



## Annual Program Report

<b>Program Name:</b>	<b>Bachelor of Chemistry</b>
<b>Qualification Level:</b>	<b>6<sup>th</sup> level</b>
<b>Department:</b>	<b>Chemistry</b>
<b>College:</b>	<b>Science</b>
<b>Institution:</b>	<b>Jouf University</b>
<b>Academic Year:</b>	<b>1442</b>
<b>Main Location:</b>	<b>Sakaka</b>
<b>Branches offering the Program:</b>	<ul style="list-style-type: none"><li>• Main Campus–Sakaka</li><li>• Female Campus–Sakaka</li></ul>

## Table of Contents

<b>A. Implementation of Previous Action Plan .....</b>	<b>3</b>
<b>B. Program Statistics.....</b>	<b>3</b>
1. Students Statistics (in the year concerned).....	3
2 . Cohort Analysis of Current Graduate Batch .....	4
3. Analysis of Program Statistics .....	4
<b>C. Program Learning Outcomes Assessment .....</b>	<b>5</b>
1. Program Learning Outcomes Assessment Results.....	5
2. Analysis of Program Learning Outcomes Assessment .....	8
<b>D. Summary of Course Reports .....</b>	<b>9</b>
1. Teaching of Planned Courses / Units .....	9
2. Courses with Variations .....	9
3. Result Analysis of Course Reports.....	9
<b>E. Program Activities .....</b>	<b>10</b>
1. Student Counseling and Support .....	10
2. Professional Development Activities for Faculty and Other Staff.....	12
3. Research and Innovation .....	19
4. Community Partnership.....	26
5. Analysis of Program Activities .....	27
<b>F. Program Evaluation.....</b>	<b>28</b>
1. Evaluation of Courses .....	28
2. Students Evaluation of Program Quality.....	32
3. Other Evaluations .....	33
4. Key Performance Indicators (KPIs) .....	35
5. Analysis of Program Evaluation .....	47
<b>G. Difficulties and Challenges Faced Program Management .....</b>	<b>48</b>
<b>H. Program Improvement Plan .....</b>	<b>48</b>
<b>I. Report Approving Authority .....</b>	<b>49</b>
<b>J. Attachments .....</b>	<b>49</b>

## 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- Increasing in the number of teaching staff.	Contracting Committee for new teaching staff	8/1441	✓			
2- Raising the efficiency of learning outcomes.	Head of department and teaching stuff	8/1441	✓			
3- Raising the percentage of scientific production.	Deanship of Scientific Research	8/1441	✓			
4- Increasing the accessible sites for international publishers and academic communities.	Deanship of Library Affairs	8/1441	✓			
5- Developing student labs with the equipment.	Head of Department	8/1441	✓			

## B. Program Statistics

### 1. Students Statistics (in the year concerned)

No.	Item	Results
1	Number of students who started the program	56
2	Number of students who graduated	30
3	Number of students who completed major tracks within the program (if applicable)	
	a.	NA
	b.	NA
	c.	NA
4	a. Number of students who completed the program in the minimal time	21
5	a. Percentage of students who completed the program in the minimal time (Completion rate)	37.5%
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
<b>Comment on any special or unusual factors that might have affected the completion rates:</b> None		

## 2. Cohort Analysis of Current Graduate Batch

Student Categories		Total cohort enrollment	Withdrawn	Retained till year end	Not passed	Passed	Passing rate
Years							
2017-18	M	13	-	13	3	10	76.9%
	F	43	-	43	8	35	81.4%
	<b>Total</b>	<b>56</b>	<b>-</b>	<b>56</b>	<b>11</b>	<b>45</b>	<b>80.3%</b>
2018-19	M	10	-	10	2	8	80%
	F	35	2	33	5	28	84.8%
	<b>Total</b>	<b>45</b>	<b>2</b>	<b>43</b>	<b>7</b>	<b>36</b>	<b>83.7%</b>
2019-20	M	8	-	8	2	6	75%
	F	28	-	28	5	23	82.1%
	<b>Total</b>	<b>36</b>	<b>-</b>	<b>36</b>	<b>7</b>	<b>29</b>	<b>88.5%</b>
2020-21	M	6	-	6	2	4	66.6%
	F	23	1	22	5	17	77.3%
	<b>Total</b>	<b>29</b>	<b>1</b>	<b>28</b>	<b>7</b>	<b>21</b>	<b>75%</b>

### Comments on the results:

Passing rate is decreasing since from the academic year 2018-19. Failing rate steady since the academic year 2018-19. while the Withdrawn rate decrease since the academic year 2018-19. Many actions have been taken over the past few years in order to increase the retention rate, and passing rate such as, tutorials sessions been arranged for the weak students. Academic advisors follow the weak students and arrange a meeting with them weekly.

## 3. Analysis of Program Statistics

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

### Strengths:

- Decreasing in withdrawal rate across the years of the program in the last three years means that the students becoming satisfied and stick to this program.
- The retained rate is good for the program.

### Areas for Improvement:

- The department needs to address the issue of students failing in various courses and adopt measures to improve the overall teaching process such that a student entering the program has better chances of achieving the learning outcomes in the minimum time.
- Students feedback should be collected and analyzed and action plan should be executed and followed by the department to improve the education process.

### Priorities for Improvement:

- The department needs to address the issue of students failing in various courses and adopt measures to improve the overall teaching process such that a student entering the program has better chances of achieving the learning outcomes in the minimum time.
- Students feedback should be collected and analyzed and action plan should be executed and followed by the department to improve the education process.

## C. Program Learning Outcomes Assessment

### 1. Program Learning Outcomes Assessment Results.

(Direct assessment from Capstone Courses)

#	Program Learning Outcomes	Assessment Methods (Direct and Indirect)	Performance Target	Results	
				Male	Female
<b>Knowledge and understanding</b>					
K1	Demonstrate the main concepts and chemical laws in all studied chemistry branches	<ul style="list-style-type: none"> <li>● Theory paper exams</li> <li>● Quizzes</li> </ul>	75%	73.2	77.7
K2	Outline the scientific principles in the subfields of chemistry (analytical, inorganic, organic and physical), and apply these principles to interact with industrial fields	<ul style="list-style-type: none"> <li>● Class participation [Rubrics-based]</li> <li>● Discussions [Rubrics-based].</li> </ul>	75%	74.2	77.8
K3	Discuss the major types of chemical reactions, their characteristics, and mechanisms as well as their kinetics	<ul style="list-style-type: none"> <li>● Home work</li> </ul>	75%	91.3	90.5
K4	Explain, integrate and apply the relevant knowledge and theories in basic sciences and other disciplines and professional fields	<ul style="list-style-type: none"> <li>● Mid-term and final exams</li> </ul>	75%	77	83.9
<b>Skills</b>					
S1	Classify the chemical compounds and identify their properties.	<ul style="list-style-type: none"> <li>● Theory paper exams</li> </ul>	75%	79.7	78.5
S2	Compare the results to predict and rationalize properties, mechanisms and patterns of reactivity.	<ul style="list-style-type: none"> <li>● Class participation [Rubrics-based]</li> <li>● Discussions [Rubrics-based]</li> </ul>	75%	75.7	64.9
S3	Formulate processes, relationships and techniques related to different chemistry branches.	<ul style="list-style-type: none"> <li>● Seminar evaluation [Rubrics-based]</li> </ul>	75%	83.5	95.5
S4	Summarize information from library, online and literature resources that will support the solving of chemical problems	<ul style="list-style-type: none"> <li>● Assignment</li> <li>● Quizzes</li> <li>● Practical Exams</li> </ul>	75%	81.9	87.4
S5	Evaluate, develop and conduct	<ul style="list-style-type: none"> <li>● Mid-term and final exams</li> </ul>	75%	87.5	88.9

