



## Attainment of CO- PO

Measuring the level of attainment of Program Outcomes (POs), Program Specific Outcomes (PSOs), and Course Outcomes (COs) is essential for evaluating the effectiveness of an educational program and ensuring that students are achieving the intended learning outcomes. This process involves several steps and methods to comprehensively assess students' performance and the overall effectiveness of the curriculum.

### **Defining POs, PSOs, and COs:**

Before measuring attainment levels, it's crucial to clearly define POs, PSOs, and COs. POs represent the broad learning objectives of the entire program, while PSOs are specific to a particular specialization within the program. COs, on the other hand, are related to individual courses and detail the specific learning outcomes expected from each course.

### **Mapping POs, PSOs, and COs:**

Mapping involves aligning COs with PSOs and POs to ensure that the curriculum is designed to achieve the intended learning outcomes at different levels. This mapping process provides a clear framework for assessing attainment levels.

**Attainment level (3 if more than 60% of students achieved the target / 2 for >50% / 1 for >40%)**

**Direct assessment 1:** refers to evaluation through internal assessments which majorly include Continuous Internal

*LOW (1) 40% student scoring more than 50% marks*

*MEDIUM (2) 50% student scoring more than 50% marks*

*HIGH (3) 60% student scoring more than 50% marks*

Assessments (CIA1/PUT) in terms of Internal Assessment Tests, Class/Assignment, Presentations, quizzes, etc.



**Direct assessment 2:** refers to evaluation through End Semester Examination (ESE)

*LOW (1) 40% student scoring more than 40% marks*

*MEDIUM (2) 50% student scoring more than 40% marks*

*HIGH (3) 60% student scoring more than 40% marks*

**Indirect assessment:** refers to the exit feedback survey taken by students/faculty/employers. The exit feedback survey must be taken up before the end of the semester. The exit survey may be based on a marking scheme (1-3) for each CO.

Further steps to follow for the calculation of Course Outcome attainment (COA) level:

A: Assign the attainment level (3 for >60%/2 for >50%/1 for >40%) for Direct Assessment 1, Direct Assessment 2, and Indirect Assessment.

B: Attainment based on internal assessment (CIA) = Average of [CIA1(a) and CIA2(b)]

C: Direct CO Attainment Level (DA) = 33% CIA + 67% End-Term (c)

D: Indirect CO Attainment Level (IA)

E: Finally, Course Outcome Attainment (COA) level = 80% of DA and 20% of IA

**Sample Attainment**

FINAL DIRECT COURSE ATTAINMENT CALCULATION						Final indirect Course	
Course Outcome	Sessional Exam	Assignment, Presentations etc	PUT	Average Internals	End Semester	Course Outcome	Attainment level
CO1	2	3	1	2	3	CO1	3
CO2	3	3	3	3	3	CO2	3
CO3	2	3	2	2	2	CO3	3
CO4	1	3	3	1	2	CO4	3
CO5	3	3	2	3	3	CO5	3
Attainment				2.2	2.6	Final Attainment	3
Weightage				33%	67%		
Direct Total Attainment				0.73	1.74		
Final Direct Total Attainment				2.47			

Final Overall Course Attainment		
Attainment	Weightage	Attainment
Direct Attainment	80%	1.97
Indirect Attainment	20%	0.6
<b>Total Course Attainment</b>		<b>2.57</b>



### Program Outcomes

**PO1: Strategic thinking and planning:** Develop the ability to think strategically and plan effectively to achieve business goals.

**PO2: Leadership and team management:** Develop leadership skills and the ability to manage teams effectively.

**PO3: Communication and interpersonal skills:** Develop effective communication and interpersonal skills to work with diverse groups of people.

**PO3: Financial and quantitative analysis:** Develop the ability to use financial and quantitative analysis to make informed business decisions.

**PO4: Ethical and social responsibility:** Develop an understanding of ethical and social responsibility issues in business and the ability to make responsible decisions.

**PO5: Innovation and entrepreneurship:** Develop the ability to identify and pursue innovative opportunities and to start and manage new ventures.

**PO6: Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

**PO7: Critical thinking and problem-solving:** Develop critical thinking and problem-solving skills to identify and solve complex business problems.

#### PO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6
1	Y		Y			Y
2	Y	Y				
3		Y		Y		
4					Y	
5	Y				Y	Y

#### POs ADDRESSED BY COs

Pos	Course Outcomes	Total Number of sessions
1	CO1,CO2,CO5	8+8+8=24
2	CO2,CO3	8+8=16
3	CO1	8
4	CO3	8
5	CO4,CO5	8+8=16
6	CO1,CO5	8+8=16



Course mapping Strength			
	Number of sessions devoted	PO	Mapping strength
	24 of 40 (60%)	PO1	3
	16 of 40 (40%)	PO2	3
	8 of 40 (20%)	PO3	1
	8 of 40 (20%)	PO4	1
	16 of 40 (40%)	PO5	3
	16 of 40 (40%)	PO6	3

**Course PO Mapping Level**

Course :	PO					
	1	2	3	4	5	6
Mapping Strength:	3	3	1	1	3	3