

ATTACHMENT 2 (c)

Annual Program Report

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

ANNUAL PROGRAM REPORT

**BSc Microbiology
(40101)**

(2016 / 2017)

Program Eligibility: The program is to submit the two most recent APRs as part of the requirements for program eligibility using the NCAA Template.

Post Accreditation: The program is required to annually complete an APR. The APR is to document a complete academic year.

APR's are prepared by the program coordinator in consultation with faculty teaching in the program. The reports are submitted to the head of department or college, and used as the basis for any modifications or changes in the program. The APR information is used to provide a record of improvements in the program and is used in the Self Study Report for Programs (SSRP) and by external reviews for accreditation.

Annual Program Report

1. Institution: Umm Al-Qura University Date: 24 / 02 / 1439 H (13 / 11 / 2017)		
2. College/ Department: Faculty of Applied Science / Department of Biology		
3. Dean: Dr. Waleed J. Altaf		
4. List All Campus Branch/Locations (approved by Ministry of Higher Education or Higher Council of Education).		
Campus Branch/Location	Approval By	Date
Main Campus:		
1: Makkah	Ministry of Higher Education	01/01/1402 H 29 /10/ 1981
2:		
3:		
4:		

A. Program Identification and General Information

Program title and code BSc Microbiology (40101)
Name and position of persons completing the APR Dr. Shady M. El-Shehawy Prof. Khaled Elbanna Dr. Hussein H. Abulreesh
Academic year to which this report applies. 1437 / 1438 H (2016 - 2017)

B Statistical Information

1. Number of students who started the program in the year concerned	35
2. (a) Number of students who completed the program in the year concerned:	8
Completed the final year of the program:	
Completed major tracks within the program (if applicable)	N/A
Title.....No	<input type="checkbox"/>
Title.....No	<input type="checkbox"/>
Title.....No	<input type="checkbox"/>
Title.....No	<input type="checkbox"/>
2. (b) Completed an intermediate award specified as an early exit point (if any)	N/A
3. Apparent completion rate.	
(a) Percentage of students who completed the program, (Number shown in 2 (a) as a percentage of the number that started the program in that student intake.)	N / A
(b) Percentage of students who completed an intermediate award (if any) (e.g. Associate degree within a bachelor degree program)	N / A
(Number shown in 2 (b) as a percentage of the number that started the program leading to that award in that student intake).	
Comment on any special or unusual factors that might have affected the apparent completion rates (e.g. Transfers between intermediate and full program, transfers to or from other programs).	

Student who completed the program in the current year may have been enrolled in different years, for examples, they may had been enrolled in 2011-2012 or even earlier and during their studies they may had withdrawn one semester or more then re-enrolled again.

4. Enrollment Management and Cohort Analysis (Table 1)

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

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

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

Enrollment Management and Cohort Analysis (Table 1)

					CURRENT YEAR†
Student Category	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Total cohort enrollment**	6 + (1)‡	36	42 + (2)‡	26 + (2)‡	14 + (16)‡ + (5)*
Retained till year end	5	29	42	10	35
Withdrawn during the year and re-enrolled the following year	0	2	2	16	0
Withdrawn for good	3	5	5	2	0
Graduated successfully	2	18 (in progress)	In progress	In progress	In progress

* PYP - Preparatory Year Program

(**)- overall enrollment to the UQU PYP in Science and Engineering pathway is ranging from 1100 to 1200 male student every year, however the figures shown in the above table (total cohort enrollment) represents those who pass the PYP and chose to enroll in the Microbiology program.

(‡) the number between brackets represents previous year enrollment who withdrawn and reenrolled in the year concerned

(†)- Starting from 2016 / 2017 academic year, the Faculty of Applied Science will no longer be part of the UQU PYP, thus all students joining the Departments of the Faculty of Applied Science in the current year will be enrolled directly after successful completion of their secondary school and pass all the requirements to enroll in the university.

(*)- There have been 5 students who were forcefully changed their major to BSc Microbiology due to their unsuccessful completion of the UQU PYP for medical school. This policy is applied to any student who fail to achieve successful completion of the UQU PYP, where these students are offered forcefully to choose another major or to withdraw for good.

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

Date of Survey: 12 / 02 / 1439 H (01 / 11 / 2017)

Number Surveyed 54 Number Responded 54 Response Rate % 100

Destination	Not Available for Employment		Available for Employment		
	Further Study	Other Reasons	Employed in Subject Field	Other Employment	Unemployed
Number	1		44	4	5
Percent of Respondents	100		100	100	100

Analysis: List the strengths and recommendations

Strengths:

(1)- What I learnt in this program was helpful in my career (Strongly agree = 53.7 %) (Agree = 33.3 %) (Overall = 87 %)

(2)- The program has helped me to develop enough attention in seeking to continue to update my knowledge as it arises in my area of expertise. (Strongly agree = 38.9) (Agree = 37 %) (Overall = 75.9 %)

(3)- The program has developed my ability to investigate and solve new problems. (Strongly agree = 50 %) (Agree = 29.6 %) (Overall = 79.6 %)

(4)- Field training was helpful to develop my skills (Strongly agree = 57.4%) (Agree = 25.9%) (Overall = 83.3 %).

(5)- The teaching staff members have great knowledge of content of courses they are teaching. (Strongly agree = 50 %) (Agree = 40.7 %) (Overall = 90.7 %)

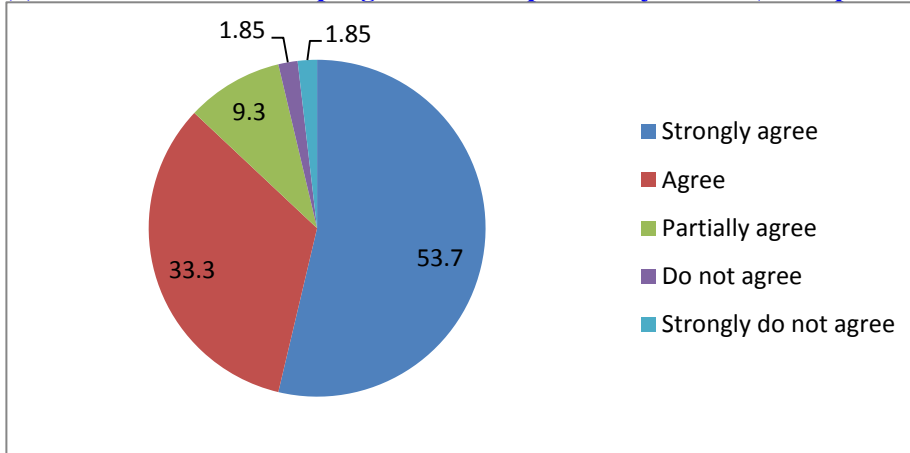
(6)- Teaching staff members paid attention to the progress of the students (Strongly agree = 35.2 %), (Agree = 31.5 %), (Overall = 66.7 %)

