



Annual Program Report

Program Name:	Bachelor in Computer Science
Qualification Level:	Bachelor (6 th Level according to latest NQF)
Department:	Computer Science
College:	Computer Science and Information Technology
Institution:	Jazan University, Jazan
Academic Year:	2021-2022
Main Location:	Campus 1: Department of Computer Science, Jazan University (For Boys) Campus 2: Mahliya Campus, Jazan University (For Girls)
Branches offering the Program:	Sabya University College, Sabya

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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. Review and update the curriculum regularly based on the recent trends	Curriculum & Teaching Committee	August 2022	Yes			
2. Enhance and Strengthen the Teaching methodologies of the faculties	Learning Outcomes committee	On going	Yes			
3. Update the Labs with the latest hardware and software tools as per the industry requirement	Curriculum & Teaching Committee	On going	Partially		List of softwares needed were collected from CC	Based on the approval of budget the softwares will be updated.
4. Conduct review / Survey from stakeholders periodically	Curriculum & Teaching Committee	Bi annually/ annually	Yes			
5. Build partnership with industry to obtain regular feedback from industry to update the curriculum.	Curriculum & Teaching Committee	August 2022		No	Unable to establish partnership with industry	Need to identify alumnus working in Industry based on the alumni database.
6. Provide training opportunities for students with the industry in the technical field	Professional Development Committee	Annually	Yes			
7. Conduct training programs and prepare them towards national and international certifications.	Professional Development Committee	Bi annually	Yes			
8. Motivate students to participate in technical competitions, workshops, seminars and conferences	Professional Development Committee	Annually	Yes			
9. Utilize existing alumni connections with industry and invite them as speakers.	Alumni Unit	Bi annually	Yes			

10. Organize exhibitions to showcase the mini projects and graduation projects and encourage them towards professional development.	Graduation Project Committee / Students Activities Committee	Ongoing	Yes			
11. Conduct regular personality and interpersonal training programs for the professional success of the students in the global market	Professional Development Committee	Ongoing	Yes			
12. Provide training in entrepreneurship skills and motivate students to be entrepreneurs	Professional Development Committee	Bi annually	Yes			
13. Invite alumni who are experts in the field to share their success stories.	Alumni Unit	Bi annually	Partially		Identified alumni	Schedule the date and invite them to share their success stories
14. Develop translation of students projects into products to become an entrepreneur.	Graduation Project Committee	Every semester		No	Projects are only application based projects and it is not up to the mark	Need to identify more scientific projects
15. Conduct training programs and involve students and faculty members in research activities.	Research & Innovation Committee	Ongoing	Yes			
16. Reward the innovative ideas and publications in the field of research and developments	Research & Innovation Committee	Ongoing	Yes			
17. Encourage faculty publications in research journals and conferences.	Research & Innovation Committee	Ongoing	Yes			

18. Well-functioning research groups with high production based on the specialization	Research & Innovation Committee	Every semester	Yes			
19. Increase the number of peer-reviewed papers.	Research & Innovation Committee	Bi annually	Yes			
20. Involve students in research and publish papers along with the faculty.	Research & Innovation Committee	Every semester		No	Not enough worth scientific research papers	Students should be encouraged to do more research based projects
21. Encourage faculty members to apply for local research projects funded by various agencies. (KAUST projects, Deanship of Scientific Research Funds & King Abdul Aziz city).	Research & Innovation Committee	Annually	Partially			Faculties have applied funding for research projects but still no decision from the top level administration.
22. Nurture a Inter / Multidisciplinary research culture and productivity.	Research & Innovation Committee	Annually		No		Faculty should be motivated to carry out more multidisciplinary research projects
23. Provide specialized training for the community in the area of Information and Communication Technology (ICT).	Research & Innovation Committee	Every semester	Yes			
24. Encourage students to use IT tools and techniques for solving community needs	Community Service Committee/ Students activities committee	Every semester	Yes			
25. Conduct awareness program for the society with the help of stakeholders	Community Service Committee	Every semester	Yes			

26. Participate in cultural and community events.	Community Service Committee	Every semester	Yes			
27. Enhance the contributions of students & faculty members in community service activities	Community Service Committee	Every semester	Yes			

B. Program Statistics

1. Students Statistics (in the year concerned)

No.	Item	Results
1	Number of students who started the program	77+214 = 291
2	Number of students who graduated	31+152= 183
3	Number of students who completed major tracks within the program (if applicable)	
	a.	NA
4	a. Number of students who completed the program in the minimal time	12+96=108
5	a. Percentage of students who completed the program in the minimal time (Completion rate)	Main Campus: 15.58%. Mahliya Campus: 44.86% Sabya Campus: Overall: 30.22%
6	Number of students who completed an intermediate award specified as an early exit point (if any)	NA
7	Percentage of students who completed an intermediate award specified as an early exit point (if any)	NA
<p>Comment on any special or unusual factors that might have affected the completion rates:</p> <p>The average completion rate is low in the Male and Mahliya campus as compared to last year's cohort but, it slightly improves in the case of Sabya Campus. Student retention is improved as per previous years but dropping or transferring to other programs needs a serious review and to be monitored at the beginning of the program. To reduce the dropout percentage, proper advising should be done periodically and at the time of the Student Orientation Program.</p>		

2. Cohort Analysis of Current Graduate Batch (2021-2022)

Student Categories		Total cohort enrollment	Withdrawn	Retained till year end	Not passed	Passed	Passing rate
Years							
Four Years Ago (2016-2017)	M	77	16	61	50	11	14.29%
	F	214	0	214	138	76	35.51%
	Total	291	16	275	188	87	24.9%
Three Years Ago (2017-2018)	M	61	5	56	45	11	18.03%
	F	214	16	198	125	73	34.11%
	Total	275	21	254	170	84	26.07%
Two Years Ago (2018-2019)	M	56	7	49	39	10	17.86%
	F	198	9	189	122	67	33.83
	Total	254	16	238	161	77	25.85%
Last Year (2019-2020)	M	49	4	45	38	7	14.28%
	F	189	7	182	109	73	40.11
	Total	238	11	227	147	80	27.2%
Current Year (2020-2021)	M	45	3	42	23	19	42.22%
	F	181	14	167	25	142	78.45%
	Total	227	17	209	48	161	60.34%

Comments on the results:

As per the cohort, male graduates are **12** with a completion percentage of **15.58%**.

95 females graduated in the current semester (2021-22) whereas **1** female graduated last year (2020-21) with a total of **96** graduates with **44.86%** completion rate.

A total of **108 students** are graduated in 2020-2021. Students' retention rate is being improved. The completion rate at the male campus is low as compared to the female campus.

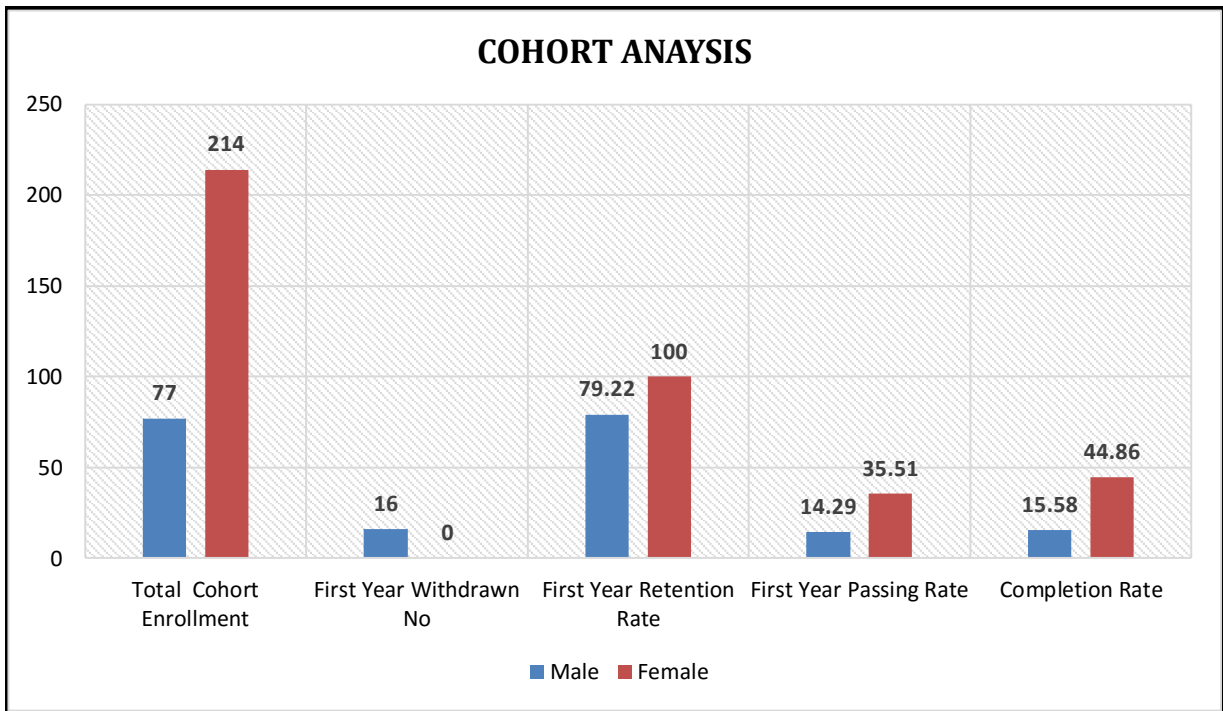
* add more rows for further years (if needed)

** attach separate cohort analysis report for each branch

Cohort Analysis Graduate Batch (2021-2022) Sabya Campus Branch

Student Categories		Total cohort enrollment	Withdrawn	Retained till year end	Not passed	Passed	Passing rate
Years							
Four Years Ago (2016-2017)	M						
	F						
	Total						
Three Years Ago (2017-2018)	M						
	F						
	Total						
Two Years Ago (2018-2019)	M						
	F						
	Total						
Last Year (2019-2020)	M						
	F						
	Total						
Current Year (2020-2021)	M						
	F						
	Total						

Comments on the results:



3. Analysis of Program Statistics

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

Strengths :

- The passing rate of female campuses is higher and more satisfactory as compared to the male campus.
- Students retention rate at male campus is satisfactory.
- Female campus shows 100% retention rate in first year, and it's quite impressive.

