



संहती कार्यसाधिका । शिलं परं भूषणम्

Shetkari Shikshan Prasarak Mandal's

KRISHNA MAHAVIDYALAYA, RETHARE BK.

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NAAC "B+" Grade (CGPA 2.65)



Founder : Hon. Jaywantrao Bhosale

President : Dr. Suresh Jaywantrao Bhosale

Principal : Dr. Salunkhe C. B., M.Sc; Ph.D.

2.6.2 Attainment of Programme outcomes and course outcomes are evaluated by the institution.

2021-22

Sr.No	Department
1	Chemistry
2	Physics
3	Zoology
4	Mathematics
5	Marathi
6	Geography
7	History
8	Commerce
9	Economics
10	Hindi



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Shetkari Shikshan Prasarak Mandal's

KRISHNA MAHAVIDYALAYA, RETHARE BK

DEPARTMENT OF Chemistry

Chemistry OBE PROCESS

Academic Year 2021-2022

1. Course- Program outcome Matrix: The Program Outcomes are developed through the curriculum (curricular/co-curricular extra-curricular activities). The program outcomes are attained through course implementation. As an educator, one must know, **“to which POs his/her course in contributing?”**. So that one can design the learning experiences, select teaching methods and design the tool for assessment. Hence, establishing the Course-PO matrix is an essential step in the OBE. The course-program outcomes matrix indicates the correlation between the courses and program outcomes. The CO-PO matrix is the map of the list of **courses contributing to the development of respective Pos.**

The Template is provided in the table below

Sr. No	Course Title	PSO-A	PSO-B	PSO-C	PSO-D	PSO-E	PSO-F	PSO-G	PSO-H
1.	Paper IX:DSE-E5: Inorganic Chemistry	✓	✓		✓	✓	✓	✓	✓
2.	Paper X: DSE- E6 Organic Chemistry	✓	✓	✓	✓	✓	✓	✓	✓
3.	Paper No. XI: DSE-E7 Physical Chemistry	✓	✓	✓	✓	✓	✓	✓	✓
4.	Paper XII : DSE-E8 Analytical Chemistry	✓	✓	✓	✓	✓	✓	✓	✓
5.	Paper XIII: DSE-F5 Inorganic chemistry	✓	✓		✓	✓	✓	✓	✓
6.	Paper XIV: DSE-F6 Organic Chemistry	✓	✓	✓	✓	✓	✓	✓	✓
7.	Paper XV: DSE-F7 Physical	✓	✓	✓	✓	✓	✓	✓	✓



	Chemistry								
8.	Paper XIV: DSE-F8 Industrial Chemistry	✓	✓		✓	✓	✓	✓	✓
9.	Chemistry Practical	✓	✓	✓	✓	✓	✓	✓	✓

2. Course Outcomes (for all courses):

The course outcomes are the statement that describes the knowledge & abilities developed in the student by the end of course (subject) teaching. The focus is on development of abilities rather than mere content. There can be 5 to 7 course outcomes of any course. These are to be written in the specific terms and not in general. The list of Course Outcomes is the part of **Annexure-C** attached herewith.

3. Set Target levels for Attainment of Course Outcomes:

The course outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess students' performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment are measured/calculated. In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done.

4. Set Target level for Attainment of Program Outcomes:

The program outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess student's performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment and program outcome attainment is measured/calculated. The program outcome attainment is governed by curricular, co-curricular and extra-curricular activities including the stakeholders' participation. The direct method and indirect method is adopted to calculate the PO attainment. **The direct method implies the attainment by course outcomes contributing to respective program outcomes. And indirect method is the satisfaction/feed-back survey of stakeholders.** In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done. The set target level is the set



benchmark to ensure continuous improvements in the learners/ graduates' performance.

5. Course Attainment Levels:

- a) CO attainment is defined/set at three levels;
- b) The CO attainment is based on end term examination assessment and internal assessment;
- c) The Co attainment is defined at three levels in ascending order
 - i. e.g. For end term and internal examination;

Sr. No	Level	CO Attainments
1.	Level-1:	30% students scored more than class average
2.	Level-2:	40% students score more than class average
3.	Level-3	50% students score more than class average

. The target level is set (e.g. Level-2). It indicates that, **the current target is level-2; 40% of students score more than class average.** The CO attainment is measured and the results are obtained. Based on the results of attainment, the corrective measures/remedial action are taken.

e. CO Attainment= 80% (Attainment level in end term examination) + 20% (Attainment level in internal examination)

6. Program attainment Level:

- a. PO attainment is defined at five levels in ascending order;
- b. **The PO attainment is based on the average attainment level of corresponding courses (Direct Method) and feed-back survey (Indirect method);**
- c. The PO attainment levels are defined/set as stated below;

Sr. No	Level	PO Attainments
1.	Level-1:	Poor: Greater than 0.5 and less than 1.0 (0.5>1)
2.	Level-2:	Average: 1.0 to 1.5
3.	Level-3	Good: 3: 1.5 to 2.0
4.	Level-4	Very Good: 2.0 to 2.5



5.	Level-5	Excellent: 2.5 to 3.0
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d. The PO attainment target level is set/defined (say, Level-4). It implies that, the department is aiming at minimum level-4 (very good) in the performance of abilities by the graduates. Based upon the results of attainment, the remedial measures are taken;

e. PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

7. The Results of CO Attainment: The Results of CO Attainment is provided in Annexure-B

FOR EXAMPLE COURSE CODE/TITLE: Paper IX: DSE- E5 Inorganic Chemistry

e.g. For end-term and internal examination;

- i. Level-1: 30% students scored more than class average
- ii. Level-2: 40% students score more than class average;
- iii. Level-3: 50% students score more than class average

Paper IX: DSE- E5 Inorganic Chemistry		
Average Marks in External examination:	24	
% Students score more than 24 is =29	55%	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is =42	79%	Level: 3
A(CO) Paper IX: DSE-E5 Inorganic Chemistry		
=	80% (3) +20 %(3)	
=	2.4+0.6	
=	3	

Paper X: DSE- E6 Organic Chemistry		
Average Marks in External examination:	34	
% Students score more than 34 is = 43	81%	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is = 39	74%	Level: 3
A(CO) DSE- E6 Organic Chemistry		
=	80% (3) +20% (3)	
=	2.4+0.6	
=	3	



Paper No. XI: DSE-E7 Physical Chemistry		
Average Marks in External examination:	26	
% Students score more than 26 is =33	62%	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is =38	72%	Level: 3
A(CO) Paper No. XI: DSE-E7 Physical Chemistry		
	=	80% (3) +20% (3)
	=	2.4+0.6
	=	3

Paper XII : DSE-E8 Analytical Chemistry		
Average Marks in External examination:	28	
% Students score more than 28 is =30	57%	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is = 38	72%	Level: 3
A(CO) DSE-E8 Analytical Chemistry		
	=	80% (3) +20% (3)
	=	2.4+0.6
	=	3

Paper XIII: DSE-F5 Inorganic chemistry		
Average Marks in External examination:	28	
% Students score more than 28 is =30	57%	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is =32	60%	Level: 3
A(CO) Paper XIII: DSE-F5 Inorganic chemistry		
	=	80% (3) +20% (3)
	=	2.4+0.6
	=	3

Paper XIV: DSE-F6 Organic Chemistry		
Average Marks in External examination:	31	
% Students score more than 31 is = 30	57%	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is = 32	60%	Level: 3
A(CO) Paper XIV: DSE-F6 Organic Chemistry		
	=	80% (3) +20% (3)
	=	2.4+0.6



= 3

Paper XV: DSE-F7 Physical Chemistry		
Average Marks in External examination:	33	
% Students score more than 33 is =25	47%	Level: 2
Average Marks in Internal examination	9	
% Students score more than 9 is =35	64%	Level: 3
A(CO) Paper XV: DSE-F7 Physical Chemistry		
	=	80% (2) +20% (3)
	=	1.6+0.6
	=	2.2

Paper XVI : DSE-F8 Industrial Chemistry		
Average Marks in External examination:	35	
% Students score more than 35 is =32	60%	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is = 35	66%	Level: 3
A(CO) Paper XIV: DSE-F8 Industrial Chemistry		
	=	80% (3) +20% (3)
	=	2.4+0.6
	=	3

Chemistry Practical		
Average Marks in External examination:	166	
% Students score more than 166 is = 36	68%	Level: 3
A(CO) Paper : Chemistry Practical		
	=	100%(3)
	=	3
	=	3

Hence, the attainment level is Level-3 and the set target level is Level-2 and therefore the CO is Fully attained.



Table No. 1.0: CO Attainment Level

Course Title	Target Attainment Level	Course Attainment Value	Fully Attained/ Not Attained	Remedial Measures
DSE- E5 Inorganic Chemistry	2	3	Fully Attained	
DSE- E6 Organic Chemistry	2	3	Fully Attained	
DSE-E7 Physical Chemistry	2	3	Fully Attained	
DSE-E8 Analytical Chemistry	2	3	Fully Attained	
DSE-F5 Inorganic chemistry	2	3	Fully Attained	
DSE-F6 Organic Chemistry	2	3	Fully Attained	
DSE-F7 Physical Chemistry	2	2.2	Fully Attained	
DSE-F8 Industrial Chemistry	2	3	Fully Attained	
Chemistry Practical	2	3	Fully Attained	

8. The Results of PO Attainment:

The Results of PO attainment are provided in Annexure-B

FOR EXAMPLE: PO NO.: a (Note: Refer to point No. 11 above which describes the attainment level and set target attainment level).

PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

(PSO-A) = 80% (3+3+3+3+3+3+2+3+3)/09 + 20% (3+3+3+3+3+3+3+3)/8=80% (2.89) + 20% (3) =2.312 + 0.6 =2.912 i.e. Level-5. The Target Level is Level-3.

