



**EINSTEIN ACADEMY OF TECHNOLOGY AND MANAGEMENT**

Approved by AICTE, Affiliated to BPUT Odisha

At: Baniatangi, PO: Bajapur, Khurdha, PIN: 752060, Bhubaneswar

## **Supporting Document for Qualitative Metric 2.6.2**



**Submitted to NAAC  
By  
Einstein Academy of Technology and Management (EATM),  
Bhubaneswar**



***2.6.2 Attainment of POs and COs are evaluated***

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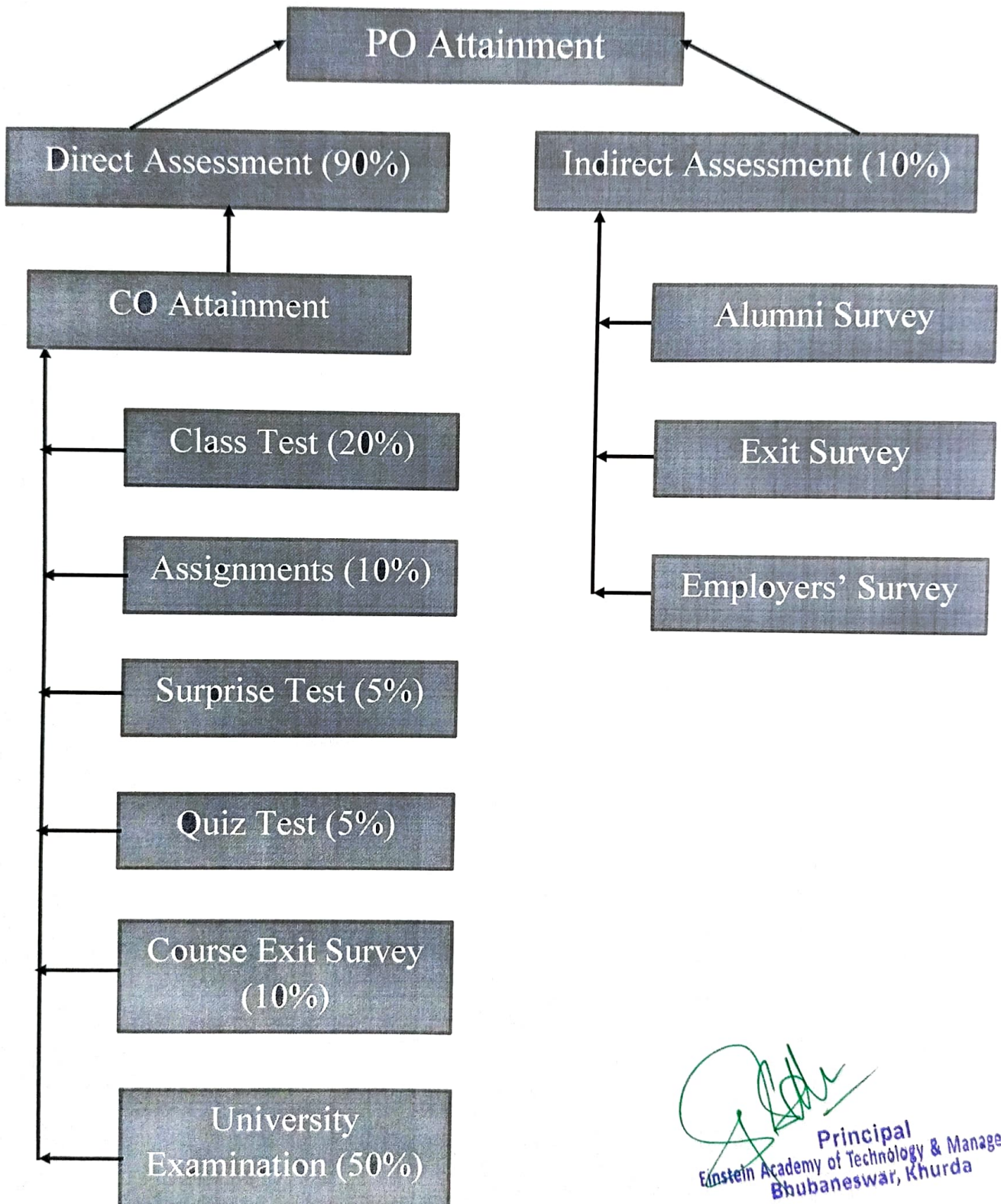
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2.6.2 Attainment of POs and COs are evaluated

Flow chart representing calculation of attainments of POs and COs



  
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Evaluation of the attainment of Program Specific Outcome is a key to assure the quality enhancement process of an institute. The academic progress of the students is regularly monitored by subject teachers assigned and Heads of the Departments for effective program outcomes and attainments. The institute ensures the outcome of the programs through the analysis of the internal and external examination results and achievements in the placements, sports, cultural and extension activities. The NSS units of the college organize various community-oriented activities. These efforts help to instill socio-ethical values and develop community service attitude among the students.

