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**National Agriculture Education Accreditation Council**

## **REPORT OF THE ACCREDITATION INSPECTION COMMITTEE (AIC)**

### **AIC TEAM:**

**Prof. Dr. Saghir Ahmed Sheikh**  
Institute of Food Sciences and Technology,  
Faculty of Crop Production,  
Sindh Agriculture University, Tandojam.

**Convener**

**Dr. Saeed Akhtar**  
Department of Food Science and Technology,  
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BZU, Multan.

**Member**

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## **Report of the Accreditation Inspection Committee (AIC)**

The Committee was constituted by the Chairman, NAEAC, HEC, Islamabad for the external assessment of various degree programs offered by the Department of Food Science and Technology, University of Karachi. Following committee had visited the Department on January 21 and 22, 2013 as scheduled by the NAEAC.

- Dr. Saghir A. Sheikh  
Director,  
Institute of Food Sciences and Technology,  
Faculty of Crop Production,  
Sindh Agriculture University, Tandojam  
Convener
- Dr. Saeed Akhter  
Assistant Professor,  
Department of Food Science and Technology,  
Faculty of Agricultural Sciences and Technology,  
BZU, Multan  
Member

The Accreditation Inspection Committee (AIC) was received by Prof. Dr. Jehan Ara, Chairperson, Department of Food Science and Technology, University of Karachi and her team. She welcomed and briefed the AIC team through a presentation about the history, faculty, degree programs, curriculum, research projects and students. In her presentation, she informed the team that the Department was established in 1994 with the mission “To cater to the need of the fast growing food industries in the country and also to meet the ever growing demand for food scientists and technologists in government, research and educational establishments”. Prof. Dr. Rashida Ali was the founder Chairperson of the Department. The Department has established linkages over the years with Universities of various countries such as Germany, U.K. and USA. The Department enjoys a very good rapport with both national and international food industries.

### **Aims and Objectives:**

The Department has set the following objectives to be achieved

- To produce qualified Food Scientists, Food Technologists and Nutritionists for food industries, teaching and research organization.
- To establish links between teaching/research institutions, government, commercial organizations and the consumers.
- To preserve, process and manipulate the agricultural crops to avoid post harvest losses.

- To introduce novel, nutritious, value added and safe food products for local consumption and export.
- To incorporate the food industry waste for products development.
- To provide consultancy and advisory services to food industries and allied stakeholders
- To extend facility for analyses of food products to the local food industry.
- To establish international collaboration with Food Science Departments and food processing industries by exchanging students and staff.
- To organize functions/programs for creating awareness about the importance of safe, processed and nutritious food.

### **Teaching Faculty:**

#### **Professors**

- Prof. Dr. Jehan Ara (Chairperson)
- Prof. Dr. M. Abid Hasnain
- Prof. Dr. Syed Asad Sayeed

#### **Assistant Professors**

- Dr. Rehmanulah Siddiqi
- Dr. Shahina Naz
- Dr. Mahmood Azam
- Ms. Faiza Abdur Rab
- Dr. Feroz Alam

#### **Lecturers**

- Ms. Ayesha Siddiqui
- Ms. Tahira Mohsin Ali
- Mr. M. Abdul Haq

## **Degree Programs:**

The department offers various degree program as mentioned below:

- B.S in Food Science and Technology (Regular)
- B.S in Food Science and Technology (Evening, self finance)
- M.S in Food Science and Technology
- M.Phil. leading to Ph.D.

Postgraduate Diploma in Food Safety and Control (Evening, self finance)

### **1. Strength and Quality of Faculty:**

The AIC team held the meeting with teaching faculty and obtained views about their professional, academic back ground, salary package, teaching/research environment, students attendance record, examination system, question paper settings, training facilities available, research project completed, ongoing and submitted projects and others problems existing in degrees programs of the department.