Hence, PO is attained

(PSO-B) = 80% (3+3+3+3+3+3+2+3+3)/09 + 20% (3+3+3+3+3+3+3+3)/8=80% (2.89) + 20% (3) =2.312 + 0.6 =2.912 i.e. Level-5. The Target Level is Level-3.

(PSO-C) = 80% (3+3+3+3+2+3)/06 + 20% (3+3+3+3+3+3)/6=80% (2.83) + 20% (3) = 2.264 + 0.6 = 2.864 i.e. Level-5. The Target Level is Level-3.



(PSO-D) = 80% (3+3+3+3+3+3+2+3+3)/09 + 20% (3+3+3+3+3+3+3)/8=80% (2.89) + 20% (3) =2.312 + 0.6 =2.912 i.e. Level-5. The Target Level is Level-3.

(PSO-E) = 80% (3+3+3+3+3+3+2+3+3)/09 + 20% (3+3+3+3+3+3+3)/8=80% (2.89) + 20% (3) =2.312 + 0.6 =2.912 i.e. Level-5. The Target Level is Level-3.

(PSO-F) = 80% (3+3+3+3+3+3+2+3+3)/09 + 20% (3+3+3+3+3+3+3)/8=80% (2.89) + 20% (3) =2.312 + 0.6 =2.912 i.e. Level-5. The Target Level is Level-3.

(PSO-G) = 80% (3+3+3+3+3+3+2+3+3)/09 + 20% (3+3+3+3+3+3+3)/8=80% (2.89) + 20% (3) =2.312 + 0.6 =2.912 i.e. Level-5. The Target Level is Level-3.

(PSO-H) = 80% (3+3+3+3+3+3+2+3+3)/09 + 20% (3+3+3+3+3+3+3)/8=80% (2.89) + 20% (3) =2.312 + 0.6 =2.912 i.e. Level-5. The Target Level is Level-3.

Table No. 2.0 PO Attainment Level

PO/PSO Number	Target Attainment Level	PO/PSOs Attainment		Fully Attained/ Not Attained	Remedial Measures
		Level	Value		
PSO-A	3	5	2.912	Fully Attained	
PSO-B	3	5	2.912	Fully Attained	
PSO-C	3	5	2.864	Fully Attained	
PSO-D	3	5	2.912	Fully Attained	
PSO-E	3	5	2.912	Fully Attained	
PSO-F	3	5	2.912	Fully Attained	
PSO-G	3	5	2.912	Fully Attained	
PSO-H	3	5	2.912	Fully Attained	



9. Planned Actions for Course Attainment:

The courses for which the level attained is less than Level-2, the remedial measures will be taken in plan way that includes, tutorial, assignments, field work and remedial coaching.

10.Planned Actions for Program Outcome Attainment:


Not Applicable.

ANNEXURE-B RESULTS OF CO-PO ATTAINMENT

Sr. No	Course Title	PSO-A	PSO-B	PSO-C	PSO-D	PSO-E	PSO-F	PSO-G	PSO-H
1.	DSE- E5 Inorganic Chemistry	3	3		3	3	3	3	3
2.	DSE- E6 Organic Chemistry	3	3	3	3	3	3	3	3
3.	DSE-E7 Physical Chemistry	3	3	3	3	3	3	3	3
4.	DSE-E8 Analytical Chemistry	3	3	3	3	3	3	3	3
5.	DSE-F5 Inorganic chemistry	3	3		3	3	3	3	3
6.	DSE-F6 Organic Chemistry	3	3	3	3	3	3	3	3
7.	DSE-F7 Physical Chemistry	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
8.	DSE-F8 Industrial Chemistry	3	3		3	3	3	3	3
9.	Chemistry Practical	3	3	3	3	3	3	3	3
Average		2.91	2.91	2.86	2.91	2.91	2.91	2.91	2.91


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DEPARTMENT OF PHYSICS

PHYSICS OBE PROCESS

Academic Year 2021-2022

1. Course- Program outcome Matrix: The Program Outcomes are developed through the curriculum (curricular/co-curricular extra-curricular activities). The program outcomes are attained through course implementation. As an educator, one must know, **“to which POs is his/her course contributing?”**. So that one can design the learning experiences, select teaching methods, and design the tool for assessment. Hence, establishing the Course-PO matrix is an essential step in the OBE. The course-program outcomes matrix indicates the correlation between the courses and program outcomes. The CO-PO matrix is the map of the list of **courses contributing to the development of respective Pos.**

The Template is provided in the table below

Sr. No	Course Title	PSO -A	PSO -B	PSO -C	PSO -D	PSO -E	PSO -F	PSO -G	PSO -H
1.	DSE-E1 Mathematical Physics	√	√	√				√	√
2.	DSE-E2 Quantum Mechanics	√	√	√	√	√		√	√
3.	DSE-E3 Classical Mechanics and Classical Electrodynamics	√		√	√	√		√	√
4.	DSE-E4 Digital and Analog Circuits and Instrumentation	√	√	√			√	√	√
5.	DSE-F1 Nuclear and Particle Physics	√		√		√	√	√	√
6.	DSE-F2 Solid State Physics	√	√	√		√	√	√	√
7.	DSE-F3 Atomic and Molecular Physics and Astrophysics	√	√	√	√	√	√	√	√
8.	DSE-F4 Energy Studies and Materials Science	√	√	√	√	√	√	√	√
9.	Physics Practical	√	√	√	√	√	√	√	√

2. Course Outcomes (for all courses):

The course outcomes are the statement that describes the knowledge & abilities developed in the student by the end of the course (subject) teaching. The focus is on the development of abilities rather than mere content. There can be 5 to 7-course outcomes of any course. These are to be written in specific terms and not in general. The list of Course Outcomes is **Annexure-C** attached herewith.

3. Set Target levels for Attainment of Course Outcomes:

The course outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess student's performance with respect to abilities (at the end of course teaching/by the end of the program) the course outcome attainment is measured/calculated. In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done.

4. Set Target level for Attainment of Program Outcomes:

The program outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess student's performance with respect to abilities (at the end of course teaching/by the end of the program) the course outcome attainment and program outcome attainment are measured/calculated. The program outcome attainment is governed by curricular, co-curricular, and extra-curricular activities including the stakeholders' participation. The direct method and indirect method are adopted to calculate the PO attainment. **The direct method implies the attainment by course outcomes contributing to respective program outcomes. An indirect method is the satisfaction/feedback survey of stakeholders.** In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done. The set target level is the set benchmark to ensure continuous improvements in the learners'/ graduates' performance.

5. Course Attainment Levels:

- a) CO attainment is defined/set at three levels;
- b) The CO attainment is based on end-term examination assessment and internal assessment;
- c) The Co attainment is defined at three levels in ascending order
 - i. e.g. For end-term and internal examination;

Sr. No	Level	CO Attainments
1.	Level-1:	30% of students scored more than the class average
2.	Level-2:	40% of students score more than the class average
3.	Level-3	50% of students score more than the class average

The target level is set (e.g. Level-2). It indicates that **the current target is level-2; 40% of students score more than the class average**. The CO attainment is measured and the results are obtained. Based on the results of attainment, corrective measures/remedial action is taken.

e. CO Attainment= 80% (Attainment level in end-term examination) + 20% (Attainment level in internal examination)

6. Program attainment Level:

a. PO attainment is defined at five levels in ascending order;

The PO attainment is based on the average attainment level of corresponding courses (Direct Method) and feedback survey (Indirect method);

c. The PO attainment levels are defined/set as stated below;

Sr. No	Level	PO Attainments
1.	Level-1:	Poor: Greater than 0.5 and less than 1.0 (0.5>1
2.	Level-2:	Average: 1.0 to 1.5
3.	Level-3	Good: 3: 1.5 to 2.0
4.	Level-4	Very Good: 2.0 to 2.5
5.	Level-5	Excellent: 2.5 to 3.0

d. The PO attainment target level is set/defined (say, Level-4). It implies that the department is aiming at a minimum level-4 (very good) in the performance of abilities by the graduates. Based upon the results of attainment, the remedial measures are taken;

e. PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

7. The Results of CO Attainment: The Results of CO Attainment is provided in Annexure-B

FOR EXAMPLE, COURSE CODE/TITLE: **Paper IX: DSE-E1 Mathematical Physics**

e.g., For end-term and internal examination;

- i. Level-1: 30% of students scored more than the class average**
- ii. Level-2: 40% of students score more than the class average**
- iii. Level-3: 50% of students score more than the class average**

Paper IX: DSE-E1 Mathematical Physics		
Average Marks in External examination:	26	
% Students score more than 26 is =5	100	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is =4	80	Level: 3
A(CO) Paper IX: DSE-E1 Mathematical Physics		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper IX: DSE-E2 Quantum Mechanics		
Average Marks in External examination:	38	
% Students score more than 38 is = 3	75	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is =4	100	Level: 3
A(CO) DSE-E2 Quantum Mechanics		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper No. XI: DSE-E3 Classical Mechanics and Classical Electrodynamics		
Average Marks in External examination:	35	
% Students score more than 35 is =4	80	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is =4	80	Level: 3
A(CO) Paper No. XI: DSE-E3 Classical Mechanics and Classical Electrodynamics		
	=	80% (3) +20%(3)
	=	2.4+0.6
	=	3

Paper XII : DSE-E4 Digital and Analog Circuits and Instrumentation		
Average Marks in External examination:	28	
% Students score more than 28 is = 03	60	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is =4	80	Level: 3
A(CO) DSE-E4 Digital and Analog Circuits and Instrumentation		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XIII: DSE-F1 Nuclear and Particle Physics		
Average Marks in External examination:	31	
% Students score more than 31 is =2	50	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is =2	50	Level: 3
A(CO) Paper XIII: DSE-F1 Nuclear and Particle Physics		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XIV: DSE-F2 Solid State Physics		
Average Marks in External examination:	36	
% Students score more than 36 is = 03	75	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is =2	50	Level: 3
A(CO) Paper XIV: DSE-F2 Solid State Physics		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XV: DSE-F3 Atomic and Molecular Physics and Astrophysics		
Average Marks in External examination:	31	
% Students score more than 31 is =3	75	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is =2	50	Level: 3
A(CO) Paper XV: DSE-F3 Atomic and Molecular Physics and Astrophysics		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XVI: DSE-F4 Energy Studies and Materials Science		
Average Marks in External examination:	39	
% Students score more than 39 is=3	75	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is 2	50	Level: 3
A(CO) Paper XVI: DSE-F4 Energy Studies and Materials Science		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Physics Practical		
Average Marks in External examination:	181	
% Students score more than 181 is =2	50	Level: 3

Hence, the attainment level is Level-3 and the set target level is Level-2 and therefore the CO is Fully attained.