Areas for Improvement:

- Male Campus Students pass out rates need to be analyzed, and proper guidance and support should be provided to improve the pass out rate.
- Annual Completion and passing percentage are the main concerns, especially for the male campus.
- Student's dropout rate at the male campus is high but shown some decline as per previous years. Students counseling should be done at the beginning of the programs and orientation programs should concentrate on future job prospects.
- Students pass out percentage in 1st, 3rd & 4th year is low, need to know the reason and give them proper guidance to improve the result.
- The student advising committee should support students and strive to identify the reasons that impact students most so that the retention rate and pass out results of the students should improve.
- Students need extra assistance at the lower level especially for the mathematics, physics, english and computer science programming courses.

Priorities for Improvement:

- Need to take immediate action to improve the annual completion, passing percentage and retention rate, especially for male campus students.
- The student advisory committee should be active and involved with the students right from the beginning of the semester.

C. Program Learning Outcomes Assessment

1. Program Learning Outcomes Assessment Results.

#	Program Learning Outcomes	Assessment Methods (Direct and Indirect)	Performance Target	Results	
				Direct	Indirect
Knowledge and Understanding					
K1	Describe the sound knowledge of principles of Computing, Science and Mathematics required in the field of Computer Science.	Exams, Assignments & Surveys	4.0	3.90	3.81
K2	Relate recent trends and current research in the field of Computer Science.	Assignments, Mini Project, Case Studies & Surveys	4.0	3.90	3.89
Skills					
S1	Analyze complex computing problems to apply principles of computing and other relevant disciplines to identify solutions.	Exams, Assignments, Laboratory Exercises, Lab Exams, Final Project & Surveys	4.0	4.18	3.67
S2	Evaluate problem-solving strategies to propose a large number of solutions and come up with the best possible solution.	Laboratory Exercises, Lab Exams, Case Studies, Mini Project & Surveys	4.0	3.96	3.8
S3	Design and implement computing-based solutions to meet a given set of computing requirements in the context of the program's discipline.	Laboratory Exercises, Lab Exams, Case Studies, Mini Project & Surveys	4.0	4.24	3.81
S4	Apply computer science theory and software development fundamentals to produce computing-based solutions.	Laboratory Exercises, Lab Exams, Case Studies, Mini Projects, Exam, Field Training Assessment & Surveys	4.0	4.67	3.69
S5	Communicate effectively in a variety of professional contexts for technical and non-technical audiences.	Mini Project Presentation, Final Projects Defense Viva & presentation, & Surveys	4.0	4.36	3.95
Values					
V1	Recognize professional and social responsibilities to make informed judgments in computing practices based on legal and ethical principles.	Field Training Assessment, Community Services Participation & Surveys	4.0	4.50	3.79
V2	Demonstrate the ability to function effectively as a member or leader of a team engaged in activities appropriate to the field of Computer Science.	Group Assignments, Mini Projects & Surveys	4.0	4.49	3.97

V3	Identify the need for and an ability to engage in continuing professional development and entrepreneurship.	Observations, and judgments about technology views, Mini-Project Presentation & Surveys	4.0	4.66	3.68
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Comments on the Program Learning Outcome Assessment results.

Direct Assessment is done using the assessment methods demarcated in the program specification and indirect assessment calculation is based on students Exit Survey.

Indirect and direct assessments detail calculations done in the PLO assessment report.

- All PLO's achievements are satisfactory, especially in direct assessment.
- There are variations in results from various entities. There is an improvement in direct assessment but a decline in indirect Assessment.
- Exam evaluations need to be verified to evaluate the direct assessments and ascertain the reason for the variation.

* 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)

2. Analysis of Program Learning Outcomes Assessment

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

Strengths :

Students have shown good skills in core areas like analyzing, problem-solving, communicating in a professional context, designing and implementing computing to obtain appropriate solutions and working as a member of a team to solve numerous issues.

- Students need to be given specific care in Mathematics, Physics and English courses. Most students are facing difficulty in these courses.
- Students improved significantly in terms of PLO achievements in the majority of PLOs but in a few, the decline is very minor.
- It has been observed that in number of courses, students achieved more A and A+, due to that direct assessment result improved.
- Overall progress of the students is good.

Areas for Improvement:

- The indirect assessment was conducted with the help of an exit student survey. Students rated their accomplishments less than their achievements in direct assessment.
- Learning resources i.e., teaching material, question bank, tutorial link and if possible recorded lectures should be uploaded on blackboard. Students were not able to access the entire resources and material available to them.
- Student's communicational and programming skills need to be improved as per the industries requirements.
- Practical knowledge, trends and technology awareness, and current research areas should be clear to the graduating students.
- Need to arrange workshops, seminars and training programs to improve students learning ability and enhance their carrier and lifelong learning.

Some of the PLOs require extra efforts from teachers to assist students to achieve the learning outcomes that reveal the graduate attributes of the computer science program after graduation.

- **Describe** the sound knowledge of principles of Computing, Science and Mathematics required in the field of Computer Science.
- **Relate** recent trends and current research in the field of Computer Science.
- **Evaluate** problem-solving strategies to propose a large number of solutions and come up with the best possible solution.

Priorities for Improvement:

The major areas that have been highlighted are lack of awareness of recent trends, understanding and applying computing to obtain suitable solutions, professional social responsibilities, continuous professional development and entrepreneurship.

Above discussed domain need to be improved and planning is required to help the students to ameliorate their social, ethical, scientific, mathematical, and programming skills.

Some of the PLOs should be closely monitored and reinforced in the classroom in order to increase student achievement.

- **Describe** the sound knowledge of principles of Computing, Science and Mathematics required in the field of Computer Science.
- **Relate** recent trends and current research in the field of Computer Science.
- **Evaluate** problem-solving strategies to propose a large number of solutions and come up with the best possible solution.

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
COMP-324 Data Security & Privacy (First Semester)	Firewalls and HMAC	Due to lack of time	The study material and tutorial were uploaded on the Blackboard
COMP-222 Algorithm & Data Structures-II (Second Semester)	-Hash Codes -Compression Functions	Proponent of final examination Due to Ramadan	Nil

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
Calculus MATH 105	Low Grades	Irregular attendance of the students and not writing the lecture notes in the class. Sometimes students forget to bring their pen, notebook, IPad, calculators etc.	Nil
Statistics and Probability MATH 262	Average Grades	Overall satisfactory of the final results. English language proficiency for students should be enhanced.	Give more emphasis to improve communication skills. Implement assessment methods to make sure that Home Works are done by the student himself or herself.
Matrix Algebra MATH-106	More number of students got A+	Passing rate is high with low grades. They need to dedicate more time on assignment works and open book problems.	Improve students' English proficiency. Students should utilize more time to solve more exercises (Calculus Café).
Discrete Mathematics (New curriculum) MATH-107	Low Grades	Passing rate is high with low grades. They need to dedicate more time on assignment works and open book problems.	Improve students' English proficiency. Students should utilize more time to solve more exercises.

Course Name & Code	variation	Reasons for variation	Actions taken
Analysis & Design of Algorithms 323 COMP-3	Low Grades	The students only concentrated on problems, not in algorithms. Maximum students they didn't write the algorithms	We have to take extra class to tell them about the importance of Algorithm and make them practice again & again.
Algorithms & Data Structures-1 221 COMP-3	Low Grades	Some topics were lengthy and questions were from that.	Try to minimize lengthy topics as per student's capability and arrange some more classes to explain those topics.
Computer Data Security and Privacy 324 COMP-3	Average Grades	Student result is satisfactory. Some students failed due to low marks in written exams.	Student result is satisfactory.
Mobile Computing 426 CNET-3	Average Grades	It seems students do not prefer to write lengthy answers. Most of the students had just drawn diagrams for the long question without writing any content.	Students should be provided with samples of long questions in class and course instructor should brief them about the appropriate required answers/solutions to those questions.
Programming of Statistics and Probability 114 COMP-3	Low Grades	Passing rate is high with low grades. They need to dedicate more time on assignment works and open book problems.	Improve students' English proficiency. Students should utilize more time to solve more exercises (Calculus Café).
Data Modeling and Simulation 252 COMP-3	Low Grades	Some topics were lengthy and questions were from that.	Try to minimize lengthy topics as per student's capability and arrange some more classes to explain those topics.
Artificial Intelligence 241 COMP-3	Average Grades not satisfactory	Average Grades	Recommendation from teachers to improve the student result
Artificial Neural Network 442 COMP-3	Result not very satisfactory	Some topics are lengthy and repeated in chapter 4	Can minimize the lengthy topics into student's understandable one and conduct more innovative class
Operating Systems 231 COMP-3	Average Grade	Result is satisfactory	Course should be taught offline as many

Course Name & Code	variation	Reasons for variation	Actions taken
			students got confused in numerical problems.
Advanced Operating Systems 332 COMP-3	Low Grades	Some topics were lengthy and questions were from that.	Try to minimize lengthy topics as per student's capability and arrange some more classes to explain those topics.
Digital Design 231 COMP-3 (New Plan)	Result Satisfactory but Average Grade	Some topics were lengthy and questions were from that.	Try to minimize lengthy topics as per student's capability and arrange some more classes to explain those topics.
Object Oriented Programming 213 COMP-3	Low Grades	<ul style="list-style-type: none"> ▪ Students struggled to understand the logical questions to answer. ▪ Students focused on memorization rather than understanding. ▪ Students failed to answer the basics which reflected their deficiencies in the basic of programming given in Programming 1,2 (COMP-112 & COMP 213 New curriculum) 	<p>Need to give the program question for practice more.</p> <p>Need a motivation to push them up.</p> <p>Need to give extra classes to re-review Programming-1 & 2 concepts before starting this course syllabus.</p>
Visual Programming 315 COMP-3	Average Grade	Overall result is satisfactory	<p>Extra learning resources should be provided to the students (Ex. Virtual Lectures).</p> <p>Encourage and provide proper guidance to the students.</p> <p>Increase the ability of students in thinking and writing the program by oral questions immediately after each class than simply conducting quiz in 1 or 2 topics.</p>
Elective – II (Advanced Java Programming) COMP 4**	Average Grade although the is Result satisfactory	More students got D and D+.	Preparing effective study plan for increasing the grades B and C in next semester

Courses with Variations (Second Semester)

