****

**Pakistan Engineering Council**

**Program Evaluation Report (Re-accreditation)**

**PROGRAM EVALUATION WORKSHEET**

**<HEI Name>**

**<Program>**

**<Date of Visit>**

1. For all accreditation criteria, the findings shall be recorded under ‘Compliance’ column as: 'Y' for Satisfactory, 'C' for Concern, 'W' for Weakness, 'D' for Deficiency or ‘OFI’ for Opportunity for Improvement.
2. In case of 'C', 'W' or 'D', justification must be provided under ‘*Observation and Remarks’* column.

| **Sr.**  **No.** | **Criteria** | **Compliance**  **Level** | **Observations and Remarks**  **on Non‐Compliance** |
| --- | --- | --- | --- |
|  | **Criterion-1: Program Educational Objectives (PEOs)** | | |
| i | Well-defined and published Institute Vision and Mission. |  |  |
| ii | PEOs are defined, consistent with the Vision / Mission, and well publicized. |  |  |
| iii | Involvement of stakeholders in formulation / review of PEOs. |  |  |
| iv | A process in place to evaluate the attainment of PEOs. |  |  |
| v | PEOs are attained and evaluation results being used for continuous improvement (CQI) of the program. |  |  |
|  | **Criterion-2: Program Learning Outcomes (PLOs)** | | |
| i | PLOs are well-defined and publicized. |  |  |
| ii | PLOs are appropriately linked to PEOs |  |  |
| iii | PLOs encompass all the required Graduate Attributes as defined in EAB Accreditation Manual |  |  |
| iv | Mapping of Courses to PLOs |  |  |
| v | Teaching-learning and assessment methods appropriate and supportive of the attainment of PLOs |  |  |
| vi | Quality of assessment process to evaluate the attainment of PLOs at student as well as cohort levels through well-defined Key Performance Indicators (KPIs); minimum threshold value should not be less than 50% |  |  |
| vii | Process in place by which assessment results are applied to further refine the assessment mechanism and/or redefine the program outcomes, thus leading to continuous improvement of the program |  |  |
|  | **Criterion-3: Curriculum and Learning Process** | | |
| i | Curriculum covers required breadth, depth and distribution of the program courses according to program specific (HEC/PEC ECRDC curriculum) guidelines. |  |  |
| ii | Curriculum provides balanced coverage of engineering and non-engineering contents in-line with National Engineering Qualifications Framework (NEQF) and the prescribed Knowledge Profile – WKs |  |  |
| iii | Adequate exposure to Complex Engineering Problems (CEPs) and Activities |  |  |
| iv | Availability of program specific well equipped labs to supplement theoretical knowledge/class room learning. |  |  |
| v | Lab work supporting the attainment of the required skills and its assessment mechanism |  |  |
| vi | CLOs defined for all courses with appropriate Learning-Levels, e.g. the ones defined in Bloom’s Taxonomy, and their mapping to relevant PLOs |  |  |
| vii | Formal involvement of industry in curriculum development / revision |  |  |
| viii | Employment of other aspects (supplementary tools and practices) of student learning such as tutorial system and seminar / workshops, etc. to enhance student learning, in addition to regular classroom interaction and lab experimentation. Regular office hours announced and time plan being maintained is the minimum expectation. |  |  |
| ix | Exposure to cooperative learning through supervised and mandatory internship program with formal feedback from the employer |  |  |
| x | Sufficient opportunities to invoke intuitiveness and originality of thought through Problem Based Learning (PBL), Design Projects and Open-Ended labs. |  |  |
| xi | Assessment of various learning outcomes (PLOs/CLOs) employing appropriate direct / indirect methods. |  |  |
| xii | Attainment of GAs in three domains (KSA); Summative assessment by the Graduates. |  |  |
| xiii | Final Year Design projects (FYDP) shall include complex engineering problems and design of systems, components or processes integrating core areas and meeting specified needs with appropriate consideration for public health and safety along with cultural, societal, and environmental considerations encompassing SDGs. |  |  |
| xiv | FYDP project deliverables and the reports are graded according to well-defined mechanism of rubrics and comprehensive standard operating procedures (SoPs). |  |  |
|  | **Criterion-4: Students** | | |
| i | Admission Criteria meets / exceeds minimum eligibility criteria prescribed by PEC Regulations. |  |  |
| ii | Annual intake is in-line with the maximum intake allowed by EAB for the program. |  |  |
| iii | Well documented policy on transfer of students only from other accredited program restricting transfer of less than 50% of Cr Hrs required for the degree. |  |  |
| iv | Availability of designated student counselors to advise / counsel students regarding academic / career matters and provide assistance in managing their health, financial, stress, emotional and spiritual problems. |  |  |
| v | Manageable class-size (around 40-50 for theory classes) and lab groups (2-3 students per workstation for hands-on type experiments, larger groups may be manageable for demonstration type) |  |  |
| vi | Manageable semester academic load (i.e. 15-18 Cr. Hrs on the average) |  |  |
| vii | Completion of courses as evident from course-files and through student feedback |  |  |
| viii | Students’ participation in national / international engineering exhibitions and / or competitions, and facilitation by program for such participations |  |  |
| ix | Quality of process to evaluate student performance and suggest / take corrective measures |  |  |
| x | How the program is inculcating community services |  |  |
|  | **Criterion-5: Faculty and Support Staff** | | |