Table No. 1.0: CO Attainment Level

Course Title	Target Attainment	Course Attainment		Fully Attained/ Not Attained	Remedial Measures
	Level	Value	level		
DSE-E1 Mathematical Physics	2	3	3	Fully Attained	
DSE-E2 Quantum Mechanics	2	3	3	Fully Attained	
DSE-E3 Classical Mechanics and Classical Electrodynamics	2	3	3	Fully Attained	
DSE-E4 Digital and Analog Circuits and Instrumentation	2	3	3	Fully Attained	
DSE-F1 Nuclear and Particle Physics	2	3	3	Fully Attained	
DSE-F2 Solid State Physics	2	3	3	Fully Attained	
DSE-F3 Atomic and Molecular Physics and Astrophysics	2	3	3	Fully Attained	
DSE-F4 Energy Studies and Materials Science	2	3	3	Fully Attained	
Physics Practical	2	3	3	Fully Attained	

8. The Results of PO Attainment:

The Results of PO attainment are provided in Annexure-B

FOR EXAMPLE: PO NO.: a (Note: Refer to point No. 11 above which describes the attainment level and set target attainment level).

PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

(PSO -A) = 80% (3+3+3+3+3+3+3+3+3)/09 + 20% (3+3+3+3+3+3+3+3)/8 = 80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

Hence, PO is attained

(PSO -B) = 80% (3+3+3+3+3+3+3)/07 + 20% (3+3+3+3+3+3+3+3)/9 = 80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

(PSO -C) = 80% (3+3+3+3+3+3+3+3+3)/09 + 20% (3+3+3+3+3+3+3+3)/8 = 80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

(PSO -D) = 80% (3+3+3+3+3)/05 + 20% (3+3+3+3+3)/5 = 80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

(PSO -E) = 80% (3+3+3+3+3+3+3)/07 + 20% (3+3+3+3+3+3+3)/7 = 80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

(PSO -F) = 80% (3+3+3+3+3+3+3)/06 + 20% (3+3+3+3+3+3)/6 = 80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

(PSO -G) = 80% (3+3+3+3+3+3+3+3+3)/09 + 20% (3+3+3+3+3+3+3+3)/8 = 80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

(PSO -H) = 80% (3+3+3+3+3+3+3+3+3)/09 + 20% (3+3+3+3+3+3+3+3)/8 = 80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

Table No. 2.0 PO Attainment Level

PO/PSO Number	Target Attainment	PO/PSOs Attainment		Fully Attained/ Not Attained	Remedial Measures
	Level	Value	Level		
PSO -A	3	3	5	Fully Attained	
PSO -B	3	3	5	Fully Attained	
PSO -C	3	3	5	Fully Attained	
PSO -D	3	3	5	Fully Attained	
PSO -E	3	3	5	Fully Attained	
PSO -F	3	3	5	Fully Attained	
PSO -G	3	3	5	Fully Attained	
PSO -H	3	3	5	Fully Attained	

9. Planned Actions for Course Attainment:

The courses for which the level attained is less than Level-2, the remedial measures will be taken in a plan way that includes, tutorials, assignments, field work, and remedial coaching.

10. Planned Actions for Program Outcome Attainment: Not Applicable.

ANNEXURE-B RESULTS OF CO-PO ATTAINMENT

Sr. No	Course Title	PSO - A	PSO - B	PSO - C	PSO - D	PSO - E	PSO - F	PSO - G	PSO - H
1.	DSE-E1 Mathematical Physics	3	3	3				3	3
2.	DSE-E2 Quantum Mechanics	3	3	3	3	3		3	3
3.	DSE-E3 Classical Mechanics and Classical Electrodynamics	3		3	3	3		3	3
4.	DSE-E4 Digital and Analog Circuits and Instrumentation	3	3	3			3	3	3
5.	DSE-F1 Nuclear and Particle Physics	3		3		3	3	3	3
6.	DSE-F2 Solid State Physics	3	3	3		3	3	3	3
7.	DSE-F3 Atomic and Molecular Physics and Astrophysics	3	3	3	3	3	3	3	3
8.	DSE-F4 Energy Studies and Materials Science	3	3	3	3	3	3	3	3
9.	Physics Practical	3	3	3	3	3	3	3	3
Average		3	3	3	3	3	3	3	3

Salani

HEAD

DEPARTMENT OF PHYSICS
KRISHNA MAHAVIDYALAYA,
Rethare Bk; Shivnagar - 415108



[Signature]
Principal
Krishna Mahavidyalaya, Rethare Bk,
Tal. Karad : 415 108 (M.S)

KRISHNA MAHAVIDYALAYA, RETHARE BK

DEPARTMENT OF ZOOLOGY

ZOOLOGY OBE PROCESSAcademic Year 2021-2022

1. Course- Program outcome Matrix: The Program Outcomes are developed through the curriculum (curricular/co-curricular extra-curricular activities). The program outcomes are attained through course implementation. As an educator, one must know, "to which POs his/her course is contributing?". So that one can design the learning experiences, select teaching methods and design the tool for assessment. Hence, establishing the Course-PO matrix is an essential step in the OBE. The course-program outcomes matrix indicates the correlation between the courses and program outcomes. The CO-PO matrix is the map of the list of courses contributing to the development of respective Pos.

The Template is provided in the table below

Sr. No	Course Title	PSO-A	PSO-B	PSO C	PSO D	PSO E	PSO F	PSO G
1.	DSE-E29 (COMPARATIVE ANATOMY OF VERTEBRATES)		√		√		√	
2.	DSE-F29 (Molecular Cell Biology and Animal Biotechnology)		√	√	√	√	√	√
3.	DSE-F30 (Biotechniques and Biostatistics)		√	√	√	√	√	√
4.	DSE-F31 (AQUATIC BIOLOGY)	√					√	√
5.	DSE-E30 (DEVELOPMENTAL BIOLOGY OF VERTEBRATES)	√	√	√			√	
6.	DSE-E32 (IMMUNOLOGY)		√	√		√	√	√
7.	DSE-E31 (Applied Zoology - II)	√	√		√		√	√
8.	DSE-F32 (Insect Vectors and Histology)	√	√	√			√	√
9.	Zoology Practical	√	√	√	√	√	√	√

2. Course Outcomes (for all courses):

The course outcomes are the statement that describes the knowledge & abilities developed in the student by the end of course (subject) teaching. The focus is on development of abilities rather than mere content. There can be 5 to 7 course outcomes of any course. These are to be written in the specific terms and not in general. The list of Course Outcomes is the part of **Annexure-C** attached herewith.

3. Set Target levels for Attainment of Course Outcomes:

The course outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess students' performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment are measured/calculated. In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done.

4. Set Target level for Attainment of Program Outcomes:

The program outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess student's performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment and program outcome attainment is measured/calculated. The program outcome attainment is governed by curricular, co-curricular and extra-curricular activities including the stakeholders' participation. The direct method and indirect method is adopted to calculate the PO attainment. **The direct method implies the attainment by course outcomes contributing to respective program outcomes. And indirect method is the satisfaction/feed-back survey of stakeholders.** In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done. The set target level is the set benchmark to ensure continuous improvements in the learners/ graduates' performance.

5. Course Attainment Levels:

- a) CO attainment is defined/set at three levels;
- b) The CO attainment is based on end term examination assessment and internal assessment;
- c) The Co attainment is defined at three levels in ascending order

i. e.g. For end term and internal examination;

Sr. No	Level	CO Attainments
1.	Level-1:	30% students scored more than class average
2.	Level-2:	40% students score more than class average
3.	Level-3	50% students score more than class average

. The target level is set (e.g. Level-2). It indicates that, **the current target is level-2; 40% of students score more than class average.** The CO attainment is measured and the results are obtained. Based on the results of attainment, the corrective measures/remedial action are taken.

e. CO Attainment= 80% (Attainment level in end term examination) + 20% (Attainment level in internal examination)

6. Program attainment Level:

- a. PO attainment is defined at five levels in ascending order;
- b. **The PO attainment is based on the average attainment level of corresponding courses (Direct Method) and feed-back survey (Indirect method);**
- c. The PO attainment levels are defined/set as stated below;

Sr. No	Level	PO Attainments
1.	Level-1:	Poor: Greater than 0.5 and less than 1.0 (0.5>1)
2.	Level-2:	Average: 1.0 to 1.5
3.	Level-3	Good: 3: 1.5 to 2.0
4.	Level-4	Very Good: 2.0 to 2.5
5.	Level-5	Excellent: 2.5 to 3.0

d. The PO attainment target level is set/defined (say, Level-4). It implies that, the department is aiming at minimum level-4 (very good) in the performance of abilities by the graduates. Based upon the results of attainment, the remedial measures are taken;

e. PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

7. The Results of CO Attainment: The Results of CO Attainment is provided in Annexure-B

FOR EXAMPLE COURSE CODE/TITLE: Paper IX: DSE-E29 (COMPARATIVE ANATOMY OF VERTEBRATES)

e.g. For end-term and internal examination;

i. Level-1: 30% students scored more than class average

ii. Level-2: 40% students score more than class average;

iii. Level-3: 50% students score more than class average

Zoology Paper IX: DSE-E29 (COMPARATIVE ANATOMY OF VERTEBRATES)		
Average Marks in External examination:	37	
% Students score more than 37 is =4	100%	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is =4	100%	Level: 3
A(CO) Zoology Paper IX: DSE-E29 (COMPARATIVE ANATOMY OF VERTEBRATES)		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Zoology Paper X: DSE-F29 (Molecular Cell Biology and Animal Biotechnology)		
Average Marks in External examination:	34	
% Students score more than 34 is=4	100%	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is =4	100%	Level: 3
A(CO) Zoology Paper X: DSE-F29 (Molecular Cell Biology and Anima Biotechnology)		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Zoology Paper XI: DSE-F29 (Molecular Cell Biology and Animal Biotechnology)		
Average Marks in External examination:	34	
% Students score more than 34 is =02	50%	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is =4	90%	Level: 3
A(CO) Zoology Paper XI: DSE-F29 (Molecular Cell Biology and Animal Biotechnology)		