Course Name & Code	variation	Reasons for variation	Actions taken
Object Oriented Programming (OOPs) 213 COMP-3	Low Grade	Students struggled to understand the logical questions to answer. Students focused on memorization rather than understanding.	Need to give the program question for practice more. Need to give extra classes to re-review Programming-1 & 2 concepts before starting this course syllabus.
Algorithms & Data Structures-1 221 COMP-3	Low Grade	Result varies due to online teaching and offline Exams.	Students should utilize more time to solve and practice exercises.
Artificial Intelligence 241 COMP-3	CLO's achievement low	Knowledge and understanding domain of the paper not clear to them	Brief introduction of the before starting the new topics.
Analysis & Design of Algorithms 323 COMP-3	Low Grades	Mathematics skills affect the result .Students cannot score high marks because of their deprived math skills.	We need to take extra classes for the basic mathematics.
Algorithms and Data Structures – II 222 COMP-3	Low Grades	Result varies due to online teaching and offline Exams.	Students should utilize more time to solve more exercises based on Time complexity
Data Modeling and Simulation 252 COMP-3	Low Grades	Students face difficulty in solving multiple choice questions.	Try to minimize lengthy topics as per student's capability and arrange some more classes to explain those topics.
Computer Data Security and Privacy 324 COMP-3	Low Grade	Overall results are satisfactory and students performed well but it can be improved. Students not practiced the analytical MCQ's.	The assessment strategy need to be reconsidered and Exam-2 can be replaced with 3-4 multiple choice pop-up quizzes instead of assignment so that students can practice the analytical MCQs instead of direct theoretical memorization based MCQs.
Mobile Computing 426 CNET-3	Low Grades	Some of the students thought that written exams were difficult More topics and that makes confusion for students	Remove ambiguous topics and provide extra explanation to tough topics.

Course Name & Code	variation	Reasons for variation	Actions taken
JAVA Programming 471 COMP-3	Low Grade	Some students programming skill don't improve to advance level	Need to arrange extra tutorial for weaker students
Theory of Compilers 433 COMP-3	More students in A & A+	Some of the student's level of understanding is average but some students score A & A+, need provide assistance to weak students	Extra explanation to weaker students. More practice problems are required.
Graduation Project 495 COMP-3	Maximum students in A & A+	Evaluation criteria and assessment method is lenient but it will affect the competitive and learning skills of the students	Need to revive the evaluation process

3. Result Analysis of Course Reports

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

<p>Strengths :</p> <ul style="list-style-type: none"> - Overall result is satisfactory, high level students performed well as compared to the students of lower level. - Whatever planned in the course roadmap was delivered on time and no issue face by course teachers during covering the mentioned course. - The capacity to work efficiently as a responsible member of a team engaged in various appropriate activities related to their domain.
<p>Areas for Improvement:</p> <ul style="list-style-type: none"> - Need to consider the issues related to more students getting lower grades (i.e. D, D+) in some of the courses. - Students need to put extra effort for mathematics, physics and english courses. - Students are weak in programming and algorithm concepts, additional classes should be provided or special attention should be given to the weak students. - Need to provide extra classes in form of online classes, tutorials, seminars, class room teaching and related topic videos for mathematics, physics and english courses to the students.
<p>Priorities for Improvement:</p> <ul style="list-style-type: none"> ▪ Students should be taught using diagrams, charts, graphs and other such methods as they are weak in understanding theoretical concepts. ▪ Students are lacking in language and mathematical skills so it is affecting the results, especially in the courses that are more oriented toward mathematical skills. ▪ General courses offered by other departments (English, Physics and Mathematics) needs review and modification in the course contents and teaching strategies if required.

E. Program Activities

1. Student Counseling and Support

Activities Implemented	Brief Description *
Academic Plan	At the beginning of each semester academic advisory unit plan the activities. Orientation programs for newly admitted students are arranged and the role of academic advisors during their program tenure is explained.
to Advisors Allocation of sections	Advisors collect the progress of each student.
Advisory Day	Two workshop advisory day 1 & 2 (28-3-2022 & 28-12-2022) organized for the students in with advisory committee interact with the students and guide them and share the facilities which the committee members will provide to the students in form of schedule for workshops, training and tutorial program.
Identification of verseunderachi	<p>Low average students: The primary goal is to identify the students having a low average score. Advisors are allocated to solve the problems the issues of the students.</p> <p>If students are failing in previous exams then try to troubleshoot their problems and provide assistance through guidance and arrange extra classes and tutorial programs for them.</p> <p>Monitoring and observing: Throughout the semester the advisors monitor all the students and observe the progress of underachievers who got assistance from advisors.</p>
Advising week	The counseling week was implemented in the first week at the college level electronically through the academic counsellors according to the distribution of counsellors for each academic level.
Low average students	<p>Training and workshop: Training, workshop and tutorial for low performing students.</p> <ul style="list-style-type: none"> - Mathematics - Programming 1 & 2 - Java Programming - Physics
and counseling Special support to students with psychological issues	Department deals with and provides effective physiological, and social guidance and counseling through qualified and sufficient staff and experts.
Duties and rights of the students	<p>The duties of advisors are sent to all of them via email where the responsibilities and duties are explained clearly.</p> <p>The date varies from one advisor to another depending on the time addressed for advising.</p> <p>A form is distributed to each advisor to be filled out by the student and signed by the advisor.</p>

	Every advisor established a sequence of meeting with his students in order to explain and clarify all the rules regarding the students' rights along with their duties.
Comments on Students Counseling	An electronic evaluation form for the counseling week's activities was used to measure students' satisfaction with the counseling week.
Activities	Many counseling session and activities were conducted by the advisors.
Comment on Student Counseling and Support **	Schedule for counseling at the beginning of each semester.
<p>Student advice has to be improved in the following ways:</p> <ul style="list-style-type: none"> ▪ Develop a systematic strategy for continuously observing and monitoring the students' status. ▪ “Student Advising Helper” is a suggested graduation project for final CS students to make it easier for advisors to monitor, track, or report all cases of students. The system is suggested to be integrated with a student database to make it easier to access all student data directly. ▪ Identification of low performing students and the courses which affects most, should schedule the training and tutorial program in the beginning of the session. ▪ Consider advising as a routine task for each staff member, which can be evaluated annually based on his progress on this task. 	

* 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 *
Faculty Orientation program	<p>Event : Department of Computer Science Academic Meeting Name Orientation program for the newly joined faculty members who joined during the academic year 2021- 2022.</p> <p>Objectives of Event:</p> <ol style="list-style-type: none"> 1. Interaction with head of different committees and higher authorities 2. Distribution of tasks and organizational structure of department 3. Academic procedures and Policies 4. Insight into the tasks and responsibilities of various departmental committees <p>Chaired by: Dr. Mohammed Hameed Alhameed (HoD) No. of Participants: 11 Date: Oct 03, 2021 Venue: CS Department Meeting Room</p>
Certificate Distribution	<p>Event Name: Appreciation Certificate Distribution Certificate of Appreciation to the faculty members of CS department who have given their valuable efforts to College of CS & IT during academic year 2021-22.</p> <p>Activity: Certificate Distribution Presented by: Dr. Mohammed Hameed Alhameed (HoD)</p>

	<p>No. of Participants: 42 Date : 05/01/2022 Venue : Computer Science Department meeting room/Online (Zoom)</p>
Exhibition day	<p>PROJECT EXHIBITION DAY No. of Participants: Students of Main, Mahliya and Sabya Campuses and supervisors Presented by: Students of CS department , Mahliya & Sabya college Date : Nov 14, 15, 2021 Venue : Ground floor, near Student Affair Unit</p>
Program, Course Specification & Report Preparation Workshop (Quality Practices Training)	<p>Topic: علي شعلان د. عمادة التطوير الأكاديمي (مفاهيم وأساسيات) تقويم الطلاب - Student evaluation (concepts and basics) Time: 07:00 Date: Feb 19, 2022 Presented by: Dr. Ali Shalan Conducted by: DAD Venue: Zoom</p>
	<p>Preparation and description of the course and program. Date: Oct 26, 2021 Time: 7:00 PM Presented by: Dr. Ahmed Taha Conducted by: DAD Venue: Zoom Application (Online).</p>
	<p>How to write effective Course learning outcomes (CLO) Date: Nov 21, 2021 Time: 8:00 PM - 9:00PM No. of Participants: 52 Presented by: Dr. Shams Tabrez Siddiqui Venue: Zoom Application (Online). Audience: All Campuses Faculty</p>
	<p>Program Report Date: Feb 28, 2022 Presented by: Dr Osama Madkhali Attendees: Open for All Location: Online through Zoom Organized by: DAD</p>
Academic Accreditation for CS program.	<p>Topic: لقاء الاعتماد الأكاديمي لقسم علوم الحاسب Time: Jan 26, 2022 Presented by: Dr. Basem Assiri Attendees: Faculty Venue: Online -Zoom Application. Organized by: QAU college committee</p>
Outcomes Based Education (OBE)	<p>Topic: Outcomes Based Education (OBE) College of CS&IT Time: Feb 20, 2022 Presented by: Dr. Ahsan Asim Location: Online through Zoom Organized by: QAU college committee</p>
SES Rating and SSRp Writing	<p>Title: SES Rating and SSRp Writing Date: Oct 21, 28-10-2021 Day: Thursday Time: 9:00 AM- 11:00 AM, 12:00 PM to 01:00 PM Venue: Computer Science Meeting Hall Speaker(s): Dr. Shadab Alam/ Dr. Shams Tabrez Siddiqui.</p>

