2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

Course Outcomes, Program Outcomes, and Program Specific Outcomes constitute the backbone of the 'Outcome Based Education' system. While COs are defined for every course, the PSOs are defined for each Program. The POs are specified by the National Board of Accreditation and the same are adopted by all the institutions.

The process for measurement of attainment of the COs, PSOs and POs is formulated at the institution level through a set of assessment tools comprising of direct and indirect methods.

CO Attainment

The attainment of CO is determined based on the outcome of at least two direct assessment tools. Recommendations for preparation of assessment plan are as follows:

    i.   Every CO should be assessed by at least two tools, apart from CIE.
    ii.   Assignment is a mandatory tool for assessment of every theory course.
    iii.   The second assessment tool could be tutorial, quiz, minute paper etc

Some of the direct assessment tools adopted in the measurement of the attainment level of COs are:

Direct Tools: CIE I and II, Assignment, Tutorial, Quiz, class room problem solving, minute paper, Seminar reports and presentation, Laboratory reports, Project reports, Viva-voce University Examination etc.

An assessment matrix is designed which consists of an assessment plan and data entry sheet displaying the question wise score for every student. The scores are entered throughout the semester by the teacher, as and when an assessment is completed so that the matrix is

continuously updated. The assessment matrix is uploaded on the faculty web page of the institution which enables the student to monitor his marks as the semester progresses.

For the University Examinations, CO wise assessment is not possible as the question paper setting and evaluation is done by the University due to which question wise marks of the student are not available. Hence the overall marks scored by the student are considered for the assessment of the CO.

At the end of the semester, the internal marks and the status of CO attainment is obtained from the assessment matrix.

Maximum University Marks	75
CO attainment threshold (40% of 75)	30
Maximum Internal Assessment marks	25
CO attainment threshold (60% of 25)	15
Maximum University Marks + Maximum Internal Assessment marks	100
CO attainment threshold of University marks + Internal Assessment marks	45

Appropriate thresholds are also set for non theory courses in a similar manner.

PO and PSO Attainment

The assessment tools for the Programme Outcomes (POs) are categorized into two types:

1. Direct Assessment Tools: CO attainment levels
2. Indirect Assessment Tools: Course end survey, Exit Survey, Alumni Survey and Employer Survey

The institution has designed separate PO assessment frameworks for theory courses, laboratory courses, seminar and project. For the evaluation of the POs and PSOs a weightage of 80% is

given to the average CO attainment score and the indirect assessment tools of course end survey, exit survey, alumni survey and employer survey are each given 5% weightage.

PO or PSO score = 0.8 * Average Direct score + 0.2* average indirect score