

**3.2.1 Describe the Assessment process used to gather the data upon which the evaluation of Course Outcome is based.**

**Direct Attainment of each CO**

**A) Internal level value for CO(k):**

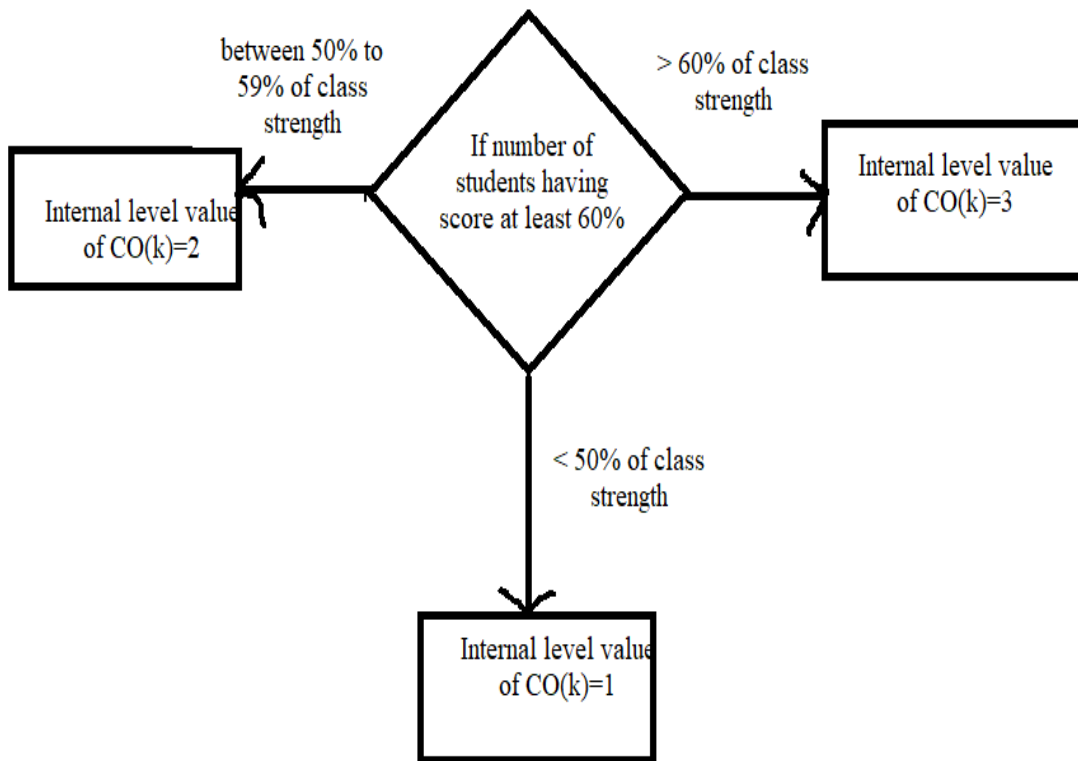
Questions in question papers (descriptive, objective and assignment) are mapped to COs.

CO Attainment (Internal) is done for any CO(k), k=1,2,3,4,5 using the following process:

Step 1: If x is maximum marks against some CO(k) in all tests put together for each student, we calculate his or her score using the following formula,

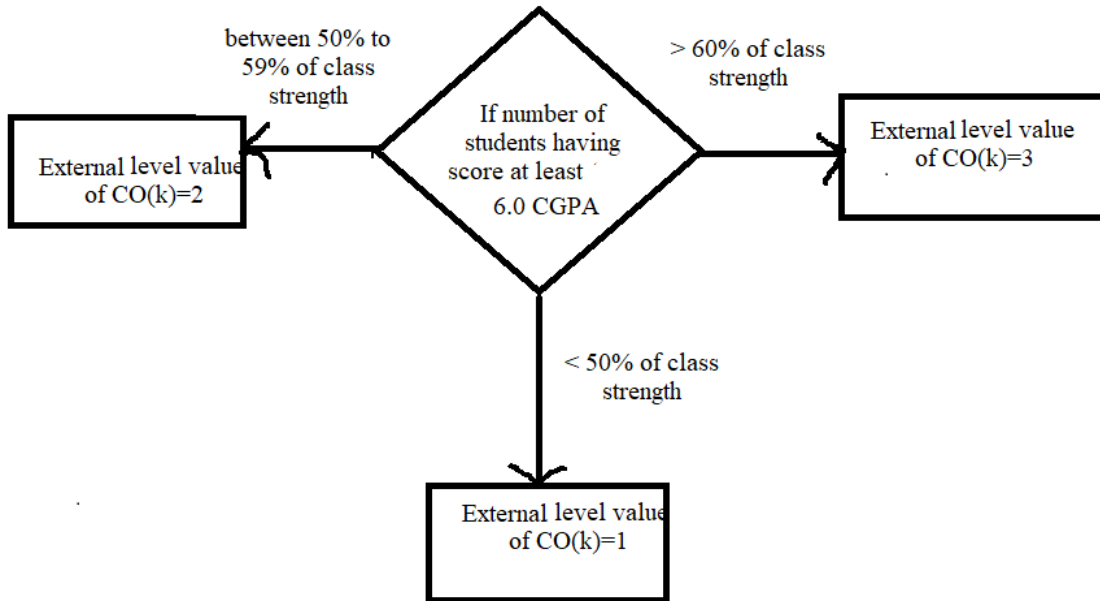
$$score = \frac{\text{Marks obtained by the student in those questions mapped to CO}(k)}{x} * 100$$

Step 2: Internal level value for CO(k) is computed using,



**B) External level value for CO(k)**

We tag questions in End Semester Exam (University Exam) to COs. However, we are not aware of marks obtained by student for each question. Hence, we adopt the following process for each CO(k), k=1, 2, ..., 5 uniformly.



Now, Direct Attainment for that CO(k) is

$$0.7 * [(Internal\ level\ value\ of\ CO(k) * 0.6) + (External\ level\ value\ of\ CO(k) * 0.4)]$$

### Indirect Attainment of each CO

$$0.3 * (Course\ end\ survey\ value\ of\ each\ CO(k))$$


where Course End Survey value is obtained as follows:

1. Each student gives a rating between 1 to 3 for each CO of a subject, where 1 represent low level mapping, 2 represent moderate mapping and 3 represent high level mapping.
2. Find the average rating for each CO.

Finally,

**CO Attainment of each CO =**

$$Direct\ Attainment\ of\ each\ CO + Indirect\ Attainment\ of\ each\ CO$$

  
 Signature with Seal of Principal  
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