

ATTACHMENT 2 (c)

Annual Program Report

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

**ANNUAL PROGRAM REPORT
(APR)**

Program Eligibility: The program is to submit the two most recent APRs as part of the requirements for program eligibility using the NCAAA 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:	King Saud University	Date of Report:	03-2015
2. College/ Department:	College of Food and Agriculture Sciences/Department of Food Science and Human Nutrition		
3. Dean:	Dr. Fahad Nasser Ibrahiem Al- Barakah		
4. List all branches/locations offering this program	<u>Diriyah campus</u>		

A. Program Identification and General Information

Program title and code Food Science and Human Nutrition (FSN)
Name and position of person completing the APR Dr. Fahad AL-Juhaimi, Chairman Phone: +966-11-4678408 Cell: +966-50-3217761 Fax: +966-11-4678394 faljuhaimi@ksu.edu.sa
Academic year to which this report applies. 2013-2014

B Statistical Information	
1. Number of students who started the program in the year concerned:	<input type="text" value="85"/>
2. (a) Number of students who completed the program in the year concerned:	<input type="text" value="41"/>
Completed the final year of the program:	
Completed major tracks within the program (if applicable)	<input type="text"/>
Title.....No	<input type="text"/>
Title.....No	<input type="text"/>
Title.....No	<input type="text"/>
Title.....No	<input type="text"/>
2. (b) Completed an intermediate award specified as an early exit point (if any)	<input type="text" value="NA"/>
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.)	<input type="text" value="48.2%"/>
(b) Percentage of students who completed an intermediate award (if any) (e.g. Associate degree within a bachelor degree program)	<input type="text" value="NA"/>
(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).

*The apparent completion rate does not mean that only 48.2% students completed the program successfully because 41 students who graduated this year are those who might have enrolled 4 years ago (2009-2010) or even earlier. So if we calculate the apparent completion rate of 2009/10 enrollment it may be $41 * 100 / 52 = 79\%$*

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). Update the years as needed.

Enrollment Management and Cohort Analysis (Table 1)

						Current Year
Student Category	2008-09 29/30	2009-10 30/31	2010-11 31/32	2011-12 32/33	2012-13 33/34	2013-14 34/35
Total cohort enrollment *	53	52	48	49	80	85
Retained till year end	-	53	45	46	64	35
Withdrawn during the year and re-enrolled the following year	-	-	0	0	0	0
Withdrawn for good	-	-	-	0	0	0
Graduated successfully	-	-	-		58	41

* The data is about the students who enroll food chemistry subject at FSN department in 4th semester because this is starting point for the students who are expected to complete their degrees at FSN department

a. Provide an analysis for the cohort that started PYP on 2009 – 10

The total student intake during 2009-10 was 52 which was almost similar to the previous year, 86% students continued till the next year and they were expected to graduate in 2013-2014. The data shows that 41 students graduated on 2013-14 but necessarily they may not be all those who enrolled in 2009-10. It can be seen that next year the student number was 53 which means a student from a previous year may have re-joined the program after withdrawing for a year.

- b. Provide an analysis for the cohort that started PYP on 2010 – 11

The student enrolment in food chemistry (the starting point) was 48 during this year which was around 7% lower than the previous year which may be due to the fact that some students may not have succeeded in completing the pre-requisite Bio-CH-101 course at the chemistry department.

- c. Provide an analysis for the cohort that started PYP on 2011 – 12

During this year the students enrolling food chemistry was 49 and it was consistent with that of the previous year

- d. Provide an analysis for the cohort that started PYP on 2012 – 13

A total of 80 student enrolled in this year and this increased number may be due to more students deciding to take food science or human nutrition as majors and also because some students who could not fulfill food chemistry pre-requisite last year, joined this course in 2012-13.

- e. Provide an analysis for the cohort that started PYP on 2013 – 14

The trend in increase in number of student remained consistent during the currently reported year also. The retained student's number was 35 but the data is only for one semester whereas enrollment data is for two semesters. So it is expected that most of the 85 students who enrolled in previous year will stay and remaining students will take the quality control (FSN 456) course next semester.

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

Number Surveyed Number Responded Response Rate %

Destination	Not Available for Employment		Available for Employment		
	Further Study	Other Reasons	Employed in Subject Field	Other Employment	Unemployed
Number			Food science	King Saud	

Percent of Respondents					
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Analysis: List the strengths and recommendations

Most of the graduate students joined prestigious food companies such as Almarai, Alrabie, Saudi Food and Drug Administration, Ministry of commerce.

There is need to collect more information about their evaluation of the program in terms of its strengths and weaknesses.

