

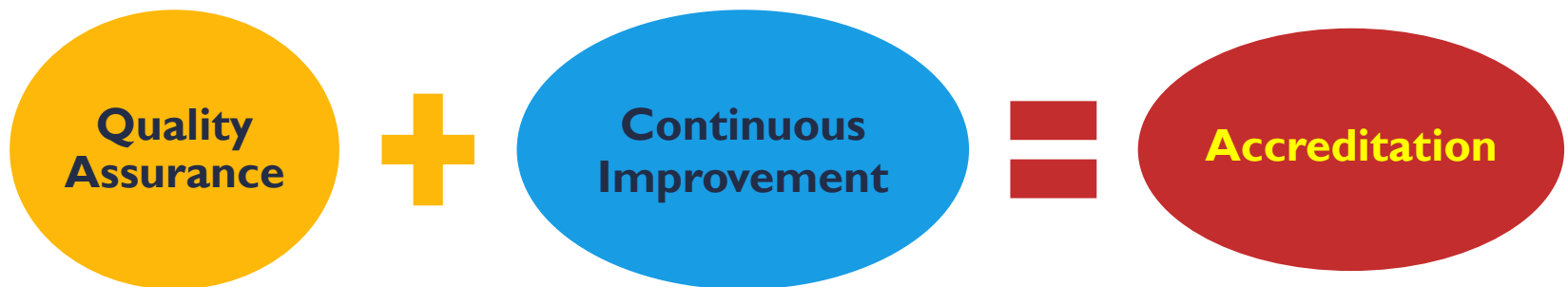


OBE, Accreditation Criteria and Importance

Prof. Urmila Patil
Professor (ECE),
Fmr Dean Academics,
Fmr IQAC coordinator,
Dr. D. Y. Patil Institute of Technology ,
Pimpri, Pune 18.

What is Accreditation ?

- Accreditation is a process of quality assurance and continuous improvement whereby a programme in an Approved Institution is critically appraised on professional judgment to verify that the Institution or the programme continues to meet and/or exceed the Norms and Standards prescribed by regulatory body from time to time.
- Kind of recognition which indicates that a program or Institution fulfils certain standards.
- The programs of technical institution are accredited by the NBA and Educational Institutions are considered for accreditation by NAAC.



Why Accreditation ?

Accreditation serves to notify the stakeholders of the education system about its quality as per their interest.

- Parents and prospective students that a program has met minimum standards.
- Faculty, director and management of a program's strengths and weaknesses and of ways to improve the program.
- Employers that graduates are prepared to begin professional practice.
- The public that the graduates of an accredited program are aware of societal consideration.

National Board of Accreditation

- September 1994 - Set-up in by the AICTE
- Became independent autonomous body with effect from 7th January 2010
- Completely independent of AICTE, administratively as well as financially in April 2013
- Conducts evaluation of programs of technical institutions based on evaluation criteria and parameters laid down by its Committees and Council
- Works closely with all the stakeholders to ensure that the programs serve to equip graduates with sound knowledge of fundamentals of the discipline and to develop in them an acceptable level of professional competence
- One of the objectives of NBA is to build a technical education system as facilitator of human resources, that will match the national goals of growth by Competence, Contribution to economy and Compatibility with societal development

Scope

Sr. No.	Program	Level
1	Engineering & Technology	Diploma (3 yrs), UG, PG
2	Management	PG
3	Pharmacy	Diploma, UG, PG
4	Architecture, Applied Arts & Crafts	UG, PG
5	Computer Application	PG
6	Hotel Management & Catering Technology	UG

3/15/2025

Classification of Institutions

TIER-I

- IITs, IISc, IIITs, NITs
- Central Universities
- State Universities
- Private Universities
- Deemed-to-be-Universities
- Autonomous Institutes

TIER-II

- Non-autonomous technical institutions affiliated to a University including:
- Government Colleges
- Government Aided Colleges
- Private/Self Financing Colleges

Why Outcome Based Accreditation ?

- Globalization (and Accreditation methods) has brought in a clear shift from education as transmission of expert knowledge to education as building learner competencies including learning to learn and life long learning.

Focus will have to be on

- Understanding fundamentals very well, and learning new skills/competencies that would enable individuals to cope with the demands of the rapidly changing workplace / society.
- Prepare competent graduates/post-graduates/researchers who will have to solve problems and shoulder challenges which are not foreseen today!

