

## **Executive Summary**

### **Program BS (Computer Science)**

### **Cycle III (2022-23)**

The Department of Computer Sciences has been chosen to commence and implement the Self-Assessment procedure proposed by HEC's Quality Assurance Agency (QAA) in order to pursue the VU mission of quality education. The current document summarizes the findings of the self-assessment process executed for the BS Computer Science program.

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 **Master's** and **Bachelor's** levels. 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 the BS (CS)
2. Conduct of critical review and submission of the **Assessment Report (AR)** by the Assessment Team (AT) for the BS (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 on the recommendation of the Department.

### **Methodology**

The department adopted the identical methodology defined by the QAA. The methodology includes the nomination and notification of PT and AT after approval of the competent authority. Initial orientation and training sessions for all members were arranged. All the relevant materials like the manual, survey forms, etc. were provided to PT and AT.

#### **Program & Assessment Teams**

<b>Sr.#</b>	<b>Name</b>	<b>Type</b>	<b>Designation</b>
1.	Mr. Adnan Asif	PT	Lecturer (Computer Science)
2.	Dr. Mushtaq Hussain	AT	Assistant Professor, (Computer Science)

PT developed the SAR in accordance with the following eight (8) criteria provided by QAA.

- 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

Various recommended surveys (Graduating, Alumni, and Faculty satisfaction) were also conducted to collect diverse feedback. A meeting was arranged on May 24, 2023, at the Lawrence Road office for critical evaluation of the program by AT in which all DQE team members were also present. After the meeting, AT submitted a report and feedback form (Rubric Form) to DQE. Based on the findings of AT, the Head of the Computer Science Department was requested to develop a rectification plan. Continuous support, guidance, and feedback were provided to both PT and AT members to prepare the SAR and AT Reports for the said program. DQE will now monitor the implementation of the Rectification Plan.

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

A summary of the key findings from SAR is given below:

The AT appreciated the efforts of PT to develop such a comprehensive report of the BS (Computer Science) program. The AT member endorsed the program structure and suggested a few improvements. The infrastructure and support provided by the university to execute the program were also reviewed and considered compatible with the smooth execution of the program. However, the following few observations were reported by AT in its report:

1. The academic observations presented in Cycle II are still not rectified yet. The status of the previous implementation plan is not traceable from the SAR.
2. The mapping of objectives vs outcomes is not plausible. The mechanism behind this mapping is also not defined.
3. The student-teacher ratio in many courses is more than 1:2100, which has a negative impact on the quality of work.
4. There is a huge difference in credit hours between VU and HEC.
5. There are still no digital pen and pad facilities available on many VU campuses.

### **Administrative Observations:**

- As an ICT-based University, some activities need to be automated to relax the faculty members for laborious work.
- Faculty workload is increasing at an exponential rate in some courses.

- The academic-industry link is missing.
- There is a shortage of faculty offices. However, the existing offices for faculty should be improved to maximize their productivity.
- A shortage of faculty members is observed in the department.
- A research center for data needs to be established where faculty and students can work together and develop some cool apps using data.

### **DQE Observations**

1. To represent the course type, VU internal terminology is used which is not common for all readers. Therefore, it suggested revising the categories similar to HEC nomenclature like Foundation, Compulsory instead of “Required” etc. In addition to this, publish updated information on the website.
2. VU-owned and private campuses have well-equipped latest computer labs. However, this claim must be rationalized through facts and figures provided in periodic campus audit reports. There must be periodic auditing for Labs / PVCs.
3. The fact that campus classroom facilities are available can be verified through physical visits or annual audit reports of the campuses.
4. The document does not define the evaluation mechanism to evaluate any process. Who initiates the evaluation? How frequently are the processes evaluated? How are the outcomes of such evaluations used for decision-making? The answer to these questions is unavailable. Summarize all the processes being followed by the department in a tabular format along with the parameters mentioned above.
5. The manual of LMS is not available for end-users. How newly enrolled students become familiar with LMS for various activities.
6. There is no mechanism available to evaluate the program’s performance as a whole. The different interfaces like LMS or VIS are designed to evaluate different courses. A dashboard must be designed to review the program’s performance after defining various KPIs at the program level.
7. The SAR contains too many grammatical and formatting errors. Despite repeated directions, the problem persists. One of the faculty's excuses is that the WPS software is not user-friendly and has compatibility concerns with Microsoft MS Word.

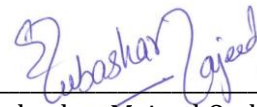
### **Conclusion and Recommendations:**

Analysis of the Criteria Referenced Self-Assessment reveals that the performance of the department is **Good to Excellent** in most of the areas, however, poor performance has been observed in only one of the areas i.e., Criterion 8 (Institutional Support). The program has secured

an overall good assessment score (71.54/100) reported by AT. In accordance with AT report, it has been found that criterion 8 needs improvement which is regarding Institutional Support to offer enough support to attract and retain high-quality faculty and ensure the availability of financial resources for library holdings. Campus facilities are not sufficient to meet the needs of faculty.

The areas that need corrective actions identified during the self-assessment process have been reported to the Head of Computer Science for rectification. DQE will follow up on the rectification plan as per a specific timeframe to track continuous improvement.

**Prepared by:**



---

Mubashar Majeed Qadri  
Manager, QA

**Reviewed by:**

Dr. Raja Fakhar Ul Inam  
Director -DQE, VU

---