	Chemistry experiments or test hypotheses, analyze and interpret data and use scientific judgment to address conclusions and make a criticism				
<b>Values</b>					
V1	Conduct laboratory experiments safely, evaluate the potential impact of chemistry that may have on society, health and the environment.	<ul style="list-style-type: none"> <li>● Seminar evaluation [Rubrics-based]</li> <li>● Discussions [Rubrics-based]</li> <li>● Practical tests</li> <li>● Projects [Rubrics-based]</li> <li>● Continuous evaluations</li> <li>● Reports and surveys [Rubrics-based]</li> <li>● Oral presentation [Rubrics-based]</li> </ul>	80%	83.8	84.1
V2	Enhance students' self and long life-learning using information technology, risk management, organization of time, and reviewing of a quality control processes.		80%	89.2	70.5
V3	Collaborate effectively as part of a team, recognizing and respecting the viewpoints of others and developing understanding and awareness of leadership styles and their impacts upon projects.		80%	81.4	89.7

**(Indirect assessment from surveys)**

#	Program Learning Outcomes	Assessment Methods (Direct and Indirect)	Performance Target	Results		
				Employer Survey	Students Evaluation of program	Alumina Survey
<b>Knowledge and understanding</b>						
K1	Demonstrate the main concepts and chemical laws in all studied chemistry branches	Indirect from Surveys	4/5	3.67	3.8	3.50
K2	Outline the scientific principles in the subfields of chemistry (analytical, inorganic, organic and physical), and apply these principles to interact with industrial fields			4.00	4.1	3.50
K3	Discuss the major types of chemical reactions, their characteristics, and mechanisms as well as their kinetics			4.00	3.8	3.83
K4	Explain, integrate and apply the relevant knowledge and theories in basic sciences and other disciplines and professional fields			4.00	3.8	3.67
<b>Skills</b>						

#	Program Learning Outcomes	Assessment Methods (Direct and Indirect)	Performance Target	Results		
				Employer Survey	Students Evaluation of program	Alumina Survey
S1	Classify the chemical compounds and identify their properties.	Indirect from Surveys	4/5	4.00	3.8	3.83
S2	Compare the results to predict and rationalize properties, mechanisms and patterns of reactivity.			4.00	3.8	4
S3	Formulate processes, relationships and techniques related to different chemistry branches.			4.00	3.3	3.83
S4	Summarize information from library, online and literature resources that will support the solving of chemical and research problems.			4.00	4.1	4.00
S5	Evaluate, develop and conduct Chemistry experiments or test hypotheses, analyze and interpret data and use scientific judgment to address conclusions and make a criticism.			4.00	4.1	4.00
<b>Values</b>						
V1	Conduct laboratory experiments safely, evaluate the potential impact of chemistry that may have on society, health and the environment.	Indirect from Surveys	4/5	4.00	3.8	4.00
V2	Enhance students' self and longlife-learning using information technology, risk management, organization of time, and reviewing of a			3.67	3.7	4.00



#	Program Learning Outcomes	Assessment Methods (Direct and Indirect)	Performance Target	Results		
				Employer Survey	Students Evaluation of program	Alumina Survey
	quality control processes.					
V3	Work effectively as part of a team, recognizing and respecting the viewpoints of others and developing understanding and awareness of leadership styles and their impacts upon projects.			3.67	3.7	4
<b>Comments on the Program Learning Outcome Assessment results.</b>						
<ul style="list-style-type: none"> <li>• Performance indicators male for the PLO-1 needs more improvement.</li> <li>• Performance indicators male for the PLO-2 needs more improvement.</li> <li>• Performance indicator female for the PLO-6 needs more improvement</li> <li>• Performance indicator female for the PLO-11 needs more improvement</li> <li>• Solving of chemical and research problems skills needs improvement as per the results of the employer's survey.</li> <li>• work in team, applying the principles of chemistry to interact with industrial fields skills needs improvement as per the results of the Alumina's survey.</li> <li>• The PLOs1 showed less satisfaction in employer's survey, student program evaluation survey and alumina survey and need improvement.</li> <li>• The PLOs2 showed less satisfaction in alumina survey and need improvement.</li> <li>• The PLOs3, PLOs4, PLOs5 and PLOs7 showed less satisfaction in student program evaluation survey and alumina survey and need improvement.</li> <li>• The PLOs6 and PLOs10 showed less satisfaction in student program evaluation survey and need improvement.</li> <li>• The PLOs11 and PLOs12 showed less satisfaction in employer survey and student program evaluation survey and need improvement.</li> </ul>						

## 1. Analysis of Program Learning Outcomes Assessment

(Including strengths, Areas for Improvement, and priorities for improvement)

### Strengths:

- All PLOs are assessed during his year
- Some of the PLOs showed high employer, students' evaluation of program and graduate satisfaction which exceeded the level of 4 out of 5 points survey.
- students' evaluation of program and graduates expressed higher level of satisfaction than employers about most of PLOs which also showed higher satisfaction more than the last year.

**Areas for Improvement:**

- Homework problems may be explained (at the time of assigning them) in more detail so students know clearly what is required by them.
- If students show poor learning in the quiz on this CLO, another quiz after the quiz with poor performance be given to help them be more prepared.
- Arranging group discussions among the students.
- Re-designing teaching plan to have more lectures or lab sessions for weak CLOs and/or PLOs.
- Use industry-based problems to improve the project-planning and solution development skills of students, the quality of senior-research project solutions, and students' ability to recognize the constraints that affect their solutions. Faculty members will explain the students by giving some real-life examples on how to examine different approaches and choose an effective approach.
- Provide students with feedback using the rubric to see if there were common areas of weakness in student performance that should be emphasized with students in later courses.
- Provide the teaming evaluation rubrics to students with the course assignments where the students were provided opportunities to demonstrate their teaming skills as defined by the criteria.
- Review assignments given to the students to be sure that students were given adequate opportunities to demonstrate the performance identified for teaming.

