	10.2	10	9	19	the actual benchmark (10.2) is based on average number of the ME students in the class for courses given in the year 2020-2021. We note that it is higher than the target (9) and the actual benchmark for the previous cycle (10) which also serves as the internal benchmark	9
KPI-P-09	Employers' evaluation of the program graduates proficiency.	4.1	4.56	3.99	4.1	4	the actual benchmark (4.56) is based on evaluation surveys conducted in the year 2020-2021 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.	4.6
KPI-P-10	Students' satisfaction with the offered services.	4	4	3.85	3.06	4.6	the actual benchmark value for 2020-2021 is 4 and is based on the survey "ME Students Survey on Evaluating Program Facilities and special Equipment" conducted among ME students for the year 2020-2021.	4.2
KPI-P-11	Ratio of students to teaching staff.	8 :1	9:1	9 :1	6 : 1	15 : 1	the Actual value (9:1) 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 2020-2021. As a clear sign of improvement in this aspect, the actual KPI is significantly better than the actual value	8:1

							for the previous year (2019-2020) which also serves as the internal benchmark (9:1).	
KPI-P-12	Percentage of teaching staff distribution.	A: M. 100% B: 100 % C: Assist. P:60% Assoc. P: 30% Prof.: 10%	A: M. 100% B: 100% C: Assist. P:75% Assoc. P: 12.5% Prof.: 12.5%	A: M. 100% B: 100% C: Assist. P:80% Assoc. P: 10% Prof.: 10%	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: 7.14 % Assist. P: 35.72 % Assoc. P: 50 % Prof.: 7.14 %	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%.	A: M. 100% B: 100% C: Assist. P:60% Assoc. P: 30% Prof.: 10%
KPI-P-13	Proportion of teaching staff leaving the program.	0%	0%	20%	20 %	0.06 %	the distribution of the Mechanical Engineering program at JU by rank, we note that there are currently 12.5 % Full Professors in the department, while the distribution of Associate and Assistant Professors is 12.5% and 80% respectively. Keeping in view the actual, and target benchmarks, the quality committee has decided to retain the target benchmark. i.e. 10% Full Professor, 30% Associate Professor, and 60% Assistant Professor.	0%
KPI-P-14	Percentage of publications of faculty members.	100%	100%	70%	80 %	85.7 %	the actual benchmark (100%) was calculated for the academic year 2020-2021. In comparison, the actual benchmark for the academic year 2019-2020, which also serves as the internal benchmark, was 70%, There is a great improvement in this KPI which reflects the excellence publication of ME staff members.	100%
KPI-P-15	Rate of published research per faculty member.	1	1.25	0.9	7.23	1.5	the actual benchmark (1.25) was calculated for the academic year 2020-2021. In comparison, the actual benchmark for the academic year 2019-2020 (which also serves as the internal benchmark) was 0.9. Thus, there is nearly a twofold increase in the publication ratio compared to the previous cycle.	1.3
KPI-	Citations rate in refereed	15	18.8	10.5	8.1	8	that the actual	19

P-16	Journals per faculty member.						benchmark (18.8) is calculated for the academic year 2020 - 2021. The actual benchmark lower than the target (15) and is higher than the actual benchmark for the previous cycle (2019-2020) which also serves as the internal benchmark (10.5), the quality committee has decided to set the new target benchmark to 19	
KPI-P-17	Satisfaction of beneficiaries with the learning resources.	4.5	4.25	4.23	4.16	4	the actual benchmark value for 2020-2021 is 4.25 and is based on the two surveys "ME Students Survey on Evaluating the Digital Library and its Services" and "ME Staff Members Survey on Evaluating the Digital Library and its Services" conducted among ME students and staff, respectively, for the year 2020-2021.	4.5
KPI-P-18	Number of research groups in the program.	2	2	0			that the actual benchmark (2) was calculated for the academic year 2020-2021. In comparison, the actual benchmark for the academic year 2019-2020 (which also serves as the internal benchmark) was 0.	3
KPI-P-19	The number of subsidized research projects that the program's staff obtain annually.	5	4	3			the actual benchmark (1) was calculated for the academic year 2020-2021. In comparison, the actual benchmark for the academic year 2019-2020 (which also serves as the internal benchmark) was 3	5
KPI-P-20	Percentage of students participating in extra-curricular activities.	20%	15%	13%			that the actual benchmark (15%) was calculated for the academic year 2020-2021. In comparison, the actual benchmark for the academic year 2019-2020, which also serves as the internal benchmark, was 13%,	20%
KPI-P-21	Employer's satisfaction with the program's mission, vision and objectives.	3.5	4.5	——			the actual benchmark value for 2020-2021 is 4.5 and is based on the survey "Employer Feedback Survey on Mechanical Engineering Vision-Mission & Objectives" for the year 2020-2021.	4.6
KPI-	Percentage of student	50%	50%	40%			the actual benchmark	60%

P-22	graduation projects related to the community.						(63.6%) was calculated for the academic year 2020-2021. In comparison, the actual benchmark for the academic year 2019-2020,	

Comments on the Program KPIs and Benchmarks results :
Twenty two KPIs have been measured and six KPIs have achieved the target.
The rest of KPIs are being made to achieve the target in the next years.

5. Analysis of Program Evaluation

(including strengths, Areas for Improvement:, and priorities for improvement)

Strengths :

- Labs are equipped with the state-of-the-art tools and devices.
- The program accepts registration applications for Saudi and Non-Saudi students.
- Registration process is fully automated through the Deanship of Admission and Registration portal.
- The students/staff ratio and average class size are almost constant and comparable with external benchmarks of other similar programs.
- More Saudi staff will return with PhD, granted from ranked universities abroad.

Areas for Improvement:

- Shortage of Saudi staff members. A recruitment process for hiring Saudi staff members is going on.
- Introduce graduate-study programs.
- Introduce a female ME program.

Priorities for Improvement:

- Increasing the number of faculty members in the ME department.
- Hiring more associate professors and professors in the ME department.

G. Difficulties and Challenges Faced Program Management

Difficulties and Challenges	Implications on the Program	Actions Taken

Conducting an independent external opinion on quality of the program	To improves the quality of the program	An external reviewer has been selected and contacted to perform the review. It is expected to perform this task during summer 2021
Allocating technicians for mechanical laboratories	To insure periodic maintenance of the equipment	A request for technicians has been submitted to University Administration

*Internal and external difficulties and challenges

H. Program Improvement Plan

No.	Priorities for Improvement	Actions	Action Responsibility	Date		Achievement Indicators	Target Benchmark
				Start	End		
1	Improve student completion rate.	Hold workshops with students to encourage for registering courses according to the program's study	Academic Affairs Committee	Sep 2021	Jun 2022	KPI-P-04	70%
2	Hire more faculty members	Recurring faculty members	Head of Department	Sep 2021	Jun 2022	KPI-P-11	8:1
3	Graduates' enrolment in postgraduate programs.	Propose a graduate program in the department	Scientific Research Committee	Sep 2021	Jun 2022	KPI-P-07	50%
6							

I. Report Approving Authority

Council / Committee	Department of Mechanical Engineering Council
Reference No.	Meeting No. 3
Date	02-09-2021

J. Attachments :

- **A separate cohort analysis report for male and female sections and for each branch** Annex 8.0
- **A report on the program learning outcomes assessment results for male and female sections and for each branch (if any)** - Annex 7.1 and Annex 7.2
- **A report on the students evaluation of program quality** - Annex S8
- **Independent reviewer's report and other survey reports (if any)** - Annex 4 (a) and Annex 4 (b)