C. Program Context

<p>Significant changes within the institution affecting the program (if any) during the past year:</p> <p>There were not much significant changes within the institution during the past year however the focus remained on the KSU's major transformation in to an active, more compact and research-oriented institution based on the KSU 2030 vision, which is having tremendous implications, calling for a new mindset, procedures, human, informational, and resource organizational systems, that are beginning to unfold and take shape.</p> <p>The FSN expanded its research activities by using all programs launched by the Deanship of Scientific Research and added a number of experts to the department. The addition of the new staff increased the number of publications and increased the external funds for up to 16 Million Saudi Riyals.</p> <p>Implications for the program:</p> <p>These changes have positively affected FSN program by improvements in overall quality of department, teaching and evaluation systems. There was a significant increase in research publications along with achieving more funds for lab facilities improvement is highly advantageous to the students pursuing their degrees in FSN. The teaching, course evaluation, course reporting and various other departmental activities now have a more quality oriented approach and striving for continuous improvement.</p>
<p>2. Significant changes external to the institution affecting the program (if any) during the past year.</p> <p>The country's economy and policies are now shifting from natural resources towards industrialization and creation of a knowledge based society. The youth population is now more interested in acquiring applied degrees that may have more market value.</p> <p>The department also keeps in touch through interaction with Institute of Food Technologists or IFT which is considered a prestigious professional organization in the field of food science and technology and in order to comply with its professional requirements. FSN is closely observing any changes, developments occurring external to institution such as industrial demands and international trends to improve its program. The increase research activities in the department are in particular helping to achieve compliance with new trends in food science and nutrition.</p>

Implications for the program

There is generally an increase in the number of students enrolling at the FSN department e.g. during the year 2012-13 there were 80 students which increased to 85 students during year 2013-2014. The department future goals, objectives and strategies are very much consistent with the increase in demand and the planning and expansion of both lab infrastructure and induction of more faculties is related to the possibilities of increase in number of students pursuing their degrees at FSN. The departmental administration from quality perspectives is much better and there is now a much better well defined system for course reporting, specifications and assessment etc.

D. Course Information Summary

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

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

The course reports were prepared by the faculty who taught the courses and were shared between faculty members. The course reports included planned course contents, contact hours planned for each topic, credit hours, learning outcomes, grades distribution, resources and facilities, results, planning for improvement and comments from other faculty members such as participation in correcting each other's exam papers. These reports were helpful in assessing the performance of different students, enrollment trends etc., and interest of students in different courses. These reports also outline the strategies and goals set for a certain course. It was also decided by the department that course reports would also contain evaluation done by a faculty member other than the one who actually taught the course along with student assessment. This will be helpful in evaluating the quality of teaching and student performance in a specific course by an independent evaluator.

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

(1.) Completion rate analysis:

The course reports gave an idea about completion rate and in most cases the course completion rate was 100%, however in some cases some of the students may have skipped the course due to multiple reasons and some of them may have not succeeded in passing a certain course.

(2.) Grade distribution analysis:

The course reports clearly presented the grade distribution and showed that which grade was obtained by most of the students. In different courses groups of students or majority of a class obtained a certain grade such 'B' showing similarity in their learning, however there were variations

too as some students performed excellent whereas few were below average also.

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

The trend for student enrollment into a specific course can be highlighted. The student enrollment for instance remain variable in FNS 316 (Food Chemistry) which is the starting point for students planning to complete their agricultural science degree with either food science or human nutrition majors.

2. Analysis of Significant Results or Variations.

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.

a. Course	Significant result or variation
FNS 316, Food Chemistry Credit Hours (3+1)	According to the CR submitted for the year 2013-14, a total of 85 students enrolled this course and 84 of them passed the course. However all of them secured either C or D grade and none fell within A or B grades.
Investigation undertaken	
The course instructor reported reasons for this significant variation or why the performance of the students was not very good or why they passed the course in lower grades.	
Reason for significant result or variation	
It may be inferred that students may lack some rigorous background knowledge of natural or food chemistry and they may not be very hardworking and only focus on passing the course..	
Action taken (if required)	
A more direct analysis and improvement of course delivery was recommended so that the students performance can be improved with respect to this course.	
b. Course	Significant result or variation
FNS 321, Food Microbiology	According to the latest report of this course (22-05-2014) a total of 14 students enrolled this course however only half of them completed it with only 5 actually passing the course.
Investigation undertaken	
It was observed that 4 students withdraw these courses and 3 were denied entry to the course. Out	

<p>of the remaining 7 students 2 failed and 5 completed it successfully.</p> <p>Reason for significant result or variation</p> <p>The course is split into 2+1 (theoretical + lab work) and the microbiological facilities required for this particular course are satisfactory. The demonstrators are trained enough to effectively deliver different topics related to food microbiology. The microbiology lab is equipped with necessary devices, microbial media and accessories to demonstrate microbial techniques to the students.</p> <p>Some students voluntarily leave the course and some may lack basic skills or a pre-requisite course for taking the food microbiology course.</p>
<p>Action taken (if required)</p> <p>N/A</p>

(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.		
Course title and code	Explanation	Compensating action if required
NA		
NA		
(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)		
Course	Unit of work	Reason
NA		
Compensating action if required		
NA		

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

<p>Preparatory year program college took some credit hours which were previously taught by the department. This put pressure on the time allocated for the FSN courses</p>	<p>The department had to modify the list of courses by adding more courses to compensate for fulfilling the credits requirement for students joining the department major program</p>	<p>The need for new courses in response to different circumstances and requirement should be one of the topics of faculty and council meetings.</p>
<p>There is generally a gap between planned and actual enrollment at the department</p>	<p>This may result in mistake in forecasting for a course requirements and planning as too high enrollment can sometime result in difficulties for course instructor/faculty</p>	<p>This issue has direct relationship with students' registration which is controlled solely by the registrar office without input from the department. Therefore, the department deals with the number of students who attend are more than its capacity by opening new sections.</p>