**Priorities for Improvement:**

- Homework problems may be explained (at the time of assigning them) in more detail so students know clearly what is required by them.
- If students show poor learning in the quiz on this CLO, another quiz after the quiz with poor performance be given to help them be more prepared.
- Arranging group discussions among the students.
- Re-designing teaching plan to have more lectures or lab sessions for weak CLOs and/or PLOs.
- Use industry-based problems to improve the project-planning and solution development skills of students, the quality of senior-research project solutions, and students' ability to recognize the constraints that affect their solutions. Faculty members will explain the students by giving some real-life examples on how to examine different approaches and choose an effective approach.
- Provide students with feedback using the rubric to see if there were common areas of weakness in student performance that should be emphasized with students in later courses.
- Provide the teaming evaluation rubrics to students with the course assignments where the students were provided opportunities to demonstrate their teaming skills as defined by the criteria.
- Review assignments given to the students to be sure that students were given adequate opportunities to demonstrate the performance identified for teaming.

## 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
All the courses were taught during the academic year 2020-21			

### 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
Training Field CHM498	All the student grad ranged between A+, A, and B+ only	The training of the student takes place in the hospital only	The chemistry department increase their partner ship with more than one place for training
Research Project CHM499	All the student has grad A+	The student registers the course after passing 90 hours from their plan	The chemistry department increase the kinds of project for the student
Heterocyclic Chemistry CHM341	Most of student has failed	Most of student need improvement in drawing and nomenclature of heterocyclic chemistry	The chemistry department decide that in the first lecture giving revision about the organic chemistry and their nomenclature

### 3. Result Analysis of Course Reports

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

<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>• 100% of courses prepared course reports.</li> <li>• The resistance showed from some courses for timing and quality of course reports have decreased (But still there).</li> <li>• CLOs assessment was done for all courses.</li> <li>• Introductory and some other courses with high failure rate over the last years showed marked improvement in completion rate.</li> <li>• Almost all course reports showed analysis/interpretation of data from student's results, survey and CLOs assessment with suggestions for improvement.</li> <li>• Almost all course reports showed follow up of previous improvement plans from the previous year reports.</li> <li>• Timing of submission of course reports has improved and all course reports were reviewed by assessment analysis and internal review committee.</li> </ul> <p><b>Areas for Improvement:</b></p> <ul style="list-style-type: none"> <li>• Follow up of implementation of suggested improvements in course reports (through wider improvement plan for course improvement).</li> <li>• Establishing focus group discussion with students and staff for any course with abnormal results or any course with student's survey response below 50%.</li> <li>• Improving commitment of course coordinators with timing of submission of course reports.</li> </ul> <p><b>Priorities for Improvement:</b></p> <ul style="list-style-type: none"> <li>• Follow up of implementation of suggested improvements in course reports (through wider improvement plan for course improvement).</li> </ul>
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- Establishing focus group discussion with students and staff for any course with abnormal results or any course with student's survey response below 50%.
- Improving commitment of course coordinators with timing of submission of course reports.



## E. Program Activities

## F. Student Counseling and Support

Activities Implemented	Brief Description*
Orientation of new students	During the orientation day of new students, first week of the academic year, 90% of the newly enrolled students attended.
Workshop for staff	During the first month of the academic year and held by head of counseling unit, 90% of staff members attended
Distribution of students to advisors	The students/staff ration is about 8-1 with maximum of 10 -1
Follow up of week students	Bi-month reports are requested for progress of week students
<b>Comment on Student Counseling and Support**</b>	
<ul style="list-style-type: none"> <li>• During the orientation day for new students, the head of student counseling unit gave presentation about counseling process including; concept of academic counseling, tasks of the academic advisors and how students can communicate with advisors.</li> <li>• Distribution of new students to staff, the students to the academic advisor ratio was kept less than 10-1.</li> <li>• Distribution of week or failed students to all staff members with special emphasis on communication with advisors and the importance of at least monthly meeting with students with follow up to monitor their progress and providing bi-annual report about individual each student.</li> <li>• Full contact data for all advisors was given to student's groups and advisor as well.</li> <li>• A workshop was held for the academic mentors to explain the importance of academic counseling /its objectives and how to open a file for each student.</li> <li>• Staff satisfaction survey revealed good satisfaction with the process of counselling and expressed by average response of results were 4.3 on 5 points evaluation survey while final year students showed 4.4 on 5 points satisfaction.</li> </ul>	

## 2. Professional Development Activities for Faculty and Other Staff

Activities Implemented	Brief Description*
Workshop on Eligibility requirement for Program Accreditation	<p><b>Type:</b> Workshop It's hands-on training on requirement for Program Accreditation <b>Venue:</b> College of Science <b>Duration:</b> 1 Day <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 7 <b>Overall customer satisfaction:</b> Excellent (3.4/5)</p>
Quality	<p>About 06 workshops were conducted by the College Quality Assurance and Accreditation Committee to improve knowledge and skills of staff, leaders, quality coordinators and program coordinators about the following titles:</p> <ol style="list-style-type: none"> <li>1. Course Specifications</li> <li>2. Course Report</li> <li>3. Rubrics</li> <li>4. Course File</li> <li>5. Measurement of PLO</li> <li>6. Standards of performance</li> </ol>
Workshop on Motivation – Key to Academic Success	<p><b>Type: Workshop</b> It's hands-on training on Motivation – Key to Academic Success <b>Venue:</b> College of Science <b>Duration:</b> 1 Day <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 12 <b>Overall customer satisfaction:</b> Excellent (4.5/5)</p>
The art of formulating and preparing tests in university education	<p><b>Type:</b> Workshop It's hands-on training on the art of formulating and preparing tests in university education <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 12 <b>Overall customer satisfaction:</b> Excellent (4.5/5)</p>
Scientific Research Methodology	<p><b>Type:</b> Workshop It's hands-on training on scientific research methodology <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 8 <b>Overall customer satisfaction:</b> Excellent (3.5/5)</p>
Building exams and electronic question banks in the Blackboard system	<p><b>Type:</b> Workshop It's hands-on training on building exams and electronic question banks in the Blackboard system <b>Venue:</b> online</p>