	Coordinated by: Mr. Aasif Aftab Audience: Quality Team (SES Members)
QAU Department -Standard Practices	Standard 5 SES and Practices Date: 17-11-2021 Day: Thursday Time: 12:00 PM to 01:00 PM Venue: Computer Science Meeting Hall and Online for female campus members Speaker(s): Mr. Shahnawaz Nasir (Head STD 5) Coordinated by: Dr. Shams Tabrez Siddiqui Audience: Quality Team (SES Members- All campuses)
	Title: Standard 6 SES and Practices Date: 18-11-2021 Time: 12:00 PM to 01:00 PM Venue: Computer Science Meeting Hall and Online for female campus members Speaker(s): Mr. Syed Ziauddin (Head STD 6) Coordinated by: Dr. Shams Tabrez Siddiqui Audience: Quality Team (SES Members- All campuses)
	Standard 4 & SES Date: 22-11-2021 Day: Monday Time: 07:30 PM to 09:00 PM Venue: Online (Zoom) Speaker(s): Mr. Shabbir Alam (Head STD 4) Coordinated by: Dr. Shams Tabrez Siddiqui Audience: Quality Team (SES Members- All campuses)
Special lecture: Promotion procedures and policies	Event Name: Saudi's faculty to cop with promotion procedures and policies Date: Nov 10, 2021 No. of Participants: 37 Presented by: Dr. Basem Assiri Venue : Online through Zoom
Seminar for teachers	Event Name: Teachers in challenging times Date: 05 th Oct 2021 Location: Online through Zoom No. of Participants: 35 Presented by: Dr. Uma Organized by: CS Department Audience: All Campuses Faculty
Workshop for Assessment	Topic: (Concepts and Fundamentals) Deanship of Academic Development. Time: 07:00 PM Date: Feb 19, 2022 By Dr. Ali Shaalan Venue : Online through Zoom Organized by DAD
Software Development	Event Name: Presentation on developed software Date: 23th Nov 2021 Location: Meeting room Deptt of CS Attendees: 13 Presented by: Mr. Shahid kamal & Mr Haseebuddin Organized by: Software development Unit & CS Activity Unit

Training on Canva an online design and publishing tool software	<p>Topic: منصة تصميم Canva No. of Participants: 75 (Students & Teachers) Date: 08-11-2021 Presented by: Mrs.Fatimah Alqahtani Organized by: Community service committee Location: Online through Bb</p>
Faculty Development Program	<p>Event Name: Workshop on Saudi Digital library Date: 13th Nov 2021 Attendees: 17 attended+20 on recording = 37 Location: Online through Zoom Presented by: Ms. Umi Salma Organized by: CS library committee & CS Activity Unit</p>
	<p>Event Name: Effective Strategies for Teaching Computer Science Courses Date: 22.11.2021 Presented by: Dr. Nada Hakami Attendees: 38 Target Audience: Faculties of female campus Location: Zoom Organized by: Teaching and Learning Unit</p>
	<p>Event Name: Research Tool POP- Research helping Tool Publish Or Perish Date: 23.11.2021 Attendees: 57 Location: Zoom Resource person:: Ms.Fatima Alqahtani Target group: All the Faculty members from CS & IT Organized by: Research Unit, CS Department</p>
	<p>Topic: "Data Visualization using TABLEAU" Time: Mar 6, 2022 7:00 PM Presented by Mrs.RAHAMA SALMAN Location: Zoom Organized by: Mahliya, Research Unit, CS Department</p>
Comment on Professional Development Activities for Faculty and Other Staff **	
Faculty members are encouraged to get more involve in professional development programs and enhance their skills through self-learning mechanism.	

* 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 *
Research Publications	<p>Male Campus</p> <ul style="list-style-type: none"> ▪ 04 patents ▪ Book Chapter 10 ▪ 64 research articles have been published in reputational international journals (ISI/SCI Indexed, Springer, Scopus, etc.) ▪ 26 research articles have been presented and published at various international conferences (IEEE, Springer, etc.).

	<ul style="list-style-type: none"> ▪ 02 seminars <p>Mahliya Campus</p> <ul style="list-style-type: none"> ▪ 49 research publications in reputed international journals (ISI/SCI Indexed, Springer, Scopus, etc.) ▪ 21 research articles published at various international conferences (IEEE, Springer, etc.). ▪ 83 seminars attended inside and outside Saudi Arabia by some faculty members. ▪ Some faculty members participated in 15 training and 8 faculty development programs. <p>Sabya campus</p> <ul style="list-style-type: none"> ▪ 20 research publications in reputed international journals (ISI/SCI Indexed, Springer, Scopus, etc.) ▪ 5 research articles published at various international conferences (IEEE, Springer, etc.). ▪ 16 seminars attended inside and outside Saudi Arabia by some faculty members ▪ Some faculty members participated in 10 training and 2 faculty development programs.
Seminar Research	<p>Topic: DATA SCIENCE AND MACHINE LEARNING Date: 11.11.2021, Thursday Time: 12:00 PM- 1:00 PM No. of Participants: 72 (Students & Teachers) Presented by: Ms. RAHAMA SALMAN Location: BlackBoard Organized by: Mahliya Activity Unit CS department</p>
	<p>Topic: IoT in Education Date: 21.11.2021, Sunday Time: 12:00 PM- 01:00 PM No. of Participants: 80 (Students & Teachers) Presented by: Ms.Sameena Shaik Location: BlackBoard Organized by: Mahliya Activity Unit CS department</p>
	<p>Topic: Natural Language processing using python Date: 29-3-2022 Time: 7:30 PM-09:30 PM Presented by: Ms. Maha Shaabi No. of Participants: 32 (Teachers & Students) Organized by: Research and Activity Unit, Mahliya campus Venue: Zoom</p>
	<p>Topic: IoT: Transforming Lives (Smart City Model) Date: 7-2-2022 Time: 12:00 PM-01:00 PM Presented by: Ms. Nusrat Hamid Shah No. of Participants: 31 (Teachers Students) Organized by: Research and Activity Unit, Mahliya campus Venue: Zoom</p>

	<p>Topic: Security Analysis in UAVs Date: 17-2-2022, Thursday Time: 07:00 PM-08:00 PM Presented by: Ms.Munleef Bhat No. of Participants: 82 (Teachers Students) Venue: Blackboard Organized by: Research and Activity Unit, Mahliya campus</p>
Workshop	<p>Event Name: Research Tool POP- Research helping Tool Publish Or Perish Date: 23.11.2021 Attendees: 57 Location: Zoom Resource person:: Ms.Fatima Alqahtani Target group: All the Faculty members from CS & IT Organized by: Mahliya Research Unit, CS Department</p>
	<p>Topic: Motion Graphics and Photography Date: 23-03-2022, Wednesday Time: 7:00 PM-8:00 PM No. of Participants: 64 Presented by: Ms. Ahmed Unnisa Begum Venue: Online through Zoom</p>
Research Talk	<p>Predictive Analytics Versus Data Science Date: 28-10-2021, Thursday Time: 12:00 PM-01:00 PM No. of Participants: 86 Presented by: Ms Nithinsha Anvarsha Location: Online through Zoom</p>
	<p>Topic: BLOCKCHAIN TECHNOLOGY Date: 7-11-2021 Time: 7:00 PM-8:00 PM Presented by: Ms. S.Padmanayaki No. of Participants: 65 (Teachers Students) Organized by: Research and Activity Unit, Mahliya campus Venue: Zoom</p>
	<p>Topic: Neural Network and Deep Learning Date: 30-3-2022, Wednesday Time: 7:00 PM-8:00 PM Presented by: Praveetha G No. of Participants: 24 (Teachers Students) Organized by: Research and Activity Unit, Mahliya campus Venue: Zoom</p>
Research Seminar	<p>Title: “Emerging Trends and Future Perspective of Deep Learning” Time: 06:30 PM Date: Feb 21, 2022 Presented by Dr. Rua Aburasain Platform: Zoom</p>
	<p>Topic: "Future Agricultural Trends and Prospects for Deep Learning" Time: 7:00 PM</p>

	Date: Mar 23, 2022 Presented by Mrs. Padmanayaki Selvarajan Platform: Zoom
	Topic: " Empirical Methods in Interdisciplinary Research " Time: 7:00 PM Date: Mar 9, 2022 Presented by Dr.Muhammad Ahsan Asim Platform: Zoom
	Topic: " Futuristic E-booking for Parking Lot with Tracking Amenity " Time: 8:00 PM Date: Feb 28, 2022 Presented by Mr.Haneef Khan Platform: Zoom Organized by: Research and Activity Unit
Comment on Research and Innovation **	
<ul style="list-style-type: none"> - Faculty members have published numerous research articles in reputed International Journals. - Need to encourage and motivate students to participate in research activities and improve publications especially the graduation project students working on research based projects. - The faculty have been encouraged to organize and participate in research activities in near future. - Sabya campus faculty needs to focus more on research publications and activities. 	

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

** including performance evaluation on these activities

4. Community Partnership

Activities Implemented	Brief Description *
Workshop - General Safety requirements	Topic: General Safety requirements workshop No. of Participants: 14 Date: 19 th Sept 2021 Presented by: Dr Noorah Organized by: Community service committee & CS Activity Unit Location: Lecture theatre
Awareness Campaign- Perfect handling of social media	Topic: التعامل المثالي مع مواقع التواصل الاجتماعي No. of Participants: 73 Date: 25-09-2021 Presented by: د.نواف الملحس Organized by: Community service committee Location: Online through Zoom
Awareness Campaign- The concept of artificial intelligence and its applications in our lives	Topic: مفهوم الذكاء الاصطناعي وتطبيقاته في حياتنا No. of Participants: 300 Date: 13-10-2021 Presented by: Dr. Abdullah Shenemar Organized by: Community service committee Location: Online through Zoom

Awareness Campaign	<p>Topic: Social engineering through social media platforms No. of Participants: 34 Date: 09-11-2021 Time: 6:30 PM – 7:30PM Presented by: أ. عماد الشيخ Mr. Imad Al Sheik Organized by: Community service committee Location: Online through Zoom</p>
Awareness Campaign- Crisis and situation management plan and emergency evacuation	<p>Topic: خطة إدارة الازمات والحالات و الإخلاء في حالات الطوارئ No. of Participants: 20 Date: 24-10-2021 Presented by: د. سحر الديب Ms. Sahar Eldeep Organized by: Mahliya Community service committee Location: Online through Bb</p>
Awareness Campaign- Awareness exhibition for celiac patients (wheat allergy)	<p>Topic: المعرض التوعوي لمرضى السلياك (حساسية القمح) Organizer and Guest No. of Participants: Date: 29-09-2022 Presented by: Mrs. Fatimah Alqahtani Organized by: Mahliya Community service committee Location: Al Rashid Mall</p>
Awareness campaign	<p>Event Name: The future of the department of computer science within vision 2030 Date: 21th Oct 2021 Total participant: 52 Location: Online through Zoom Organized by: Community service committee & CS Activity Uni Presented by: Dr. Mohammed Hameed Alhameed</p>
Special Lecture on awareness	<p>Event Name: Awareness campaign for Technology, Security, Intellectual intelligence Date: 17th Nov 2021 Location: Online through Zoom Total participant: 63 Presented by: Dr. Basem Assiri Organized by: Community service committee & CS Activity Unit</p>
	<p>Event: The heart is swallowed by a pulsating heart Date: 5-10-2021 Attendees: 25 Resource Person: أيد الزو ابو احمد بنب ز. Organized by: Mahliya Campus Committee</p>
Vaccination campaign	<p>Event: Come back with caution Date: Sept 14, 2021, Tuesday Resource person: Mrs. Zainab Abu Al-Zawaid Location: B Block building, Mahliya campus</p>
Breast Cancer Awareness Campaign	<p>Event Breast Cancer Awareness Campaign Date: October 25, 2021, Monday Attendees: 40 Resource person: Dr. Zainab Ahmed Abu Al-Zawai Location: Training room, Mahliya campus</p>

