

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

**OBE Lectures Series-4
Accreditation Criteria of
Washington Accord/PEC under OBE
(9 Criterion)**

Criteria- 1:

Program Educational Objectives (PEOs)

Attributes of PEOs

1. Well-defined and published Institute Vision and Mission
2. PEOs are defined, consistent with the Vision / Mission, and well publicized.
3. Involvement of stakeholders in formulation / review of PEOs.
4. A process in place to evaluate the attainment of PEOs.
5. Evaluation results used for continual improvement of the program

- Follow up at CUSIT/Deptt Level

1. University, Department mission to be aligned and published in the prospectus/other University Material,
2. Appropriate Mapping of CUSIT mission/Department Vision and Mission and PEOs.
3. Major Stakeholders like employers, industry and Alumni Formal involvement
4. Achievement of PEOs assessed through Alumni, Employers Surveys
5. Periodic Review process of PEOs (CQI)

Criteria- 2:

Program Learning Outcomes (PLOs)

Attributes of PLOs

1. PLOs are well-defined and publicized.
2. PLOs are appropriately linked to PEOs
3. PLOs encompass all the required Graduate Attributes as defined in EAB Accreditation Manual
4. Mapping of Courses to PLOs
5. Teaching-learning and assessment methods appropriate and supportive to the attainment of PLOs
6. Quality of assessment process to evaluate the attainment of PLOs at student as well as cohort levels through well-defined Key Performance Indicators (KPIs).
7. 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

- Follow up at CUSIT/Deptt Level

1. PLOs are customized and published
2. Mapping of PLOs and PEOs.
3. All 11 PLOs specified by PEC/WA to be customized. Mapping of CLOs and PLOs.
4. Mapping of CLOs and PLOs.
5. CLOs/Course Files, Direct and Indirect Assessment ensure achievement of PLOs
6. Semester Review of PLOs Achievement against KPI both at Cohort level and Individual level
7. Students' Performance Review by CQI team in every semester and plan for their improvement

Criteria- 3:

Curriculum and Learning Process

Attributes

1. Curriculum covers required breadth, depth and distribution of the program courses according to program specific (HEC/PEC NCRC curriculum) guidelines.
2. Curriculum provides balanced coverage of engineering and non-engineering contents in-line with National Engineering Qualifications Framework (NEQF)
3. Adequate exposure to Complex Engineering Problems (CEPs) and Activities
4. Availability of program specific well equipped labs to supplement theoretical knowledge/class room learning.
5. Lab work supporting the attainment of the required skills and its assessment mechanism

- Follow up at CUSIT/Deptt Level

1. PEC/HEC approved Curriculum to be followed
2. PEC approved distribution of Engineering and Non Engineering Courses required.
3. The most misconceived part of preparation. Intensive trainings of Faculty required. This will be separately treated.
4. All required Labs to be provided
5. Assessment of Lab work must include direct and indirect methods, relating to all the three domains (Knowledge, Skill and Attitude). Lab Rubric to be developed

Criteria– 3:

Curriculum and Learning Process-Cont'd

Attributes

1. CLOs defined for all courses with appropriate Learning-Levels, e.g. the ones defined in Bloom's Taxonomy, and their mapping to relevant PLOs
2. Benchmarking of curriculum carried out with National / International best practices – Washington Accord (WA) recognized programs
3. Formal involvement of industry in curriculum development/ revision
4. Employment of other aspects of student learning such as tutorial system and seminar / workshops, etc. to enhance student learning, in addition to regular classroom interaction and lab experimentation
5. Exposure to cooperative learning through supervised internship program with formal feedback from the employer

- Follow up at CUSIT/Deptt Level

1. Course File, Mapping of CLOs and PLOs with appropriate level must be exhibited.
2. Check the comparison of Curriculum with the national and International best institutes
3. Members from Employers and industry to be represented in BoS/BoF
4. Extensive Seminars/workshops and other co-curricular activities to broaden the learning capacity of Students
5. Supervised internships, Survey Camps with appropriate feedback

Criteria- 3:

Curriculum and Learning Process-Cont'd

Attributes

1. Sufficient opportunities to invoke intuitiveness and originality of thought through Problem Based Learning (PBL), Design Projects and Open-Ended labs.
2. Assessment of various learning outcomes (PLOs/CLOs) employing appropriate direct / indirect methods.

- Follow up at CUSIT/Deptt Level

1. Real Problems based assignments, Case studies and Design Projects and Open Ended labs as part of learning system
2. Assessment tools to be deployed to check the attainment of PLOs/CLOs both direct and indirect methods and tools

Criteria- 4: Students

Attributes

1. Admission Criteria meets / exceeds minimum eligibility criteria prescribed by PEC Regulations
 2. Annual intake is in-line with the maximum intake allowed by EAB for the program.
 3. Efforts made to provide off-class academic counseling such as through engaging RAs/TAs/GAs holding scheduled tutorials, problem solving sessions etc. Regular office hours announced by faculty is the minimum expectation.
 4. 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.
- **Follow up at CUSIT/Deptt Level**
1. PEC approved criteria to be followed.
 2. Clear Policy and limit of Credit transfer from accredited institutions only.
 3. Rigorous Academic Counseling, including Department Counselors, Research Assistants, Teaching Assistant etc. Regular Counseling Hours by faculty, problems solving session with students, their parents etc.
 4. Roles of Students Counseling, Career Development Centre, their representation at department level.