The assessment tools and processes used for measuring the attainment of each PO's, PSO's and CO's are direct and indirect methods.

Direct Assessment is made through the results obtained in the external examination by the individual students. It is also supplemented by the internal assessments like class tests, surprise test /quiz tests/ assignments.

Indirect assessment is made through students' feedback, surveys like course exit survey, employers' survey, alumni survey.

The methods adopted for the evaluations of program outcomes, program specific outcomes and course outcomes are as follows:

$$\text{PO / PSO Attainment (\%)} = (\text{weightage: 90\%}) \times (\text{Average CO attainment in direct assessment}) + (\text{weightage: 10\%}) \times (\text{Average CO attainment in indirect assessment})$$

### **Attainment of COs**

COs for each course of the program from first year to fourth year is written by the respective faculty member. A correlation is established between CO's, PO's and PSO's in a scale of 1, 2 and 3.

- 1 = Indicates Being the slight (low),
- 2 = Being moderate (medium) and
- 3 = Being substantial (high).

  
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A mapping matrix is prepared in this regard for every course in the program including the elective courses offered. The CO attainment levels can be measured based on the results of the internal assessment and external examination conducted by the university. This is a form of



direct measurement of attainment. Two class tests, quiz tests/ surprise tests/ assignment tests are conducted for each course in a semester. In each test, the percentage of students who achieve a set target for the COs is computed.

**Average CO Attainment of individual Course:**

- The CO attainment level for each subject is fixed by considering a set value higher than the average performance at the university level.
- The Set Value for internal, quiz and surprise is considered as 60% while for assignment the set value is 70%.
- Percentage of student securing equal or more than the set value is determined.
- Percentage of student attainment of the set value is converted to attainment level of individuals with a correlation level (X) as follows: X = 1 for a range of 60% to 70%; X = 2 if the range is more than 70% and less than 80 % and X = 3 if the range is more than 80%.
- Average attainment of individual level of quiz, surprise and assignment is calculated.
- Attainment of individual CO is calculated by considering the weightage as 50% weightage to University examination+ 20% weightage to internal tests + 5% Quiz +5% surprise test + 10% Assignment.
- Average CO attainment of a course is calculated.
- Attainment for particular Program Outcome / Program Specific Outcome is calculated by taking weighted average of all course outcome attainment addressing that particular PO & PSO. Similar calculation is repeated for all the POs & PSOs and for every course. The POs/PSOs attainment for a batch of students is computed by taking average of PO attainments/PSO attainments of all the courses.
- Indirect assessment is based on exit survey of the particular outgoing batch of students.