	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Zoology Paper XII : DSE-F31 (AQUATIC BIOLOGY)		
Average Marks in External examination:	33	
% Students score more than 33 is 1	25%	Level: 1
Average Marks in Internal examination	10	
% Students score more than 9 is	90%	Level: 3
A(CO) Zoology Paper XII : DSE-F31 (AQUATIC BIOLOGY)		
	=	80% (1) +20 (3)
	=	0.8+0.6
	=	1.4

Zoology Paper XIII: DSE-E30(DEVELOPMENTAL BIOLOGY OF VERTEBRATES)		
Average Marks in External examination:	19	
% Students score more than 19 is =3	75%	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is =04	100%	Level: 3
A(CO) Zoology Paper XIII: DSE-E30(DEVELOPMENTAL BIOLOGY OF VERTEBRATES)		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Zoology Paper XIV: DSE-E32 (IMMUNOLOGY)		
Average Marks in External examination:	19	
% Students score more than 19 is 3	75%	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is=4	100%	Level: 3
A(CO) Zoology Paper XIV: DSE-E32 (IMMUNOLOGY)		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Zoology Paper XV: DSE-E31 (Applied Zoology - II)		
Average Marks in External examination:	18	
% Students score more than 18 is =3	75%	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is =04	100%	Level: 3

A(CO) Zoology Paper XV: DSE-E31 (Applied Zoology - II)		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Zoology Paper XVI: DSE-F32 (Insect Vectors and Histology)		
Average Marks in External examination:	32	
% Students score more than 32 is =3	75%	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is	100%	Level: 3
A(CO) Zoology Paper XVI: DSE-F32 (Insect Vectors and Histology)		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Zoology Practical		
Average Marks in External examination:	169	
% Students score more than 169 is =2	50%	Level: 3

Hence, the attainment level is Level-3 and the set target level is Level-2 and therefore the CO is Fully attained.

Table No. 1.0: CO Attainment Level

Course Title	Course Attainment Value	Target Attainment Level	Fully Attained/ Not Attained	Remedial Measures
DSE-E29 (COMPARATIVE ANATOMY OF VERTEBRATES)	3	2	Fully Attained	
DSE-F29 (Molecular Cell Biology and Animal Biotechnology)	3	2	Fully Attained	
DSE-F30 (Biotechniques and Biostatistics)	3	2	Fully Attained	
DSE-F31 (AQUATIC BIOLOGY)	1.4	2	Not Fully Attained	Extra lectures taken
DSE-E30 (DEVELOPMENTAL BIOLOGY OF VERTEBRATES)	3	2	Fully Attained	
DSE-E32 (IMMUNOLOGY)	3	2	Fully Attained	
DSE-E31 (Applied Zoology - II)	3	2	Fully Attained	
DSE-F32 (Insect Vectors and Histology)	3	2	Fully Attained	
Zoology Practical	3	2	Fully Attained	

8. The Results of PO Attainment:

The Results of PO attainment are provided in Annexure-B

FOR EXAMPLE: PO NO.: a (Note: Refer to point No. 11 above which describes the attainment level and set target attainment level).

PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

(PSO-A) = 80% (1+3+3+3)/04 + 20% (3+3+3+3)/4 = 80% (2.5) + 20% (3) = 2.6 i.e. Level-5. The Target Level is Level-3.

Hence, PO is attained

(PSO-B) = $80\% (3+3+3+3+3+3+3)/07 + 20\% (3+3+3+3+3+3+3)/7 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-3.

(PSO-C) = $80\% (3+3+3+3+3)/05 + 20\% (3+3+3+3+3)/5 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-3.

(PSO-D) = $80\% (3+3+3+3)/04 + 20\% (3+3+3+3)/4 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-3.

(PSO-E) = $80\% (3+3+3+3)/04 + 20\% (3+3+3+3)/4 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-3.

(PSO-F) = $80\% (3+3+3+3+3+3+3+3+3)/08 + 20\% (3+3+3+3+3+3+3+3)/8 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-3.

(PSO-G) = $80\% (3+3+3+3+3)/05 + 20\% (3+3+3+3+3)/5 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-3.

Table No. 2.0 PO Attainment Level

PO/PSO Number	Target Attainment	PO/PSOs Attainment		Fully Attained/ Not Attained	Remedial Measures
	Level	Value	Level		
PSO-A	3	2.6	5	Fully Attained	
PSO-B	3	3	5	Fully Attained	
PSO-C	3	3	5	Fully Attained	
PSO-D	3	3	5	Fully Attained	
PSO-E	3	3	5	Fully Attained	
PSO-F	3	3	5	Fully Attained	
PSO-G	3	3	5	Fully Attained	


9. Planned Actions for Course Attainment:

The courses for which the level attained is less than Level-2, the remedial measures will be taken in plan way that includes, tutorial, assignments, field work and remedial coaching.

Head
 Department of Sociology
 K.M. Reddy (B.A.)

10. Planned Actions for Program Outcome Attainment:**Not Applicable.****ANNEXURE-B RESULTS OF CO-PO ATTAINMENT**

Sr. No	Course Title	PO1-A	PO2-B	PO3-C	PO4-D	PO5-E	PO6-F	PO7-G
1.	DSE-E29 (COMPARATIVE ANATOMY OF VERTEBRATES)		3		3		3	
2.	DSE-F29 (Molecular Cell Biology and Animal Biotechnology)		3	3	3	3	3	3
3.	DSE-F30(Biotechniques and Biostatistics)		3	3	3	3	3	3
4.	DSE-F31 (AQUATIC BIOLOGY)	1					3	
5.	DSE-E30(DEVELOPMENTAL BIOLOGY OF VERTEBRATES)	3	3	3			3	
6.	DSE-E32 (IMMUNOLOGY)		3	3		3	3	3
7.	DSE-E31 (Applied Zoology - II)	3	3		3		3	3
8.	DSE-F32 (Insect Vectors and Histology)	3	3	3			3	3
9.	Zoology Practical	3	3	3	3	3	3	3
Average		2.6	3	3	3	3	3	3

For 
Head
Department of Zoology
K. M. Rethare (Bk.)




Principal
Krishna Mahavidyalaya, Rethare Bk,
Tal. Karad : 415 108 (M.S)



2. Course Outcomes (for all courses):

The course outcomes are the statement that describes the knowledge & abilities developed in the student by the end of course (subject) teaching. The focus is on development of abilities rather than mere content. There can be 5 to 7 course outcomes of any course. These are to be written in the specific terms and not in general. The list of Course Outcomes is the part of **Annexure-C** attached herewith.

3. Set Target levels for Attainment of Course Outcomes:

The course outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess students' performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment are measured/calculated. In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done.

4. Set Target level for Attainment of Program Outcomes:

The program outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess student's performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment and program outcome attainment is measured/calculated. The program outcome attainment is governed by curricular, co-curricular and extra-curricular activities including the stakeholders' participation. The direct method and indirect method is adopted to calculate the PO attainment. **The direct method implies the attainment by course outcomes contributing to respective program outcomes. And indirect method is the satisfaction/feed-back survey of stakeholders.** In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done. The set target level is the set benchmark to ensure continuous improvements in the learners/ graduates' performance.

5. Course Attainment Levels:

- a. CO attainment is defined/set at three levels;
- b. The CO attainment is based on end term examination assessment and internal assessment;
- c. The Co attainment is defined at three levels in ascending order
 - i. e.g. For end term and internal examination;



Sr. No	Level	CO Attainments
	Level-1:	30% students scored more than class average
	Level-2:	40% students score more than class average
	Level-3	50% students score more than class average

. The target level is set (e.g. Level-2). It indicates that, **the current target is level-2; 40% of students score more than class average.** The CO attainment is measured and the results are obtained. Based on the results of attainment, the corrective measures/remedial action are taken.

e. CO Attainment= 80% (Attainment level in end term examination) + 20% (Attainment level in internal examination)

6. Program attainment Level:

a. PO attainment is defined at five levels in ascending order;

b. **The PO attainment is based on the average attainment level of corresponding courses (Direct Method) and feed-back survey (Indirect method);**

c. The PO attainment levels are defined/set as stated below;

Sr. No	Level	PO Attainments
	Level-1:	Poor: Greater than 0.5 and less than 1.0 (0.5>1)
	Level-2:	Average: 1.0 to 1.5
	Level-3	Good: 3: 1.5 to 2.0
	Level-4	Very Good: 2.0 to 2.5
	Level-5	Excellent: 2.5 to 3.0

d. The PO attainment target level is set/defined (say, Level-4). It implies that, the department is aiming at minimum level-4 (very good) in the performance of abilities by the graduates. Based upon the results of attainment, the remedial measures are taken;

e. PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

7. The Results of CO Attainment: The Results of CO Attainment is provided in Annexure-B

FOR EXAMPLE COURSE CODE/TITLE: **Paper IX: DSE-E9 Mathematical Analysis**

e.g. For end-term and internal examination;

- i. **Level-1: 30% students scored more than class average**
- ii. **Level-2: 40% students score more than class average;**
- iii. **Level-3: 50% students score more than class average**



