

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

Virtual University of Pakistan was 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 by alleviating 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 Education is designated to initiate and implement Self-Assessment process defined by Quality Assurance Agency (QAA) of HEC. The current document summarizes the findings of self-assessment process of MSc Mathematics program.

The department is committed to equip the students with up-to-date knowledge and competencies to become effective and inspirational teachers and/or leaders at different levels of education system. The department follows its mission 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. Development of **Self-Assessment Report (SAR)** by Program Team for **MSc Mathematics** program
2. Conduct of critical review and submission of **Assessment Report (AR)** by Assessment Team for MSc Mathematics program
3. Development of **Rectification Plan** by Head of Department
4. 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. HOD of the concerned department nominated a program team (PT) for the current program. The composition of PT is given below. DQE also arranged initial orientation and training sessions for all PT members:

**Table 1: Program Team**

Sr.#	Name	Designation
1.	Mr. Zulfiqar Ahmed Noor	Lecturer, Department of Mathematics & Statistics, Virtual University of Pakistan
2.	Mr. Shahzad Faizi	Assistant Professor, Department of Mathematics & Statistics, Virtual University of Pakistan

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 SAR for the said program.

4. After completion and submission of the final SAR by PT, the Rector on the recommendation of the HOD approved the formation of an Assessment Team (AT) for critical appraisal of 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 below:

**Table 2: Assessment Team**

Sr.#	Name	Designation
1.	Dr. Amber Asghar	Lecturer, Department of Mathematics & Statistics Virtual University of Pakistan
2.	Dr. Qasim Ali Chaudhry	Associate Professor, Department of Mathematics, UET Lahore

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:**

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:

**Academic Observations:**

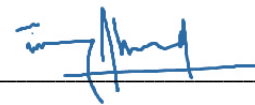
1. Digital library is available but the department has the deficiency of books relevant to their programs in hard form. A separate library should be established with a large collection of books. For the purchase of books department own purchase committee should be constituted.
2. Learning outcomes of some courses are not appropriate and cannot be achieved within the course credit hours limitations. These learning outcomes need to be redesigned according to the objective of courses.
3. The professional counseling does not exist.
4. There is also shortage of faculty offices.

**Conclusion and Recommendations:**

Analysis of the Criteria Referenced Self-Assessment reveals that performance of the department is satisfactory in most of the areas, however, poor performance has not been observed in any of the areas. It is reflected by moderate overall assessment score (70.87/100) reported by AT. Based on this average score, the rectification plan needs to be implemented for further improvement.

In accordance with AT report, good performance of the department has been observed in some of the areas which, if improved, may lead to excellence in terms of performance. The aforementioned areas have been depicted in Criterion # 5 (Process Control), Criterion # 6 (Faculty), and Criterion # 7 (Institutional Facilities). The absence of career counseling facilities, shortage of PhD faculty, limited time available for research, limited access to digital resources and physical library have been reported as the areas that need improvement.

The areas that need 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 as per the specific time-frame to track continuous improvement.



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Manager QA, DQE

Director DQE:

