

**Executive Summary**  
**Self-Assessment Report (SAR) of Program BS Biotechnology**  
**Directorate of Quality Enhancement (DQE)**  
**Virtual University of Pakistan**

The Virtual University of Pakistan established in 2002 with the aim to provide extremely affordable world class education to aspiring students all over the country regardless of their physical location. The University also seeks to alleviate the lack of capacity in the existing universities while simultaneously tackling the acute shortage of qualified professors in the country using free-to-air satellite television broadcasts and the Internet. To pursue this aim, the Department of Biotechnology is designated to initiate and implement the Self-Assessment process designed by Quality Assurance Agency (QAA) of HEC. The current document summarizes the findings of self-assessment process of BS Bio-Technology program.

The department is committed to producing graduates who can lead organizations towards success and prosperity in the global marketplace. The department follows its vision in all of its courses and areas of specialization that offered at both Masters and Bachelors levels. The department feels satisfied upon completion of the following list of tasks:

1. The development of **Self-Assessment Report (SAR)** by a Program Team constituted for **BS Biotechnology** program
2. The conduct of critical review and submission of **Assessment Report (AR)** by an Assessment Team for BS Biotechnology program.
3. Development of **Rectification Plan** by Head of Department.

The tasks were completed according to the set methodology through Program and Assessment Teams nominated by the Rector on the recommendation of the Department.

### **Methodology**

The following methodology is adopted to complete the whole SAR cycle:

1. A Program Team (PT) was nominated for the program. Initial orientation and training sessions for all members were arranged by DQE. The composition of PT is given below:

**Table 1: Program Team**

<b>Sr.#</b>	<b>Name</b>	<b>Designation</b>
1.	Dr. Sana Zahoor (Coordinator)	Assistant Professor (Faculty of Science and Technology)
2.	Mr. Shahid Sherzada	Instructor (Faculty of Science and Technology)

2. All the relevant material such as SAR manual, survey forms, etc. was provided to PT.
3. Continuous support, guidance, and feedback were provided to PT members to prepare the SAR for said program.
4. After completion and submission of the final SAR by PT, an Assessment Team (AT) was formed by the Rector on the recommendation of the Department. Accordingly, a Subject Specialist from other institution was also included. The composition of AT is given below:

**Table 2: Assessment Team**

Sr.#	Name	Designation
1.	Dr. Asif Nadeem	Assistant Professor, Institute of Biochemistry and Biotechnology, (UVAS), Lahore
2.	Dr. Akhta Ali	Assistant Professor (Faculty of Science and Technology)

5. The SAR developed by PT was forwarded to AT for critical review.
6. After completion of critical review and assessment of the SAR, AT members visited the department and had a meeting with PT.
7. After the visit, AT submitted a report and feedback form (Rubric Form) to DQE.
8. DQE forwarded the observations & findings of AT report to the Head of Department for developing a rectification plan.
9. DQE will now monitor implementation of Rectification Plan.

### **Parameters for the SAR:**

The SAR is prepared on the following eight (8) criteria prescribed by the HEC:

- Criterion 1: Program Mission, Objectives and Outcomes Criterion
- Criterion 2: Curriculum Design and Organization Criterion
- Criterion 3: Laboratory and Computing Facility Criterion
- Criterion 4: Student Support and Advising Criterion
- Criterion 5: Process Control Criterion
- Criterion 6: Faculty Criterion
- Criterion 7: Institutional Facilities Criterion
- Criterion 8: Institutional Support

## **Key Findings of the SAR:**

Following is the summary of the key SAR findings:

### **Academic Observations:**

1. The learning objectives and outcomes of the programs must be SMART but available statements are lacking such attributes and required rephrasing.
2. The curriculum is suggested to analyze considering the latest updated HEC approved the curriculum for BS (Hons.) Biotechnology. The credit hours should not be less than the HEC approved contents.
3. The labs for biotechnology programs are available in different cities of Pakistan. AT members are unable to make any comment about the effectiveness of such labs as detailed information is missing that should be provided to make evaluation more objective.
4. After a detailed discussion about the execution of practical work, AT recommended that a lab manager must be appointed in each lab to monitor the lab activities and facilities.
5. The programs like biotechnology are a new addition to the online mode of education, therefore, it is suggested that an extensive orientation week for newly enrolled students must be planned to provide awareness about program, pedagogy, and interaction with the faculty members.
6. Formal career counseling is not sufficient. For the career counseling of students, seminars and workshops should be organized at least once in the semester and experts from industries and organizations should be invited.
7. There is no physical library available at any student campus. In the digital library, the shortage of reference books is observed. Department has the deficiency of e-resources for the students and faculty.
8. Faculty motivation level in faculty survey is not satisfactory. They have less confidence on faculty development incentives.

### **Conclusion and Recommendations:**

AT rated this program against a five-point scale provided by HEC for Self-Assessment. AT awarded a moderate overall assessment score (78/100). The score predicted that the performance of the department is good. In the rubric, the AT has also rated few criteria very low and highlighted few many gray areas that required a rectification plan which should be implemented immediately to improve the performance of the department.

The criteria Criterion # 4 (Student Support and Advising) and Criterion # 5 (Process Control) are rated low become a major reason for reported moderate score. In these criteria, AT has shown great concerns about the absence of career planning advisors for students, and the non-existence of periodic performance evaluation mechanism of different processes.

The Need Improvement areas identified during self-assessment process have been reported to the Head of respective Department and the specific rectifications have also been requested. DQE will follow up the implementation plan as per the specific time-frame.

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**Reviewed by:**

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Director DQE:

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The Rector:

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