Calculation for Programm outcome attainment

Step1: Develop CO – PO mapping at each Course Level and Program level

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	3	1	.1	1	3	2	1	1	1
CO2	3	1	.1	1	1	2	2	1	1
CO3	2	3	.2	2	1	3	1	1	1
CO4	2	1	.1	2	2	1	2	2	3
CO5	1	2	3	3	1	2	1	1	3
Average	2.2	1.6	1.6	1.8	1.6	2	1.4	1.2	1.8

$WPi = \sum j \, (CO \, j) / 4$ (i=1 to 10 and j=1 to 4) (where WPi is the Weight factor for

Programme Outcome POi

Step 2: COs Attainment Targets at Course Level

Course Evaluation	Levels of Assessment (Marks Distribution)	Target Fixed	Attainment Level
CIA (25 Marks)	DA (10 Marks)	> 6 Marks	1, otherwise 0
	IA (15 Marks)	> 8 Marks	1, otherwise 0
SEE (75 Marks)	FA	>30 Marks	1, otherwise 0

(CIA- Continuous Internal Assessment, SEE – Semester End Exam, DA – Direct Assessment, IA – Indirect Assessment, FA- Final Assessment)

Step 3: Calculating Attainment at each Level of Assessment for Course

CO is said to be attained by a student if he/she gets greater than 40% of marks in FA, greater than 60% of marks in DA and around 55% of marks in IA as fixed targets. The number of students who attained the target is calculated for a course as a whole using the following formulas:

CO_DA = Total Number of Students reached the target / Total number of students attended

CO_IA = Total Number of Students reached the target / Total number of students attended

CO_FA = Total Number of Students reached the target / Total number of students attended

Step 4: Calculating Semester-wise Attainment for each Level

1. Calculating the Final PO attainment Levels for a Course and Semester:

After calculating weights and fraction of students attained at each level of assessment for a particular course, semester-wise PO attainment will be calculated by using the following formula for three different levels of assessment.

1. Calculating the Final PO attainment Levels for a Course and Semester:

After calculating weights and fraction of students attained at each level of assessment fora particular course, semester-wise PO attainment will be calculated by using the following formula for three different levels of assessment.

Direct Assessment:

$$P_{iDAj} = \frac{\sum (WP_i * CO\_DA)}{\sum WP_i}$$

Indirect Assessment:

$$P_{iIAj} = \frac{\sum (WP_i * CO\_IA)}{\sum WP_i}$$

Final Assessment:

$$P_{iFAj} = \frac{\sum (WP_i * CO\_FA)}{\sum WP_i}$$

(Fix j = 1 to 6 (Semester number) and i vary from 1 to 10)

Step 5: Calculating attainment at each level for a Programme

After calculating semester wise PO attainment for each level of assessment for six semesters, Programme wise attainment will be calculated by using the following formula for three different levels of assessment.

Direct Assessment:

$$P_{iDA} = \frac{\sum_j P_{iDAj}}{n} \times 100$$

Indirect Assessment:

$$P_{iIA} = \frac{\sum_j P_{iIAj}}{n} \times 100$$

Final Assessment:

$$P_{iFA} = \frac{\sum_j P_{iFAj}}{n} \times 100$$

($i = 1,\dots 10$, $j=1,\dots 6$ and n = Total No. of Semesters)

For Example: The PO Attainment for a faculty B.Sc. Life Sciences, B.Sc. Physical Sciences, BA and BCOM for the 2016- 19 batch is as follows:

PO ATTAINMENT OF BSC LIFE SCIENCES (2016-2019 BATCH)								
BSC LS	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
DA	97.56677	97.87378	97.73154	97.28154	97.16254	97.96813	97.05019	96.81227	96.69296
IA	96.56516	97.35935	97.29152	96.46352	96.30093	97.42948	95.55305	95.40612	95.45235
FA	96.01042	96.84665	96.78355	95.77964	95.62925	96.9899	94.79009	94.54686	94.57593

PO ATTAINMENT OF BSC PHYSICAL SCIENCES (2016-2019 BATCH)								
BSC PS	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
DA	94.12369	94.5122	94.75639	94.58121	95.34914	94.42814	93.43266	94.13793	94.47168
IA	96.56516	97.35935	97.29152	96.46352	96.30093	97.42948	95.55305	95.40612	95.45235
FA	96.01042	96.84665	96.78355	95.77964	95.62925	96.9899	94.79009	94.54686	94.57593

PO ATTAINMENT OF BA (2016-2019 BATCH)

BA	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
DA	96.97025	95.73582	94.76674	95.23928	96.98675	96.04544	96.65502	96.6627	95.40136
IA	97.18192	95.88961	94.75767	95.34015	97.10931	96.16668	96.96587	96.96094	95.54731
FA	89.6684	88.15163	87.28915	88.33019	90.81194	88.29309	89.63633	90.33159	89.18921

PO ATTAINMENT OF BCOM (2016-2019 BATCH)									
BCOM	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
DA	96.51602	96.79398	96.87515	96.94015	96.42808	96.63313	96.82271	96.83242	97.02209
IA	95.78615	96.27503	96.45398	96.5456	95.83359	96.00435	96.19799	96.31967	96.68287
FA	93.22782	93.02268	93.57554	93.9022	93.69076	92.94981	93.83022	94.02865	94.54828

(i =1,…10, j=1,…6 and n = Total No. of Semesters)