F. Summary Program Evaluation

1. Graduating Students Evaluation (To be reported on in years when surveys are undertaken)	
Date of Survey	2013
Attach survey report	
<p>a. List most important recommendations for improvement, strengths and suggestions</p> <ol style="list-style-type: none"> 1. The students suggested for establishing a department library. 2. Students wanted their opinion to be frequently taken for improvement of the program. 3. Alumni association should be more active at the department level. 4. The courses revision should be aligned with feedback from the private and public sector employing graduates. 5. There is need to add more practical courses that are in line with industrial requirements. 	<p>Analysis (e.g. Assessment, action already taken, other considerations, strengths and recommendation for improvement.)</p> <p>The following is being done and planned in response to the graduated students survey:</p> <ol style="list-style-type: none"> 1. The central library is well equipped with different database and establishment of a library at college level can also be considered. 2. Practice of taking opinions of students, external organization and reviewers is now being followed more aggressively. 3. The improvements in course specifications are being undertaken that can fulfill the future needs of students and their employers.
<p>b. Changes proposed in the program (if any) in response to this analysis and feedback.</p> <p>The department is now keener in improving the program in view of such evaluations; the practice of external and internal evaluations by reviewers, students and examiners is being followed more frequently. The specifications of courses taught at the department are now more properly listed down and there is keen interest by faculty, instructors and quality management team to make them more updated, well-established. Each course is being given a considerable attention and attempts are being made that all the requirements for achieving the objectives of each course are available, functional and utilized.</p>	

2. Other Evaluation (e.g. Evaluations by employers or other stakeholders, external review)

Describe evaluation process

An independent external review was not conducted during the currently reported year however previously obtained evaluations by independent evaluator and those of consultant from NCAAA were taken into consideration for improvements in the program during this year as well.

The reviewers carried out following activities during their visits:

- Visit to the laboratories of the department and the main library
- Visit to other learning facilities of the department
- Review of quality assurance documents of the DAERS (ex: program and course specifications, annual reports, strategic plan, KPIs and other relevant documents), and statistics related to the 11 accreditations standards of the NCAAA,
- Visit to the web-site of the KSU and the CFAS, and
- Review of manuals, brochures and handbook.

The reviewer's comments related to the program's strength were focused on the following points:

1. High faculty support for students which was shown on the student's survey results and data analysis.
2. International accreditation (AIC) and ISO obtained by the department, after reviewing the document presented to AIC.
3. Research grants and publication performed by the faculty, as shown in the program annual report and course report and documented in standard 10 of this SSR.
4. Community service as documented in standard 11
5. Highly qualified faculty members of the department as presented in the table of teaching staff in section C of this write-up.
6. Well established college strategic plan.

In addition, the reviewers listed some limitations of the department focused on:

1. English language use in class rooms;
2. Increase student's enrolment as well as more extra-curricular activities for students. The detailed comments and suggestion by the reviewer are listed in the preceding table.

<p>a. List most important recommendations for improvement, strengths and suggestions for improvement.</p> <p>Strength Following is the list of strengths as mentioned by the IFT and consultant:</p> <ol style="list-style-type: none"> 1. Continuous quality improvement in teaching facilities and equipment is commendable. 2. The program has a strong core of teaching staff that are highly qualified and experienced in their field. 3. There is strong evidence that academic staffs are actively engaged in research. 4. Providing services to the community is an integral part of the college strategic direction and service to community is well documented. <p>Limitations and Suggestions for Improvement: Following areas were highlighted for improvement:</p> <p>Following areas were highlighted for improvement:</p> <ol style="list-style-type: none"> 1: Reviewers pointed out need for quality assurance cell in previous surveys. 2: They also highlighted the importance of establishing more systematic and up-to-date library for students in the department. 3: The scientific equipment should be managed properly and there should be a maintenance unit taking care of any faults and ensuring proper functioning. 	<p>(e.g. Analysis of recommendations for improvement: Are recommendations valid and what action will be taken, action already taken, or other considerations?)</p> <p>FSN has a well established quality management system unit and accreditation unit now. The department has designated a full time employee to organize and maintain all aspects of quality such as surveys, course reports, program annual reports, communication with college office of quality, and distribute any new information from NCAAA to all faculty members.</p> <p>There is a well established central library and efforts are being made to establish smaller libraries at college and departmental levels.</p>
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b. Changes proposed in the program (if any) in response to this feedback.		
There were no major changes proposed except those highlighted issues which were addressed. Quality management unit is now in place, functioning under the guidance of the chairman and director of the unit. The quality documents are now being prepared well in conformance to the standards set by NCAAA.		
2. Ratings on Sub-Standards of Standard 4 by program faculty and teaching staff; 4.1 to 4.10.		
(a) List 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).		
Sub-Standards	Best Practices Followed (Y/N)	5 Star Rating
4.1. Student Learning Outcomes	Y	4 star
4.2. Program Development Processes	Y	5 star
4.. Program Evaluation and Review Processes	Y	4 star
4.4. Student Assessment	Y	4 star
4.5. Educational Assistance for Students	Y	4 star
4.6. Quality of Teaching	Y	4 star
4.7. Support for Improvements in Quality of Teaching	Y	4 star
4.8. Qualifications and Experience of Teaching Staff	Y	4 star
4.9. Field Experience Activities	Y	4 star
4.10. Partnership Arrangements With Other Institutions	Y	4 star
List priorities for improvement.		
<ol style="list-style-type: none"> 1. Increased faculty development activities, focused topics intended in faculty development, and comprehensive strategies for identification of special attributes of students graduating from the department should be developed. 2. Setting flexible guidelines to make minor changes in program and/or courses according to evaluation should be taken in consideration and this should be done as soon as possible. 3. King Saud University as well as colleges and departments should encourages students to take course evaluations seriously and should be insured that their evaluations are important and will be used to improve the program and the performance of the department. 4. Guidelines should be adapted to choose and encourage students showing high performance after they pass the first year in the department. Such encouragement will keep these students motivated. 5. Flexible guidelines should be set to make appropriate adjustments to the courses according to comments which students may addressed in their evaluations of the course reports. 6. Formal recognition should be given also by departments. 7. Preparation, writing and discussion of internship reports by students need to be improved. 		