(7)- Teaching staff members were available for guidance and advice whenever I needed that. (Strongly agree = 50 %) (Agree = 24.1 %), (Overall = 74.1 %)

(8)- I am generally satisfied with quality of my learning experience at this university (Strongly agree = 35.2 %), (Agree = 44 %), (Overall = 76.2 %)

Below is the pie chart for overall opinion on the program

(1)- What I learnt in this program was helpful in my career (54 respondents)



Recommendations:

- (1)- Update the study plan to include new courses and update the content of existing courses.
- (2)- More attention required for upgrading and maintaining the facilities in the laboratories.
- (3)- More attention required for IT services and facilities available for students.
- (4)- Intensive courses in English to be added to the program
- (5)- More interactions with graduates
- (6)- More attention to the training courses

C. Program Context

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

Due to a number of drawbacks of the application of UQU PYP for the Science and Engineering pathway during the past four years, that affected the overall number of students enrolled in the various programs provided by all departments (e.g. Biology; Chemistry; Physics and Mathematical Science), the Faculty of Applied Science by unanimous votes of the department members and by the Faculty council members, decided to withdraw from the UQU PYP program, that means the Faculty of Applied Science will enroll fresh students directly into its programs after graduating from high school, subject to achieving the UQU requirements for admission in the university.

The policy of Faculty of Applied Science to enroll new students into the main four programs, i.e.:

**BSc Biology (40100)
BSc Chemistry (40200)
BSc Physics (40300)
BSc Mathematics (40400)**

Students who are willing to enroll in the:

**BSc Microbiology (40201)
BSc Industrial Chemistry (40206)
BSc Medical Physics (40301)**

Must achieve a minimum of (2.00) out of (4.00) GPA in their first year.

It is important to mention that the Faculty of Applied Science has adopted a PYP-like first year for all seven programs, that can make transfer between majors and program is easy for students without costing them delays in the time required to complete their studies.

The table below explains the study plan of the first year of all seven programs provided by the Faculty of Applied Science.

First year							
Level 1				Level 2			
S	Course code	Course title	Credit hours	S	Course code	Course title	Credit hour
1	Calculus	4041101	4	1	General Biology	4011101	4
2	General Chemistry	4021101	4	2	General Physics	4031101	4
3	General English	7001401	4	3	English for Science	7001402	4
4	Holy Quran		2	4	Arabic Language		2
5	Islamic Culture		2	5	Biography of the Prophet		2
	Total		16		Total		16

The proposed withdraw from UQU PYP program shall take effect next academic year (1437 / 1438 H) corresponding to (2016 – 2017).

This acadmic year (2016 / 2017) all the changes of leaving the UQU PYP for Enginerring and Science pathways have taken effects and below are the propsed implications for the program and what has been really

Implications for the program

There will be a number of positive implications on the BSc Microbiology program following the withdrawal from UQU PYP Science and Engineering Pathway, these include:

(1)- Updating the study plan of the BSc Microbiology program, taking into consideration the suggestions and comments and recommendations from alumni surveys; current students and teaching staff surveys; benchmark comparisons with local, regional and international programs.

(1.1)- The study plan have been updated as a result of this major change, starting from this academic year (2016 / 2017) all newly enrolled students are studying the updated study plans.

(2)- The quality of students to be enrolled will be better, as direct enrolment to the program is not available. Students shall at least achieve a minimum of (2.0) out of (4.0) GPA in their first year in the main Faculty of Applied Science Programs (i.e. BSc Biology; BSc Chemistry; BSc Physics and BSc Mathematics) before being enrolled in the BSc Microbiology Program.

(2.2)- All 35 students started enrolled in this program in this academic year (2016 / 2017) have passed their first semester and/or first year with minimum GPA of (2.00). This means that distinctive students are more interested in taking this program.

(3)- Students who are changing majors within the Faculty of Applied Science programs (seven programs) will not be affected in terms of their completion time as the first year of all seven programs is identical. It is PYP-like year where all students study the same courses regardless of their program in which they were enrolled.

(3.3)- This made it easy for students to change major at early stage without significantly negatively affecting them. We have 7 different BSc programs offered by the departments of the Faculty of Applied Science, all these programs have the same course structure in the 1st year of study. This means a student can be enrolled in the Physics program, but can change his major at the end of first year and that first year still be part of his new major. Some of the 35 students who enrolled in this program were started their first semester in physics and chemistry program and changed major at the end of first year after achieving the required GPA to join the Microbiology program.

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

N / A

Implications for the program
N / A

D. Course Reports Information Summary

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

(a.) Describe how the individual course reports are used to evaluate the program.

Through individual course reports and number of strengths and weaknesses can be excerpted, by which can provide vital information to assess the program. These information can be gathered from the course reports as follows:

(1)- Effectiveness of teaching strategies: this can help identify any difficulties in using the stated teaching strategies and any suggested action plan to improve these strategies. Difficulties in applying proper teaching strategies can hinder achieving the objectives and learning outcomes of the program.

(2)- Result statistics: this can help getting a wide view on achieving the objectives of the program by identifying any abnormal results, e.g. low pass rate, skewed results (either low or high). Identifying abnormal results can help finding the reasons that influence these results and put an action plan to improve the situation.

(3)- Resources and Facilities: identifying any difficulties in accessing learning resources and facilities can help immensely to identify any negative impact on achieving the objectives and affecting the learning outcomes.

(4)- Course evaluation by students: this one of the important component of the course report that can help to highlight the strengths and weaknesses of every individual course from the students' standpoint.