Following conclusions were drawn:

- The teaching faculty showed full satisfaction over the salary package but they showed dissatisfaction over the operational budget provided to the Department by University especially for chemicals, glassware and research purposes which hampers the practical work and research activities of the Department.
- The faculty members were satisfied from the Chairperson's cooperation.
- The majority of teachers was satisfied from the conducive environment in the Department.
- The workload of the faculty is, however, exceeding the limit set in S7.
- Course review reports were also maintained by the faculty.
- Faculty needs more trainings specially for newly inducted teachers.

### **Curriculum Design and Development:**

The HEC revises curriculum after every 3-4 years that are based on feedback by stakeholders such as students, employers, alumnae, industry etc. to improve the quality of education and to bring the curriculum at par with the international universities.. The curriculum was revised in 2010 and then the Department of Food sciences and

Technology has also revised its curriculum. Students of the department were very much satisfied with the curriculum and teachers' performance. The resource materials for teaching the defined curriculum were available. The Committee however, observed that regular meetings of the departmental board of studies were only held in the previous years. No regular feedback mechanism existed to seek students' feedback. The meeting of the faculty board of studies was held as per the need of the department/faculty.

### **Infrastructure and Learning Resources:**

The department has new constructed building on 22000 sq. ft having sufficient number of faculty offices, 5 classrooms out of 5, two classrooms have AVA facilities, teaching and research laboratories with enough capacity for undergraduate as well as postgraduate research students. The AIC team also visited the departmental as well as central libraries and was satisfied with the facilities available for the students. The department library subscribes only one foreign journal which may be enhanced. However, the department has insufficient budget for its maintenance. Access of students to the computer is limited and needs attention due to large number of undergraduate students in morning and evening shifts .

### **Students support and progression:**

The department every year receives overwhelming response in all degree programs and the annual intake is more than the University admission policy. The average CGPA of students in undergraduate and postgraduate is about 3.3. The AIC team visited the two undergraduates (morning and evening) classrooms and almost spent more than 30 minutes in each classroom. The Committee members interviewed the students on various aspects of their educational programs and overall environment of the Department. Some of the students complained about the lesser practical performance due to shortage of chemicals etc. They were of the opinion that the Department needs more support from the University in terms of funds to promote research and to achieve international standards. However, they were fully satisfied with the teachers' interaction as well as library and internet facilities available in the Department. The committee then visited the postgraduate (M.Sc.) classroom. The students were fully satisfied with library and internet facilities. The shortage of computers however, was complained about. They further added that more food journals be provided to the Department. The AIC team however, noted shortage of student accommodation, auditorium, sports and transport facilities. Teachers-students interaction was quite encouraging.

### **Research and Consultancy Activities:**

The department receives research grants occasionally, however, the department has arranged and participated in different seminars, conferences and constantly provides advisory and consultancy services to food and allied industries. The faculty has played significant role in publishing scientific papers in HEC recognized national and international journals in last three years.

### **Governance and Leadership:**

The highest administrative position in the University is the Vice Chancellor, followed by Pro-Vice Chancellor (if any), Registrar, Director Finance and Controller of Examinations. Dean is the academic head of faculty and Chairperson has been working under the Dean of the faculty of sciences. A good understanding was seen amongst the faculty members and the Dean and Chairperson. All the governing rules and procedures are properly documented and a well defined annual calendar is available for the activities of all degree programs. Powers of administration have also been clearly delineated. Placement bureau and a departmental alumni exist and is partially operational. However, there is need to increase development budget. Regular issues of news bulletin/magazine need to be published regularly.

### **Recent Innovations and Best Practices:**

The department always encouraged the faculty members for acquiring post-doctoral and other professional trainings. Senior ex-students working in the industries are constantly invited in regularly arranged Board of Studies meetings and their inputs have also been encouraged and implemented to create harmony between department and food industries. Regular industrial visits and internships have also been arranged for students to improve their skills. Research projects are assigned to all students to orient them towards innovative ideas and to improve their research expertise.

