

**Executive Summary**  
**Self-Assessment Report (SAR) of Program Ph.D. in Biotechnology**  
**Assessment Cycle – I (2017-18)**  
**Directorate of Quality Enhancement (DQE)**  
**Virtual University of Pakistan**

The Department of Biotechnology of Virtual University of Pakistan (VUP), is designated to initiate and implement Self-Assessment process defined by Quality Assurance Agency (QAA) of HEC to pursue the aim of VUP. The aim of VUP is to provide extremely affordable world class education to students all over the country regardless of their physical location by alleviating the lack of capacity in the existing universities. Additionally, VUP is also tackling the acute shortage of qualified professors in the country using free-to-air satellite television broadcasts and the Internet. The current document summarizes the findings of self-assessment process initiated for critical evaluation of program titled 'Ph.D. in Biotechnology'.

The department is committed to equipping the students with up-to-date knowledge and competencies to become effective and inspirational teachers and leaders at different levels of current education system. The department feels satisfied upon completion of the following list of tasks:

1. Development of **Self-Assessment Report (SAR)** by the Program Team (PT) for **Ph.D. in Biotechnology** program
2. Conduct of critical review and submission of **Assessment Report (AR)** by Assessment Team (AT) for **Ph.D. in Biotechnology** program.
3. Development of **Rectification Plan** by the Head of Department.

The tasks were completed according to the set methodology through PT and AT nominated by the Rector on the recommendation of the Department.

### **Methodology**

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

1. HOD of the department nominated a PT for the current program. The composition of PT is given in Table 1. DQE also arranged orientation and training sessions for all PT member:

**Table 1: Program Team**

S. No	Name	Designation
1	Dr. Sana Zahoor	Assistant Professor, Department of Biotechnology, VU

1. All the relevant material such as SAR manual, survey forms, etc. was provided to PT.
2. Continuous support, guidance, and feedback were provided to PT members to prepare the SAR for the current program.
3. After the completion and submission of the final SAR by PT and DQE, the Rector on the recommendation of the HOD approved the formation of an AT for the critical appraisal of the program and SAR. It is also ensured that a Subject Specialist from other institution become part of this team. The composition of AT is given in Table 2:

**Table 2: Assessment Team**

S. No	Name	Designation
1	Dr. Nadeem Sheikh	Associate Professor/Director, Centre for Applied Molecular Biology (CAMB) at University of the Punjab, Lahore.
2	Dr. Asif Nadeem	Assistant Professor, Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore.
3	Dr. Akhtar Ali	Assistant Professor, Department of Biotechnology, Virtual University of Pakistan, Lahore.

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

**Parameters for the SAR:**

Following eight (8) criteria prescribed by the HEC are used to develop SAR:

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

**Key Findings of the SAR:**

Following is a summary of the key SAR findings:

1. The mission statements of the department and program are not available on VU web site.
2. All courses of the program are tagged as “Elective” whereas as per HEC, two core courses must be offered. Therefore, it is suggested to redesign the curriculum. The proposed curriculum is provided by AT team in their final report.
3. A complete designated list of courses must be developed for the Ph.D. program only.
4. The program objectives mentioned in the SAR are mismatched with the objectives available on VU Website. The program outcomes need to be rephrased to align with program objectives.
5. There is a shortage of reference e-books in the digital library. Department has the deficiency of e-resources for the students and faculty. Faculty members are encouraged to purchase

the required books, however, due to the absence of efficient reimbursement mechanism, the facility is not utilized with by the faculty members

6. The workload of the faculty members especially for those who are involved in the lab supervision should be reduced. Currently, they are working beyond the official timing as well as on weekends. Heavy workload restricts them to keep a healthy work-life balance and they are not able to spend more time for scholarly work and update their knowledge in the subject area.
7. There should be a lab manager in each lab to monitor the lab practical activities and facilities.
8. Student career counseling cell should be established in the university to develop collaboration with the biotechnology industry.
9. Faculty development incentives are not sufficient to boost their satisfaction level.

**Conclusion and Recommendations:**

Analysis of Criteria Referenced Self-Assessment reveals that performance of the department is good. It is reflected by overall excellent assessment score (81/100) reported by AT. In spite of the overall good score, comparatively low rating in Criterion # 7 (Institutional Facilities) is observed which need to be focused for improvement. The criterion is about retention of quality faculty members. Additionally, the issues like an insufficient number of Ph.D. faculty members in specialized areas, relatively high faculty workload as compared to other departments, the absence of career counseling for students, and revision of learning objectives/outcomes of the program required corrective actions.

The areas that require corrective actions identified during self-assessment process have been reported to the Head of respective Department for rectification. DQE will follow up the implementation plan periodically to track continuous improvement.

**Prepared by:**



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**Syed Naveed Anwer**  
**Officer QA, DQE**

**Director DQE:**



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**The Rector:**

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