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

(1.) Completion rate analysis:

The overall completion rate average of the courses provided in the first semester (371) was 79%. In the second semester (372), the average completion rate was 87 %. While in the summer semester (373) the average completion rate reached 98%.

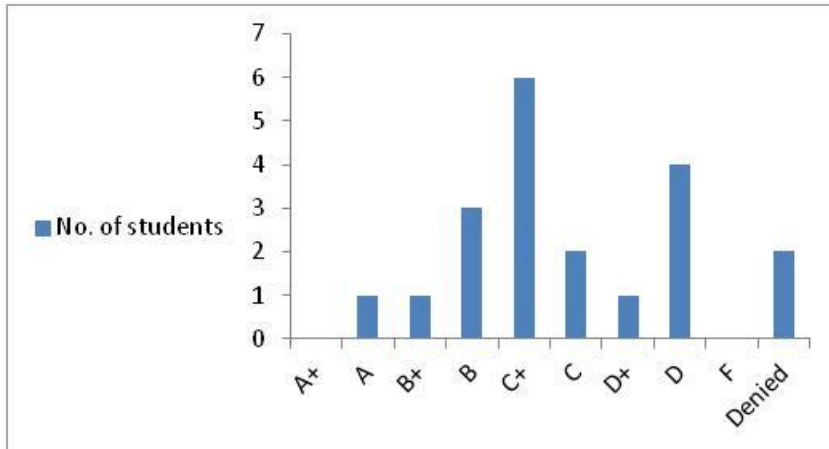
Overall the average completion rate in all three semesters is above 50% which may reflect achieving the objectives and learning outcomes.

See attached completion rate statistics report for every single course and the overall average for the program.

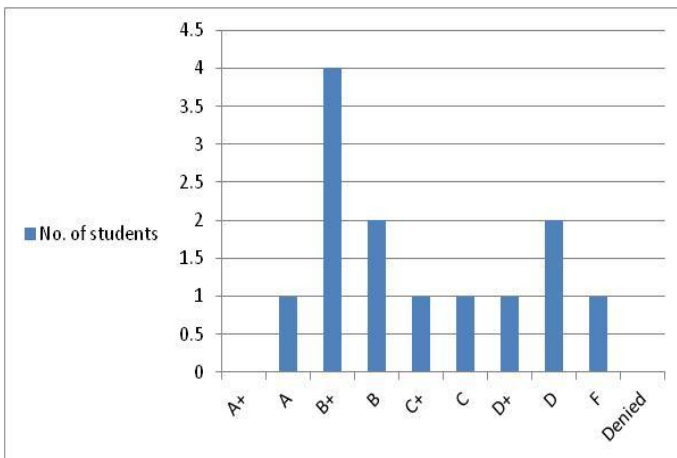
(2.) Grade distribution analysis:

Below are grade distribution analysis of randomly selected courses from each semester

(1)- First semester (371)

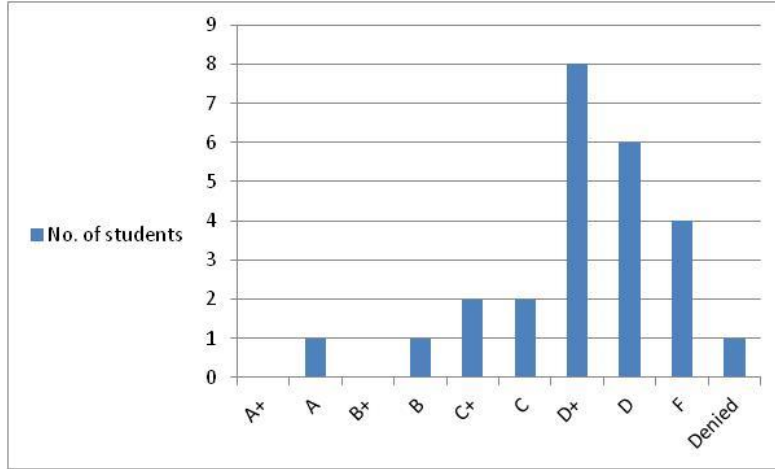


Grade distribution analysis of Biochemistry (401231-3), no abnormal or skewed results observed.

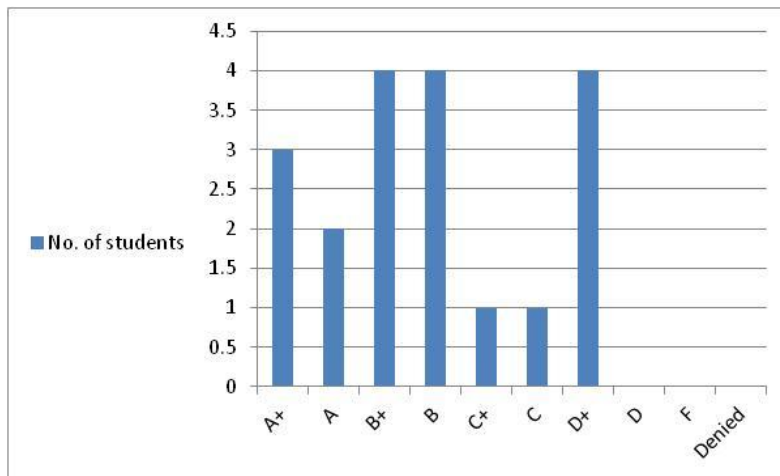


Grade distribution analysis of Food Microbiology (401334-3), no abnormal or skewed results were observed.

