Integrating and Evaluating Outcome-Based Education at the Thapar Institute: A Commitment to Quality and Transparency

The Department of Electrical and Instrumentation Engineering has established a robust framework for implementing and assessing learning outcomes, encompassing both Program Outcomes (POs) and Course Outcomes (COs), aligning with Graduate Attributes (GAs) for all programs of the department. This framework is integral to TIET ethos and practices for academic excellence and continuous quality improvement. The department ensures that well-defined outcomes are embedded within the assessment process and that they are widely publicized among the stakeholders to create a transparent and outcome-oriented academic environment.

Integration of Program and Course Outcomes

In TIET, the POs and COs are meticulously mapped to ensure that all programs consistently deliver competencies aligned with national and international academic standards. The learning outcomes are developed in accordance with the guidelines of the National Board of Accreditation (NBA), ensuring that graduates demonstrate the essential skills, knowledge, and attitudes required in today's competitive world. Faculty members and academic experts collaborate to design courses that reflect these outcomes, thereby creating a cohesive curriculum where each course contributes meaningfully to attaining POs and GAs.

Each course has specific COs and is aligned with POs. These COs are outlined in course syllabi and are emphasized throughout instruction. This enables a structured approach through formative and summative assessments of outcomes, fostering measurable progress across various levels of learning.

Assessment and Evaluation

A well-defined assessment strategy that includes both direct and indirect methods is practiced to evaluate the attainment of POs and COs. Direct assessments consist of continuous assessments, quizzes, project evaluations, laboratory work, and mid and end-semester examinations. Indirect assessments, including student feedback, exit surveys, and employer feedback, complement the direct methods, offering a holistic perspective on learning outcomes.

The attainment of COs is quantitatively analysed through a system that computes achievement levels based on performance metrics. These results are then used to assess PO attainment, following a tiered approach where course-level achievements contribute to program-level outcomes. Periodic reviews of these outcomes ensure the identification of any improvements, leading to necessary curriculum revisions, resource allocation, and targeted interventions such as new experiments and infrastructure augmentation with new laboratories.

Publication and Stakeholder Awareness

TIET actively disseminates POs, COs, and GAs through various channels to foster transparency and engagement. These are prominently displayed on the institute's website, course syllabus, and academic areas. Students are encouraged to familiarize themselves with these outcomes and attributes, reinforcing their importance in shaping the educational experience. Additionally, academic advisors and faculty members routinely discuss these with students to make them understand the needed skills and competencies.

Continuous Improvement and Feedback

TIET is committed to the continuous improvement of its outcome-based education (OBE) framework. The institution regularly reviews and updates COs to align with evolving industry demands, technological advancements, and global standards. Feedback from alumni, industry partners, and other stakeholders is actively sought to fine-tune learning outcomes and enhance the curriculum. Experts from the industry are invited to the Board of Studies (BOS), which is responsible for revising the curriculum. Such iterative revisions ensure that graduates are not only well-prepared for their careers but also capable of contributing positively to society.

Finally, the comprehensive approach of TIET to the integration, assessment, and publication of learning outcomes reflects its commitment to quality education. By aligning POs, COs, and GAs with rigorous assessment processes involving all stakeholders, TIET fosters an educational environment that promotes transparency, accountability, and continuous improvement. This commitment to outcome-based education positions TIET as a leading institution dedicated to producing skilled, responsible, and competent graduates.