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## Course Outcomes to Programme Outcomes Mapping: A Methodology Based on Key Elements

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Abstract: In a world of tremendous technical developments, effective and efficient higher education has always been a major challenge. The rising number of educational institutions have made it mandatory for healthy competitions among the institutions. To evaluate the qualitative competence of these educations institutions in engineering and technology and related disciplines, an efficient assessment technique in internal and external quality has to be followed. To achieve this, the curriculum is to be developed into courses, and each course has to be presented in the form teaching lesson plan consisting of topics and session outcome known as Course Outcomes (COs), that easily map into different Programme Outcomes (POs). The major objective of these methodologies is to provide quality technical education to its students. Detailed clear weightage in CO-PO mapping helps in proper measurable COs and to devise the POs attainment is an important issue. This ensures in assisting the achievement of the POs with proper weightage to POs, and also improves the successive curriculum development. In this paper, we presented a methodology for mapping CO and PO considering the key elements supported by each PO. This approach is useful in evaluating the attainment of POs which is based on the attainment of COs using the existing data from students' marks taken from various test items. Such direct assessment tools are used to measure the degree to which each student has achieved each course learning outcome by the completion of the course. Hence, these results are also useful in measuring the PO attainment for improving the programme vision and mission.

**Keywords:** attainment, course outcomes, programme outcomes, educational institutions

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