(2)- Second Semester (372)

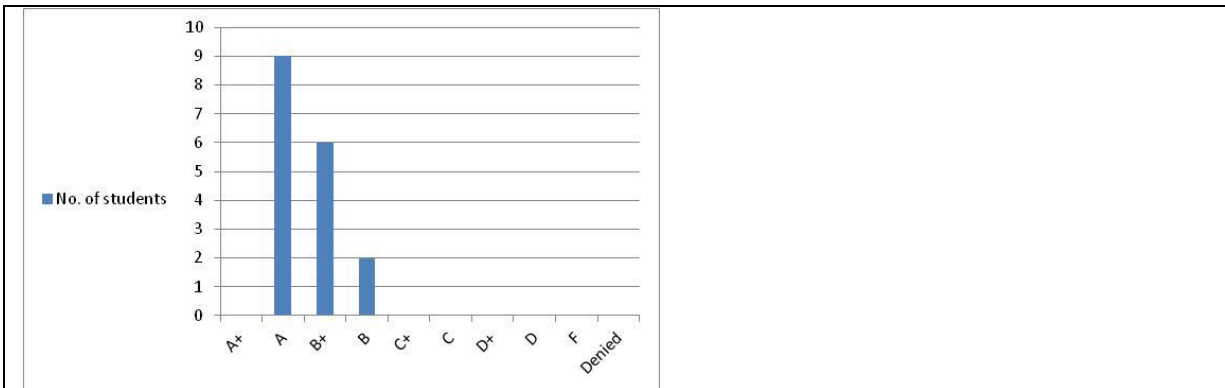


Grade distribution analysis of Microbial Physiology (401246-3), no abnormal or skewed results were observed.



Grade distribution analysis of Molecular Microbiology (401233-3), no abnormal or skewed results were observed.

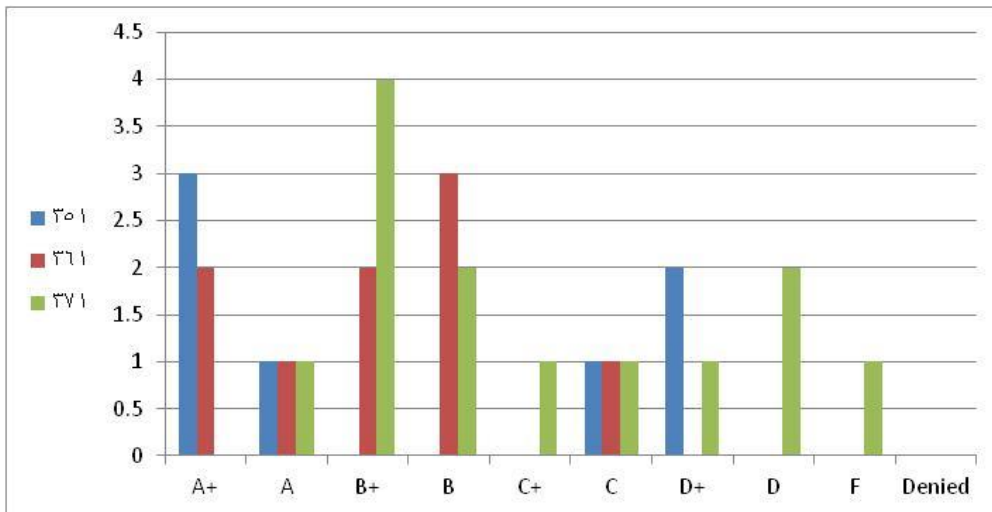
(3)- Summer semester (373)



Grade distribution analysis of Research Project (401395-4), no abnormal or skewed results were observed.

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

Trend analysis of grade distribution for Food Microbiology (401346-3) over three years is shown below:



The chart shows the grades distribution of the course in three consecutive years (2015 – 2017). As it can be seen, no abnormal or skewed results can be observed throughout the years, as the number of high achieving students (A+, A, B+ and B) is tend to be low normally comparing to middle or low achievers (C+, C, D+ and D). The number of failing students is also observed to be low throughout the years.

The overall completion rate of this course throughout the three years is more than 97.3% which shows no major problems associated with this course that could have impacted achieving the objectives and the learning outcomes of the course.

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

N/A	
List any courses where completion rates, grade distribution, or trends are significantly skewed, high or low results, or departed from policies on grades or assessments. For each course indicate what was done to investigate, the reason for the significant result, and what action has been taken.	
N/A	
a. Course	Significant result or variation
Investigation undertaken	
Reason for significant result or variation	
Action taken (if required)	
b. Course	Significant result or variation
Investigation undertaken	
Reason for significant result or variation	
Action taken (if required)	
c. Course	Significant result or variation
Investigation undertaken	
Reason for significant result or variation	
Action taken (if required)	

(Attach additional summaries if necessary)

4. Delivery of Planned Courses

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

(b) Compensating Action Required for Units of Work Not Taught in Courses that were Offered. (Complete only where units not taught were of sufficient importance to require some compensating action)		
N/A		
Course	Unit of work	Reason
Compensating action if required		

E Program Management and Administration

List difficulties (if any) encountered in management of the program.	Impact of difficulties on the achievement of the program objectives.	Proposed action to avoid future difficulties in response.
N / A	N / A	N / A

F. Summary Program Evaluation

<p>1. Graduating Student Evaluations (surveys)</p> <p>Date of Surveys 26 / 02/ 1439 H (15 / 11 /2017),</p> <p>Only 7 students responded to survey</p> <p>Attach survey reports.</p>	
<p>a. List most important recommendations for improvement, strengths and suggestions</p> <p>(1)- Add new course s to study plan. (2)- Include scientific trips in courses like visiting sewage purification facility in Water and wastewater microbiology course. (3)- Increase the number of homework to help students search for information. (4)- There was lack of material for practical sessions at times, the laboratories needs a lot of improvement in terms of equipments and chemicals. (5)- Withdraw from UQU PYP (Prep Year Program)</p>	<p>Analysis (e.g. Assessment, action already taken, other considerations, strengths and recommendation for improvement.)</p> <p>(1)- The new study plan includes new courses such as “Antimicrobial Agents”, “Bioinformatics” and “Biostatistics”, other courses such as “Fungal Yeast” and “Actinomycetes” were removed from the new study plan and its content was placed in relevant new courses. (2)- Scientific trips to related work places during the courses and prior to field training course is a very good idea and will be taken into consideration. (3)- Extra curricula activities were suggested to be included in each course. (4)- As this report is prepared, an application is being prepared to equip all the laboratories in the Department of Biology. The Application was granted around SAR 3000,000 to purchase new lab equipments. The specifications and quantities of each equipment is supposed to be submitted to the UQU vice rector by December 25th, 2016. Another application was submitted for purchasing the required chemicals, glassware and laboratory disposable. (5)- This has been achieved starting from this academic year</p>

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

(1)- The study plan is updated and new courses were added and the course content of existing courses is updated. Taken into consideration local and international benchmarking (similar programs provided by Saudi universities and international universities). The new study plan was revised by two experts in microbiology, both are professors. One from Local university and the other one from regional university (Egypt). Their comments, suggestions and recommendations were all taken into consideration before the final approval of the new study plan by UQU council.