	<p><b>Duration:</b> 2h.  <b>Target Audience:</b> All Teaching Staff  <b>Total Number of attendees:</b> 15  <b>Overall customer satisfaction:</b> Excellent (3.8/5)</p>
Statistical analysis using SPSS	<p><b>Type:</b> Workshop  It's hands-on training on using SPSS in statistical analysis  <b>Venue:</b> online  <b>Duration:</b> 2h.  <b>Target Audience:</b> All Teaching Staff  <b>Total Number of attendees:</b> 14  <b>Overall customer satisfaction:</b> Excellent (3.6/5)</p>
Quality standards in designing electronic courses	<p><b>Type:</b> Workshop  It's hands-on training on the quality standards in designing electronic courses  <b>Venue:</b> online  <b>Duration:</b> 2h.  <b>Target Audience:</b> All Teaching Staff  <b>Total Number of attendees:</b> 10  <b>Overall customer satisfaction:</b> Excellent (3.5/5)</p>
Time and meeting management skills	<p><b>Type:</b> Workshop  It's hands-on training on the time and meeting management skills  <b>Venue:</b> online  <b>Duration:</b> 2h.  <b>Target Audience:</b> All Teaching Staff  <b>Total Number of attendees:</b> 13  <b>Overall customer satisfaction:</b> Excellent (3.6/5)</p>
Academic KPIs	<p><b>Type:</b> Workshop  It's hands-on training on the time and meeting management skills  <b>Venue:</b> online  <b>Duration:</b> 2h.  <b>Target Audience:</b> All Teaching Staff  <b>Total Number of attendees:</b> 10  <b>Overall customer satisfaction:</b> Excellent (3.6/5)</p>
Foundations and principles of e-learning	<p><b>Type:</b> Workshop  It's hands-on training on the principles of e-learning  <b>Venue:</b> online  <b>Duration:</b> 2h.  <b>Target Audience:</b> All Teaching Staff  <b>Total Number of attendees:</b> 8  <b>Overall customer satisfaction:</b> Excellent (3.5/5)</p>
Requirements and standards of the National Center for Academic Accreditation and Assessment for	<p><b>Type:</b> Workshop  It's hands-on training on the principles of e-learning  <b>Venue:</b> online  <b>Duration:</b> 2h.  <b>Target Audience:</b> All Teaching Staff  <b>Total Number of attendees:</b> 7  <b>Overall customer satisfaction:</b> Excellent (3.4/5)</p>

Postgraduate Studies			
Designing opinion polls and questionnaires electronically	<p><b>Type:</b> Workshop It's hands-on training on the designing opinion polls and questionnaires electronically</p> <p><b>Venue:</b> online</p> <p><b>Duration:</b> 2h.</p> <p><b>Target Audience:</b> All Teaching Staff</p> <p><b>Total Number of attendees:</b> 17</p> <p><b>Overall customer satisfaction:</b> Excellent (3.8/5)</p>		
Systematic Literature Reviews	<p><b>Type:</b> Workshop It's hands-on training on systematic literature reviews</p> <p><b>Venue:</b> online</p> <p><b>Duration:</b> 2h.</p> <p><b>Target Audience:</b> All Teaching Staff</p> <p><b>Total Number of attendees:</b> 18</p> <p><b>Overall customer satisfaction:</b> Excellent (3.9/5)</p>		
Teaching in a creative way	<p><b>Type:</b> Workshop</p> <p><b>Venue:</b> online</p> <p><b>Duration:</b> 2h.</p> <p><b>Target Audience:</b> All Teaching Staff</p> <p><b>Total Number of attendees:</b> 26</p> <p><b>Overall customer satisfaction:</b> Excellent (3.7/5)</p>		
General and occupational health and safety requirements in facilities and equipment educational and research	<p><b>Type:</b> Workshop</p> <p><b>Venue:</b> online</p> <p><b>Duration:</b> 2h.</p> <p><b>Target Audience:</b> All Teaching Staff</p> <p><b>Total Number of attendees:</b> 21</p> <p><b>Overall customer satisfaction:</b> Excellent (3.5/5)</p>		
Developing thinking in distance education	<p><b>Type:</b> Workshop</p> <p><b>Venue:</b> online</p> <p><b>Duration:</b> 2h.</p> <p><b>Target Audience:</b> All Teaching Staff</p> <p><b>Total Number of attendees:</b> 21</p> <p><b>Overall customer satisfaction:</b> Excellent (3.5/5)</p>		
Evaluation of newly synthesized ligands and their metal complexes both in bulk and nano size as potent anticancer agents.	<p><b>Type:</b> Lecture</p> <p><b>Venue:</b> online</p> <p><b>Duration:</b> 2h.</p> <p><b>Target Audience:</b> All Teaching Staff</p> <p><b>Total Number of attendees:</b> 28</p> <p><b>Overall customer satisfaction:</b> Excellent (4.2/5)</p>		
Fuel cells and their applications	<p><b>Type:</b> Lecture</p> <p><b>Venue:</b> online</p> <p><b>Duration:</b> 2h.</p> <p><b>Target Audience:</b> All Teaching Staff</p> <p><b>Total Number of attendees:</b> 23</p> <p><b>Overall customer satisfaction:</b> Excellent (4.2/5)</p>		



Medicinal plants: from traditional use to modern drugs	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 25 <b>Overall customer satisfaction:</b> Excellent (4.1/5)
Current applications of carbon nanotubes	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 27 <b>Overall customer satisfaction:</b> Excellent (4.1/5)
Role of pharmaceutical organic chemistry in drug design	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 25 <b>Overall customer satisfaction:</b> Excellent (4.1/5)
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Medicinal plants: from traditional use to modern drugs design	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 25 <b>Overall customer satisfaction:</b> Excellent (4.1/5)
Fuel cells and their applications	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 21 <b>Overall customer satisfaction:</b> Excellent (3.5/5)
Current applications of carbon nanotubes	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 25 <b>Overall customer satisfaction:</b> Excellent (4.1/5)
Green Chemistry and its applications	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 25 <b>Overall customer satisfaction:</b> Excellent (4.1/5)
Nuclear Resonance Spectrometer advanced magnetic To characterize organic compounds	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 21 <b>Overall customer satisfaction:</b> Excellent (3.5/5)

Plastic and its impact on the environment	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 23 <b>Overall customer satisfaction:</b> Excellent (4.2/5)
What did chemists find about Covid 19 so far	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 23 <b>Overall customer satisfaction:</b> Excellent (4.2/5)
Our life is Chemistry	<b>Type:</b> Lecture <b>Venue:</b> online <b>Duration:</b> 2h. <b>Target Audience:</b> All Teaching Staff <b>Total Number of attendees:</b> 21 <b>Overall customer satisfaction:</b> Excellent (3.5/5)
<b>Comment on Professional Development Activities for Faculty and Other Staff**</b>	
<ul style="list-style-type: none"> <li>• The Chemistry program for faculty of science for the academic year 2020-2021 was a university wide, multi-levels program.</li> <li>• There was a very good attendance rate for most of the sessions.</li> <li>• Most of sessions showed high satisfaction from participants with the program content, instructors, timing and other related items. The participants were extremely satisfied with hands on training and the workshop topics that were relevant to workplace-based needs of the faculty members. The average satisfaction was 4.1/5.</li> </ul> <p><a href="https://drive.google.com/file/d/1vfUsyK41noc9h_dicOmwUXyHcmnQWnRT/view?usp=share_link">https://drive.google.com/file/d/1vfUsyK41noc9h_dicOmwUXyHcmnQWnRT/view?usp=share_link</a></p>	