Paper IX: DSE-E9 Mathematical Analysis		
Average Marks in External examination:	19	
% Students score more than 19 is =1	50%	Level: 3
Average Marks in Internal examination	5.5	
% Students score more than 5.5 is =1	50%	Level: 3
A(CO) Paper No.Paper IX: DSE-E9 Mathematical Analysis		
	80% (3) +20%	
=	(3)	
=	2.4+0.6	
=	3	

Paper X: DSE-E10 Abstract Algebra		
Average Marks in External examination:	32	
% Students score more than 32 is =1	100%	Level: 3
Average Marks in Internal examination	6	
% Students score more than 6 is = 2	100%	Level: 3
A(CO) Paper No.Paper IX: DSE-E10 Abstract Algebra		
	80% (3) +20%	
=	(3)	
=	2.4+0.6	
=	3	

Paper XI: DSE-E11 Optimization Techniques		
Average Marks in External examination:	18	
% Students score more than 18 is =2	100%	Level: 3
Average Marks in Internal examination	7	
% Students score more than 7 is =2	100%	Level: 3
A(CO) Paper No.Paper IX: DSE-E11 Optimization Techniques		
	80% (3) +20%	
=	(3)	
=	2.4+0.6	
=	3	

Paper XII : DSE-E12 Integral Transforms		
Average Marks in External examination:	10	
% Students score more than 10 is= 1	50%	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is = 1	50%	Level: 3
A(CO) Paper No.Paper IX: DSE-E12 Integral Transforms		
	80% (3) +20%	
=	(3)	



	=	2.4+0.6
	=	3

Hence, the attainment level is Level-3 and the set target level is Level-2 and therefore the CO is fully attained.

Table No. 1.0: CO Attainment Level

Course Title	Course Attainment Value	Attainment Level	Target Attainment Level	Fully Attained/ Not Attained	Remedial Measures
DSE-E9 Mathematical Analysis	3	3	2	Fully Attained	
DSE-E10 Abstract Algebra	3	3	2	Fully Attained	
DSE-E11 Optimization Techniques	3	3	2	Fully Attained	
DSE-E12 Integral transforms	3	3	2	Fully Attained	

8.The Results of PO Attainment:

The Results of PO attainment are provided in Annexure-B

FOR EXAMPLE: PO NO.: a (Note: Refer to point No. 11 above which describes the attainment level and set target attainment level).

PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

(PSO-A) = $80\% (3+3+3+3)/04 + 20\% (3+3+3+3)/4 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-2.

Hence, PSO is attained

(PSO-B) = $80\% (3+3+3+3)/04 + 20\% (3+3+3+3)/4 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-2.

(PSO-C) = $80\% (3+3+3+3)/04 + 20\% (3+3+3+3)/4 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-2.



(PSO-D) = $80\% (3+3+3+3)/04 + 20\% (3+3+3+3)/4 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-2.

(PSO-E) = $80\% (3+3+3+3)/04 + 20\% (3+3+3+3)/4 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-2.

(PSO-F) = $80\% (3+3+3+3)/04 + 20\% (3+3+3+3)/4 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-2.

(PSO-G) $80\% (3+3+3+3)/04 + 20\% (3+3+3+3)/4 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-2.

(PSO-H) = $80\% (3+3+3+3)/04 + 20\% (3+3+3+3)/4 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-2.

Table No. 2.0 PO Attainment Level

PO/PSO Number	PO/PSOs Attainment Value	Attainment Level	Target Attainment Level	Fully Attained/ Not Attained	Remedial Measures
PSO-A	3	5	3	Fully Attained	
PSO-B	3	5	3	Fully Attained	
PSO-C	3	5	3	Fully Attained	
PSO-D	3	5	3	Fully Attained	
PSO-E	3	5	3	Fully Attained	
PSO-F	3	5	3	Fully Attained	
PSO-G	3	5	3	Fully Attained	
PSO-H	3	5	3	Fully Attained	

9. Planned Actions for Course Attainment:

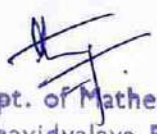
The courses for which the level attained is less than Level-2, the remedial measures will be taken in plan way that includes, tutorial, assignments, field work and remedial coaching.

10. Planned Actions for Program Outcome Attainment:

Not Applicable.

ANNEXURE-B RESULTS OF CO-PO ATTAINMENT

Sr. No	Course Title	PSO-A	PSO-B	PSO-C	PSO-D	PSO-E	PSO-F	PSO-G	PSO-H
	DSE-E9 Mathematical Analysis	3	3	3	3	3	3	3	3
	DSE-E10 Abstract Algebra	3	3	3	3	3	3	3	3
	DSE-E11 Optimization Techniques	3	3	3	3	3	3		3
	DSE-E12 Integral transforms	3	3	3	3	3	3		3
	Average	3	3	3	3	3	3	3	3


 Head of Dept. of Mathematics
 Krishna Mahavidyalaya Rethare BK




 PRINCIPAL
 KRISHNA MAHAVIDYALAYA
 RETHARE (BK.), TAL. KARAD

Shetkari Shikshan Prasarak Mandal's
KRISHNA MAHAVIDYALAYA, RETHARE BK
DEPARTMENT OF MARATHI
MARATHI OBE PROCESS
Academic Year 2021-2022

1. Course- Program outcome Matrix: The Program Outcomes are developed through the curriculum (curricular/co-curricular extra-curricular activities). The program outcomes are attained through course implementation. As an educator, one must know, **“to which POs his/her course in contributing?”**. So that one can design the learning experiences, select teaching methods and design the tool for assessment. Hence, establishing the Course-PO matrix is an essential step in the OBE. The course-program outcomes matrix indicates the correlation between the courses and program outcomes. The CO-PO matrix is the map of the list of **courses contributing to the development of respective Pos.**

The Template is provided in the table below

Sr. No	Course Title	A	B	C	D	E	F
1.	Marathi Paper VII (DSE-E1): साहित्यविचार	√				√	√
2.	Marathi Paper VIII(DSE-E2) मराठी भाषा आणि भाषाविज्ञान	√	√	√	√		√
3.	Marathi Paper IX (DSE-E3) : मध्ययुगीन मराठी वाङ्मयाचा इतिहास	√		√		√	√
4.	Marathi Paper X : (DSE -E 4) मराठी भाषा व अर्थाजनांच्या संधी	√	√	√	√	√	√
5.	Marathi Paper XI (DSE -E 5) वाङ्मय प्रवाहाचे अध्ययन : मध्ययुगीन	√				√	√
6.	Marathi Paper XII (DSE-E126):साहित्यविचार	√				√	√
7.	Marathi Paper XIII (DSE-E127):मराठी भाषा आणि भाषाविज्ञान	√	√	√	√	√	√

8.	Marathi (DSE-E 128) Paper XIV : मध्ययुगीन मराठी वाङ्मयाचा इतिहास	√		√		√	√
9.	(DSE -E 129) Paper XV : मराठी भाषा व अर्थाजनांच्या संधी	√	√	√	√		√
10.	Marathi (DSE -E 130) Paper XVI वाङ्मय प्रवाहाचे अध्ययन : ललितगद्य	√	√			√	√

2. Course Outcomes (for all courses):

The course outcomes are the statement that describes the knowledge & abilities developed in the student by the end of course (subject) teaching. The focus is on development of abilities rather than mere content. There can be 5 to 7 course outcomes of any course. These are to be written in the specific terms and not in general. The list of Course Outcomes is the part of **Annexure-C** attached herewith.

3. Set Target levels for Attainment of Course Outcomes:

The course outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess students' performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment are measured/calculated. In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done.

4. Set Target level for Attainment of Program Outcomes:

The program outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess student's performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment and program outcome attainment is measured/calculated. The program outcome attainment is governed by curricular, co-curricular and extra-curricular activities including the stakeholders' participation. The direct method and indirect method is adopted to calculate the PO attainment. **The direct method implies the attainment by course outcomes contributing to respective program outcomes. And indirect method is the satisfaction/feed-back survey of stakeholders.** In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the

course-program outcome mapping is done. The set target level is the set benchmark to ensure continuous improvements in the learners/ graduates' performance.

5. Course Attainment Levels:

- a) CO attainment is defined/set at three levels;
- b) The CO attainment is based on end term examination assessment and internal assessment;
- c) The Co attainment is defined at three levels in ascending order
 - i. e.g. For end term and internal examination;

Sr. No	Level	CO Attainments
1.	Level-1:	30% students scored more than class average
2.	Level-2:	40% students score more than class average
3.	Level-3	50% students score more than class average

. The target level is set (e.g. Level-2). It indicates that, **the current target is level-2; 40% of students score more than class average**. The CO attainment is measured and the results are obtained. Based on the results of attainment, the corrective measures/remedial action are taken.

e. CO Attainment= 80% (Attainment level in end term examination) + 20% (Attainment level in internal examination)

6. Program attainment Level:

- a. PO attainment is defined at five levels in ascending order;
- b. **The PO attainment is based on the average attainment level of corresponding courses (Direct Method) and feed-back survey (Indirect method);**
- c. The PO attainment levels are defined/set as stated below;