2. Other Evaluation (e.g. Evaluations by employers or other stakeholders, external review)			
Describe evaluation process. N / A			
Attach review/survey report.			
a. List most important recommendations for improvement, strengths and suggestions for improvement.		(e.g. Analysis of recommendations for improvement: Are recommendations valid and what action will be taken, action already taken, or other considerations?)	
b. Changes proposed in the program (if any) in response to this feedback.			
2. Ratings on Sub-Standards of Standard 4 by program faculty and teaching staff; 4.1 to 4.10.			
(a) Standard 4 Sub-Standards. Are the “Best Practices” followed; Yes or No? Provide a revised rating for each sub-standard. Indicate action proposed to improve performance (if any).			
Standard 4 Sub-Standards	Best Practices Followed (Y/N)	5 Star Rating	List priorities for improvement.
(4.1)- Student Learning Outcome	YES	****	(1)- Relationship with the industry need to be further strengthened. (2)- There should be more interactions with employers to determine their requirements for qualified future work force. (3)- The “Interpersonal skills” for students must be further improved.

(4.2)- Program development process	YES	*****	(1)- The program (study plan and course contents) required constant monitoring to observe weaknesses and improve them. (2)- Stakeholders should take part in developing process.
(4.3)- Program review and evaluation process	YES	*****	(1)- The program (study plan; program specification and courses specifications) will be reviewed and evaluated by two external experts, one local and the other one international. (2)- The program should be under constant monitoring for improvement and quality perspectives.
(4.4)- Student assessment	YES	*****	(1)- Students' achievements have to be constantly monitored against the mission and objectives of the program.
(4.5)- Educational assistance for students	YES	*****	(1)- Departmental website on UQU portal must be improved to include all necessary information on educational rules, regulations in a concise and clear manner. (2)- Overseas students required more flexible and easy process to apply for admission and automated process to follow up their applications.
(4.6)- Quality of Teaching	YES	*****	(1)- Teaching improvement need to be compared against KPIs. (2)- The Department of Biology may periodically invite visiting scholars from regional and international universities to assess the quality of the program.
(4.7)- Support for improvement in quality of teaching	YES	*****	(1)- The KPIs outlined in the NCAAAA Standards need to be constantly monitored with target benchmark. (2)- The Department requires more finance to purchase new laboratory equipment and service maintenance existing one to improve the quality of laboratory sessions
(4.8)- Qualification and experience of teaching staff	YES	*****	All the teaching staff have obtained their PhD from well known universities in Europe (England / Germany) and the USA. The teaching staff are well experienced in teaching, some of which have more than 20 years teaching experience.
(4.9)- Field experience activities	YES	*****	(1)- Require improvement with healthcare sector employer to secure better internship.
(4.10)- Partnership arrangements with other institutions	NO	***	(1)- Students exchange programs should be implemented and encouraged. (2)- Exchange programs for visiting teaching staff members and researchers must be implemented and encouraged.

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

(4.1)- Student Learning Outcome

Strengths:

(1)-The students learning outcomes are designed and intended to satisfy stakeholders' requirements.

Recommendation:

(1)- Students learning outcomes needed to be assessed by stakeholders throughout the academic year.

(2)- There should be more interactions with stakeholders to determine their latest requirements.

(4.2)- Program development process

Strengths:

(1)- The new updated study plan and curricula were developed with collaboration of graduating students; alumni and teaching staff members.

(2)- The new updated study plan and curricula were benchmarked against internal and external parallel programs provided by top universities.

(3)- The new updated study plan and curricula was revised prior to approval by two specialized professors from local and international institutions.

Recommendation:

(1)- Stakeholders should involve in updating the study plan and the curricula.

(4.3)- Program review and evaluation process

Strengths:

(1)- Teaching staff members are well experienced to review and evaluate the program content.

(2)- The study plan and curricula are revised by external experts.

(4.4)- Student assessment

Strengths:

(1)- Teaching staff members use various assessment methods to determine the level of students learning outcomes.

(4.5)- Educational assistance for students

Strengths:

(1)- Umm Al-Qura University (UQU) has a well-defined and well informative orientation program for new students, where all academic faculties and departments participate to provide information about the various programs provided by every department.

(2)- Online registration process are available and easy to use and follow by students.

(3)- The department provides further assistance to students throughout the semester.

Recommendations:

- (1)- Departmental website on UQU portal must be improved to include all necessary information on educational rules, regulations in a concise and clear manner.
- (2)- Overseas students required more flexible and easy process to apply for admission and automated process to follow up their applications.

(4.6)- Quality of Teaching

Strengths:

- (1)- The department is staffed with well qualified teaching staff members.

Recommendations:

- (1)- Teaching improvement need to be compared against KPIs.
- (2)- The Department of Biology may periodically invite visiting scholars from regional and international universities to assess the quality of the program.

(4.7)- Support for improvement in quality of teaching

Strengths:

- (1)- The presence of committed and devoted Vice Deanship for quality assurance and academic development.

Recommendations:

- (1)- The KPIs outlined in the NCAAAA Standards need to be constantly monitored with target benchmark.
- (2)- The Department requires more finance to purchase new laboratory equipment and service maintenance existing one to improve the quality of laboratory sessions

(4.8)- Qualification and experience of teaching staff

Strengths:

- (1)- The Department of Biology have diverse, multinational, well qualified teaching staff members with vast teaching and research experience, who obtained their PhD from reputable institutions in Europe (UK, Germany and the Netherland), United States of America and Canada.

(4.9)- Field experience activities

Strengths:

- (1)- The Microbiology program has a very well arranged field experience activities that have been running for the past 25 years. The field experience activities involve training in clinical laboratories (hospitals laboratories); food quality laboratories (food production factories and Saudi Food and Drug Association) and water quality laboratories (water companies and bottled water factories). A number of the program graduates through the years have been working in these laboratories and reached higher positions in their jobs.

Recommendations:

- (1)- Require improvement with healthcare sector (i.e. hospital laboratories) employer to secure better internship.