### 3. Research and Innovation

Activities Implemented	Brief Description*
<p>Staff research Production; the research production showed improvement during the academic year 20-21 as follow</p>	The Number of papers published in scientific journals classified in Scopus databases: <b>168</b>
	The Number of papers published in scientific conferences: <b>5</b>
	The Total number of citations from Scopus database: <b>5092</b>
	The Number of faculty members among the most cited, based on the WoS or Scopus databases: <b>1</b>
	The number of research published through international cooperation with the best (100) universities according to the classification of Shanghai, QS or THE according to the latest classification of universities and research centers: <b>1</b>
	The Number of scientific papers classified in WoS or Scopus databases or conferences published with graduate undergraduate students: <b>2</b>
	The Number of research projects funded from within the university: <b>11</b>
	The Number of research projects funded from outside the university: <b>1</b>
	The Number of awards received by faculty members in the field of scientific research: <b>14</b>
<p>Workshop: Master Project discussion.</p>	<p><b>Type:</b> Workshop Metal oxide loaded on Metal-Organic framework as bifunctional catalysts of an acidic and basic nature for the Knoevenagel condensation reaction <b>Venue:</b> College of Science <b>Duration:</b> 1 Day <b>Date:</b> 09/2/2021 <b>Target Audience:</b> All Teaching Staff and students <b>Total Number of attendees:</b> 20</p>
	<p><b>Type:</b> Workshop Comparative effect of the different intercalated anions into Mg–Al layered double hydroxides (LDHs) for the removal of colored materials from aqueous solutions <b>Venue:</b> College of Science <b>Duration:</b> 1 Day <b>Date:</b> 09/2/2021 <b>Target Audience:</b> All Teaching Staff and students <b>Total Number of attendees:</b> 19</p>
	<p><b>Type:</b> Workshop Preparation, Characterization and kinetic Studies of Transition Metal Oxides Based Nano- Adsorbents for water depollution Applications <b>Venue:</b> College of Science <b>Duration:</b> 1 Day</p>

Activities Implemented	Brief Description *
	<p><b>Date:</b> 10/2/2021  <b>Target Audience:</b> All Teaching Staff and students  <b>Total Number of attendees:</b> 19</p> <hr/> <p><b>Type:</b> Workshop  Studies on the behavior of some polydentate Schiff bases ligands as corrosion inhibitions  <b>Venue:</b> College of Science  <b>Duration:</b> 1 Day  <b>Date:</b> 10/2/2022  <b>Target Audience:</b> All Teaching Staff and students  <b>Total Number of attendees:</b> 17</p>
	<p><b>Comment on Research and Innovation **</b></p> <ul style="list-style-type: none"> <li>• The Percentage of full-time faculty members who published at least one research during the year to total faculty members in the program is 91%, this is good achievement if compared with the last year.</li> <li>• Almost all workshops and training sessions related to researches showed high staff satisfaction with the program content, instructors, timing and other related items. The average satisfaction was 4.3/5.</li> </ul> <p><a href="https://drive.google.com/file/d/1gcm3BTpBTchQByciuKJZI7-dfktPt5AD/view?usp=share_link">https://drive.google.com/file/d/1gcm3BTpBTchQByciuKJZI7-dfktPt5AD/view?usp=share_link</a></p>

## 1. Community Partnership

Activities Implemented	Brief Description *
12 workshops agreed and approved	A number of 12 workshops have been received and approved to be conducted for the community on internal/external- community level. Such topics include but not limited to: renewable energy & applications, on-campus tours for laboratories, chemistry in life, extraction of olive oil.
Arab Week of Chemistry	On 18-26 of October 2021 a number of students and staff have taken part in this event in association with the school in Jouf region. The event involved splitting them into groups in which each group was assigned a supervisor and was allocated a specific school. Their task involved do some experiment and give lecture about the important of chemistry in life.
Twelfth Olive Festival	On 12 <sup>th</sup> of January 2021, the student of chemistry department shar in the twelfth olive festival via making some products depend up on olive oil like soap, shampoo, cream, the student shows their product for various types of the community regardless of their backgrounds and employment status, many students have shared in this festival which will undoubtedly benefit them in their studies and later on their career.
<sup>1</sup> HNMR Spectroscopy workshop	On the 10 <sup>th</sup> of March 2021, a workshop titled ' <sup>1</sup> HNMR Spectroscopy workshop' took place in the central laboratory center building. That workshop targets various types of the community regardless of their backgrounds and employment status. Many students have attended this workshop which will undoubtedly benefit them in their studies and later on their career.
<b>Comment on Community Partnership**</b>	
<ul style="list-style-type: none"> <li>• A big participation and involvement have been acknowledged with over 50% by both the faculty and administrative staff members in the various events associated with the community service.</li> <li>• The number of students taking part and being involved in the community services events aiming at improving their professional and communication skills such as: leadership, teamworking, responsibility and commitment.</li> </ul>	

## 2. Analysis of Program Activities

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

### Strengths:

- 50% of teaching staff, 45% of admin staff and 35% of students were involved in arrangement and provision of these event.
- The program provided number of community contribution over the academic year 2019-20.
- Improvement of staff publication and citations.
- Chemistry program was University wide program, and showed good satisfaction from the attendees

### Areas for Improvement:

- Use the five points scale for evaluation of events with organized data collection and interpretation
- The Chemistry programs will be planned and conducted with increased participation of faculty members.
- Make alignment between extracurricular activities and PLOs targeted by them.
- Encourage more students to be members of student club.
- Conduction focus group discussion through a combined committee from quality, students and academic affairs to improve the student's satisfaction with career counselling and learning resources with their suggestion for improvement and ensure implementation of the suggested improvements.

### Priorities for Improvement:

- Use the five points scale for evaluation of events with organized data collection and interpretation
- The Chemistry programs will be planned and conducted with increased participation of faculty members.
- Make alignment between extracurricular activities and PLOs targeted by them.
- Encourage more students to be members of student club.
- Conduction focus group discussion through a combined committee from quality, students and academic affairs to improve the student's satisfaction with career counselling and learning resources with their suggestion for improvement and ensure implementation of the suggested improvements.