Outcome-based Education (OBE) and Accreditation

- OBE is targeted at achieving desirable outcomes (in terms of knowledge, skills, attitudes and behavior) at the end of a program.
- This entails a regular methodology for ascertaining the attainment of outcomes, and benchmarking these against the program outcomes consistent with the objectives of the program.
- NBA accreditation used to be based on “Input – Process – Output” model.
- In 2009, NBA aligned its methodology with international benchmarks and started accreditation on the basis of Outcomes.
- Outcomes are dependent not only on inputs but also on the processes followed by an institution to convert inputs into defined outcomes.
- “What is learned” vs “What is taught”

“PRODUCT DEFINES PROCESS”

Outcome-based Education (OBE) and Accreditation

- OBE relates each part of an educational system around goals (outcomes)
- Each student (product of the educational institution) should have achieved the goal to prove its quality
- No single specified style of teaching or assessment
- Classes, opportunities, and assessments should help students achieve the specified outcomes
- Role of the faculty as instructor, trainer, facilitator, mentor
- Input like infrastructure facilities, administrative practices, academic resources, financial resources evaluated
- Outputs like success rate, academic performance, placement, higher education, and entrepreneurship evaluated

Quality assurance and CQI

Assessment :

- Assessment is one or more processes that identify, collect, and prepare data to **evaluate** the attainment of student outcomes.


Methods for gathering data include

- Direct / Indirect
- Formative / Summative
- Objective / Subjective
- Embedded / Add-on
- Quantitative / Qualitative

Set proper **Performance Indicators or Rubrics**

Quality assurance and CQI

Evaluation :

- Consists of one or more processes for interpreting the data and evidences accumulated through assessment processes.
- Evaluation determines the extent or level to which outcomes are being attained.
- Attainment of outcomes 
- Else results in decisions and actions to be taken for program improvement. (Continuous Quality Improvement).
- Faculty members and program committee initiate quality measures at the Course level and at Program level.

Quality assurance and CQI

For continuous improvement, an educational program need a clear understanding of:

- Mission statements
- Constituents
- Objectives (what to achieve through the graduates of the program)
- Outcomes (learning to meet objectives)
- Processes (Practices adapted to achieve the outcome)
- Facts (Data identification and collection)
- Evaluation (Interpretation of facts in terms of attainment level of outcome)
- Action (Corrective change or addition in the process for improvement in the attainment of level)

SAR Accreditation Criteria

- The assessment and evaluation process of accreditation of an UG engineering program is based on 10 broad criteria
- Each criterion relates to a major feature of institutional activity and its effectiveness
- The criteria have been formulated in terms of parameters, including quantitative measurements that have been designed for maximal objective assessment of each feature
- These accreditation criteria have been split into two levels as:
 - Part A : Institute level criteria
 - Part B : Program level criteria

Accreditation Criteria (for OBE)

Vision, Mission and PEOs

Programme Outcomes

Programme Curriculum

Student Performance

Faculty Contributions

Facilities and Technical Support

Academic Support Units
and Teaching-learning
Process

Governance, Institutional
Support and Financial
Resources

Continuous Improvement

Vision, Mission and PEOs

- **Vision** is a futuristic statement that the institution would like to achieve over a long period of time
- **Mission** statements are essentially the means to achieve the vision of the institution
- In case the vision is to create high-quality engineering professionals, then the mission could be to offer a well-balanced program of instruction, practical experience, and opportunities for overall personality development.
- Vision and Mission statements help the program in defining aspirations and to remain focused.
- Simple language, easy to communicate and should define objectives.

3/15/2025

Vision, Mission and PEOs

Program Educational Objectives (PEOs)

- PEOs are the statements that describe what the graduates are expected to perform and achieve during the first few years after graduation.
- Reflect on the professional accomplishments, continuing education and attitudes.
- Consistent with the mission of the institution.
- All the stakeholders should participate in the process of framing PEOs.
- Manageable number of PEOs (3 to 5).

Program Curriculum and Teaching-Learning Processes

- The process of development of program curriculum considering the Program Outcomes and Program-Specific Outcomes.
- Structure of the curriculum shall comprise of course code, course title, total number of contact hours (lecture, tutorial and practical) and credits.
- Grouping based on course components such as core, elective, basic science, engineering science, humanities and projects / internship.
- Attainment of the POs and PSOs shall be articulated.