(4.10)- Partnership arrangements with other institutions

Strengths: This year there has been a service contract between the Department of Biology and Professor Iqbal Ahmad, Professor of Microbiology from Department of Agricultural Microbiology, Aligarh Muslim University of India, as a visiting professor at the Department of Biology at UQU

Weakness:

(1)- Ten years ago there were a small number of overseas students who were admitted to the program, mainly from Yemen. However, no more overseas students applied to the program since 2009. Unfortunately, no such students and/or teaching staff members exchange programs are exits now for the BSc Microbiology program.

Recommendations:

- (1)- Students exchange programs should be implemented and encouraged.
- (2)- Exchange programs for visiting teaching staff members and researchers must be implemented and encouraged.

G. Program Course Evaluation

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

Course Title/Course Code	Student Evaluations		Other Evaluation (specify)	Action Planned	
	Yes	No		Yes	No
Biology 401101 (Botany)		✓			
Biology 401102 (Zoology)	✓				
Cell Biology 401211		✓			
Lab instruments 401222		✓			
Virology 401243		✓			
Bacteriology 401244		✓			
Mycology 401245		✓			
Water Microbiology 4901247		✓	random evaluation of a random samples of examination papers / evaluation of the extent to which the examination papers meet the quality standards	✓	
Actinomycetes 401249		✓			
Biological analysis 401322		✓			

Soil microbiology 401341	✓		random evaluation of a random samples of examination papers / evaluation of the extent to which the examination papers meet the quality standards	✓	
Plant pathology 401342		✓	random evaluation of a random samples of examination papers / evaluation of the extent to which the examination papers meet the quality standards	✓	
Fungal Yeast 401345		✓			
Parasitology 401365		✓			
Microbial toxin 401441		✓	random evaluation of a random samples of examination papers / evaluation of the extent to which the examination papers meet the quality standards	✓	
Applied Bacteriology & Mycology 401442	✓				
Industrial microbiology 401446		✓			
Cyanobacteria 401447		✓	random evaluation of a random samples of examination papers / evaluation of the extent to which the examination papers meet the quality standards	✓	
Biotechnology 401445		✓			
Practical Training 401493		✓			
Introductory microbiology 401143		✓			
Biochemistry 401231		✓	random evaluation of a random samples of examination papers / evaluation of the extent to which the examination papers meet the quality standards	✓	
Haematology 401232		✓			
Food Microbiology 401334		✓			
Practical Training 401495		✓			
Petroleum Microbiology 401475	✓		random evaluation of a random samples of examination papers / evaluation of the extent to which the examination papers meet the quality standards	✓	
General Preparations 401121		✓			
Phycology 401242		✓			

Microbial ecology 401346		✓	random evaluation of a random samples of examination papers / evaluation of the extent to which the examination papers meet the quality standards	✓	
Medical Microbiology 401347		✓			
Petroleum Microbiology 401443		✓			
Food Quality control 401444		✓	random evaluation of a random samples of examination papers / evaluation of the extent to which the examination papers meet the quality standards	✓	
Practical training 401492		✓			
Molecular microbiology 401233		✓			
Epidemiology 401348		✓			

(Add items or attach list if necessary)

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

N/A

Level	Course Code	Course Title	Number of Sections	Credit Hours	College or Department
Level 1					
Level 2					
Level 3					
Level 4					
Level 5					
Level 6					
Level 7					
Level 8					
Include additional levels if needed					

3. Program Learning Outcomes Assessment. Provide a report on the program learning outcomes assessment plan using the NCAA accreditation four year cycle. By the end of the four year cycle all program learning outcomes must be assessed using KPIs with benchmarks and analysis, national or international standardized testing (if available), rubrics, exams and grade analysis, or some alternative scientific measure of student performance.

KPI #	NQF Learning Domains and Learning Outcomes	Method of Assessment for LOs	Date of Assessment
1.0	Knowledge		
1.1	To know the ethics of microbiology and related areas of science	(1)- quizzes, mid-term and final exams.	(1)- week 6, 10 and 17
1.2	To design methods for analyzing and solving problems in the field of microbiology and its applications	(2)- Assessment of lab reports and practical examinations.	(2)- week 6 and 16
1.3	To think critically in evaluating microbiological information	(3)- Evaluating individual and group tasks, and evaluating presentations and talks.	(3)- throughout the semester before week 16
1.4	To implement projects related to his study in microbiology program.	(4)- Activities and homework evaluations.	(4)- throughout the semester before week 16
2.0	Cognitive Skills		
2.1	To understand the importance of scientific research and look at the recent advances in microbiological sciences	(1)- Assessment of scientific experiments	(1)- throughout the semester
2.2	To prepare, explore, identify, analyze and evaluate various scientific problems and solutions.	(2)- Evaluating individual and group tasks	(2)- throughout the semester
2.3	To compare and contrast the methods of scientific research and the ability to design and evaluation of scientific research	(3)- Written exams (4)- Evaluation of Activities and homework.	(3)- week 6, 10, and 17 (4)- throughout the semester
3.0	Interpersonal Skills & Responsibility		
3.1	To involve working independently and with multi-disciplinary teams.	(1)- Assessment of group projects. (2)- Assessment of projects conducted individually.	(1)- prior to week 16 (2)- prior to week 16
3.2	To cooperate in providing scientific and technical services in various fields for all sectors		
4.0	Communication, Information Technology, Numerical		
4.1	To use the computer to prepare written reports, evaluate scientific data and calculations	(1)- Evaluating the laboratory written reports.	(1)- week 15 or 16
4.2	To use the internet to conduct search for published articles and books	(2)- Evaluating activities and homework.	(2)- throughout the semester
5.0	Psychomotor		
5.1	To perform basic and advanced microbiological laboratory techniques	(1)- Evaluation of laboratory written reports	(1)- week 15 or 16
5.2	To be able to operate laboratory instruments	(2)- Practical exams	(2)- week 10 and 16

Provide an analysis of the Four (five/six) Year Program Learning Outcome Assessment Cycle (List strengths and recommendations).

