Kanya Maha Vidyalaya, Jalandhar (Autonomous) has adopted Benjamin Bloom's Taxonomy as a compass for faculty in defining student learning goals and links Course Outcomes (COs) with examination results at the end of each learning period (each semester) to nurture student capabilities. This taxonomy comprises six distinct levels given below, pivotal in shaping learning objectives, planning month wise division of syllabus and designing assessment techniques for every course:

1. Remember
2. Understanding
3. Application
4. Analysis
5. Assessment
6. Creating

In order to effectively establish this practice, Kanya Maha Vidyalaya, Jalandhar, has wholeheartedly embraced Outcome-Based Education (OBE). Within each department, learning outcomes are designed to ensure measurability.

Courses are designed to encompass a wide array of pedagogical techniques, ranging from traditional lectures and chalk talks to hands-on laboratory practices, interactive workshops, and dynamic conferences and seminars/ webinars. The techniques are supported by cutting-edge information and Integrated Communication Technology (ICT) tools and methods. To achieve the desired outcomes following methods have been adopted for CO mapping and CO to Programme Specific Outcomes (PSO) / Programme Outcomes (PO) mapping

Criteria for Assessment of Course Outcomes

The Course Outcomes are calculated based on the performance of the students in End Semester Examinations. The data used for evaluating COs are acquired from the awards obtained by students in each question and their classification according to the COs. The strength of CO mapping is determined through a straightforward technique that relies on the percentage of marks (x) obtained by a student in each question and is outlined as follows and illustrated in Table 1.

- If x ≥75%, it is considered that the CO is addressed at Level 4.

- If 60%≤ x< 75%, it is considered that the CO is addressed at Level 3.

- If 50%≤ x< 60%, it is considered that the CO is addressed at Level 2.

- If 40%≤ x< 50%, it is considered that the CO is addressed at Level 1.

- If x < 40%, it is considered that the CO is not addressed.

Table 1: Threshold Score and Range to the weightage obtained in each CO to assess the attainment.

Percentage	Score	For 5 marks question		For 6 marks question		For 8 marks question		For 10 marks question		For 12 marks question		For 16 marks question	
		from	to	from	to	from	to	from	to	from	to	from	to

Less than 40%	0	0	1.9995	0	2.3994	0	3.1992	0	3.999	0	4.7988	0	6.3984
40-49.99	1	2	2.4995	2.4	2.9994	3.2	3.9992	4	4.999	4.8	5.9988	6.4	7.9984
50-59.99	2	2.5	2.9995	3	3.5994	4	4.7992	5	5.999	6	7.1988	8	9.5984
60-74.99	3	3	3.7495	3.6	4.4994	4.8	5.9992	6	7.499	7.2	8.9988	9.6	11.9984
75-100	4	3.75	5	4.5	6	6	8	7.5	10	9	12	12	16

Criteria for Assessment of Course Outcomes to Programme Specific Outcomes

The mapping of Course Outcomes (COs) to Program Specific Outcomes (PSOs) is conducted to ensure that the COs cater to all PSOs and to assess the strength of this mapping. This mapping allows one to evaluate the extent to which PSOs are addressed by the COs at different levels. The criteria used to map COs to PSOs and evaluate attainment levels are as follows:

The number of sessions/lectures allocated to each CO is documented, and the distribution of these sessions concerning PSOs is carefully recorded. The evaluation is performed to ensure whether all PSOs are covered by one or more COs, leaving no PSO unaddressed in the program's curriculum. The strength of mapping is calculated using a simple technique based on the percentage of classroom sessions (y) addressing a specific PSO as given below:

- If $y \geq 50\%$, it is considered that the PSO is addressed at Level 4.

- If $40\% \leq y < 50\%$, it is considered that the PSO is addressed at Level 3.

- If $25\% \leq y < 40\%$, it is considered that the PSO is addressed at Level 2.

- If $5\% \leq y < 25\%$, it is considered that the PSO is addressed at Level 1.

- If $y < 5\%$, it is considered that the PSO is not addressed.

A critical component of the evaluation involves calculation of the scale factor, which quantifies the mapping strength. It is determined using the formula:

Scale Factor = (Actual Mapping Strength / Maximum Possible Mapping Strength)

To calculate the overall attainment of PSOs that are relevant to COs, the scale factors calculated above are multiplied by the CO attainment level for each course. The results are then aggregated and used to compute the average CO to PSO level for each semester. This data is often visually represented as a bar graph, providing a clear overview of the program's performance in addressing PSOs throughout its duration.