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

Strength

1. The new program was thoroughly evaluated by the educational committee. Requirements applicable to the field of study were used. These requirements were the IFT (Institute of Food Technologists) guidelines for the program as well as the guidelines of AND (Academy of Nutrition and Dietetics).
2. National qualifications and standards were followed (IFT and AND) and some of the American Universities were used as benchmarks.
3. Comments raised by the external reviewer were taken into consideration as mentioned previously. This leadership of the department is open for comments with regard to improving the program, including internal and external comments.
4. Text books are available and students pay only 25% of their original prices.
5. Attendance is monitored and enforced strongly by the teaching staff.
6. The Deanship of Skills Development offers workshops in teaching skills for the teaching staff.
7. Formal recognition is given only by the institution (King Saud University). This is to make sure that the mission and the objectives of the department are in line with KSU.
8. Most teaching staffs graduated from American's Universities. Their degrees obtained by taking courses as well as performing theses, in contrast with graduate schools from other countries.
9. Finally, the department hosts highly qualified international trained faculty members, good support system for all faculty members, strong and entrusted faculty members, and continuous faculty development programs.

Recommendations:

1. Minor changes required for keeping program up to date and responding to course and program evaluation is not applicable currently. This is because no student until now indicated any such changes in the evaluation form. However, the department discussed this point and concluded that any change can be done according to the advice of educational committee. This committee should study the proposed change and its recommendations should be approved by the department council.
2. Student evaluation is done for each course and results of the evaluations are distributed to all teaching staff. However, students are not taking this issue seriously as they should.
3. Some of the teaching staff attends the workshops offered by the Deanship of Skills Development. Many criticisms were raised regarding some of the offered workshops concerning their quality and benefits. Therefore, deanship of skills development should distribute questionnaire to determine the needs of the teaching staff.
4. Preparation, writing, and discussion of reports by students at the end of the internship program are considered below average

G. Program Course Evaluation



1. List 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
FSN202/Principles of Food Science	✓				
FSN206/Principles of Human Nutrition	✓				
FSN315/Nutritional Biochemistry	✓				
FSN316/Food Chemistry	✓				
FSN317/Food Analysis	✓				
FSN323/Food Microbiology	✓				
FSN325/Sanitation and Food Safety	✓				
FSN352/Food Processing and Preservation	✓				
FSN372/Assessment of Nutritional Status	✓				
FSN 376/Diets Planning	✓				
FSN 456/Quality Control and sensory Evaluation of Foods	✓				
FSN420/Food Biotechnology	✓				
FSN422/Food Service	✓				
FSN433/Dairy Science and Technology	✓				
FSN435/Dates Science and Technology	✓				
FSN437/Cereal Science and Technology	✓				
FSN439/Meat Science and Technology	✓				
FSN471/Development of Food Products	✓				

FSN361/Nutrition during the Life Cycle	✓				
FSN422/Food Service	✓				
FSN464/Community Nutrition	✓				
FSN 465/Applied Nutrition	✓				
FSN 472/Problems of Nutrition in Developing Countries	✓				
FSN 477/Micronutrients	✓				
FSN 481/Selected Topics in Food and Nutrition	✓				

(Add items or attach list if necessary)

2. 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: Diriyah campus	Ministry of higher education	1965
2:		

List all courses taught by this program and for this program that are in other programs (if any).

Year	Course Code	Course Title	Required or Elective	Credit Hours	College or Department
Prep Year	ENGL 140	English Language 1	Required	8	English language department
	MATH 140	Mathematics 1	Required	2	Department of mathematics
	CSK 140	Communication Skills	Required	2	
	TEC 140	Computer Skills & Information Tech.		3	College of computer science
	ENGL 150	English Language 2		8	English language department
	MATH	Mathematics 2 (calculus)	Required	3	Department of mathematics