| i | Sufficient Faculty Strength for providing effective student-teacher interaction (student-teacher ratio should be as per PEC guidelines, i.e. better than 20:1) |  |  |
| ii | Balanced faculty having appropriate qualifications (min. postgraduate with a reasonable percentage holding PhD) to cover all areas of program curriculum |  |  |
| iii | Formal mechanism for faculty training and mentoring on pedagogical skills including OBE concepts and implementation methodologies. |  |  |
| iv | Effectiveness of faculty development program to ensure their professional growth and retention. |  |  |
| v | Reasonable faculty workload (as per PEC guidelines) including facilitation to young faculty pursuing higher studies. |  |  |
| vi | Course files maintained as per PEC Manual of Accreditation 2019 – Third Edition (Amended Ver. of Accreditation Manual - 2014) guidelines |  |  |
| vii | Continuation of faculty research, publications and sponsored projects from industry/donor agencies, etc. |  |  |
| viii | The program should be headed by a PhD senior faculty of relevant engineering discipline. Reasonable mix of Senior and Junior qualified faculty be ensured. |  |  |
|  | **Criterion-6: Facilities and Infrastructure** | | |
| i | Adequacy of teaching and learning facilities, e.g. classroom environment and availability of various teaching aids, etc. |  |  |
| ii | Provision of program specific labs (as per curriculum), workshops, and associated lab equipment for complementing the class / theory work. |  |  |
| iii | Adequacy of library resources and facilities. |  |  |
| iv | Provision of sufficient computing facilities and internet access / resources allocated for the program. |  |  |
| v | Provision and effectiveness of consulting and career placement services provided to the students |  |  |
| vi | Adequacy of support facilities such as hostels, sports and recreational centers, health care centers, student centers, and transport facilities |  |  |
| vii | Adequacy of arrangements made / measures taken to ensure work-place safety (EHS concerns) in general, and while performing experiments in the labs. in particular |  |  |
|  | **Criterion-7: Institutional Support and Financial Resources** | | |
| i | Adequacy of institutional financial resources to ensure program’s sustainability and meeting of recurring as well as developmental requirements. |  |  |
| ii | Evidence of continued financial commitment in the form of increasing endowment and recurring /development budget since last accreditation visit. |  |  |
| iii | Provision of funding for R&D pursuits and presentations/publication of research papers |  |  |
|  | **Criterion-8: Continuous Quality Improvement (CQI)** | | |
| i | CQI process is well documented and institutionalized at all levels (CLOs, PLOs and PEOs) through institute’s QMS. |  |  |
| ii | Actions taken / implementation plans worked out to address the concerns/ weaknesses identified in the last accreditation visit report. |  |  |
| iii | Improvement in Faculty Strength / Qualifications since last accreditation visit, if required. |  |  |
| iv | Improvement in Student-Teacher Ratio since last accreditation visit, if required. |  |  |
| v | Continuation of Faculty Publications, R&D and Consultancy activities |  |  |
| vi | Addition of any new facilities, i.e.  infrastructure, lab equipment, teaching aids, etc. to assist in the attainment of program objectives / outcomes, since last accreditation visit |  |  |
| vii | New initiative(s) taken since last accreditation visit (including but not limited to OBE implementation, content delivery, assessment and evaluation processes, etc.) |  |  |
|  | **Criterion-9: Industrial and International Linkages** | | |
| i | Existence of active Industrial Advisory  Board/Committee |  |  |
| ii | Formal mechanism for seeking feedback from Industry and its analysis for the attainment of PEOs |  |  |
| iii | Opportunities for students to acquire industrial experience via internship and existence of Industry-Liaison office |  |  |
| iv | Design projects sponsored / supervised jointly by Industry Professionals and faculty members |  |  |
| v | Faculty members involved in design / supervision / consultancy role with the industry in the execution of applied research / design project that are relevant to society / industry. |  |  |

**RECOMMENDATIONS BY VISITATION TEAM**

The institute had applied for accreditation under the Manual of Accreditation 2019 – Third Edition (Amended Ver. of Accreditation Manual - 2014), i.e. as a Level II institute, practicing Outcome-Based Education system. Based on the OBE system of accreditation, the team evaluated the program of << program name >> for its compliance to the nine (9) accreditation criteria and found some deficiencies/ weaknesses/ concerns primarily related to the compliance of << List of Criteria >>

As a result, the team recommends to EAB that the program may be accredited as a Level II institute under the Manual of Accreditation 2019 – Third Edition (Amended Ver. of Accreditation Manual - 2014) for a period of <\_\_\_\_\_\_> years, i.e. for intake batches<\_\_\_\_\_\_\_\_\_\_\_\_\_>.

Signatures:

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Name of Subject Expert: Expert < >Engineering

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Name of Subject Expert: Expert < >Engineering

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Name of Industrial Expert: Expert < >Engineering

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Name of Convener / Team Lead: Convener < >Engineering

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Name of PEC Rep PEC Representative

Dated: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_