Sr. No	Level	PSO Attainments
1.	Level-1:	Poor: Greater than 0.5 and less than 1.0 (0.5>1
2.	Level-2:	Average: 1.0 to 1.5
3.	Level-3	Good: 3: 1.5 to 2.0
4.	Level-4	Very Good: 2.0 to 2.5
5.	Level-5	Excellent: 2.5 to 3.0

d. The PO attainment target level is set/defined (say, Level-4). It implies that, the department is aiming at minimum level-4 (very good) in the performance of abilities by the graduates. Based upon the results of attainment, the remedial measures are taken;

e. PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

7. The Results of CO Attainment: The Results of CO Attainment is provided in Annexure-B

FOR EXAMPLE COURSE CODE/TITLE: Marathi **Paper VII (DSE-E1):साहित्यविचार**

e.g. For end-term and internal examination;

i. Level-1: 30% students scored more than class average

ii. Level-2: 40% students score more than class average;

iii. Level-3: 50% students score more than class average

Paper VII:साहित्यविचार		
Average Marks in External examination:	26	
% Students score more than 26 is	60	Level 3
Average Marks in Internal examination	9	
% Students score more than 9 is	90	Level 3
A(CO) Paper VII (DSE-E1):साहित्यविचार		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper VIII: मराठी भाषा आणि भाषाविज्ञान		
Average Marks in External examination:	22	
% Students score more than 22 is	50	Level 3
Average Marks in Internal examination	10	
% Students score more than 10 is	100	Level 3
A(CO) Paper VIII (DSE-E2):मराठी भाषा आणि भाषाविज्ञान		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper IX : मध्ययुगीन मराठी वाङ्मयाचा इतिहास		
Average Marks in External examination:	25	
% Students score more than 25 is	70	Level 3
Average Marks in Internal examination	10	
% Students score more than 9 is	90	Level 3
A(CO) Paper No IX: (DSE-E3) Paper IX : मध्ययुगीन मराठी वाङ्मयाचा इतिहास		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper X : मराठी भाषा व अर्थाजनांच्या संधी		
Average Marks in External examination:	21	
% Students score more than 21 is	50	Level 3
Average Marks in Internal examination	10	
% Students score more than 10 is	100	Level 3
A(CO) (DSE -E 4) Paper X : मराठी भाषा व अर्थाजनांच्या संधी		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XI वाङ्मय प्रवाहाचे अध्ययन : मध्ययुगीन		
Average Marks in External examination:	16	
% Students score more than 16 is	50	Level 3
Average Marks in Internal examination	10	
% Students score more than 9 is	100	Level 3
A(CO) (DSE -E 5) Paper XI वाङ्मय प्रवाहाचे अध्ययन : मध्ययुगीन		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XII:साहित्यविचार		
Average Marks in External examination:	28	
% Students score more than 28 is	50	Level 3
Average Marks in Internal examination	10	
% Students score more than 10 is	100	Level 3
A(CO) Paper XII (DSE-E126):साहित्यविचार		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XIII: मराठी भाषा आणि भाषाविज्ञान		
Average Marks in External examination:	27	
% Students score more than 27 is	90	Level 3
Average Marks in Internal examination	10	
% Students score more than 9 is	90	Level 3
A(CO) Paper XIII (DSE-E127):मराठी भाषा आणि भाषाविज्ञान		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XIV : मध्ययुगीन मराठी वाङ्मयाचा इतिहास		
Average Marks in External examination:	32	
% Students score more than 32 is	70	Level 3
Average Marks in Internal examination	10	
% Students score more than 9 is	90	Level 3
A(CO) Paper No IX: (DSE-E 128) Paper XIV : मध्ययुगीन मराठी वाङ्मयाचा इतिहास		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XV : मराठी भाषा व अर्थाजनांच्या संधी		
Average Marks in External examination:	33	
% Students score more than 33 is	50	Level 3
Average Marks in Internal examination	9	
% Students score more than 9 is	90	Level 3
A(CO) (DSE -E 129) Paper XV : मराठी भाषा व अर्थाजनांच्या संधी		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XVI वाङ्मय प्रवाहाचे अध्ययन : ललितगद्य		
Average Marks in External examination:	27	
% Students score more than 27 is	70	Level 3
Average Marks in Internal examination	10	
% Students score more than 10 is	100	Level 3
A(CO) (DSE -E 130) Paper XVI वाङ्मय प्रवाहाचे अध्ययन : ललितगद्य		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Hence, the attainment level is Level-3 and the set target level is Level-2 and therefore the CO is Fully attained.

Table No. 1.0: CO Attainment Level

Course Title	Course Attainment Value	Target Attainment Level	Fully Attained/ Not Attained	Remedial Measures
Marathi Paper VII (DSE-E1): साहित्यविचार	3	2	Fully Attained	
Marathi Paper VIII(DSE-E2) मराठी भाषा आणि भाषाविज्ञान	3	2	Fully Attained	
Marathi Paper IX (DSE-E3) : मध्ययुगीन मराठी वाङ्मयाचा इतिहास	3	2	Fully Attained	
Marathi Paper X : (DSE -E 4) मराठी भाषा व अर्थाजनांच्या संधी	3	2	Fully Attained	
Marathi Paper XI (DSE -E 5) वाङ्मय प्रवाहाचे अध्ययन : मध्ययुगीन	3	2	Fully Attained	
Marathi Paper XII (DSE-E126):साहित्यविचार	3	2	Fully Attained	
Marathi Paper XIII (DSE-E127):मराठी भाषा आणि भाषाविज्ञान	3	2	Fully Attained	
Marathi (DSE-E 128) Paper XIV : मध्ययुगीन मराठी वाङ्मयाचा इतिहास	3	2	Fully Attained	
(DSE -E 129) Paper XV : मराठी भाषा व अर्थाजनांच्या संधी	3	2	Fully Attained	
Marathi (DSE -E 130) Paper XVI वाङ्मय प्रवाहाचे अध्ययन : ललितगद्य	3	3	Fully Attained	

8. The Results of PSO Attainment:

The Results of PO attainment are provided in Annexure-B

FOR EXAMPLE: PO NO.: a (Note: Refer to point No. 11 above which describes the attainment level and set target attainment level).

PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

$$(PSO-A) = 80\% (3+3+3+3+3+3+3+3+3+3)/10 = 3 + 20\%$$

$$(3+3+3+3+3+3+3+3+3+3)/10 = 3,$$

80% (3) + 20% (3) = 3, i.e. Level-5. The Target Level is Level-3. (3:1.5 to 2.0)

Hence, PO is attained

$$\text{(PSO-B)} = 80\% (3+3+3+3+3)/05=3 + 20\% (3+3+3+3+3)/5 =3,$$

80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.(3:1.5 to 2.0)

Hence, PO is attained

$$\text{(PSO-C)} = 80\% (3+3+3+3+3+3)/06=3 + 20\% (3+3+3+3+3+3)/6=3,$$

80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

Hence, PO is attained

$$\text{(PSO-D)} = 80\% (3+3+3+3)/04=3 + 20\% (3+3+3+3)/4 = 3,$$

80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

Hence, PO is attained

$$\text{(PSO-E)} = 80\% (3+3+3+3+3+3+3+3+3)/08 =3+ 20\% (3+3+3+3+3+3+3+3+3)/8 = 3,$$

80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

Hence, PO is attained

$$\text{(PSO-F)}=80\%(3+3+3+3+3+3+3+3+3+3+3)/10=3+20\%$$

$$(3+3+3+3+3+3+3+3+3+3)/10 = 3$$

80% (3) + 20% (3) = 3 i.e. Level-5. The Target Level is Level-3.

Hence, PO is attained

Table No. 2. PSO Attainment Level

PO/PSO Number	Target Attainment Level -3 Very Good .3:1.5 to2.0)	PO/PSOs Attainment Value Excellent (2.5 to 3)		Fully Attained/ Not Attained	Remedial Measures
	Level	Value	Level		
PSO-A	3	3	5	Fully Attained	
PSO-B	3	3	5	Fully Attained	
PSO-C	3	3	5	Fully Attained	
PSO-D	3	3	5	Fully Attained	
PSO-E	3	3	5	Fully Attained	
PSO-F	3	3	5	Fully Attained	

9. Planned Actions for Course Attainment:

The courses for which the level attained is less than Level-2, the remedial measures will be taken in plan way that includes, tutorial, assignments, field work and remedial coaching.

10. Planned Actions for Program Outcome Attainment:

Not Applicable.

ANNEXURE-B RESULTS OF CO-PO ATTAINMENT

Sr. No	Course Title	PSO-A	PSO-B	PSO-C	PSO-D	PSO-E	PSO-F
1.	Marathi Paper VII (DSE-E1): साहित्यविचार	3				3	3
2.	Marathi Paper VIII(DSE-E2) मराठी भाषा आणि भाषाविज्ञान	3	3	3	3		3
3.	Marathi Paper IX (DSE-E3) : मध्ययुगीन मराठी वाङ्मयाचा इतिहास	3		3		3	3
4.	Marathi Paper X : (DSE -E 4) मराठी भाषा व अर्थाजनांच्या संधी	3	3	3	3	3	3
5.	Marathi Paper XI (DSE -E 5) वाङ्मय प्रवाहाचे अध्ययन : मध्ययुगीन	3				3	3
6.	Marathi Paper XII (DSE-E126):साहित्यविचार	3				3	3
7.	Marathi Paper XIII (DSE-E127):मराठी भाषा आणि भाषाविज्ञान	3	3	3	3	3	3
8.	Marathi (DSE-E 128) Paper XIV : मध्ययुगीन मराठी वाङ्मयाचा इतिहास	3		3		3	3
9.	(DSE -E 129) Paper XV : मराठी भाषा व अर्थाजनांच्या संधी	3	3	3	3		3
10.	Marathi (DSE -E 130) Paper XVI वाङ्मय प्रवाहाचे अध्ययन : ललितगद्य	3	3			3	3
Average		3	3	3	3	3	3



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Shetkari Shikshan Prasarak Mandal's
KRISHNA MAHAVIDYALAYA, RETHARE BK
DEPARTMENT OF GEOGRAPHY
GEOGRAPHY OBE PROCESS
Academic Year 2021-2022

1. Course- Program outcome Matrix: The Program Outcomes are developed through the curriculum (curricular/co-curricular extra-curricular activities). The program outcomes are attained through course implementation. As an educator, one must know, **"to which POs his/her course is contributing?"**. So that one can design the learning experiences, select teaching methods and design the tool for assessment. Hence, establishing the Course-PO matrix is an essential step in the OBE. The course-program outcomes matrix indicates the correlation between the courses and program outcomes. The CO-PO matrix is the map of the list of **courses contributing to the development of respective Pos.**

The Template is provided in the table below

Sr. No	Course Title	A	B	C	D	E	F	G	H	I
1.	DSE-VII, Paper VII: Development of Geography	√	√			√	√			
2.	DSE-VIII, Paper VIII: Geography of India	√	√	√	√	√	√	√	√	
3.	DSE-IX, Paper IX: Population Geography	√	√	√		√	√	√	√	
4.	DSE-X, Paper X: Economic Geography	√	√	√	√	√	√	√	√	
5.	DSE-XI, Paper XI: Urban Geography	√	√	√	√	√	√	√	√	
6.	DSE-XII Paper XII: Political Geography	√	√			√	√	√	√	
7.	DSE-XIII, Paper XIII: Fundamentals of Map Making	√								√
8.	DSE-IVX, Paper XIV: Advanced Techniques in Geography	√								√

2. Course Outcomes (for all courses):

The course outcomes are the statement that describes the knowledge & abilities developed in the student by the end of course (subject) teaching. The focus is on development of abilities rather than mere content. There can be 5 to 7 course outcomes of any course. These are to be written in the specific terms and not in general. The list of Course Outcomes is the part of **Annexure-C** attached herewith.

