



Guidelines formulation of Course Outcomes (COs) and Course Mapping with Program Outcomes (POs)

TEN MAJOR TIPS

1. All the Course Outcomes (COs) shall be formulated at the very beginning of the course design once the course titles are identified that contribute to the attainment of Program Outcomes (POs)
2. Based on the definition of COs i.e. intended learning outcomes (ILO), the course contents shall be designed i.e. classroom deliverables
3. All the COs shall be appropriately mapped to the relevant POs with appropriate weight, say, '3' for strong contribution; '2' for moderate contribution and '1' for less contribution
4. The course content shall be designed and the appropriate mapping shall be done based on the expected outcomes of each PO which is meant for a desirable graduate attributes for a graduating engineer
5. There is no standard protocol of fixing the number of COs for each course. However, as per the requirement of accreditation process by NBA under Tier I & II, **the number of COs for a course is expected to be around 6 (Six)**
6. One of the most important points to be noted during the mapping process is that the courses should be mapped to the relevant POs only if the course is common or core or mandatory to all students with ILO for a graduate as a whole. While demonstrating the process of the calculation of POs attainment, it shall be done through core courses only
7. COs shall follow the revised Bloom's Taxonomical Action Verbs
8. While measuring the course outcomes pertaining to Program Specific Outcomes (PSOs), the curriculum designed should ensure that the courses are spread across the semesters. For instance, it is not advisable to have such courses at the higher semester, say 8th semester or 7th semester to limited extent and claims that the attainment level is 100%
9. While formulating the Target Performance Level (TPL) for the courses or the each course outcomes, it shall be judiciously decided based on the following parameters
 - a. Age of the Program
 - b. Previous track record of the course in terms of students' performance and T & L process
 - c. Number of students clearing GATE
 - d. Average University Performance

The above parameters are just a metric to fix the TPL on a scientific basis. In case, if the program decides to fix a higher level of TPL, accordingly suitable teaching pedagogy and other assessment instrument shall be in place for the attainment the defined TPL. On the other hand the TPL should not be less than that of the earlier highest TPL since the launch of the program. The program should ensure that the attainment is progressively improving towards continuous growth

10. Eventually, the course contents should appropriately address the requirement of course outcomes and appropriate assessment tools shall be in place for measuring the attainment

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