## G. Program Evaluation

### 1. Evaluation of Courses

Course Code	Course Title	Student Evaluation (Yes-No)	Other Evaluations (specify)	Developmental Recommendations
CHM 101	Chemistry general 1	Yes		✓
CHM 202	Chemistry general 2		Peer-Review	✓
CHM 241	Principles of organic chemistry 1			✓
CHM 231	Chemical thermodynamic			✓
CHM 221	Chemistry of main groups elements			✓
CHM 242	Principles of Organic Chemistry 2			✓
CHM 222	Practical Inorganic Chemistry 1		Peer-Review	✓
CHM 251	Volumetric and gravimetric analysis			✓
CHM 232	Phase rule and solutions			✓
CHM243	Practical organic chemistry 1			✓
CHM233	Principles of quantum chemistry		Peer-Review	✓
CHM 321	Transition Elements and coordination Chemistry			✓
CHM 322	Inorganic Reaction mechanism			✓
CHM341	Heterocyclic chemistry			✓
CHM331	Electro chemistry			✓
CHM351	Instrumental analysis methods		Peer-Review	✓
CHM332	Practical physical chemistry 1			✓
CHM 333	Chemistry of solid state			✓
CHM 334	Chemical kinetics			✓
CHM 342	Biochemistry		Peer-Review	✓
CHM 352	Separation methods and chromatography			✓
CHM 343	Polymers and petrochemicals			✓
CHM 344	Organic reactions mechanism		Peer-Review	✓
CHM 421	Organometallic chemistry			✓
CHM431	Surface and catalysis chemistry		Peer-Review	✓
CHM 441	Practical organic chemistry 2			✓
CHM 451	Environmental chemistry			✓
CHM498	Field training		Peer-Review	✓
CHM 422	Lanthanides and actinides chemistry		Peer-Review	✓
CHM424	Spectroscopy of inorganic compounds			✓
CHM425	Practical inorganic chemistry 2		Peer-Review	✓
CHM434	Practical physical chemistry 2		Peer-Review	✓
CHM 442	Organic compounds spectroscopy			✓
CHM 499	Research project		Peer-Review	✓
CHM453	Medical and industrial analysis		Peer-Review	✓

## Program Elective Courses (10) Hours

SN	Course Code	Course Name	Hours				Prior requirements	Level
			Theoretical	Practical	Training /Exercise s	Accredited		
1.	CHM335	Corrosion	1	2	0	2	CHM 331	6
2.	CHM322	Inorganic reaction mechanism	2	0	0	2	CHM 321	
3.	CHM345	Physical organic chemistry	2	0	0	2	CHM 341	
4.	CHM346	Natural products	1	2	0	2	CHM 341	
5.	CHM482	Nano-chemistry and application	1	2	0	2	90 credit hours must be completed	7
6.	CHM486	Green chemistry	2	0	0	2	90 credit hours must be completed	
7.	CHM423	Photochemistry	2	0	0	2	CHM 321	
8.	CHM452	Advance subjects in analytical chemistry	1	2	0	2	CHM 352	
9.	CHM433	Physical chemistry of polymers	1	2	0	2	CHM 343, CHM 334	
10.	CHM443	Advanced practical applications in organic chemistry	0	4	0	2	CHM 342	8
11.	CHM488	Renewable energy	2	0	0	2	90 credit hours must be completed	
12.	CHM435	Advanced quantum chemistry	2	0	0	2	CHM 431	
13.	CHM426	Advanced topics in inorganic chemistry	1	2	0	2	CHM 421	
14.	CHM427	Nuclear and radio chemistry	2	0	0	2	CHM 421	
15.	CHM489	Industrial chemistry	2	0	0	2	90 credit hours must be completed	

## 2. Students Evaluation of Program Quality

**Evaluation Date:** Final year students (Program Evaluation Survey)  
May-2021

**Number of Participants:**38



Students Feedback	Program Response
<b>Strengths:</b> <ul style="list-style-type: none"> <li>• Good satisfaction with PLOs i.e., 3.3</li> <li>• Good overall student satisfaction</li> </ul>	Results of PLOs assessment integrated with other indirect and direct assessment of PLOs
<b>Areas for Improvement:</b> <ul style="list-style-type: none"> <li>• Students feedback to be provided on the Blackboard and documented in the course file</li> <li>• Rubrics explain to the students before evaluating the assessment</li> <li>• During the tutorial classes session discuss the practical skills and how to improve them</li> </ul>	The program will encourage the teaching staff of the courses concerned with these to give more attention on provide feedback, explanation of rubrics and practical skills.
<b>Suggestions for improvement:</b> Students need more training on practical t skills.	The program will organize seminars or workshop for training on practical skills.

<b>Evaluation Date:</b> Midpoint student experience survey SES May-2021	<b>Number of Participants:</b> 44
Students Feedback	Program Response
<b>Strengths:</b> <ul style="list-style-type: none"> <li>• Good overall Satisfaction i.e., 4.07</li> <li>• All questions related to the “Learning and Teaching” showed good results.</li> <li>• Questions related to the “Advice and Support” showed good results.</li> </ul>	
<b>Areas for Improvement:</b> <ul style="list-style-type: none"> <li>• Class room facilities.</li> <li>• Extracurricular activities.</li> <li>• Use of digital Resources.</li> </ul>	<ul style="list-style-type: none"> <li>• Facilities and resources committee will visit the classrooms to make sure all the facilities are available.</li> <li>• E- learning committee will arrange a session with the students to explain them how to use the digital resources.</li> </ul>
<b>Suggestions for improvement:</b> <ul style="list-style-type: none"> <li>• Improving the student’s satisfaction with facilities of extracurricular activities.</li> <li>• Improving the student’s satisfaction with the digital resources.</li> </ul>	

### 3. Other Evaluations

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

<b>Evaluation method:</b> Staff Satisfaction Survey	<b>Date:</b> May-2021	<b>Number of Participants:</b> 12
Summary of Evaluator Review		Program Response
<b>Strengths:</b> <ul style="list-style-type: none"> <li>• Good overall Satisfaction i.e., 4.02</li> <li>•</li> <li>• All questions related to the “Learning and Teaching” showed good results.</li> <li>• All questions related to the “Program Management” showed good results.</li> </ul>		<ul style="list-style-type: none"> <li>• Community services committee will follow up with the participation of the faculty members in the community services activities.</li> <li>• Program Quality Assurance and Research Committee’s will arrange some sessions for the faculty members.</li> </ul>
<b>Points for Improvements:</b> <ul style="list-style-type: none"> <li>• Professional Development Programs.</li> <li>• Community Services.</li> </ul>		
<b>Suggestions for improvement</b> <ul style="list-style-type: none"> <li>• Arrange professional development workshops or training sessions for the faculty members.</li> <li>• Motivate the faculty members to be involved more in the community services.</li> </ul>		

<b>Evaluation method:</b> Alumni Satisfaction survey	<b>Date:</b> May-2021	<b>Number of Participants:</b> 30
Summary of Evaluator Review		Program Response
<b>Strengths:</b> <ul style="list-style-type: none"> <li>• Good overall Satisfaction i.e., 3.92</li> <li>• All questions related to the “Qualities and Abilities” showed good results.</li> <li>• All questions related to the “level of program preparation for the Program Learning Outcomes” showed good results.</li> </ul>		<ul style="list-style-type: none"> <li>• Alumni Committee will arrange a workshop targeting the soft-kills.</li> <li>• Faculty members will be asked to prepare assignments that will target to improve the teamwork skills amongst students.</li> </ul>
<b>Points for Improvements:</b> <ul style="list-style-type: none"> <li>• Soft Skills</li> <li>• Teamwork</li> </ul>		
<b>Suggestions for improvement</b> <ul style="list-style-type: none"> <li>• Arrange training programs to polish the soft-skills.</li> <li>• Introduce teamwork-based assignments .</li> </ul>		