	150				
	LTS 140	Learning, Thinking and Research Skills	Required	3	
	CHS 140	Health and Fitness	Required	1	College of Health sciences
	ENT 101	Entrepreneurship	Required	1	
1st Year Semester 1					
1st Year Semester 2					
2nd Year Semester 1	202 FSN	Principles of Food Science	Required	2 (2+0)	Food science and nutrition dept.
	101 IC	Introduction to Islamic Culture	Elective	2 (2+0)	Islamic studies department
	101 PHYS	General Physics (1)	Required	4 (3+1)	Department of physics
	101 BCH	General Biochemistry	Required	4 (3+1)	Department of biochemistry
	102 BOT	Botany	Required	3 (2+1)	Department of botany
	106 STAT	Bio Statistics	Required	2 (2+0)	Department of statistics
	205 AGEC	Principles of Agricultural Economics	Required	3 (3+0)	Department of agri-economics
2nd Year Semester 2	206 FSN	Principles of Human Nutrition	Required	2 (2+0)	Food science and nutrition dept.
	316 FSN	Food Chemistry	Required	3 (3+0)	Food science and nutrition dept.
	103 ZOO	Principles of Zoology	Required	3 (2+1)	Department of zoology
	103 CHEM	General Chemistry (1)	Required	3 (3+0)	Department of chemistry
	104 CHEM	General Chemistry Lab	Elective	1 (0+1)	Department of chemistry
	211 PLPT	Agricultural Microbiology	Required	3 (2+1)	Dept. of Plant production
	332 ZOO	General Physiology	Required	3 (2+1)	Department of zoology

3rd Year Semester 1	315 FSN	Nutritional Biochemistry	Required	3 (3+0)	Food science and nutrition dept.
	317 FSN	Food Analysis	Required	3 (1+2)	Food science and nutrition dept.
	323 FSN	Food Microbiology	Required	4 (3+1)	Food science and nutrition dept.
	IC 102	Islam and Community Structure	Elective	2 (2+0)	
	106 ANPR	Animal Production Systems	Required	2 (2+0)	Department of animal production
	108-1 CHEM	Introductory Organic Chemistry	Required	4 (3+1)	Department of chemistry
3rd Year Semester 2	325 FSN	Sanitation and Food Safety	Required	2 (2+0)	Food science and nutrition dept.
	352 FSN	Food Processing and Preservation	Required	3 (2+1)	Food science and nutrition dept.
	372 FSN	Assessment of Nutritional Status	Required	2 (1+1)	Food science and nutrition dept.
	376 FSN	Diets Planning	Required	2 (1+1)	Food science and nutrition dept.
	456 FSN	Quality Control and sensory Evaluation of Foods	Required	2 (1+1)	Food science and nutrition dept.
	103 IC	Economic System in Islam	Elective	2 (2+0)	
	201 PPS	Principles of Plant Production	Required	3 (2+1)	Department of plant production
	470 CHS	Nutrition and Disease	Required	3 (3+0)	College of health science
4th Year Semester 1	FSN 400	Cooperative Learning	Required	12	Food science and nutrition dept. in collaboration with outside organizations
4th Year Semester 2 1st option	104 IC	Principles of Political System in Islam	Elective	2 (2+0)	
	Supporting Courses for Cooperative Learning in Food Science Fields Choose 15 credit hrs				
	420 FSN	Food Biotechnology	Required	2 (2+0)	Food science and nutrition dept.
	422 FSN	Food Service	Required	2 (2+0)	Food science and nutrition dept.
	433 FSN	Dairy Science and	Required	4 (2+2)	Food science and

		Technology			nutrition dept.
	435 FSN	Dates Science and Technology	Required	2 (2+0)	Food science and nutrition dept.
	437 FSN	Cereal Science and Technology	Required	4 (2+2)	Food science and nutrition dept.
	439 FSN	Meat Science and Technology	Required	4 (2+2)	Food science and nutrition dept.
	471 FSN	Development of Food Products	Required	2 (1+1)	Food science and nutrition dept.
	320 AGEN	Principles of Food Process Engineering	Required	3 (2+1)	Food science and nutrition dept.
4th Year Semester 2 2nd option	104 IC	Principles of Political System in Islam	Elective		
	Supporting Courses for Cooperative Learning in Human Nutrition Fields Choose 15 credit hrs				
	361 FSN	Nutrition during the Life Cycle	Required		Food science and nutrition dept.
	422 FSN	Food Service	Required		Food science and nutrition dept.
	464 FSN	Community Nutrition	Required		Food science and nutrition dept.
	465 FSN	Applied Nutrition	Required		Food science and nutrition dept.
	472 FSN	Problems of Nutrition in Developing Countries	Required		Food science and nutrition dept.
	477 FSN	Micronutrients	Required		Food science and nutrition dept.
	481 FSN	Selected Topics in Food and Nutrition	Required		Food science and nutrition dept.
	104 PA	Principle of General Administration	Required		Food science and nutrition dept.
	463 SOC	Medical Social Work	Required		
Include additional years if needed					

3. Program Learning Outcome Assessment. Design a program learning outcome assessment plan using the NCAAA accreditation four year cycle. By the end of the four year cycle all program learning outcomes are to 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	Date of Assessment
1.0	Knowledge		
1.1	Define the subject matter of food science and nutrition	Exams, quizzes, midterm finals, papers/projects, and special assignment.	2014
1.2	List the subjects and the areas of knowledge required		2014
1.3	Describe knowledge in analysis, design and development of subject application.		2014
1.4	Understand the concepts of Food Science Technology and Human Nutrition.		2014
1.5	Communicate food science and nutrition knowledge effectively with others in one-on-one, small-group, and large-group situations		2014
2.0	Cognitive Skills		
2.1	Apply and communicate knowledge to the intended.		2014
2.2	Develop comprehensive awareness of analytical skills, new product development, food industry problem solving, and meal planning for special cases.	30% of final grade to be based on practical exams and seminar Seminars. The remaining 70% are allocated for written exams	2014
2.3	Differentiate understand the reason for choosing different food processing methods as well as the effect of processing on the nutritional value of foods		2014
3.0	Interpersonal Skills & Responsibility		
3.1	Interpret a situation and decide possible source of problems and demonstrate ability to communicate the problem to others	Observation, Self-evaluation, Peers' evaluation, and Email communication between student and staff	2014
3.2	Demonstrate ability to recognize food production problems. Judge a nutrition situation related to disease such as malnutrition		2014