Women's day program	Event: World women's day Date: 8-3-2022 Resource person: Prof. Zainab Abu Al-Zawaid (Public Relations and Media Unit) Location: Mahliya College headquarter.
Comment on Community Partnership **	
<p>There should be a Community Partnership Committee, and a separate budget.</p> <p>Faculty and students are involved in many community related programs and activities. Still, need to explore more in community services. Female campuses are encouraged to participate with full strength in social activities with some social cause.</p>	

* 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)

<p>Strengths :</p> <ul style="list-style-type: none"> - A good number of activities were conducted during the academic year 2021-22 and the focus was on professional development activities for faculty, research and community services. - There was a wide range of activities conducted, with the bulk of effort going toward professional development activities for faculty to further improve their careers, do and share original research, and to engage in service to the local community. - A total of 38 events were conducted in all campuses out of which 14 events were for research and development whereas 16 were for faculty development and the remaining 8 were for community services.
<p>Areas for Improvement:</p> <ul style="list-style-type: none"> ▪ Need to organize workshops and training programs for faculty development from experts. ▪ Female campuses need to focus more, encourage faculty members to participate and be a part of Community Partnership Activities. ▪ Female faculty members should involve themselves in research activities through forming research groups.
<p>Priorities for Improvement:</p> <ul style="list-style-type: none"> ▪ Need to establish a unit for Community Partnership Activities. ▪ Faculty Development / Training programs on Teaching & learning, discussing the teaching strategies and evaluation methods based on the nature of the courses need to conduct on a priority basis. ▪ Need to form a group of faculty's with area of specialization, to achieve more research publications. ▪ Department should arrange and provide research resources to faculty and students i.e., high performing systems, access to paid journals, research lab and room.

F. Program Evaluation

1. Evaluation of Courses

Course Code	Course Title	Student Evaluation (Yes-No)	Other Evaluations (specify)	Developmental Recommendations
COMP 111	Introduction to Computing	Yes	Faculty/Teaching & Learning Unit/QAU-Male campus	<ul style="list-style-type: none"> - Algorithm and definition should be added in the course material. - Add more exercise in Chapter 5. - Chapter 5 should be divided in two separate chapters.
COMP112	Programming 1	Yes	Faculty/Teaching & Learning Unit/QAU-Male campus	Programming-I, course should be reviewed with the help of CC & TL.
COMP213	Programming 2	Yes	Faculty/Teaching & Learning Unit/QAU-Male campus	1. Programming-II course should be reviewed with the help of CC & TL.
COMP213	Object Oriented Programming	Yes	Faculty/Teaching & Learning Unit/QAU	The OOP course should be reviewed again with the help of CC & TL, and the text book should be change, it is not appropriate for the students.
COMP252	Data Modeling & Simulation	Yes	Faculty/Teaching & Learning Unit/QAU	Need to prepare the course material according to the new plan.
COMP221	Algorithm & Data Structures 1	Yes	Faculty/Teaching & Learning Unit/QAU	Update the course material according to the New plan.
222 COMP-3	Algorithm & Data Structures-II	Yes	Faculty/Teaching & Learning Unit/QAU	Course content and lab manual is appropriate
231 COMP-3	Operating System	Yes	Faculty/Teaching & Learning Unit/QAU-Male campus	<ul style="list-style-type: none"> - Multithreading Program can be added in the lab Manual. - Update the lab Manual in Python.

Course Code	Course Title	Student Evaluation (Yes-No)	Other Evaluations (specify)	Developmental Recommendations
241 COMP-3	Artificial Intelligence	Yes	Faculty/Teaching & Learning Unit/QAU-Male campus	<ul style="list-style-type: none"> - Lab manual will be in python from next semester - Need to do some changes in the CLOs according to the NCAAA guidelines.
323 COMP-3	Analysis & Design of Algorithms	Yes	Faculty/Teaching & Learning Unit/QAU	<ul style="list-style-type: none"> - More problems must discussed in Theory. - Transform & Conquer chapter should be added again.
324 COMP-3	Data Security & Privacy	YES	Faculty/Teaching & Learning Unit/QAU	Course content and lab manual is appropriate
315 COMP-3	Elective-I (Visual Programming)	Yes	Faculty/Teaching & Learning Unit/QAU	<ol style="list-style-type: none"> 1. Need to update the version of the book. 2. Need to fix the problem of Chapter-6 3. Need to fix the synchronization of Theory and Lab
332 COMP-3	Advanced Operating System	Yes	Faculty/Teaching & Learning Unit/QAU	Course content and lab manual is appropriate
336 COMP-3	Computer Graphics	Yes	Faculty/Teaching & Learning Unit/QAU	<ul style="list-style-type: none"> - Need to add more problem on DDA, Bresnham Line and Bresnham Mid-Point Circle algorithm. - Lab manual is appropriate
390 COMP-3	Summer Training	Yes	GP Committee /Teaching & Learning Unit/QAU	<ul style="list-style-type: none"> - Student should develop some apps and web application - There must be a committee to contact IT Companies for the student summer training
433 COMP-3	Theory of Compiler	Yes	Faculty/Teaching & Learning Unit/QAU-Male campus	<ul style="list-style-type: none"> - Update the new edition of the book. - Need to manage the time for theory and lab.

Course Code	Course Title	Student Evaluation (Yes-No)	Other Evaluations (specify)	Developmental Recommendations
442 COMP-3	Artificial Neural Network	Yes	Faculty/Teaching & Learning Unit/QAU	- Syllabus should be reviewed and compare course material with other university - Lab Manual should be in Python
COMP471	Java Programing (Elective 2)			- Need to re organize the Theory and Lab material.
495 COMP-3	Final Project	Yes	GP Committee/ Teaching & Learning Unit/QAU	- Need to have 2-3 workshop for the students. - Need to have domain expert - Some Extra classes should be provided for Programming.

2. Students Evaluation of Program Quality

Every year Program evaluation survey is conducted by SSU and data is collected from exit students (graduating) survey. Based on this survey the program evaluation is done by QAU and Program Assessment Committee.

Evaluation Date : 31-4-2022	Number of Participants: 80
Students Feedback	Program Response
<p>Strengths:</p> <ul style="list-style-type: none"> The evaluation is satisfactory in every way. Improved student facilities such as laboratories, classrooms facilities, celebration hall and religious observance. The course's study materials were upgraded and up to the mark. An orientation program is arranged for the students at the beginning of the semester. New curriculum designed & implemented based on industry job market requirements. Academic and career counseling and the performance of the students were monitored by the advisory unit members who were available for the students whenever they required assistance. Extra tutorial and classes were arranged for weaker students Intellectuals are encouraged to participate in competitions with and other universities. Teachers should give the students feedback on regular basis to improve the performance of the students. 	<p>The new curriculum implemented will improve the students' performance.</p> <p>In the near future strength of the students will increase.</p>

* Attach report on the students evaluation of program quality

<p>Areas for Improvement:</p> <ul style="list-style-type: none"> • Need to incorporate new teaching strategies and methods. • Need to encourage students and teachers to participate in community services at ground level into different sectors. • More facilities for extracurricular activities e.g. sporting and recreational activities. • Essential to organize more co-curricular activities related to the courses that may help them to improve the learning ability and develop skills. • Need to establish state of art infrastructure to enhance student’s cognitive and soft skills. • Necessary needed extra budget for extracurricular and cultural activities. 	<p>The curriculum review committee and QAU will discuss with course teachers and course coordinators to incorporate other effective teaching strategies other than traditional.</p> <p>Department should encourage and conduct various extracurricular activities for students.</p> <p>Faculty should involve students in social activities through community services.</p>
<p>Suggestions for improvement:</p> <ul style="list-style-type: none"> • Library resources are not sufficient, need to procure books and learning resources for college library. • Need to extend timing of library and laboratory to succour students in completing their assignments and programs. • Need to collaborate with IT industries and organizations for placements and corporative trainings. • Photocopy and other similar facilities need to establish for students. 	<p>Request already communicated to university administration regarding library resources and is under process.</p> <p>Cooperative training and placement cell establishment plan at college level.</p>

3. Other Evaluations

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

Alumni Feedback

Evaluation method : Survey	Date: 10-09-2022	Number of Participants : 67
Summary of Evaluator Review		Program Response
<p>Strengths:</p> <ul style="list-style-type: none"> • Students problem solving and development computer-based solution skills show positive trends. • Working in a team under professional and ethical responsibilities. • Apply and learn the latest tools. • Stay in college has a good impact in life and career. 		<p>The survey report is satisfactory but still need to focus more to facilitate the students in developing cognitive and soft skills. Awareness and enhancement of the career through professional certification.</p>
<p>Points for Improvements::</p> <ul style="list-style-type: none"> • Need to establish an active alumni and employment unit for the students to improve the employability. 		<p>Department and college council need to set up a committee for establishing the required units in the department for the program.</p>