3. Set Target levels for Attainment of Course Outcomes:

The course outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess students' performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment are measured/calculated. In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done.

4. Set Target level for Attainment of Program Outcomes:

The program outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess student's performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment and program outcome attainment is measured/calculated. The program outcome attainment is governed by curricular, co-curricular and extra-curricular activities including the stakeholders' participation. The direct method and indirect method is adopted to calculate the PO attainment. **The direct method implies the attainment by course outcomes contributing to respective program outcomes. And indirect method is the satisfaction/feed-back survey of stakeholders.** In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done. The set target level is the set benchmark to ensure continuous improvements in the learners/ graduates' performance.

5. Course Attainment Levels:

- a) CO attainment is defined/set at three levels;
- b) The CO attainment is based on end term examination assessment and internal assessment;
- c) The Co attainment is defined at three levels in ascending order
 - i. e.g. For end term and internal examination;

Sr. No	Level	CO Attainments
1.	Level-1:	30% students scored more than class average
3.	Level-3	50% students score more than class average

. The target level is set (e.g. Level-2). It indicates that, **the current target is level-2; 40% of students score more than class average.** The CO attainment is measured and the results are obtained. Based on the results of attainment, the corrective measures/remedial action are taken.

e. CO Attainment= 80% (Attainment level in end term examination) + 20% (Attainment level in internal examination)

6. Program attainment Level:

a. PO attainment is defined at five levels in ascending order;

b. [REDACTED]

c. The PO attainment levels are defined/ set as stated below;

Sr. No	Level	PO Attainments
1.	Level-1:	Poor: Greater than 0.5 and less than 1.0 (0.5>1)
2.	Level-2:	Average: 1.0 to 1.5
3.	Level-3	Good: 3: 1.5 to 2.0
4.	Level-4	Very Good: 2.0 to 2.5
5.	Level-5	Excellent: 2.5 to 3.0

d. The PO attainment target level is set/defined (say, Level-4). It implies that, the department is aiming at minimum level-4 (very good) in the performance of abilities by the graduates. Based upon the results of attainment, the remedial measures are taken;

e. PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

7. The Results of CO Attainment: The Results of CO Attainment is provided in Annexure-B

FOR EXAMPLE COURSE CODE/TITLE: **Paper VII: DSE-E106 Evolution o Geographical Thought**

e.g. For end-term and internal examination;

- i. Level-1: 30% students scored more than class average**
- ii. Level-2: 40% students score more than class average;**
- iii. Level-3: 50% students score more than class average**

Paper VII: Development of Geography		
Average Marks in External examination:	19	
% Students score more than 19 is	55	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is	100	Level: 3
A(CO) Paper VII: Development of Geography		
	=	80% (3) +20% (3)
	=	2.4+0.6
	=	3

Paper VIII: Geography of India		
Average Marks in External examination:	22	
% Students score more than 22 is	73	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is	100	Level: 3
A(CO) Paper VIII: Geography of India		
	=	80% (3) +20% (3)
	=	2.4+0.6
	=	3

Paper IX: Population Geography		
Average Marks in External examination:	24	
% Students score more than 24 is	55	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is	100	Level: 3
A(CO) Paper IX: Population Geography		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper X: Economic Geography		
Average Marks in External examination:	17	

% Students score more than 17 is	45	Level: 2
Average Marks in Internal examination	10	
% Students score more than 10 is	100	Level: 3
A(CO) Paper X: Economic Geography		
	=	80% (2) +20 (3)
	=	1.6+0.6
	=	2.2

Paper XI: Urban Geography		
Average Marks in External examination:	23	
% Students score more than 23 is	45	Level: 2
Average Marks in Internal examination	10	
% Students score more than 10 is	100	Level: 3
A(CO) Paper XI: Urban Geography		
	=	80% (2) +20 (3)
	=	1.6+0.6
	=	2.2

Paper XII: Political Geography		
Average Marks in External examination:	19	
% Students score more than 19 is	45	Level: 2
Average Marks in Internal examination	10	
% Students score more than 10 is	100	Level: 3
A(CO) Paper XII: Political Geography		
	=	80% (2) +20 (3)
	=	1.6+0.6
	=	2.2

Paper XIII: Fundamentals of Map Making		
Average Marks in External examination:	81	
% Students score more than 81 is	64	Level: 3
Average Marks in Internal examination	NA	NA
% Students score more than 00 is	NA	NA
A(CO) Paper XIV: Fundamentals of Map Making		
	=	100%(3)
	=	3

Paper XIV: Advanced Techniques in Geography		
Average Marks in External examination:	81	
% Students score more than 81 is	64	Level: 3
Average Marks in Internal examination	NA	NA
% Students score more than 00 is	NA	NA
A(CO) Paper XIV: Advanced Techniques in Geography		

	=	100%(3)
	=	3

Hence, the attainment level is Level-3 and the set target level is Level-2 and therefore the CO is fully attained.

Table No. 1.0: CO Attainment Level

Course Title	Target Attainment	Course Attainment		Fully Attained/ Not Attained	Remedial Measures
	Level	Value	Level		
DSE- Paper VII: Development of Geography	2	3	3	Fully Attained	
DSE- Paper VIII: Geography of India	2	3	3	Fully Attained	
DSE- Paper IX: Population Geography	2	3	3	Fully Attained	
DSE- Paper X: Economic Geography	2	2.2	3	Fully Attained	
DSE- Paper XI: Urban Geography	2	2.2	3	Fully Attained	
DSE- Paper XII: Political Geography	2	2.2	3	Fully Attained	
DSE- Paper XIII: Fundamentals of Map Making	2	3	3	Fully Attained	
DSE- Paper XIV: Advanced Techniques in Geography	2	3	3	Fully Attained	

8. The Results of PO Attainment:

The Results of PO attainment are provided in Annexure-B

FOR EXAMPLE: PO NO.: a (Note: Refer to point No. 11 above which describes the attainment level and set target attainment level).

PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

- **(PSO-A)** = $80\% (3+3+3+2+2+2+3+3)/8=2.6 + 20\% (3+3+3+3+3+3)/6=3,$

$80\% (2.6) + 20\% (3) = 2.81$, i.e. Level-5, The Target Level is-3(3: 1.5 to 2.0),

Hence, PSO is attained.

- **(PSO-B)** = $80\% (3+3+3+2+2+2)/6=2.5 + 20\% (3+3+3+3+3+3)/6=3,$

$80\% (2.5) + 20\% (3) = 2.75$, i.e. Level-5, The Target Level- 3(3: 1.5 to 2.0),

Hence, PSO is attained.

- **(PSO-C)** = $80\% (3+3+2+2)/4=2.5 + 20\% (3+3+3+3)/4=3,$

$80\% (2.5) + 20\% (3) = 2.75$, i.e. Level-5, The Target Level is-3(3: 1.5 to 2.0),

Hence, PSO is attained.

- **(PSO-D)** = $80\% (3+2+2)/3=2.33 + 20\% (3+3+3)/3=3,$

$80\% (2.33) + 20\% (3) = 2.66$, i.e. Level-5, The Target Level is L-3(3: 1.5 to 2.0), **Hence, PSO is attained.**

- **(PSO-E)** = $80\% (3+3+3+2+2+2)/6=2.5 + 20\% (3+3+3+3+3+3)/6=3,$

$80\% (2.5) + 20\% (3) = 2.75$, i.e. Level-5, The Target Level- 3(3: 1.5 to 2.0),

Hence, PSO is attained.

- **(PSO-F)** = $80\% (3+3+3+2+2+2)/6=2.5 + 20\% (3+3+3+3+3+3)/6=3,$

$80\% (2.5) + 20\% (3) = 2.75$, i.e. Level-5, The Target Level- 3(3: 1.5 to 2.0),

Hence, PSO is attained.

- **(PSO-G)** = $80\% (3+3+2+2+2)/5=2.4 + 20\% (3+3+3+3+3)/5=3,$

$80\% (2.4) + 20\% (3) = 2.75$, i.e. Level-5, The Target Level- 3(3: 1.5 to 2.0),

Hence, PSO is attained.

- **(PSO-H) = 80% (3+3+2+2+2)/5=2.4 + 20% (3+3+3+3+3)/5=3,**
80% (2.4) + 20% (3) = 2.75, i.e. Level-5, The Target Level- 3(3: 1.5 to 2.0),

Hence, PSO is attained.

- **(PSO-I) = 80% (3+3)/2=3 i.e. Level-5, The Target Level- 3(3: 1.5 to 2.0),**

Hence, PSO is attained.