4.0	Communication, Information Technology, Numerical		
4.1	Interpret real malnutrition cases or troubleshoot a food- production problem in a production line.	Report evaluation and exams	2014
5.0	Psychomotor		
5.1	Perform diagnostics of food products or a nutrition situation and provide a technical report explaining the situation and possible solution or recommendation	Report evaluation and exams	2014

Provide “direct assessments” for the current year’s program learning outcomes, according to the dates provided above (G.2). A **KPI Assessment Table** is provided below. Each learning outcome should utilize a separate KPI table. Over the four (five/six) year cycle, all program learning outcomes are to be assessed and reported in the **Annual Program Report(s)**. Normally a program has 6 to 8 program learning outcomes. Therefore 1 to 3 learning outcomes are directly assessed each year.

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 # 3.1 Program KPI: Students overall evaluation on the quality of their learning experience at the institution	
Assessment Year: 2013-14 Program Learning Outcome: Students can understand, analyze and communicate different concepts related to the fields of food science, food technology and human nutrition.	
NQF Learning Domain	Knowledge
Target Benchmark	4/5 (i.e four out of five students should be satisfied with the knowledge they obtained through FSN program)
KPI Actual Benchmark	3.83/5
Internal Benchmark	4.5/5
External Benchmark	
New Target Benchmark	4.5/5
Analysis: (List strengths and recommendations)	
Strengths:	
<ol style="list-style-type: none"> 1. The faculty members of Food Science and Nutrition department are highly trained, qualified and committed to teaching, research, and community outreach programs. 2. The courses offered at the department are carefully designed and continuously updated in relations to the latest developments in the fields of food science and human nutrition. 3. Laboratories are well equipped with most of the necessary infrastructure required for 	

effective delivery of practical courses.

4. Institutional policies and procedures are adhered to for the verification of standards of achievement by students in relation to other institutions and the requirements of the National Qualifications Framework.

Recommendations

1. The gathered results of statistical analysis of quality and performance of the program and student evaluation should be used as guide for quality improvement.
2. The quality improvement and program planning recommendations should be imbedded in the daily administrative processes. Continue the use of standard forms and survey instruments for quality assurance processes and include any new unique needs of the program to ensure quality assurance follow-up.
3. Make certain the information on key performance indicators, related to knowledge and selected for the program, is provided regularly.

KPI # 3.4 Program KPI: Proportion of programs in which there was independent verification of standards of student's achievements by people external to the institution during the year

Assessment Year 2013-14 Program Learning Outcome: Students should have enough verifiable cognitive skills about food processing, product development, human nutrition, food analysis and food quality that they can effectively work according to the needs of foods industry or other related professional organizations.

NQF Learning Domain	Cognitive Skills
Target Benchmark	The department the requirements of the Institute of Food Technology (IFT) of Chicago as target
KPI Actual Benchmark	The department fulfilled all IFT requirements
Internal Benchmark	
External Benchmark	IFT requirements
New Target Benchmark	Maintain IFT requirements and become a member of IFT

Analysis: (List strengths and recommendations)

Strengths:

- The different types of learning outcomes in relation to cognitive skills are now set by the department
- The department is systematically assessing cognitive skills of students by conducting students and external survey and through professional institutes' verification.
- A methodical approach for students' cognitive skills was established by inviting outside program reviewers from national and international institutions in addition to complying with NCAAA requirements.

Recommendations for Improvements

- The department needs to develop more KPIs for students related to cognitive skills in addition to those specified by NCAAA
- Develop more relevant benchmarking to cognitive skills that meets employers

<p>expectations</p> <ul style="list-style-type: none"> • More information should be collected and feedback taken from employers of graduates who passed this program. This can help in improving the program and making it more applied for professional needs.
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KPI # 4.2 Program KPI: Students' overall evaluation on the quality of their courses (average rating of students on a five point scale on overall evaluation of courses)	
Assessment Year 2013-14 Program Learning Outcome: Students should be able to interpret and demonstrate a certain food science & technology/human nutrition related problem	
NQF Learning Domain	Interpersonal Skills & Responsibility
Target Benchmark	4/5
KPI Actual Benchmark	4/5
Internal Benchmark	3.87/5 (Agriculture Engineering)
External Benchmark	
New Target Benchmark	To remain consistent with the quality of courses in imparting required professional skills in the students
Analysis: (List strengths and recommendations)	
<p>Strengths</p> <ul style="list-style-type: none"> • The FSN department has defined the learning outcomes for interpersonal skills and responsibility • The department is systematically assessing students learning outcomes by conducting student's surveys for all courses, surveys of faculty and employees, and survey of alumni as well as employers. • Methodical approach for students learning outcome was established by inviting outside program reviewers from national and international institutions in addition to complying with NCAAA requirements. <p>Recommendations for Improvements</p> <ul style="list-style-type: none"> • The department needs to develop more KPIs for students learning outcomes in relation to interpersonal skills and responsibility in addition to those specified by NCAAA • The employers expectations should also be taken into consideration • The role of alumni and use their experience in improvement of different learning outcomes. 	