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

KPI Assessment Table (Institutionally approved for the program)

KPI Code # _____ Program KPI: _____	

Assessment Year _____ Program Learning Outcome: _____	

NQF Learning Domain	
KPI Target Benchmark	
KPI Actual Benchmark	
Internal Benchmark	
External Benchmark	
Analysis: (List strengths and recommendations)	
New Target Benchmark	

3. Orientation programs for new teaching staff		
Orientation programs provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If offered how many participated?
a. Brief Description		
<p>Orientation program for Preparing the new faculty members (teaching staff members), which is organized by the Deanship of Development and Quality in cooperation with a number of deanships (i.e. Deanship of Libraries; Deanship of Postgraduate studies; Deanship of Information Technology), centers and academic departments of the Umm Al-Qura University. The program runs for five consecutive days aiming to prepare new faculty members at the university by providing them with the knowledge they need to perform their professional duties and knowledge of the university regulations, academic regulations, methods of teaching and evaluations and all the services provided to them.</p> <p>Targeted audience: Newly recruited faculty members (teaching staff members), both non-Saudi contractors from universities outside the Kingdom, as well as Saudis who completed their scholarships for master degree and PhD degree and returned back to work at the university, as well as newly appointed teaching assistants.</p> <p>Detailed objectives of the program:</p> <ol style="list-style-type: none">(1) Facilitate the integration of newly appointed teaching staff members into the university as soon as possible.(2) - Introducing newly appointed teaching staff members to the history, mission and goals of the university.(3) - Introducing newly appointed teaching staff members to university regulations, rules and official procedures.(4) - Introducing newly appointed teaching staff members to the Library and other sources of information available.(5)- Introducing newly appointed teaching staff members to research resources and services available.(6)- Bring to the awareness of the newly appointed teaching staff members the places of services within the campus area; such as medical clinics and gymnasiums and other non-academic facilities.(7) - Increase the efficiency and effectiveness of professional production among newly appointed teaching staff members.(8)- Developing the teaching, assessment and research skills of newly appointed faculty members (teaching staff members).		
b. List recommendations for improvement by teaching staff.		
<p>The orientation program has been receiving praises from participating new teaching staff, their academic departments and participating supporting deanships. Most of the strengths of the orientation program is that it helps new teaching staff to get familiar with the university academic and administrative rules and regulations. Also it helps new teaching staff to</p>		

identify all the facilities available and various supporting deanships and their services and regulations.

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

N / A

4. Professional Development Activities for Faculty, Teaching and Other Staff	How many Participated	
	Teaching Staff	Other Staff
a. Activities Provided		
Teaching strategies at university level (5 hours workshop)		
Active learning (5 hours workshop)		
Students assessments methods (5 hours workshop)		
b. Summary analysis on usefulness of activities based on participant's evaluations or other evaluation methods.		
Data not available		

H. Independent Opinion on Quality of the Program (e.g. head of another similar department / program offering comment on evidence received and conclusions reached).

The program was revised by Prof. Iqbal Ahmad, a visiting professor of agricultural microbiology from Aligarh Muslim University, India. Professor Iqbal Ahmad had served an 8 month service contract with the Department of Biology, which include two visits to the Department, to fulfill various tasks, including revision of BSc, MSc and PhD study plans, giving seminars and workshops, and perform collaborative research. Below the main comments of Prof. Ahmad, and entire evaluation given by him is attached with this report.

1. Matters Raised by Evaluator Giving Opinion	Comments by Program Coordinator
<p>Program Strength:</p> <p>(1)- The course is well prepared in its structure and organization and suitably divided in eight different levels in a four years layout programme.</p> <p>(2)- The objective of the course is well defined and expected to yield quality teaching, learning and skill development in the students. it covers a wide spectrum of courses and suitably linked with its prerequisite when needed.</p> <p>(3)- Combination of courses selected at each level</p>	

<p>with increasing advancement will help student to understand and perform better.</p> <p>(4)- Overall this course programme will provide a comprehensive teaching in all domain of microbiology and student will have enough freedom and choice to develop him as self as microbiologist in the domain of his interest.</p> <p>Weakness of the program: Apparently there is no specific weakness in the proposed program. However practical training in microbiology in always challenging but interesting and time consuming. Therefore, practical aspects should be included in such a manner that it gets completed in t time frame work allotted to each course and students gets extra time if the experiments are to be repeated.</p>	
<p>2. Implications for Planning for the Program</p> <p>Scope for improvement: There is always a scope for improvement. The course structure must be viewed considering the local constraints, demands and scope at both national and international levels. After completing one round/ batch feedback from teachers and students may be taken to improve it. In future some courses may be introduced to enhance the strong background and understanding of subject such as classical to molecular genetics of human/ plant/ microbes. Some paper may be introduced which exclusively covers fundamentals of the basic to new techniques starting from microbiology/biochemistry and molecular biology.</p>	

Program KPI and Assessment Table

KPI #	KPI	KPI Target Benchmark	KPI Actual Benchmark	KPI Internal Benchmarks BSc Microbiology (King Saud University, Riyadh, KSA)	KPI External Benchmarks BSc Microbiology (Imperial College, London, UK)	KPI Analysis	KPI New Target Benchmark
1	Students overall evaluation on the quality of their learning experience	5.0 (100 %)	4.5 (87 %) Program evaluation survey	No data available	79 % satisfied (170 survey, only 73 responded) www.unistats.direct.gov.uk	See below the table	5.0
2	Proportion of courses in which students evaluations were conducted during the year	4.0 (80 %)	2.0 (40 %) Course evaluation survey	No data available	No data available	See below the table	4.0
3	Students overall rating on the quality of their courses	5.0 (100 %)	3.5 (76 %) Course / program evaluation survey	No data available	79 % satisfied (170 survey, only 73 responded) www.unistats.direct.gov.uk	See below the table	5.0

4	Proportion of teaching staff with verified doctoral qualifications	5.0 (100%)	5.0 (100%)	No data available	5.0 (100%)	See below the table	5.0 (100%)
5	Percentage of students entering the program who successfully completed the first year	4.5 (85 %)	3.9 (78 %) Department al 5 years cohort analysis	No data available	No data available	See below the table	4.5 (85 %)
6	Number of referred publications in the previous year per full time equivalent teaching staff	4.0 (80%)	3.5 (70%) Annual Department al research outcome analysis	No data available		See below the table	4.0 (80%)

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

(1)- Students overall evaluation on the quality of their learning experience:

This year we tried to survey a total of 54 students who already graduated and being employed, fortunately all 54 (100 %) students responded. We had an 87% satisfaction of the overall quality of their learning experience. Unfortunately, we are still having very low number of final year students responded to our survey, all of them (100%) gave either (strongly agree) or (agree) on the question concerning the overall quality of the learning experience. We aim to encourage more students to respond to our survey next year.