  
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Attainment-2018-22 - Excel (Product Activation Failed)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI			
66	180122221	Prity Pragnan Padhi	2.00	3.00	2.00	4.00	3.00	2.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00			
67	180122222	Purna Chandra Biswal	4.00	5.00	3.00	4.00	5.00	3.00	4.00	5.00	3.00	4.00	5.00	3.00	4.00	5.00	3.00	4.00	5.00	3.00	4.00	5.00	3.00	4.00	5.00	3.00	4.00	5.00	3.00	4.00	5.00	3.00	4.00				
68	180122223	Ramesh Bhaia	5.00	3.00	3.00	4.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00				
69	180122224	Rakesh Dehena	4.00	4.00	3.00	2.00	5.00	2.00	5.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00					
70	180122225	Ramachandra Lapani	2.00	2.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00				
71	180122226	Sachin Sahoo	5.00	2.00	2.00	4.00	5.00	4.00	5.00	2.00	2.00	5.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00	3.00	4.00					
72	180122227	Saikatosh Sarangi	4.00	4.00	4.00	4.00	5.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00					
73	180122228	Sarbajitran Pali	2.00	3.00	2.00	5.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00					
74	180122229	Sarbajitran Nayak	4.00	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00					
75	180122230	Sanjay Tewari	4.00	3.00	3.00	2.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00					
76	180122231	Soumesh Kumar Patra	2.00	3.00	2.00	5.00	5.00	2.00	5.00	4.00	4.00	5.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00					
77	180122232	Soumya Kanta Mishra	2.00	3.00	2.00	4.00	5.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00					
78	180122233	Sourjanjan Samal	4.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00					
79	180122234	Sudhakar Jena	2.00	2.00	3.00	2.00	5.00	3.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00					
80	180122235	Subhaji Das	2.00	2.00	3.00	2.00	5.00	3.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	4.00					
81	180122236	Surbijita Jena	4.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00					
82	180122237	Swarna Pradhan	3.00	3.00	2.00	4.00	5.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00					
83	180122238	Talash Kumar Maharaju	2.00	3.00	3.00	2.00	5.00	3.00	4.00	4.00	4.00	2.00	2.00	5.00	5.00	5.00	3.00	3.00	5.00	3.00	5.00	3.00	5.00	3.00	5.00	3.00	5.00	3.00	5.00	3.00	5.00	3.00					
84	180122239	Tribhuvana Mishra	2.00	3.00	3.00	2.00	5.00	3.00	4.00	4.00	4.00	2.00	2.00	5.00	5.00	5.00	3.00	3.00	5.00	3.00	5.00	3.00	5.00	3.00	5.00	3.00	5.00	3.00	5.00	3.00	5.00	3.00					
85	180122240	Trupti Das	4.00	3.00	2.00	5.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00	4.00	4.00	5.00	5.00					
86	180122241	Trupti Das	3.50	4.00	3.00	3.50	5.00	3.50	4.00	3.00	3.50	5.00	3.50	4.00	3.00	3.50	5.00	3.50	4.00	3.00	3.50	5.00	3.50	4.00	3.00	3.50	5.00	3.50	4.00	3.00	3.50	5.00					
87	No. of students attain the set value		57	68	60	68	67	69	74	68	66	67	68	77	68	69	67	66	60	66	67	66	67	68	73	67	65	67	59	66	67	60	72	68	56	67	70
88	Percentage of student requiring equal or more than the set value		65.52	78.36	68.87	78.16	100.00	67.82	85.06	66.67	75.86	100.00	66.67	88.51	78.16	67.82	100.00	64.37	61.95	64.37	63.91	100.00	74.71	77.01	67.82	75.86	60.00	68.87	64.37	63.91	63.91	63.91	63.91	64.37	100.00	80.46	
89	Attainment levels of individual CO (R 0.6 s X: 0.7 then X=1 else 0.7 X: 0.8 then X=2 else 0.8 X: 1 then X=3)		1	2	1	2	3	1	3	1	2	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3			
90	Attainment of individual CO (Considering weightage) 20% internal + 10% assignment + 5% Surprise + 5% Quiz + 10% course outcome + 50% University result		2.35					2.45					2.45				2.45				2.50				2.55					2.45							
91	Average CO attainment																																				
92	MAPPING OF THE SUBJECT		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12																							
93			3	3	3	3	0	0	3	0	0	0	0	0	0	0																					
94	DIRECT ATTAINMENT OF POs		2.46	2.46	2.46	0.00	0.00	2.46	0.00	0.00	0.00	0.00	0.00	0.00	2.46																						
95	DIRECT ATTAINMENT OF POs WITH CE		2.51	2.51	2.51	0.00	0.00	2.51	0.00	0.00	0.00	0.00	0.00	0.00	2.51																						
96	MAPPING OF THE SUBJECT WITH PSO		PSO1	PSO2	PSO3																																
97			3	3	3																																
98	PSO ATTAINMENT ACHIEVED		2.46	2.46	2.46																																
99	DIRECT ATTAINMENT OF PSO WITH CE		2.51	2.51	2.51																																

EE MOS FMHM IPMEM KDM ETD

12:56 04-05-2024

Attainment-2018-22 - Excel (Product Activation Failed)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI		
90	Attainment of individual CO (Considering weightage) 20% internal + 10% assignment + 5% Surprise + 5% Quiz + 10% course outcome + 50% University result		2.35				2.45						2.45				2.45				2.50				2.55					2.45						
91	Average CO attainment																																			
92	MAPPING OF THE SUBJECT		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12																						
93			3	3	3	0	0	3	0	0	0	0	0	0	0																					
94	DIRECT ATTAINMENT OF POs		2.46	2.46	2.46	0.00	0.00	2.46	0.00	0.00	0.00	0.00	0.00	0.00	2.46																					
95	DIRECT ATTAINMENT OF POs WITH CE		2.51	2.51	2.51	0.00	0.00	2.51	0.00	0.00	0.00	0.00	0.00	0.00	2.51																					
96	MAPPING OF THE SUBJECT WITH PSO		PSO1	PSO2	PSO3																															
97			3	3	3																															
98	PSO ATTAINMENT ACHIEVED		2.46	2.46	2.46																															
99	DIRECT ATTAINMENT OF PSO WITH CE		2.51	2.51	2.51																															

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