KPI # 4.2 Program KPI: Students' overall evaluation on the quality of their courses (Average rating of students on a five-point scale on overall evaluation of courses).	
Assessment Year 2010-11 Program Learning Outcome: Student should have the ability to interpret cases of malnutrition or trouble-shoot problem in a food production line.	
NQF Learning Domain	Communication, Information Technology, Numerical
Target Benchmark	4/5
KPI Actual	

Benchmark	
Internal Benchmark	4/5
External Benchmark	4/5
New Target Benchmark	4/5
Analysis: (List strengths and recommendations)	
Strengths	
<p>1. Students are given various type of problem solving tasks in different course in which they are encouraged to polish their numerical, communication and IT skills. The classrooms in FSN are well equipped with multimedia devices and there is internet facility throughout the college. Students have easy access to computers for collection of information in solving problems and completing their assignments.</p> <p>2. The department invites external reviewers for assessment of the quality of teaching and learning and these reviewers are from professional organizations such as IFT and also from other universities offering similar majors.</p> <p>3. The student feedbacks, teachers' evaluations and course improvements are continuously accomplished at the department.</p>	
Recommendations	
<p>1. Continue systematic monitoring the program after the changes made due to establishment of the prep year.</p> <p>2. More efforts are required for achieving or even excelling the set benchmark.</p> <p>3. More collaboration with food industries and nutrition related organizations should be established.</p>	

KPI # New KPI Program KPI: Under students' satisfaction domain, the overall ratio on the quality of their course by answering. I am happy with this course in general In the course evaluation survey.	
Assessment Year 2013-14 Program Learning Outcome: A student should feel enough equipped with professional skills in food science or human nutrition fields that he can diagnose a food product or nutrition related problem and become capable of explaining it along with solutions and recommendations.	
NQF Learning Domain	Psychomotor
Target Benchmark	4.5/5
KPI Actual Benchmark	3.7/5
Internal Benchmark	3.87/5 (Agriculture Engineering)
External Benchmark	
New Target Benchmark	4.5/5
Analysis: (List strengths and recommendations)	
Strength	

1. There was a thorough evaluation of the new program by the educational committee and these were based on the requirements set by IFT (Institute of Food Technologists) and AND (Academy of Nutrition and Dietetics).
2. The new program was based on national qualifications, external standards (IFT and AND) and benchmarks of some of the American Universities.
3. This leadership of the department is open for comments with regard to improving the program, including internal and external comments and it gives due consideration to all of them.
4. The new program will be applied to students in the academic year (1433/1434) which means that the department reassessment of the program conducted at least once every five years. This will allow overview and constant improvement of the program.
5. The stake holders and companies where most of the FSN graduates work are invited to review the program and the department coordinates well with them and knows their needs and demands.
6. The teaching skills of the teaching staff are continuously improved through workshops and programs arranged by Deanship of Skills Development.
7. Finally, the department hosts highly qualified internationally trained faculty members, good support system for all faculty members, strong and entrusted faculty members, and continuous faculty development programs.

Areas for improvement:

1. Minor changes required for keeping program up to date and responding to course and program evaluation is not applicable currently. This is because no student until now indicated any such changes in the evaluation form. Moreover, any change in the course and the program usually done every five years. However, the department discussed this point and concluded that any change can be done according to the advice of educational committee. This committee should study the proposed change and its recommendations should be approved by the department council.
2. Student evaluation is done for each course and results of the evaluations are distributed to all teaching staff. However, students are not taking this issue seriously as they should.
3. Some of the teaching staff attends the workshops offered by the Deanship of Skills Development. Many criticisms were raised regarding some of the offered workshops concerning their quality and benefits. Therefore, deanship of skills development should distribute questionnaire to determine the needs of the teaching staff.

3. Orientation programs for new teaching staff

Orientation programs provided? Yes No If offered how many participated?

a. Brief Description

For new faculty members, special workshops offered by the Deanship of Skills Development at King Saud University for new faculty members in a form of orientation. The university offers new faculty special financial support so that to kick off their research activities. This program is open for all new faculty members.

<p>b. List recommendations for improvement by teaching staff.</p> <p>The orientation programs can be included at college and department level so that new faculty members receive an immediate introduction about the department/college they are actually joining within the university.</p> <p>Department head can be assigned such a task by the concerned deanship along with provision of necessary requisites and personal trained in such programs.</p>
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<p>c. If orientation programs were not provided, give reasons.</p> <p>NA</p>
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4. Professional Development Activities for Faculty, Teaching and Other Staff	How many Participated	
	Teaching Staff	Other Staff
a. Activities Provided		
<ul style="list-style-type: none"> Attend the workshops organized by the Deanship of Quality at King Saud University 		
<ul style="list-style-type: none"> Attend the summer training offered by KSU abroad for a number of issues such as leadership skills development; enhance teaching and learning of faculty members. The program is offered every summer and it is open for all. 		
<ul style="list-style-type: none"> Sharing of "know-how" of new tools though short courses and seminars. 		
<ul style="list-style-type: none"> Participating in international workshops for personal professional improvement. 		
<ul style="list-style-type: none"> Faculty is encouraged to attend foreign universities research program for their sabbatical leave. 		
<ul style="list-style-type: none"> Local and international conferences attendance is supported by KSU as well. 		
<p>b. Summary analysis on usefulness of activities based on participant's evaluations or other evaluation methods.</p> <p>The above listed activities proved to be useful for refreshing the knowledge and skills of faculty and this has resulted in getting more research funds after providing new research ideas. Trainings, short courses, conferences, workshops etc. are always very useful professional development activities and KSU is fully supportive to our department for these.</p>		