(2)- Proportion of courses in which students evaluations were conducted during the year:

This year we were unable to conduct course evaluation surveys, very low proportions of the courses were survey (40 %), probably this due to low number of students attending the courses due to the lack of interests from large number of students to conducts such surveys, or, due to the low number of students who are attending some of the courses, particularly those courses in the old study plan (edition 18). We aim to perform more course evaluation surveys. We will also conduct an evaluation of a random sample of examination papers

as well as evaluation to the extent of which the examination questions meet the quality standards.

(3)- Students overall rating on the quality of their courses:

Although there was very low number of course evaluation surveys conducted this year, majority of the students were satisfied with the quality of teaching they received. In all courses surveyed the students stressed that the teachers have great knowledge of the courses they were teaching. The most common suggestion is that there was lack of some laboratory materials that hinder the completion of all scheduled laboratory sessions.

(4)- Proportion of teaching staff with verified doctoral qualifications:

All the teaching staff in the BSc Microbiology program are PhD holders. In fact, they obtain their doctoral degrees from various reputable institutions in U.K., U.S.A., Germany and Egypt. A blind of different teaching/research backgrounds, different nationalities that give wide learning experience to the students enrolling in this program. By 2018 two teaching assistant currently on scholarship to obtain their PhD from the U.K. and Canada will return after successful completion of their studies and that will add to the overall diversity of the teaching staff in the Bsc Microbiology program.

(5)- Percentage of students entering the program who successfully completed the first year:

Based on our five-year cohort study on students enrolling and graduating this program, we noted in (2012/2013), only 6 students were enrolled, by which 83.3 % of the students completed the first year successfully. The third year of the cohort study showed increase of the enrollment students (36 students), by which 29 students (80.5 %), successfully passed the first year. The fourth year of the cohort study showed increase in enrollment (42 students) and increase in the percentage of successful completion of the first year where all 42 students (100 %) successfully passed the first year. In 2015/2016 intake, 26 students were enrolled, yet only 10 students (38.5 %) were completed the first year. This current year 2017/2018 only 35 students enrolled by which all of them (100 %) successfully passed the first year with a GPA no less than 2.0 out of 4.0.

(6)- Number of referred publications in the previous year per full time equivalent teaching staff:

In 2016 the teaching staff members in the BSc Microbiology program at the department of Biology were able to publish a total of (15) research articles in reputable international journals, most of which are well indexed (ISI, Scopus, PubMed), some of which with good impact factor (ISI Impact Factor). In addition to a number of manuscripts submitted in November and December 2016, and if accepted,

should be published in 2017. These research articles were varied between collaboration between departmental microbiology group (5 research articles), and collaboration between departmental microbiology group and researchers from other departments within UQU as well as researchers from other institutions (e.g. Fayoum University: Egypt; Aligarh Muslim University: India). Given the vast research experience and enthusiasm of the microbiology teaching staff members we consider that the number of publications in 2016 (15 in total) is somewhat less than what we hope. This is possibly due to multi factors associated with the research projects and/or the involvement of teaching staff members with their teaching and other departmental duties. We aim to increase the number of research publications in 2017 keeping mind maintaining the quality of research and searching for more collaborations with researchers within UQU various departments and local universities in Saudi Arabia and beyond.

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

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

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

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

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

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

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

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

Program Action Plan Table

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

No.	Recommendations	Actions	Assessment	Responsible	Start	Completion
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			Criteria	Person	Date	Date
1	Seek more respondents to program evaluation survey from graduate students	Survey forms will be prepared online using Google forms and sent to graduate students to their emails.	Survey analysis	Dr. Hussein H. Abulreesh	September 2018	December 2018
2	Seek more respondents to program evaluation surveys from final year Students	Survey forms will be handed to students to be filled prior receiving their certificates	Survey analysis	Program coordinator	June 2018	September 2018
3	Perform more course evaluation surveys	Evaluation forms will be distributed to students one week prior the final examinations	Survey analysis	Each individual teacher	End of semester 1, end of semester 2, end of summer semester (where applicable)	September 2018
4	Perform random evaluation of a random samples of examination papers	The program quality committee will chose 5 different courses to perform the evaluation	An official form has been suggested the University deanship of Quality Assurance. This form has been approved to use by the National Commission for Academic Accreditation and Assessment (NCAAA)	Program quality committee	End of semester 1, end of semester 2, end of summer semester (where applicable)	September 2018

5	Perform evaluation of the extent to which the examination papers meet the quality standards	The program quality committee will chose 5 different courses to perform the evaluation	An official form has been suggested the the University deanship of Quality Assurance. This form has been approved to use by the National Commission for Academic Accreditation and Assessment (NCAA)	Program quality committee	End of semester 1, end of semester 2, end of summer semester (where applicable)	September 2018
6						
Action Plan Analysis (List the strengths and recommendations for improvement of the Program Action Plan).						

I. Action Plan Progress Report

1. Progress on Implementation of Previous Year's Action Plans N / A				
Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
a. Seek more respondents to program evaluation survey from graduate students	November 2017	Dr. Hussein H. Abulreesh	yes	

Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
b. Seek more respondents to program evaluation surveys from final year Students	September 2017	Head of Department	Yes	
Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
c. Perform more course evaluation surveys	June 2017	Each individual teaching staff member	Yes	
Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
d. Perform random evaluation of a random samples of examination papers	June 2017	Program quality committee	Yes	
Action Planned	Planned Completion Date	Person Responsible	Completed	If Not Completed, Give Reasons
e. Perform evaluation of the extent to which the examination papers meet the quality standards	June 2017	Program quality committee	yes	

Program Chair/ Coordinator Name: _____

Signature: _____ **Date Report Completed:** _____

Received by: _____ **Dean/Department Head**

Signature: _____ **Date:** _____

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