<ul style="list-style-type: none"> • Active participation of final year students with alumni at least once a year. • Need to organize job fair for the final year students with the collaboration of alumni and employers. • Need to invite employers to the campus and include them in the program advisory board. • Program advisory board meetings should be conducted on a regular basis. • Need to develop partnership with the IT industries for providing training and earning professional certificates. • More training sessions/workshops/seminars should be arrange for the graduating students and others for learning and developing interpersonal, ethical, and communications skills to assist them in effectively performing the assigned tasks when working in teams or groups. • Extra effort needed from the Mahliya and Sabya campuses to arrange more workshops, training programs and seminars for their students. • Mahliya and Sabya campuses should encourage students to participate neck to neck with male campus in professional, ethical, societal and economic development their community. 	<p>Need to conduct an Alumni meet and invite some employers</p> <p>Carrier and placement cell need to be established at the college level in collaboration with the university training and placement unit.</p>
<p>Suggestions for improvement</p> <ul style="list-style-type: none"> • Student must be introduced about specialization of job market • Department necessity is to build strong communication and interaction with the alumni. • Program must tie up with the IT organization and other sectors for the Cooperative training for their students. • Need to establish alumni and employment unit for organizing and conducting different activities. • Department should organize yearly basis the job fair for the final year students with the collaboration of alumni and employers. • Program advisory board meeting at least twice a year. • Extra budget for extra-curricular and community services, partnership with social work organization. 	<p>Latest industrial tools provided to students in the labs as the new curriculum is being implemented.</p> <p>Alumni meet in near future with final year students to share their experiences and guidance.</p>

* Attach independent reviewer's report and stakeholders' survey reports (if any)

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)

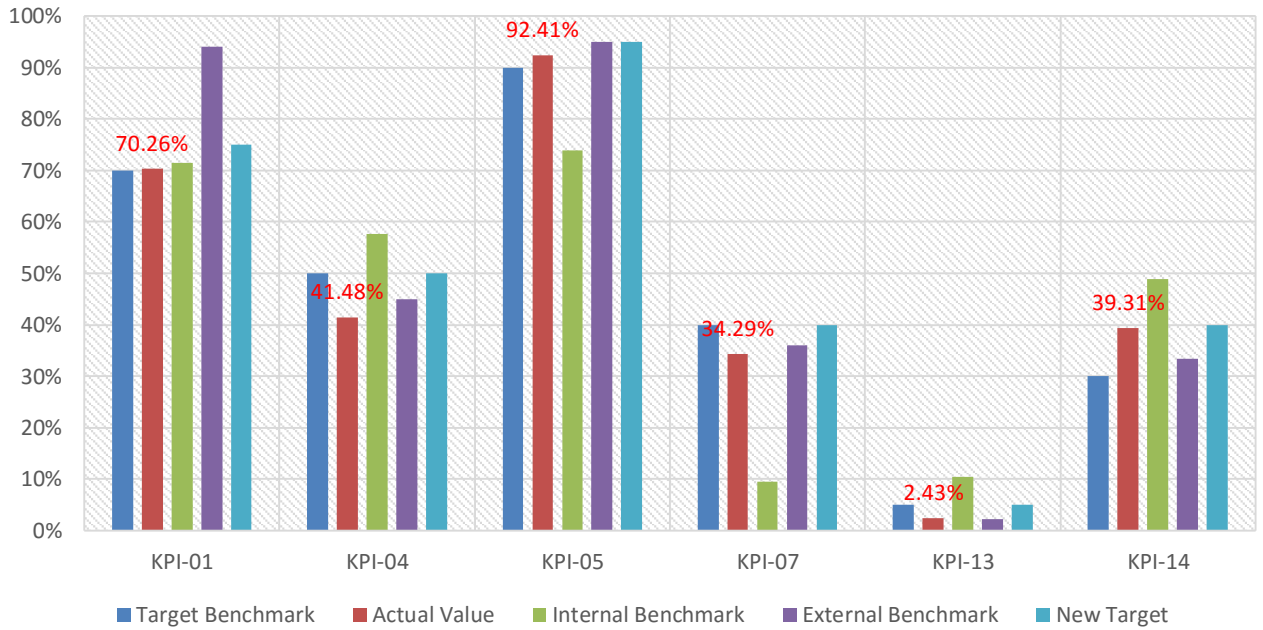
No	KPI	Target Benchmark	Actual Value	Internal Benchmark IS Program - Jazan University	External Benchmark CS Program- (King Khalid University)	Analysis	New Target Benchmark
KPI-P-01	Percentage of achieved indicators of the program operational plan objectives	70%	70.26 %	71.5%	94%	Below the target level.	75%
KPI-P-02	Students' Evaluation of quality of learning experience in the program	4.25	3.85	4.4	4.03	Below the target level.	4.25
KPI-P-03	Students' evaluation of the quality of the courses	4.0	4.06	4.22	3.7	CRC should play its role effectively to improve the quality of the offered courses by executing the track leader evaluation form.	4.25
KPI-P-04	Completion rate	50%	41.48 %	57.67%	45%	Below the target level.	50%
KPI-P-05	First-year students retention rate	90%	92.41 %	73.89%	95%	The average value is a little higher than the target value.	95%
KPI-P-06	Students' performance in the professional and/or national examinations	NA					
KPI-P-07	Graduates' employability and enrolment in postgraduate programs	40%	34.29 %	9.5%	36%	Target achieved successfully.	40%
KPI-P-08	Average number of students in the class	25	20.97	21.38	30	superior to, but approaching the target	25
KPI-P-09	Employers' evaluation of the program graduates' proficiency	4.5	4.45	-	4.75	Target achieved successfully.	4.5
KPI-P-10	Students' satisfaction with the offered services	3.5	3.02	2.93	3.7	Services quality should be monitored regularly throughout the session.	3.5
KPI-P-11	Ratio of students to teaching staff	20:1	24:87	23.86:1	20:1	Department should more qualified faculty staff to deal	20:1

						with the increasing no. of students.	
KPI-P-12	Percentage of teaching staff distribution	Prof=5 % Associate Prof= 5 % Asst. Prof= 25 % Lecturer=65 %	Prof.=0 % Associate Prof.=2 .13% AP=27.66% Lecturer=65.96 % TA=4.26%	Prof.=0% Associate Prof.=0% AP=19.30 % Lecturer=80.70%	Prof.=2.4% Asso P=14.3% AP=21.4% Lecturer=43 % TA=14.3%	Dept. requires more assistant, associate, and full professors.	Prof.=5% Associate Prof.=5% Asst Prof=30% Lecturer=60%
KPI-P-13	Proportion of teaching staff leaving the program	5%	2.43%	10.37%	2.3%	Some faculty members got better opportunities and left.	5%
KPI-P-14	Percentage of publications of faculty members	30%	39.31 %	48.97%	33.3%	Successfully achieved the target level. The reason is that many faculty members are involved in writing and publishing quality research in prestigious international journals and have won research awards from JU as well.	40%
KPI-P-15	Rate of published research per faculty member	0.75:1	1.69:1	1.74:1	1.12:1	Faculty members are involved in publishing quality research.	2:1
KPI-P-16	Citations rate in refereed journals per faculty member	20:1	8.73:1	25.63	77.33	A higher rate than the set target value infers that quality research is being produced by the faculty members.	20:1
KPI-P-17	Satisfaction of beneficiaries with the learning resources	3.5	3.82	3.6	3.7	Sufficient learning resources.	4

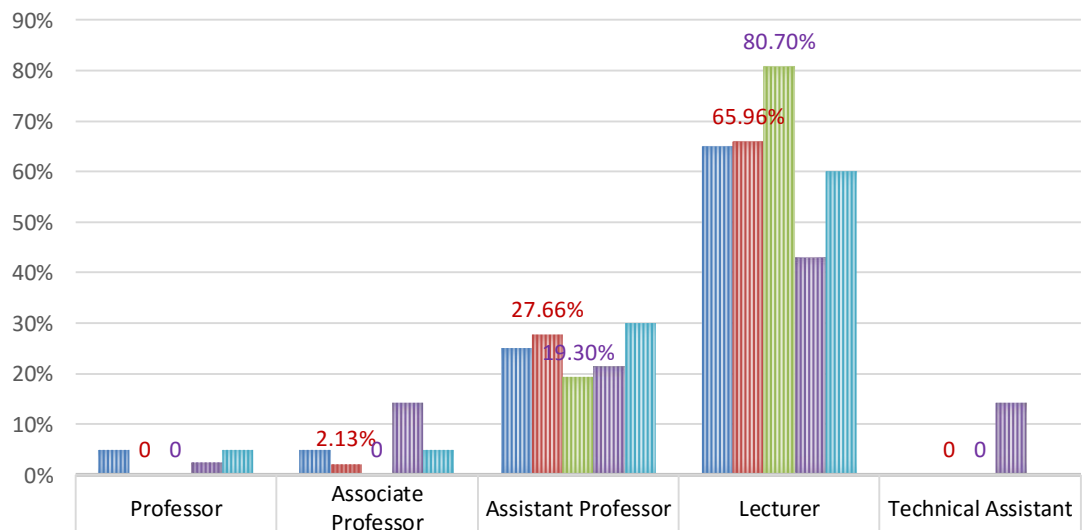
Comments on the Program KPIs and Benchmarks results :

- In addition, there are a few areas of concern that should be addressed, the most noticeable of which is the apparent completion rate, which is low and doesn't shown any improvement when compared to prior years.
- The retention rate has improved and is on the rise, which is promising.
- Publications by faculty members has risen steadily over time.
- More faculty involve in research activities.
- Shown satisfaction with learning resources and offered services