Criteria- 4: Students-Cont'd

Attributes

1. 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)
2. Manageable semester academic load (i.e. 15-18 Cr. Hrs)
3. Completion of courses as evident from course-files and through student feedback
4. Students' participation in national / international engineering exhibitions and / or competitions, and facilitation by program for such participations
5. Quality of process to evaluate student performance and suggest / take corrective measures

- Follow up at CUSIT/Deptt Level

1. Class Size restriction. Ample work stations for performance
2. Teaching Load to be restricted to approved
3. Course completion report online, review at HoD and DQEC levels.
4. Extensive involvement of students in workshops, visits, exhibition etc. Role of CDC and Industry Liaison Section
5. Internship surveys, Alumni Surveys, Employers surveys etc and appropriate corrective actions

Criteria- 5:

Faculty and Support Staff

Attributes

1. Sufficient Faculty Strength for providing effective student-teacher interaction (student-teacher ratio should be as per PEC guidelines, i.e. better than 20:1)
2. Balanced faculty having appropriate qualifications (min. postgraduate with a reasonable percentage holding PhD) to cover all areas of program curriculum
3. Formal mechanism for faculty training and mentoring on pedagogical skills including OBE concepts and implementation methodologies.
4. Effectiveness of faculty development program to ensure their professional growth and retention.
5. Reasonable faculty workload (as per PEC guidelines) including facilitation to young faculty pursuing higher studies.

- Follow up at CUSIT/Deptt Level

1. The 20:1 ratio to be maintained Teacher teaching for at least one semester included. Faculty not teaching not counted.
2. MS plus experience. At least one PhD per section of intake. Their diversity required.
3. Rigorous Faculty training sessions on PBE
4. Faculty retention history through development and motivation.
5. Faculty development opportunities and young Faculty development focus.

Criteria- 6:

Facilities and Infrastructure

Attributes

1. Adequacy of teaching and learning facilities, e.g. classroom environment and availability of various teaching aids, etc.
2. Provision of program specific labs (as per curriculum), workshops, and associated lab equipment for complementing the class / theory work.
3. Adequacy of library resources and facilities
4. Provision of sufficient computing facilities and internet access / resources allocated for the program
5. Provision and effectiveness of consulting and career placement services provided to the students
6. Adequacy of support facilities such as hostels, sports and recreational centers, health care centers, student centers, and transport facilities

- Follow up at CUSIT/Deptt Level

1. No of Class rooms, labs and AV Aids in Classes.
2. The basic Labs and Shared Labs must be consistent with the program needs
3. Basic books and Reference books. 1000 titles
4. Computer Labs and Wifi facilities
5. Department level effective counseling Mechanism
6. Students' Support services, researtional, health and transport facilities

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Criteria- 6:

Facilities and Infrastructure-Cont'd

Attributes

1. Adequacy of arrangements made / measures taken to ensure work-place safety (EHS concerns) in general, and while performing experiments in the labs. in particular

- Follow up at CUSIT/Deptt Level
1. Lab Safety manuals, Safety drills, evacuation maps and signs, Protective measures and gadgets in performing Lab experiments, Gloves, Glasses, and Ear plugs, plastic hats etc.

Criteria- 7:

Institutional Support and Financial Resources

Attributes

1. Adequacy of institutional financial resources to ensure program's sustainability and meeting of recurring as well as developmental requirements.
2. Evidence of continued financial commitment in the form of increasing endowment and recurring /development budget since last accreditation visit.
3. Provision of funding for R&D pursuits and presentations/publication of research papers

- Follow up at CUSIT/Deptt Level

1. Sustainable Fee Revenue, commitment of financial resources for recurring and development requirements of the program.
2. Increased allocations, progressively
3. Funding of research activities, research publications etc.

Criteria– 8:

Continuous Quality Improvement (CQI)

Attributes

1. CQI process is well documented and institutionalized at all levels (CLOs, PLOs and PEOs).
2. Actions taken / implementation plans worked out to address the concerns/weaknesses identified in the last accreditation visit report
3. Improvement in Faculty Strength / Qualifications since last accreditation visit
4. Improvement in Student-Teacher Ratio since last accreditation visit
5. Continuation of Faculty Publications, R&D and Consultancy activities
6. 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
7. New initiative(s) taken since last accreditation visit (including but not limited to OBE implementation, content delivery, assessment and evaluation processes, etc

- Follow up at CUSIT/Deptt Level

1. Proof to be provided by DQEC and UQEC.
2. Evidence to be provided
3. Evidence to be provided
4. Evidence to be provided
5. Evidence to be provided
6. Evidence to be provided
7. Evidence to be provided

Criteria- 9: Industrial Linkages

Attributes

1. Existence of active Industrial Advisory Board/Committee
2. Formal mechanism for seeking feedback from Industry and its analysis for the attainment of PEOs
3. Opportunities for students to acquire industrial experience via internship and existence of Industry-Liaison office
4. Design projects sponsored / supervised jointly by Industry Professionals and faculty members
5. Faculty members involved in design / supervision / consultancy role with the industry in the execution of industrial projects

- Follow up at CUSIT/Deptt Level

1. National and Provincial Advisory Bords/Minutes of meetings and recommendations
2. Involvement of industry reps in BOS/BoF
3. Internships, industrial visits, industry interaction