Program Curriculum and Teaching-Learning Processes

Improved quality of teaching and learning processes by

- Adherence to academic calendar
- Improving instruction methods using pedagogical initiatives
- Collaborative learning
- Quality of laboratory experience
- Encouraging bright students
- Assisting weak students
- Quality of question papers, assignments and evaluation
- Quality of projects
- Industry Interaction

3/15/2025

Program Curriculum and Teaching-Learning Processes

- Mention quality of semester tests, assignments and evaluation.
- Project identification, allotment, continuous monitoring, evaluation.
- POs and PSOs addressed through the projects with justification.
- Industry-attached laboratories, partial delivery of appropriate courses by industry experts, industry internship/summer training, etc.
- Initiatives, implementation details and impact analysis to be provided in SAR.

Course Outcomes and Program Outcomes

- Course coordinator to state course outcomes
- Align COs to attain POs and PSOs
- Same course, different teachers, different COs
- Program articulation matrix and course articulation matrix
- Decide delivery mode
- PO attainment from CO->PO mapping
- PSO attainment from CO->PSO mapping. Stronger



Course Outcomes and Program Outcomes

Course Outcomes (COs): Describe what students are expected to know, and are able to do at the end of each course. Relate to the skills, knowledge and behavior that students acquire

- 4-6 CO statements for each course
- Assessment tools: ISE, MSE, ESE
- Student Portfolio
- Process to be adapted to map assessment questions and parameters of Rubrics to CO
- Set of attainment level for all courses, before beginning the course
 - First cycle: 60% students to score 60%
 - Next cycle : 70 % students to score 70%

Course Outcomes and Program Outcomes

PO attainment : Direct and Indirect methods

- Direct method: Based on direct examination or observation of students' knowledge or skills against measurable performance indicators
- Indirect method: Assessment based on ascertaining opinion or self-report using Rubrics
- It is a set of criteria for assessing students' work or performance
- Suited to Program Outcomes that are complex or not easily quantifiable
- Assessment of each PO and PSO for three assessment years shall be indicated

Students' Performance

- The educational institution should monitor the academic performance of its students carefully
- The institution shall provide the required information for 3 complete academic years about sanctioned intake and corresponding admission in the program
- Success rate with and without backlogs in the stipulated period
- Academic performance of second and third year
- Placement and higher studies and professional activities as per the format given in the SAR.

Faculty Quality and Contributions

Provide following information for three complete AYs

- Student-Faculty Ratio (SFR)
- Faculty Cadre Ratio
- Faculty Qualifications
- Faculty Retention
- Innovations by the faculty in teaching and learning
- Faculty development activities, academic research, sponsored research, development activities and consultancy
- Faculty Performance Appraisal and Development System (FPADS)
- Contributions of visiting / adjunct / emeritus faculty as per the format given in the SAR

Facilities and Technical Support

- Adequate infrastructural facilities to support the achievement of the POs
- Classrooms, tutorial rooms, meeting rooms, seminar halls, conference hall, faculty rooms, and laboratories
- Laboratories equipped with computing resources, equipment, and tools relevant to the program
- Adequate number of qualified technical supporting staff
- Provide the required information in SAR about facilities and technical manpower in the department to meet the curriculum requirements as well as the POs and PSOs

Continuous Improvement

- Closing the loop at course level, program level and institution level, ensures quality of the program
- All COs and POs attainment analysis is made to provide continuous improvement through course delivery, assessment and curriculum
- Provide required information regarding action taken based on the results of evaluation of each PO for 2-3 assessment years along with academic audit process, placement, higher studies, entrepreneurship and quality of students admitted to the program

First Year Academics

- First Year Faculty Ratio (FYSFR)
- Qualification of Faculty Teaching First Year Common Courses
- First Year Academic Performance
- Attainment of COs and POs of all first year courses and the action taken based on the results of evaluation of relevant POs and PSOs for continuous improvement

Student Support Systems

- Academic student support systems play an important role in the teaching-learning process
- Mentoring/proctor system at individual level
- Feedback analysis and reward and corrective measures
- Self-learning facilities/materials
- Scope for learning beyond syllabus
- Career guidance
- Training and placement
- Entrepreneurship cell
- Provision for co-curricular and extra-curricular activities

Governance, Institutional Support and Financial Resources

- Formulation and implementation of policies to fulfill institute's Mission and Vision
- Strategic plan and its effective implementation and monitoring
- Governance body, administrative setup, function of various bodies
- Service rules and recruitment policies
- Grievance redressal mechanism
- Delegation of financial powers
- Transparency and availability of correct information in public domain
- Budget allocation and utilization (for both institution and program)
- Comprehensive and up to date library
- Quality of learning resources
- Adequate Internet bandwidth