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

1. Matters Raised by Evaluator Giving Opinion	Comment by Program Coordinator
<p>Independent opinion was obtained from external reviewers such as Institute of Food Technologists (IFT) who besides giving various positive comments about strengths of teaching and research being carried out at FSN department also suggested some areas for improvement such as:</p> <ol style="list-style-type: none"> 1. The gathered results of statistical analysis of quality and performance of the program should be used as guide for future plans for quality improvement. 2. The quality improvement and program planning recommendations should be imbedded in the daily administrative processes. 3. Continue the use of standard forms and survey instruments for quality assurance processes and include any new unique needs of the program to ensure quality assurance followup. 4. Make certain the information on key performance indicators that are selected for the program is provided regularly. 	<p>Considering the comments for areas improvement in functioning of FSN department following strategies are being planned:</p> <ol style="list-style-type: none"> 1. To hire qualified staff in the Academic Quality unit and provide needed training. 2. To ensure that specific indicators are identified for monitoring performance and make certain that appropriate benchmarks are selected for comparative evaluation of the achievement of goals and objectives and quality of performance. 3. Develop and maintain a database for quality and updates any quality development in the program. 4. To include quality assurance measures in all departmental quality committee meetings. 5. The interpretations of evidence of quality performance should be done by specialized personnel. 6. To ensure that the program administrators and teaching and other staff are committed to maintaining and improving the quality of the program.
<p>2. Implications for Planning for the Program</p> <p>These independent opinions prove to be useful for overall quality improvement at food science and human nutrition program. It also helped and directed the department to establish KPI and benchmarks for its performance evaluation; to properly document for ensuring quality, to give considerable importance to quality relate issues in running of departmental affairs and to establish ad quality management unit at the department.</p>	

I. Action Plan Progress Report

1. Progress on Implementation of Previous Year's Action Plans				
Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
Changes in course requirement	Continuous process	Dr. Mohamed El-Fawaz	The department of FSN had a program change in regards to courses offered, where the whole seventh semester was allocated for the internship. In addition one course was eliminated and some courses were made as elective. Now, the department allow students to take one of two choices for a major, either food science or human nutrition, but the degree will still carry the same title as mentioned earlier.	Comment: Changes in courses may also be required in future depending on the professional needs and feedback from industry and national priorities relating to food science and human nutrition.
Actions Planned	Planned Completion Date	Person Responsible	Completed	If Not Complete, Give Reasons
Relation with community	Continuous process	Dr. AbdulrhmanSalih Al-Khalifa	N/A	More community-department relationships are planned to be established and work in this direction is continuous.

2. Proposals for Program Development
<p>a. Proposals for Changes to Program Structure (units/credit-hours, compulsory or optional courses, other)</p> <p>There are some proposals under consideration in particular due to the separation of preparatory year program from the department</p>
<p>b. Proposals for Changes to Courses, (deletions and additions of units or topics, changes in teaching or assessment procedures etc.)</p> <p>New courses are being considered due to removal of some courses from list of courses offered by the department which were taken by preparatory year program.</p> <p>There may also be new course proposals as result of alumni feedback and consultations with IFT.</p>
<p>c. Development of Activities for Faculty and Teaching Staff</p> <p>The activities aimed at professional development of teaching and academic staff include:</p> <ul style="list-style-type: none"> • Workshops organized by the Deanship of Quality at King Saud University • Summer training abroad by KSU and aimed at improving leadership skills and enhance the knowledge and skills of faculty members. • Short courses and seminars are also arranged for the exchange of knowledge. • International training workshops for faculty's professional improvement. • Faculty is also provided with opportunities to attend foreign universities research program for their sabbatical leave. • Local and international conferences attendance is supported by KSU as well.

3. New Action Plan for Academic Year <u>2015-16</u>		
Actions Required	Completion Date	Person Responsible
Developing an e-mail list for alumni, public, and private sector stakeholders for easier coordination.	2015	Director of the Quality management System (QMS) team at FSN
Setting up implementation process of KSU's quality management system to accomplish the mission of the department	2015	Director of QMS team at FSN

Request faculty members to encourage students to stay in contact with them to seek advice at the beginning of every semester	2015	Director of QMS team at FSN
Appeal to faculty to write grant proposals for attracting external funding for research	2015	Director of QMS team at FSN
Follow the graduation rate every semester and determine the effect of the measures taken by the department of the institution for accelerating the rate.	2015	Director of QMS team at FSN

Program Chair/ Coordinator Name: Fahad Y. AL-Juhaimi

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

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

Signature: _____ **Date:** _____