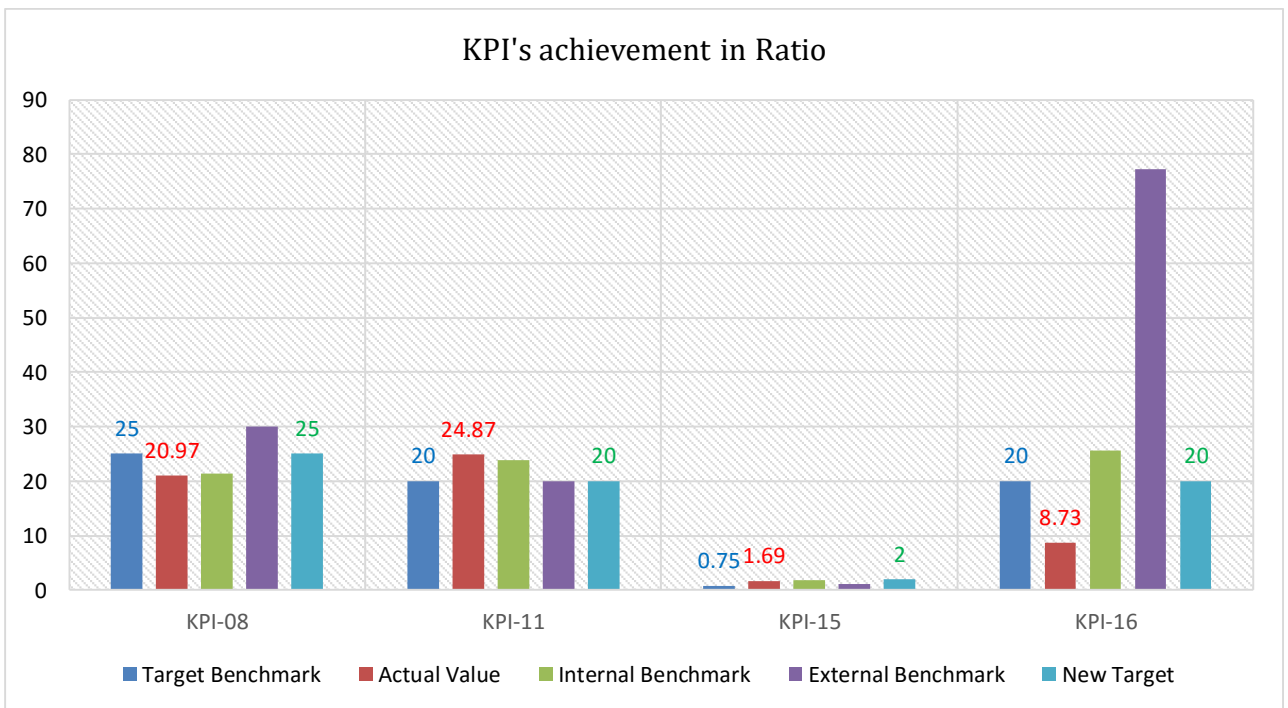
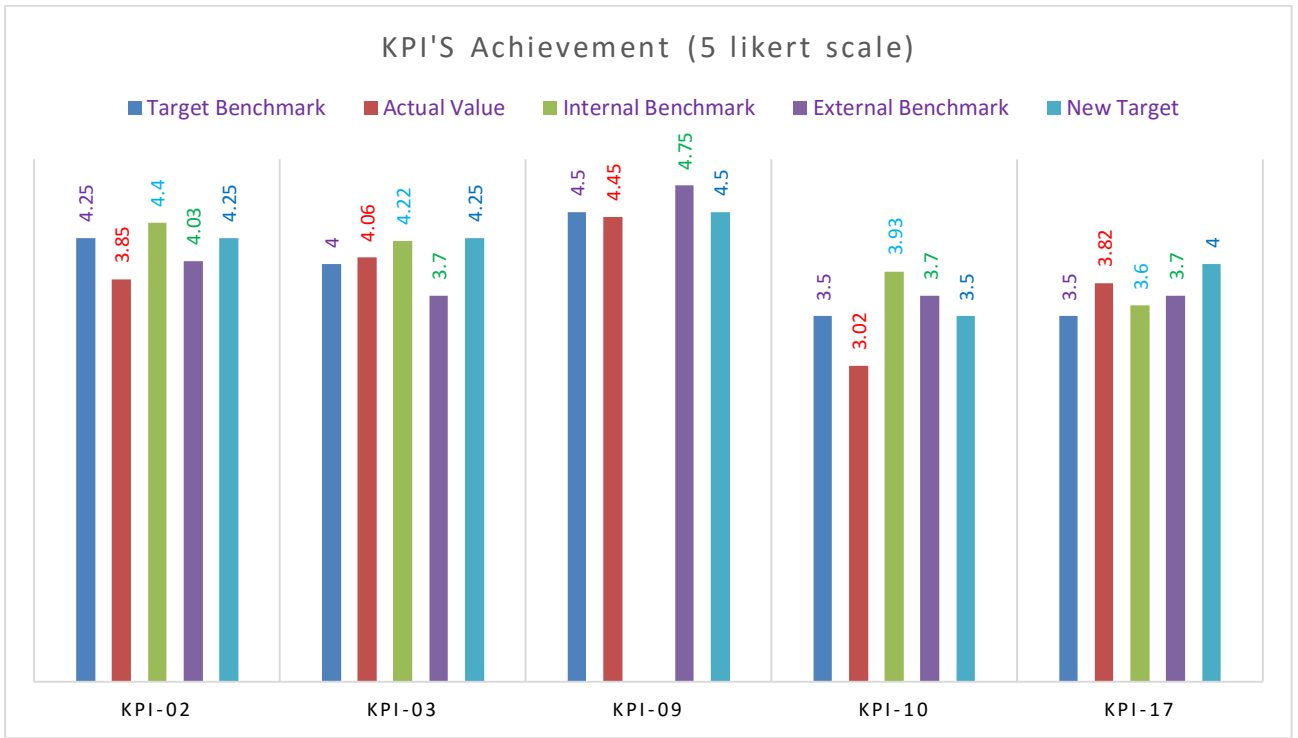
KPI's achievement in Percentage



KPI- 12 Percentage of teaching staff distribution



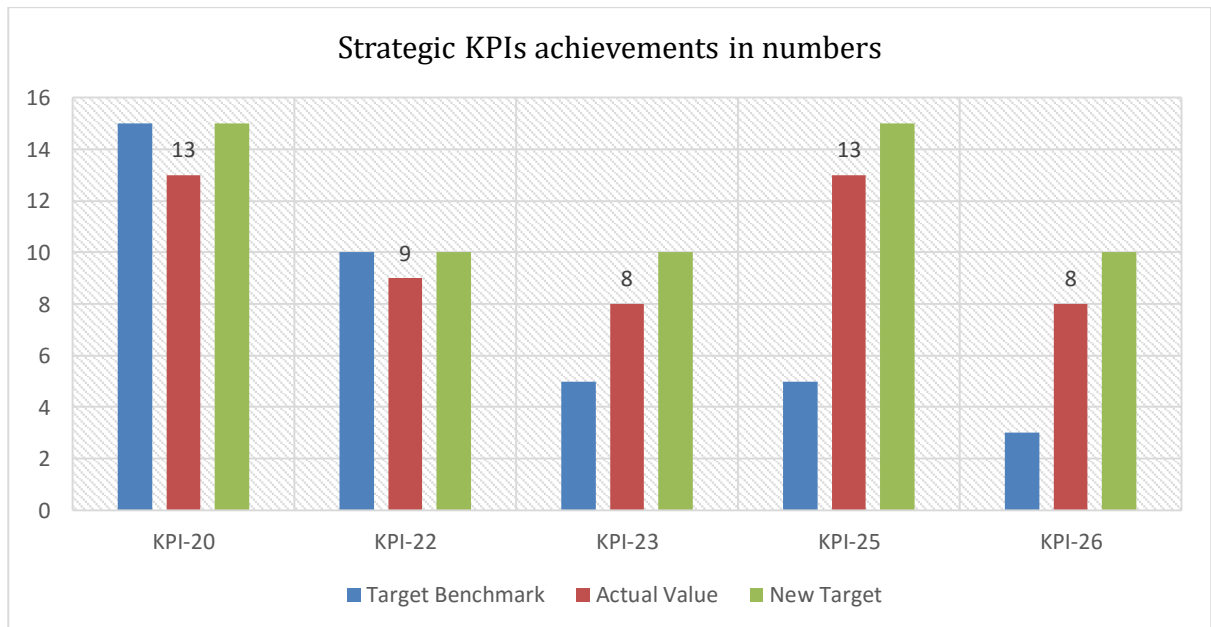
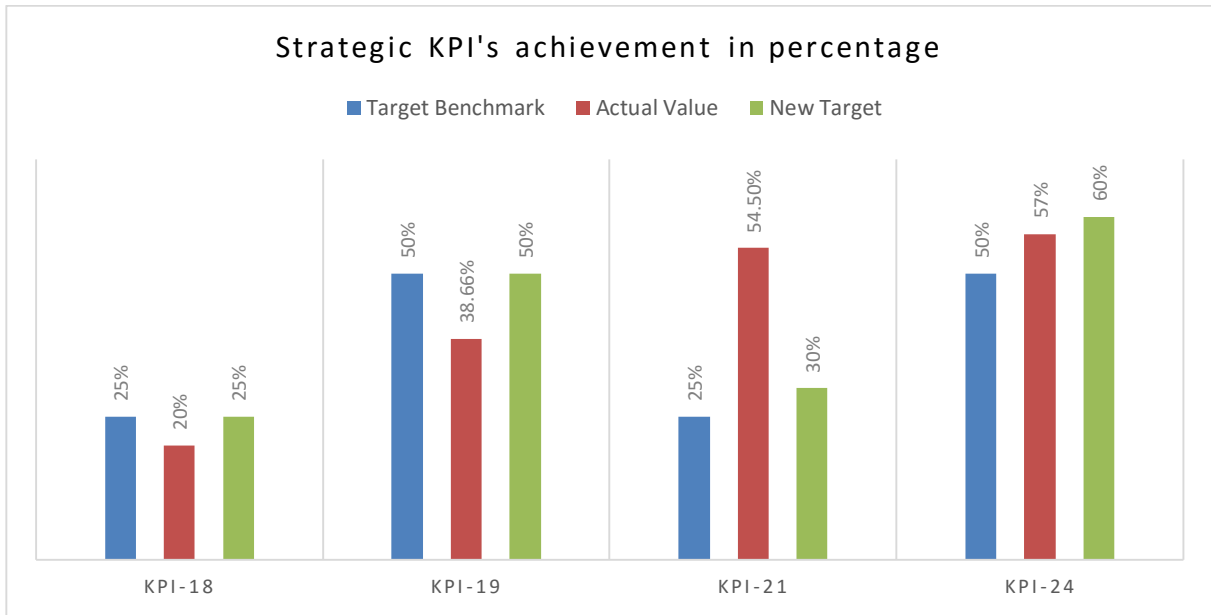
	Professor	Associate Professor	Assistant Professor	Lecturer	Technical Assistant
Target Benchmark	5%	5%	25%	65%	0
Actual Value	0	2.13%	27.66%	65.96%	0
Internal Benchmark	0	0	19.30%	80.70%	0
External Benchmark	2.40%	14.30%	21.40%	43%	14.30%
New Target	5%	5%	30%	60%	0%



Strategic Key Performance Indicators (SKPIs)

Strategic KPI's are based on strategic goals and their initiatives

No	KPI	Target Benchmark	Actual Value	Analysis	New Target Benchmark
KPI-S-18	Percentage of courses updated based on the latest trend and research requirements.	25 %	20%	Negative	25%
KPI-S-19	Students attended the workshops and got trained in the industry-based certification courses.	50 %	38.66%	Negative	50%
KPI-S-20	Number of mini-projects presented at department level.	15	13	Stable	15
KPI-S-21	Students who participated in technical competitions, workshops, seminars and conferences.	25%	54.5%	Positive trend	30%
KPI-S-22	Number of workshops conducted by DAD/QAU to implement best practices in teaching strategies and assessment methods.	10	9	Stable	10
KPI-S-23	Number of Quartile awards received towards research every year.	5	8	Positive trend	10
KPI-S-24	Faculty participated in workshops, training, seminars and conferences.	50 %	57%	Positive trend	60%
KPI-S-25	Number of training conducted in soft skills for the students.	5	13	Positive trend	15
KPI-S-26	Number of specialized training programs conducted for the society.	3	8	Positive trend	10



5. Analysis of Program Evaluation

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

Strengths :

- The department's Strategic and Action Plans are well-defined (2017-22).
- Percentage of achieved indicators of the program operational plan objectives measured yearly.
- Improvement in first-year retention rate of the student.
- Students on the new campus have access to specialized and well-equipped labs; the library has been relocated from the old campus to the college premises, and cafeteria and photocopier services have become accessible.