<b>Evaluation method:</b> Employers Satisfaction survey	<b>Date:</b> May-2021	<b>Number of Participants:</b> 15
Summary of Evaluator Review		Program Response
<b>Strengths:</b> <ul style="list-style-type: none"> <li>• Good overall Satisfaction i.e., 3.97</li> <li>• Good satisfaction level with the skills using information technology and the latest modes of communication</li> </ul>		
<b>Points for Improvements:</b> <ul style="list-style-type: none"> <li>• Increase number of participants</li> <li>• Practical Knowledge</li> <li>• Research problems</li> </ul>		<ul style="list-style-type: none"> <li>• Alumni Committee will arrange a workshop targeting the practical skills.</li> <li>• Faculty members will arrange extra sessions and assign extra homework in order to improve the practical knowledge and solve complex research chemistry problems in core courses.</li> </ul>
<b>Suggestions for improvement</b> <ul style="list-style-type: none"> <li>• Increase the number of participants to have information from different sources.</li> <li>• Arrange extra sessions for the research chemistry problems analysis and practical skills/knowledge.</li> </ul>		

#### 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	Key Performance Indicators	Target Benchmark	Actual Value	Internal Benchmark	Analysis	New Target Benchmark
1	KPI-P-01	Percentage of achieved indicators of the program operational plan objectives.	75%	76.3%	80%	It is noted that the actual benchmark (76.3%) value is higher than the target benchmark (75%). And from the values of last two years, the new target benchmark will be 77%.	77%
2	KPI-P-02	Students' Evaluation of quality of learning experience in the program	4.0	3.85	4.16	The questionnaire results show that actual KPI is 3.85, which means that the grade of satisfaction is "very High". And from the values of last two years, The new target KPI will be (4.1) for the next academic year	4.1
3	KPI-P-03	Students' evaluation of the quality of the courses.	4.0	4.38	4.22	The questionnaire results show that actual KPI is 4.38, and achieved the target (4.0). And from the values of last two years, The new target KPI is	4.1

						proposed (4.1) for the next academic year	
4	KPI-P-04	Completion rate.	40%	37.5%	44.64%	The actual value (37.5%) is lower than the target (40%). And from the values of last two years, The new target is set to 40%	40%
5	KPI-P-05	First-year students retention rate	80%	80.52%	84.17%	Actual value (80.52%) achieved the target (80%). And from the values of last two years, The new target is to 80%	80%
6	KPI-P-06	Students' performance in the professional and/or national examinations.	50%	31.8	39.18 %	The actual value (31.8%) is lower than the target (50%). And from the values of last two years, the new target is set to 50%	50%
7	KPI-P-07	Graduates' employability and enrolment in postgraduate programs.	a-60% b-3%	a-56% b-4.5%	a-52.9% b- 0%	The actual value (56% and 4.5%) is lower than the target (60%) and higher than the target (3%). And from the values of last two years, the	a-60% b-5%

						new target is set to 60% and 5%	
8	KPI-P-08	Average number of students in the class.	11	13	15	Actual value (13) is more than target benchmark (11) And from the values of last two years, the new target is set to 11	11
9	KPI-P-09	Employers' evaluation of the program graduate's proficiency.	4.0	3.9	4.07	The actual benchmark (3.8) is less than the target benchmark (4.0) and the internal benchmark (4.07). And from the values of last two years, the new target is kept to 4.0	4.0
10	KPI-P-10	Students' satisfaction with the offered	3.5	3.82	3.55	The actual benchmark value is 3.82 is less than the target benchmark (4.0) and internal benchmark (3.55). And from the values of last two years, The new target benchmark will be 4.0	4.0
11	KPI-P-11	Ratio of students to teaching	10:1	11:1	11 : 1	Actual value (11:1). The target	10:1

		staff.				is ( 10:1) and the internal benchmark (11:1), and this reflects not good ratio. And from the values of last two years, the new target benchmark kept at 10:1	
12	KPI-P-12	Percentage of teaching staff distribution.	Assist. P:40 % Assoc. P:40 % Prof.: 20%	Assist. P:59.24% Assoc.P:26.06 % Prof.:14.7 %	Assist. P:59.24 % Assoc. P:26.06 % Prof.:14.7 %	For assistant professors, actual value (14.7%) is equal to the target (14.7%). We decided to retain the target benchmark at 14.7%. For associate professors, actual value (26.06%) is equal to the target (26.06 %).  And from the values of last two years, It is decided to retain the target benchmark at 26.06 %.	Assist. P:40% Assoc. P:40% Prof.: 20 %
13	KPI-P-13	Proportion of teaching staff leaving the program.	0%	0%	3.3 %	Actual value of this KPI is 0%. The new target benchmark will be	0%

						equal to 0%, reflecting the department's aims to improve the working environment and to consequently reduce the attrition rate even further. And from the values of last two years, It decided to retain the target benchmark at 0%.	
14	KPI-P-14	Percentage of publications of faculty members.	85%	%82	83 %	The actual benchmark (82%) is lower than target (85%). And from the values of last two years, It has been decided to set the target benchmark to 85%	85%
15	KPI-P-15	Rate of published research per faculty member.	2:1	2.53:1	1.59:1	The actual benchmark (2.53:1) is higher than the target benchmark (2:1). And from the values of last two years, It has been decided to set the new target benchmark at	3:1



						(3:1)	
16	KPI-P-16	Citations rate in refereed journals per faculty member.	40:1	62:1	45.4:1	The actual benchmark (62:1) is higher than the target benchmark (40:1). And from the values of last two years, It is decided to set the new target benchmark at (40:1)	40:1
17	KPI-P-17	Satisfaction of beneficiaries with the learning resources.	4.0	3.8	3.35	The actual benchmark value is 3.8 is less than target one (4.0). And from the values of last two years, It is decided to set the new target benchmark to 4.0	4.0
18	KPI-AP-01	Number of research groups in the program	2	0	0	The actual benchmark value is (0) is less than the target one (2 projects). And from the values of last two years, It is decided to set the new target benchmark to 2.	2

19	KPI-AP-02	The number of funded research projects that the program's employees obtain annually	15	5	13	The actual benchmark value is (5) is lower than the target one (15 projects). And from the values of last two years, It is decided to set the new target benchmark to 15	15
20	KPI-AP-03	Percentage of students participating in extra-curricular activities	85%	84.1%	84.4	The actual benchmark (84.1%) is higher than the target one (85%). It is decided to set the new target benchmark to 85%	85%
21	KPI-AP-04	Employers' satisfaction with the program's mission, vision and goals	4.2	4.11	3.9	The actual benchmark value is based on the survey "Employer Survey on EE Vision Mission & Objectives". The actual benchmark (4.11) is higher than the target one (4.2). It is decided to set the new target benchmark to 4.2	4.2

22	KPI-AP-05	Percentage of the student's graduation projects related to the surrounding community	30%	25%	20%	The actual benchmark (25%) is less than the target one (25%). And from the values of last two years, It is decided to set the new target benchmark to 30%	30%
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**Comments on the Program KPIs and Benchmarks results:**

- large number of indicators are in use for evaluation of program quality.
- Many KPIs showed improvements.
- Internal and external data were available for comparisons, the external one was from highly recognized chemistry program.

