

Virtual University of Pakistan

Assessment Team Report

Department Computer Science and Information Technology

PhD in Computer Sciences

Criteria Referenced Evaluation

| | Poor performance in most of the areas. | Fair performance in most of the areas. | Good performance for most areas / No poor performance in any areas. | Good to excellent performance in all areas. | Excellent performance in all areas. | Score |
|-------------|--|--|---|---|-------------------------------------|-------|
| Criterion 1 | | | ✓ | | | 3.33 |
| Criterion 2 | | | | ✓ | | 15.50 |
| Criterion 3 | | | | ✓ | | 8.00 |
| Criterion 4 | | | ✓ | | | 6.67 |
| Criterion 5 | | | | ✓ | | 12.00 |
| Criterion 6 | | | ✓ | | | 13.71 |
| Criterion 7 | | | | | ✓ | 8.67 |
| Criterion 8 | | | ✓ | | | 7.00 |

| Criterion 1 – Program Mission, Objectives and Outcomes | | | | | | Weight = 0.05 | |
|---|--|--------------|-----------|----------|----------|----------------------|----------|
| Factors Score | | | | | | | |
| 1 | Does the Program have documented measurable objectives that support faculty / college and institution mission statements? | 5 | P | 3 | 2 | 1 | |
| 2 | Does the Program have documented outcomes for graduating students? | 5 | P | 3 | 2 | 1 | |
| 3 | Do these outcomes support the Program objectives? | 5 | P | 3 | 2 | 1 | |
| 4 | Are the graduating students capable of performing these outcomes? | 5 | 4 | 3 | 2 | 1 | |
| 5 | Does the department assess its overall performance periodically using quantifiable measures? | 5 | P | 3 | 2 | 1 | |
| 6 | Is the result of the Program Assessment documented? | 5 | P | 3 | 2 | 1 | |
| Total Encircled Value (TV) | | 0 | 20 | 0 | 0 | 0 | 0 |
| Score 1 (S1) = [TV/(No. of Questions *5)] *100 *Weight = | | 3.33 | | | | | |
| Criterion 2 – Curriculum Design and Organization | | | | | | Weight = 0.20 | |
| Factors Score | | | | | | | |
| 1 | Is the curriculum consistent? | 5 | P | 3 | 2 | 1 | |
| 2 | Does the curriculum support the program's documented objectives? | 5 | P | 3 | 2 | 1 | |
| 3 | Are theoretical background, problem analysis and solution design stressed within the program's core material? | 5 | 4 | P | 2 | 1 | |
| 4 | Does the curriculum satisfy the core requirements laid down by respective accreditation bodies? (refer Appendix A of the Self Assessment Manual) | 5 | P | 3 | 2 | 1 | |
| 5 | Does the curriculum satisfy the major requirements laid down by HEC and the respective councils / accreditation bodies? | 5 | P | 3 | 2 | 1 | |
| 6 | Does the curriculum satisfy the general education, arts and professional and other discipline requirements as laid down by the respective / accreditation bodies / councils? | 5 | P | 3 | 2 | 1 | |
| 7 | Is the information technology component integrated throughout the program? | P | 4 | 3 | 2 | 1 | |
| 8 | Are oral and written skills of the students developed and applied in the program? | 5 | 4 | P | 2 | 1 | |
| Total Encircled Value (TV) | | 5 | 20 | 6 | 0 | 0 | 0 |
| Score 2 (S2) = [TV/(No. of Questions *5)] *100 *Weight = | | 15.50 | | | | | |
| Criterion 3 – Laboratories and Computing Facilities | | | | | | Weight = 0.10 | |
| Factors Score | | | | | | | |
| 1 | Are laboratory manuals / documentation / instructions etc. for experiments available and readily accessible to faculty and students? | 5 | P | 3 | 2 | 1 | |
| 2 | Are there adequate number of support personnel for instruction and maintaining the laboratories? | 5 | P | 3 | 2 | 1 | |
| 3 | Are the university's infrastructure and facilities adequate to support the program objectives? | 5 | P | 3 | 2 | 1 | |
| Total Encircled Value (TV) | | 0 | 12 | 0 | 0 | 0 | 0 |
| Score 3 (S3) = [TV/(No. of Questions *5)] *100 *Weight = | | 8.00 | | | | | |
| Criterion 4 – Student Support and Advising | | | | | | Weight = 0.10 | |
| Factors Score | | | | | | | |
| 1 | Are the courses being offered in sufficient frequency and number for the students to complete the program in a timely manner? | 5 | P | 3 | 2 | 1 | |
| 2 | Are the courses in the major area structured to optimize interaction between the students, faculty and teaching assistants? | 5 | 4 | P | 2 | 1 | |
| 3 | Does the university provide academic advising on course decisions and career choices to all students? | 5 | 4 | P | 2 | 1 | |
| Total Encircled Value (TV) | | 0 | 4 | 6 | 0 | 0 | 0 |
| Score 4 (S4) = [TV/(No. of Questions *5)] *100 *Weight = | | 6.67 | | | | | |