Areas for Improvement:

- Need to establish a career counseling unit for the students to improve the employability
- The program department has to build strong communication and interaction with the alumni.
- Need to invite employers to the campus and include them in the program advisory board.
- Academic advisory unit should work out on identifying the reasons for low completion rate and provide the assistance to improve.
- Need to include more copies of core books in library.

Priorities for Improvement:

- Annual evaluations of teaching staff should be conducted to determine faculty members' performance so that departments may make better informed decisions on how to keep skilled members intact in any circumstances.
- Seminars and conferences should be arranged by the Research Unit in collaboration with the Deanship of Research to motivate the faculty members to get involved in research activities.
- Research strategic plan, priorities and research group should be establish to encourage and guide junior faculty members to enhance their knowledge and publication.
- Department must put a request for requesting some highly cited professors for encouraging research culture.
- Extra budget for community related and extra-curricular activities.
- Academic advisory unit should schedule their activities and plan at the beginning of the semester.
- Department should hire more senior faculty.

G. Difficulties and Challenges Faced Program Management

Difficulties and Challenges	Implications on the Program	Actions Taken
Lack of senior PhD faculty member	Increase in Research Publication	Request sent to higher authorities in this regard
Special research lab and room for researchers	Encourage and involve more faculty in research activities	Requested to department
Lack of original/latest software in the Labs	Students are unable to do Lab properly	Request sent to higher authorities in this regard
Non Availability of Hard Copy of Text Book	Students and concerned Faculty face difficulties in course material for further references	College Library is under Construction
Non Availability of sufficient copies of text and reference book.	Faculty face difficulties while preparing the course contents	Need to bring more books relevant to program
Working projector required in the classroom for Theory classes	Faculty will not be able to give presentations properly	Should assign the classes to have projectors

International & local training to faculty and students to foster an environment of continuous improvement.	Faculty development program and students professional development	Excellence unit would schedule activities for faculty & students.
Arrangement of more co-curricular and extra-curricular activities for multi-skilled students.	Produce skilled graduate	Extra-curricular committee should organize the activities.
Identify and find the reasons (academic / health / psychological) for low GPAs of underachieving students.	Improve the grade of low achievers, especially.	Advisory committee should identify previous semester low achievers during first week.
Need to involve more students and faculty in community activities	Social responsibilities towards the society	Schedule community services in the beginning of the semester.

*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.	Review and update the curriculum regularly based on the recent trends	Review the courses based on the recent research trends	Curriculum & Teaching Committee	Sep-22	Aug -23	Percentage of courses updated based on latest trend and research requirements	25%
2.	Enhance and Strengthen the Teaching methodologies of the faculties	Identify and strengthen the teaching methodologies	Learning Outcomes Committee	Sep-22	Aug -23	No. of programs conducted	1 per semester
3.	Update the labs with the latest hardware and software tools as per the industry requirements	Check for the latest software & hardware, open source softwares	Curriculum & Teaching Committee	Sep-22	Aug -23	No. of labs updated with latest hardware & Software tools.	-
4.	Conduct review / Survey from stakeholders periodically	Review / Survey from Stakeholders	Curriculum & Teaching Committee	Sep-22	Aug -23	Number of feedbacks obtained from stakeholders.	1 per semester
5.	Build partnership with industry to obtain regular feedback from industry to update the curriculum.	Identify partnering industries	Curriculum & Teaching Committee	Sep-22	Aug -23	Number of meetings conducted, feedback from faculty	2 per semester

6.	Provide training opportunities for students with the industry in the technical field	At a Periodicity of 1 to 2 Semester, Trainings are conducted by inviting professionals from Industry	Professional Development Committee	Sep-22	Aug-23	Students satisfaction with the offered services. (KPI-P-10)	1 per semester
7.	Conduct training programs and prepare them towards national and international certifications.	Workshops and trainings are conducted by inviting professionals from Industry. Motivate students	Professional Development Committee	Sep-22	Aug-23	Students attended the workshops and got trained in the industry-based courses and certification courses to total number of students. (KPI-P-02)	50% should take part in the training
8.	Motivate students to participate in technical competitions, workshops, seminars and conferences	Students are motivated and encouraged to participate in technical competitions, conferences, workshops, seminars and conferences	Professional Development Committee	Sep-22	Aug-23	Students who participated in technical competitions, workshops, seminars and conferences to total number of students. (KPI-S-21)	30% of the students should attend
9.	Utilize existing alumni connections with industry and invite them as speakers.	Identify the alumni working in the industry and based on their expertise invite them as speakers	Alumni Unit	Sep-22	Aug-23	Number of alumni employed in the industry	At least once in a semester
10.	Organize exhibitions to showcase the mini projects and graduation projects and encourage them towards professional development.	Organize exhibitions to show case the mini projects	Graduation Project Committee	Sep-22	Aug-23	Number of Projects exhibited (KPI-S-20)	Every semester

11.	Conduct regular personality and interpersonal training programs for the professional success of the students in the global market.	-Students participation -Faculty participation	Professional Development Committee	Sep-22	Aug-23	Number of trainings conducted in the soft skills for the students. . (KPI-S-25)	At least once per semester
12.	Provide training in entrepreneurship skills and motivate students to be entrepreneurs	Identify entrepreneurs in the field	Community Service Committee	Sep-22	Aug-23	Number of trainings towards entrepreneurship skills. (KPI-S-19)	At least once per semester
13.	Invite alumni who are experts in the field to share their success stories.	Collect alumni details from database and identify their expertise	Alumni Unit	Sep-22	Aug-23	Percentage of alumni who are experts in the field. Percentage of Alumni working in the industry Feedback from the students	At least once per semester
14.	Develop translation of students projects into products to become an entrepreneur.	Training sessions including Kingdom Rules which guides to start small business	Learning Outcomes Committee	Sep-22	Aug-23	Number of Student active participation.	At least one project
15.	Conduct training programs and involve students and faculty members in research activities.	Training programs	Professional Development Committee	Sep-22	Aug-23	Percentage of publications of faculty members (KPI-P-07)	Two per semester
16.	Reward the innovative ideas and publications in the field of research and development	Forming a research group with experts	Research Committee	Sep-22	Aug-23	No of quartile awards / grants received. (KPI-S-23)	5
17.	Encourage faculty publications in research journals and conferences	Quality of the paper/ usefulness of the conference	Research Committee	Sep-22	Aug-23	List of published articles by the faculty members	Two per semester
18.	Well-functioning research groups	Identify faculty	Research Committee	Sep-22	Aug-23	-List of specialization.	

	with high production based on the specialization	specialization and create groups.				-Number of research groups based on the specialization.	Two per semester
19.	Increase the number of peer-reviewed papers.	High quality ISI, WOS journals etc, papers peer reviewed	Research Committee	Sep-22	Aug-23	Number of peer reviewed papers	One per semester
20.	Involve students in research and publish papers along with the faculty.	Guiding the students, research oriented problems	Research Committee	Sep-22	Aug-23	-Number of publications. -Number of students involved in research.	One per semester
21.	Encourage faculty members to apply for local research projects funded by various agencies. (KAUST projects, Deanship of Scientific Research Funds & King Abdul Aziz city).	Relationships/ Contracts/ Cooperation/ Evaluation	Research Committee	Sep-22	Aug-23	Number of funded projects applied.	One per semester
22.	Nurture a Inter / Multidisciplinary research culture and productivity.	Research in different disciplines	Research Committee	Sep-22	Aug-23	Number of Inter / Multidisciplinary / transdisciplinary research	One per semester
23.	Provide specialized training for the community in the area of Information and Communication Technology (ICT).	Organizing workshops, training sessions	Community Service Committee	Sep-22	Aug-23	Number of specialized training programs conducted for the community towards ICT. (KPI-S-26)	One per semester
24.	Encourage students to use IT tools and techniques for solving community needs	Workshops / Training /Seminars	Research Committee	Sep-22	Aug-23	Number of mini projects/ projects towards solving social requirements. (KPI-S-20)	One per semester
25.	Conduct awareness program for the society with the	Organizing workshops, training sessions	Community Service Committee	Sep-22	Aug-23	Number of awareness program conducted.	One per semester

	help stakeholders of						
26.	Participate in cultural community events.	Organizing community events and cultural events.	Community Service Committee	Sep-22	Aug-23	Number of community events conducted.	One semester per
27.	Enhance the contributions of students & faculty members in community service activities	Organize community service activities.	Community Service Committee	Sep-22	Aug-23	-Number of students involved in community service activities.	One semester per

I. Report Approving Authority

Council / Committee	DEPARTMENT COUNCIL
Reference No.	001/1443/01
Date	11/09/2022

J. Attachments:

- A separate cohort analysis report (2020-21) for male and female sections and for each branch
- A report on the program learning outcomes assessment results for male and female sections and for each branch (if any)
- A report on the students evaluation of program quality
- Independent reviewer's report and other survey reports (if any)