## 5. Analysis of Program Evaluation

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

<p><b>Strengths:</b></p> <ul style="list-style-type: none"><li>• The student survey is regularly conducted and feedback is used for course and program improvement.</li><li>• Students show a good level of satisfaction with the quality of learning resources, quality of courses, offered services.</li><li>• Students and Faculty members show a good level of satisfaction with the learning resources.</li><li>• The Chemistry program provides sufficient number of full-time teaching staff to the students.</li><li>• Procedures are in place to ensure that new hired PhD faculty has verified degrees.</li><li>• More Saudi staff will return with PhD, granted from ranked universities abroad.</li><li>• There is a high degree of job satisfaction at the department, leading to higher retention rates.</li><li>• The rate of scientific publishing is increasing through the last three years as the university offered many subsidized project and scientific research groups.</li><li>• The Chemistry department made serious efforts to create awareness among the stakeholders on the vision, mission &amp; values and it has been carried out through: Handbooks, prospectus, college homepage. Display in LCD screens, posting in the college social networking site, student forum etc. Faculty board, department meeting minutes are quoted with “vision, mission &amp; values”. Quotes in faculty lectures.</li></ul>
<p><b>Areas for Improvement:</b></p> <ul style="list-style-type: none"><li>• Employers’ involvements in the mission have to be stressed by taking their opinions in a larger scale.</li><li>• Following up the offered job opportunities to inform our alumni with it and keep in contact with them.</li><li>• There is a need to increase the proportion of Full Professors in the Department of Chemistry.</li><li>• Following up the causes for a low proportion of students completing program in minimum possible time through holding periodic meeting with academic advisor.</li><li>• Setting a research performance evaluation according to number of granted projects for faculty members.</li><li>• Improve the program partnership with the community.</li><li>• improvement of counseling process</li></ul>
<p><b>Priorities for Improvement:</b></p> <ul style="list-style-type: none"><li>• Research Performance Evaluation and its impact on the annual evaluation.</li><li>• Conduct Advisory Committee at least twice in a year in order to discuss in more details about the continuous improvement plan and program development.</li><li>• Increase the program partnership with the community.</li><li>• improvement of counseling process</li></ul>

### G. Difficulties and Challenges Faced Program Management

Difficulties and Challenges	Implications on the Program	Actions Taken
None		

### H. Program Improvement Plan

N o.	Priorities for Improvement	Actions	Action Responsibility	Date		Achievement Indicators	Target Bench mark
				Start	End		
1	Research Performance Evaluation and its impact on the annual evaluation	Reward for excellent scientific publication	Head of Department	December 30th, 2020	May 30th, 2021	Rate of published research per faculty member.	90%
2	Conduct Advisory Committee at least twice in a year in order to discuss in more details about the continuous improvement plan and program development	Meeting of the Advisory Committee with the Council of the Department of Chemistry	Study plan committee and quality committee	December 30th, 2020	May 30th, 2021	The number meeting of Advisory Committee with the Council of the Department of Chemistry	2
3	Increase the program partnership with the community.	the student's graduation projects related to the surrounding community	Community Partnership Committee	December 30th, 2020	May 30th, 2021	Percentage of the student's graduation projects related to the surrounding community	30%
4	improvement of counseling process	Increase meeting of the Advisory Committee with the Council of the Department of Chemistry	Head of Department	December 30th, 2020	May 30th, 2021	The number meeting of Advisory Committee with the Council of the Department of Chemistry	3

## I. Report Approving Authority

<b>Council / Committee</b>	Chemistry Department
<b>Reference No.</b>	15 <sup>th</sup> Department Council - Subject 15
<b>Date</b>	19/1/2022

## J. Attachments:

- A separate cohort analysis report for male and female sections and for each branch  
[https://drive.google.com/file/d/1N0a71NQSCVkjilS0Wwox86arzsXP7EIr/view?usp=share\\_link](https://drive.google.com/file/d/1N0a71NQSCVkjilS0Wwox86arzsXP7EIr/view?usp=share_link)  
[https://drive.google.com/file/d/1\\_0tm12ZzyEWY5D4mNTEUh\\_zC\\_5FVBvbI/view?usp=share\\_link](https://drive.google.com/file/d/1_0tm12ZzyEWY5D4mNTEUh_zC_5FVBvbI/view?usp=share_link)  
[https://drive.google.com/file/d/1n7LUghwloAcx5ci8wcQtDRlw9haZR\\_BT/view?usp=share\\_link](https://drive.google.com/file/d/1n7LUghwloAcx5ci8wcQtDRlw9haZR_BT/view?usp=share_link)
- A report on the program learning outcomes assessment results for male and female sections  
[https://drive.google.com/file/d/1d3Se2s-k01xCiao9cgjP1dieJm-0rAem/view?usp=share\\_link](https://drive.google.com/file/d/1d3Se2s-k01xCiao9cgjP1dieJm-0rAem/view?usp=share_link)
- A report on the students' evaluation of program quality  
[https://drive.google.com/file/d/1h7UmZufp0nZXAtpgdbFlziYrq4JK7vTf/view?usp=share\\_link](https://drive.google.com/file/d/1h7UmZufp0nZXAtpgdbFlziYrq4JK7vTf/view?usp=share_link)  
[https://drive.google.com/file/d/1dH-gTEcBmNBqRshhAKHrAl6z2gv1N-UV/view?usp=share\\_link](https://drive.google.com/file/d/1dH-gTEcBmNBqRshhAKHrAl6z2gv1N-UV/view?usp=share_link)
- Independent reviewer's report and other survey reports (if any)  
[https://drive.google.com/file/d/1C8t4GBkO0UzhHkwFm5yzl8qSb37v0iTS/view?usp=share\\_link](https://drive.google.com/file/d/1C8t4GBkO0UzhHkwFm5yzl8qSb37v0iTS/view?usp=share_link)  
[https://drive.google.com/file/d/14xbO-gq9mT5GiW5-4jFzkzHR09AB48Ea/view?usp=share\\_link](https://drive.google.com/file/d/14xbO-gq9mT5GiW5-4jFzkzHR09AB48Ea/view?usp=share_link)