## **SWOT ANALYSES:**

### **Major strengths:**

- The Department has 12 faculty members, out of which 7 are Ph.D degree holders with Post Doctoral exposure and two faculty members have also submitted their Ph.Ds theses for the award of the degrees. The faculty consists of experts in various important disciplines including Chemistry, Biochemistry, Microbiology and Food Engineering. There are also part time faculty members from research organizations and food industries who are involved in teaching regularly.
- There exists newly constructed building of the Department with sufficient space for offices, labs and classrooms. The new building of the department has eight major laboratories equipped with all basic facilities. The laboratories include food Engineering Lab, Food Chemistry Lab, Food Microbiology Lab, Food Quality Control Lab, Food Analysis Lab, Food Biochemistry, Post Harvest Lab, Food Analytical Lab. and Computer Lab.
- The classes are being conducted regularly and course contents are completed in a stipulated period of time.
- Faculty have a good number of publications in HEC approved National and International Journals.
- Sufficient available infrastructure/facilities are in place.

### **Major Weaknesses:**

- Insufficient operational budget hinders the research and academic activities.
- Lab safety apparatus/equipments was not found including first aid boxes in the laboratories.
- Digital library facilities lacks at the departmental library.
- The Department has a seminar library with about 1000 books, but it needs more books and regular subscription of International Research Journals.
- One of the major weaknesses is the unavailability of Departmental Food processing units (pilot plant units) such as canning unit, beverage units for carbonated and non carbonated beverages.
- Non-availability of cold storage units,

### **Major Opportunities:**

- There is tremendous potential and lot of job opportunities for the graduates as Karachi which is the biggest industrial city with a quite a number of highly reputed big food industries. Therefore, the department needs to be further strengthened to cater to the needs of this industry for skilled manpower, raw materials, food processing issues and industrial food safety trainings. Moreover the department must have initiated programs to increase awareness on the significance of agro based cottage industry including production of value added foods at small scale to promote national economy and to alleviate poverty in the region.

### **Major Threats:**

- The University is facing acute problem of shortage of funds due to which the Department is not getting funds for maintenance of laboratories, building and to carry out experimental work.
- The Law & Order situation of the city is affecting the quality of teaching as well as disturbing the timely completion of academic activities.
- Faculty may be encouraged to hunt for grants from National and International funding/donor agencies.
- Stand by generator (uninterrupted electric facilities) be provided to the Department to save/protect the high-tech equipment from electrical fluctuation.

### **Final Recommendation:**

The Department has been offering various degree programs since 1994. It has played a significant role in producing the graduates in the field of Food Science and Technology and cater to the need of industries but there is still a lot of demand of Graduates to be absorbed in Industries. Based on NAEAC prescribed criteria, the committee after deliberation and brain storming, unanimously recommended the degree programs of the Department to be graded as the middle band of “ X “ category with 73% (i.e. The classification of degree programs with minor shortfalls expected to meet the criteria as set by the Council of Accreditation).



## Evaluation Criteria Weightage for Agriculture Degree Programs

Sr. No.	Program Evaluation Criteria	Points Assigned	Points Awarded
			M.Sc (H) & B.Sc (H)
<b>Major Criteria</b>			
1	Strength and Quality of Faculty	250	208
2	Curriculum Design and Development	150	128
3	Infrastructure and Learning Resources	200	132
4	Students Support and progression	100	68
<b>Sub - Total (a)</b>		<b>700</b>	<b>536</b>
<b>Minor Criteria</b>			
5	Research and Consulting Activities	150	93
6	Governance and Leadership	100	65
7	Recent Innovations and Best practices	50	35
<b>Sub - Total (b)</b>		<b>300</b>	<b>193</b>
<b>Grand Total (a+b)</b>		<b>1000</b>	<b>729</b>

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Name and Designation

\_\_\_\_\_  
Signature of Program Evaluator