| Criterion 5 – Process Control | | | | | | Weight = 0.15 | | | | |
|---|---|--------------|-----------|----------|----------|---------------|--|--|--|--|
| Factors Score | | | | | | | | | | |
| 1 | Is the process to enroll students to a program based on quantitative and qualitative criteria? | 5 | P | 3 | 2 | 1 | | | | |
| 2 | Is the process above clearly documented and periodically evaluated to ensure that it is meeting its objectives? | 5 | P | 3 | 2 | 1 | | | | |
| 3 | Is the process to register students in the program and monitoring their progress documented? | 5 | P | 3 | 2 | 1 | | | | |
| 4 | Is the process above periodically evaluated to ensure that it is meeting its objectives? | 5 | P | 3 | 2 | 1 | | | | |
| 5 | Is the process to recruit and retain faculty in place and documented? | 5 | P | 3 | 2 | 1 | | | | |
| 6 | Are the processes for faculty evaluation & promotion consistent with the institution mission? | 5 | P | 3 | 2 | 1 | | | | |
| 7 | Are the processes in 5 and 6 above periodically evaluated to ensure that they are meeting their objectives? | 5 | P | 3 | 2 | 1 | | | | |
| 8 | Do the processes and procedures ensure that teaching and delivery of course material emphasize active learning and that course learning outcomes are met? | 5 | P | 3 | 2 | 1 | | | | |
| 9 | Is the process in 8 above periodically evaluated to ensure that it is meeting its objectives? | 5 | P | 3 | 2 | 1 | | | | |
| 10 | Is the process to ensure that graduates have completed the requirements of the program base on standards and documented procedures? | 5 | P | 3 | 2 | 1 | | | | |
| 11 | Is the process in 10 above periodically evaluated to ensure that it is meeting its objectives? | 5 | P | 3 | 2 | 1 | | | | |
| Total Encircled Value (TV) | | 0 | 44 | 0 | 0 | 0 | | | | |
| Score 5 (S5) = [TV/(No. of Questions *5)] *100 *Weight = | | 12.00 | | | | | | | | |
| Criterion 6 – Faculty | | | | | | Weight = 0.20 | | | | |
| Factors Score | | | | | | | | | | |
| 1 | Are there enough full time faculty members to provide adequate coverage of the program areas / courses with continuity and stability? | 5 | P | 3 | 2 | 1 | | | | |
| 2 | Are the qualifications and interests of faculty members sufficient to teach all courses, plan, modify and update courses and curricula? | 5 | P | 3 | 2 | 1 | | | | |
| 3 | Do the faculty members posses a level of competence that would be obtained through graduate work in the discipline? | 5 | P | 3 | 2 | 1 | | | | |
| 4 | Do the majority of faculty members hold a PhD degree in their discipline? | 5 | 4 | 3 | P | 1 | | | | |
| 5 | Do faculty members dedicate sufficient time to research to remain current in their disciplines? | 5 | 4 | P | 2 | 1 | | | | |
| 6 | Are there mechanisms in place for faculty development? | 5 | 4 | P | 2 | 1 | | | | |
| 7 | Are faculty members motivated and satisfied so as to excel in their profession? | 5 | P | 3 | 2 | 1 | | | | |
| Total Encircled Value (TV) | | 0 | 16 | 6 | 2 | 0 | | | | |
| Score 6 (S6) = [TV/(No. of Questions *5)] *100 *Weight = | | 13.71 | | | | | | | | |
| Criterion 7 – Institutional Facilities | | | | | | Weight = 0.10 | | | | |
| Factors Score | | | | | | | | | | |
| 1 | Does the institution have the infrastructure to support new trends such as e-learning? | P | 4 | 3 | 2 | 1 | | | | |
| 2 | Does the library contain technical collection relevant to the program and is it adequately staffed? | 5 | 4 | P | 2 | 1 | | | | |
| 3 | Are the class rooms and offices adequately equipped and capable of helping faculty carry out their responsibilities? | P | 4 | 3 | 2 | 1 | | | | |
| Total Encircled Value (TV) | | 10 | 0 | 3 | 0 | 0 | | | | |
| Score 7 (S7) = [TV/(No. of Questions *5)] *100 *Weight = | | 8.67 | | | | | | | | |

| Criterion 8 – Institutional Support | | | | | Weight = | | 0.10 | |
|---|--|-------------|----------|----------|----------|----------|------|--|
| Factors Score | | | | | | | | |
| 1 | Is there sufficient support and finances to attract and retain high quality faculty? | 5 | P | 3 | 2 | 1 | | |
| 2 | Are there an adequate number of high quality graduate students, teaching assistants and Ph.D students? | 5 | 4 | P | 2 | 1 | | |
| Total Encircled Value (TV) | | 0 | 4 | 3 | 0 | 0 | | |
| Score 8 (S8) = [TV/(No. of Questions *5)] *100 *Weight = | | 7.00 | | | | | | |

OVERALL ASSESSMENT SCORE =

S1 + S2 + S3 + S4 + S5 + S6 + S7 +S8

**= 3.33 + 15.50 + 8.00 + 6.67 + 12.00 +
13.71 + 8.67 + 7.00**

= 74.88 / 100

Comments:

The overall PhD in Computer Science program design and evaluation procedures are satisfactory but there are certain areas that can be improved which are as follows:

- Need to develop new courses which should be offered only in PhD in Computer Science program.
- The program design does not aim to improve oral skills of the student. There should be two synchronous oral presentations by students in each course.
- There should be a structured academic advising procedure for student counseling regarding their course and career choices.
- There is a need for more PhD faculty members in the department.
- Faculty members should be allotted more time for research activities to update their knowledge of the domain area.
- University should start faculty development programs.
- Since there are no graduate students, program outcomes could not be measured.