Executive Summary

Self-Assessment Report of Program Associate Degree in Computer Science
Directorate of Quality Enhancement (DQE)
Virtual University of Pakistan

The Virtual University of Pakistan established in 2002 intending 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 Computer Sciences is designated to initiate and implement the Self-Assessment process designed by the Quality Assurance Agency (QAA) of HEC. The current document summarizes the findings of the self-assessment process of Associate Degree in Computer Science.

The department of Computer Sciences is committed to producing graduates who can develop computer applications/processes to enhance the efficiency & effectiveness of organizations to lead in the global marketplace. The department follows its vision in all of its courses and areas of specialization 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 AD in (CS) program.
2. Conduct of critical review and submission of *Assessment Report (AR)* by Assessment Team for AD in (CS) 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 upon recommendation of the Department.

Methodology

The methodology adopted to complete the whole SAR cycle is described below:

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

Table 1: Program Team

Name	Designation
Saeed Amjad, Lecturer	Lecturer (Computer Sciences)

2. All the relevant material such as the 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 the said program.

4. After completion and submission of the final SAR by PT, an Assessment Team (AT) was formed by the Rector upon recommendation of the Department. The composition of AT is given below in Table 2:

Table 2: Assessment Team

Name	Designation
Dr. Salman Bashir, AP	Assistant Professor, CS, Virtual University of Pakistan

5. The SAR developed by PT was forwarded to AT for critical review.
6. After completion of the 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 the implementation of the Rectification Plan.

Parameters for the SAR:

The SAR is prepared on the following eight (8) criteria prescribed by 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. University mission statement should be the one that is approved by the statutory bodies, and in a proper format, and must be published/displayed on the main website and various campuses.
2. The departmental and program mission statement should be published on "Department" specific web pages after approval from the statutory bodies. The non-existence of web pages for each 'Faculty' makes it impossible to publish important information like statements and program details for public awareness.
3. The learning objectives and outcomes of the program are not mapped appropriately and therefore are also not measurable.

4. Feedback in terms of various surveys like employer surveys, course evaluation, etc. to access the program effectiveness is not available.

5. It is not predictable from the report that any mechanism is in practice to assess the overall performance of the department periodically using quantifiable measures.

6. The learning objectives and outcomes of the courses offered in AD programs are abstract and difficult to measure regardless these courses are owned by the department or taken from other departments.

7. HEC explicitly categorizes various courses into groups such as Compulsory, Foundation, Major, and Domain Electives. However, the aforementioned course categorizations have not been found in any study scheme. The only terms used in study schemes are "Required" and "Elective" (available at the main website of VU) which are inappropriate and uncommon for academicians.

8. As per the information provided by PT, the study centers are sufficient enough to meet the academic needs of the students, however, to assess the adequacy and effectiveness of those recourses to meet student's academic needs, the audit reports of the last three years must be provided with SAR to AT because due to geographical locations of these centers, the physical audit/inspection by AT is not possible.

9. No information is provided on how frequently the learning objectives/outcomes, admission criteria, processes are evaluated for improvement.

10. For the AD program in Computer Science, it is reported that lab work is being offered; however, no information regarding the conduct of those labs, the assessment, and the monitoring of lab work is available.

11. There are no such guidelines as for ethics are concerned for students to have provided or conveyed to teachers. In the online mode system students miss the opportunity of learning ethics, communication skills, and the experience of the teacher.

Administrative Observations:

- Faculty development incentives are not sufficient; for instance, faculty should be encouraged with flexible timings or with half paid salaries to peruse Ph.D. programs

- Lack of time for research activities is identified as a major weak area of the job description of faculty associated with the Virtual University of Pakistan.

- To engage and incentivized the faculty, the University must devise an internal "Best University Teacher Award" and encourage faculty to participate in that competition.

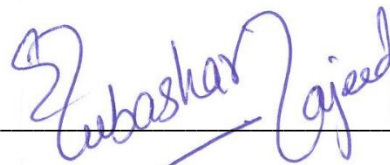## Conclusion and Recommendations:

While analyzing Criteria Referenced Self-Assessment, it has been found that the performance of the department is satisfactory but still, many gray areas keep it from performing well. It is reflected in terms of moderate overall assessment score (76/100) reported by AT. This average score demands that the rectification plan should be implemented immediately.

According to the scorecard, criterion # 8 is rated low and becomes a major reason for this moderate score. The criterion is related to "Institutional Support" and according to AT, labs are there but the implementation of lab work is not done so far which is required for practical exposure of the students. The other criteria like Criterion # 3 ("Laboratories and Computing Facilities") and Criterion # 7 (Institutional Facilities) are also relatively low rated. The early response of AT echoed that they have significant concerns about the following areas:

- The lab work is an essential part of this program.
- The least time is given by the faculty for research and scholarly activities.
- Limited access to digital resources and physical library.

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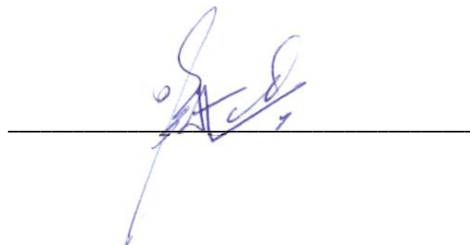
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