Table No. 2.0 PO Attainment Level

PO/PSO Number	Target Attainment Level-3 Very Good (3: 1.5 to 2.0)	PO/PSOs Attainment Level-5 Excellent: (2.5 to 3.0)		Fully Attained/ Not Attained	Remedial Measures
	Level	Value	Level		
PSO-A	3	2.81	5	Fully Attained	-
PSO-B	3	2.75	5	Fully Attained	-
PSO-C	3	2.75	5	Fully Attained	-
PSO-D	3	2.66	5	Fully Attained	-
PSO-E	3	2.75	5	Fully Attained	-
PSO-F	3	2.75	5	Fully Attained	-
PSO-G	3	2.75	5	Fully Attained	-
PSO-H	3	2.75	5	Fully Attained	-
PSO-I	3	3.00	5	Fully Attained	-

9. Planned Actions for Course Attainment:

The courses for which the level attained is less than Level-2, the remedial measures will be taken in plan way that includes, tutorial, assignments, field work and remedial coaching.

10. Planned Actions for Program Outcome Attainment:

Not Applicable.

ANNEXURE-B RESULTS OF CO-PO ATTAINMENT

Sr. No	Course Title	PO1-A	PO2-B	PO3-C	PO4-D	PO5-E	PO6-F	PSO-G	PSO-H	PSO-I
1.	DSE- Paper VII: Development of Geography	3	3							
2.	DSE- Paper VIII: Geography of India	3	3	3	3	3		3	3	
3.	DSE- Paper IX: Population Geography	3		3	3	3		3	3	
4.	DSE- Paper X: Economic Geography	3	3	3			3	3	3	
5.	DSE- Paper XI: Urban Geography	3		3		3	3	3	3	
6.	DSE- Paper XII: Political Geography	3	3	3		3	3	3	3	
7.	DSE- Paper XIII: Fundamentals of Map Making	3	3	3	3	3	3	3	3	
8.	DSE- Paper XIV: Advanced Techniques in Geography	3	3	3	3	3	3	3	3	
Average		3	3	3	3	3	3	3	3	


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DEPARTMENT OF HISTORY

HISTORY OBE PROCESS

Academic Year 2021-2022

1. Course- Program outcome Matrix: The Program Outcomes are developed through the curriculum (curricular/co-curricular extra-curricular activities). The program outcomes are attained through course implementation. As an educator, one must know, **"to which POs his/her course is contributing?"**. So that one can design the learning experiences, select teaching methods and design the tool for assessment. Hence, establishing the Course-PO matrix is an essential step in the OBE. The course-program outcomes matrix indicates the correlation between the courses and program outcomes. The CO-PO matrix is the map of the list of **courses contributing to the development of respective Pos.**

The Template is provided in the table below

Sr. No	Course Title	A	B	C	D	E	F
1.	Paper No. Paper VII: DSE- E- 61 Early India (from beginning to 4th c. BC)	√	√	√	√	√	√
2.	Paper No. Paper VIII: DSE-E- 62 History of Medieval India (1206-1526 AD)	√		√	√	√	√
3.	Paper No. Paper XI: DSE-E- 63 Age of Revolution		√	√	√	√	√
4.	Paper No. Paper X: DSE-E- 64 Political History of the Marathas	√		√	√	√	√
5.	Paper No. Paper XI: DSE-E- 65 History: Its Theory	√		√	√	√	√
6.	Paper No. Paper XII: DSE-E- 186 Ancient India (From 4th c BC to 7th c. AD)	√		√	√	√	√
7.	Paper XIII: DSE- E- 187 History of Medieval India (1526-1707 AD)	√		√	√	√	√
8.	Paper XIV: DSE- E- 188 Making of the Modern World (16 to 19 Century)		√	√	√	√	√
9.	Paper No. Paper XV: DSE-E-189 Polity, Economy and Society under the Marathas	√		√	√	√	√
10.	Paper No. Paper XVI: DSE-E- 190 Methods and Applications of History	√		√	√	√	√

2. Course Outcomes (for all courses):

The course outcomes are the statement that describes the knowledge & abilities developed in the student by the end of course (subject) teaching. The focus is on development of abilities rather than mere content. There can be 5 to 7 course outcomes of any course. These are to be written in the specific terms and not in general. The list of Course Outcomes is the part of **Annexure-C** attached herewith.

3. Set Target levels for Attainment of Course Outcomes:

The course outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess students' performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment are measured/calculated. In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done.

4. Set Target level for Attainment of Program Outcomes:

The program outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess student's performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment and program outcome attainment is measured/calculated. The program outcome attainment is governed by curricular, co-curricular and extra-curricular activities including the stakeholders' participation. The direct method and indirect method is adopted to calculate the PO attainment. **The direct method implies the attainment by course outcomes contributing to respective program outcomes. And indirect method is the satisfaction/feed-back survey of stakeholders.** In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done. The set target level is the set benchmark to ensure continuous improvements in the learners/ graduates' performance.

5. Course Attainment Levels:

- a) CO attainment is defined/set at three levels;

- b) The CO attainment is based on end term examination assessment and internal assessment;
- c) The Co attainment is defined at three levels in ascending order
- i. e.g. For end term and internal examination;

Sr. No	Level	CO Attainments
1.	Level-1:	30% students scored more than class average
3.	Level-3	50% students score more than class average

. The target level is set (e. g. Level-2). It indicates that, **the current target is level-2; 40% of students score more than class average.** The CO attainment is measured and the results are obtained. Based on the results of attainment, the corrective measures/remedial action are taken.

e. CO Attainment= 80% (Attainment level in end term examination) + 20% (Attainment level in internal examination)

6. Program attainment Level:

a. PO attainment is defined at five levels in ascending order;

b. [REDACTED]

c. The PO attainment levels are defined/set as stated below;

Sr. No	Level	PO Attainments
1.	Level-1:	Poor: Greater than 0.5 and less than 1.0 (0.5>1
2.	Level-2:	Average: 1.0 to 1.5
3.	Level-3	Good: 3: 1.5 to 2.0
4.	Level-4	Very Good: 2.0 to 2.5
5.	Level-5	Excellent: 2.5 to 3.0

d. The PO attainment target level is set/defined (say, Level-4). It implies that, the department is aiming at minimum level-4 (very good) in the performance of abilities by the graduates. Based upon the results of attainment, the remedial measures are taken;

e. PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

7. The Results of CO Attainment: The Results of CO Attainment is provided in Annexure-B

FOR EXAMPLE COURSE CODE/TITLE: **Paper VII: Early India (from beginning to 4th c. BC)**

e.g. For end-term and internal examination;

i. Level-1: 30% students scored more than class average

ii. Level-2: 40% students score more than class average;

iii. Level-3: 50% students score more than class average

Paper VII: Early India (from beginning to 4th c. BC)		
Average Marks in External examination:	18	
% Students score more than 18 is =4	40%	Level: 2
Average Marks in Internal examination	10	
% Students score more than 10 is =11	100%	Level: 3
Paper No. Paper VII : DSE- E- 61 Early India (from beginning to 4th c. BC)		
	=	80% (2) +20% (3)
	=	1.6+0.6
	=	2.2
Paper VIII: History of Medieval India (1206-1526 AD)		
Average Marks in External examination:	23	
% Students score more than 23 is =4	40%	Level: 2
Average Marks in Internal examination	10	
% Students score more than 10 is =11	100%	Level: 3
Paper No. Paper VIII: DSE-E- 62 History of Medieval India (1206-1526 AD)		
	=	80% (2) +20 % (3)
	=	1.6+0.6
	=	2.2

Paper IX: Age of Revolution		
Average Marks in External examination:	27	
% Students score more than 27 is =6	60%	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is =11	100%	Level: 3

Paper No. Paper XI: DSE-E- 63 Age of Revolution		
	=	80% (3) +20% (3)
	=	2.4+0.6
	=	3
Paper X: Political History of the Marathas		
Average Marks in External examination:		19
% Students score more than 19 is 5		50% Level: 3
Average Marks in Internal examination		10
% Students score more than 10 is 11		100% Level: 3
Paper No. Paper X: DSE-E- 64 Political History of the Marathas		
	=	80% (3) +20% (3)
	=	2.4+0.6
	=	3
Paper XI: History: Its Theory		
Average Marks in External examination:		22
% Students score more than 22 is =4		40% Level: 2
Average Marks in Internal examination		10
% Students score more than 10 is =11		100% Level: 3
Paper No. Paper XI: DSE-E- 65 History: Its Theory		
	=	80% (2) +20 % (3)
	=	1.6+0.6
	=	2.2
Paper XII : Ancient India (From 4th c BC to 7th c. AD)		
Average Marks in External examination:		27
% Students score more than 16 is 4		40% Level: 2
Average Marks in Internal examination		10
% Students score more than 10 is 11		100% Level: 3
Paper No. Paper XII: DSE-E- 186 Ancient India (From 4th c BC to 7th c. AD)		
	=	80% (3) +20 % (3)
	=	1.6+0.6
	=	2.2
Paper XIII: History of Medieval India (1526-1707 AD)		
Average Marks in External examination:		22
% Students score more than 22 is =6		60% Level: 3
Average Marks in Internal examination		10
% Students score more than 10 is =11		100% Level: 3
Paper XIII: DSE- E- 187 History of Medieval India (1526-1707 AD)		
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Paper XIV: Making of the Modern World (16 to 19 Century)		
Average Marks in External examination:	18	
% Students score more than 18 is = 8	80%	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is 11	100%	Level: 3
Paper XIV: DSE- E- 188 Making of the Modern World (16 to 19 Century)		
	=	80% (3) +20 %(3)
	=	2.4+0.6
	=	3

Paper XVI: Methods and Applications of History		
Average Marks in External examination:	19	
% Students score more than 19 is =9	90%	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is 11	100%	Level: 3
Paper No.Paper XVI: DSE-E- 190 Methods and Applications of History		
	=	80% (3) +20% (3)
	=	2.4+0.6
	=	3

Hence, the attainment level is Level-3 and the set target level is Level-2 and therefore the CO is Fully attained.

Table No. 1.0: CO Attainment Level

Course Title	Target Attainment	Course Attainment		Fully Attained/ Not Attained	Remedial Measures
	Level	Value	Level		
Paper No. Paper VII: DSE- E-61 Early India (from beginning to 4th c. BC)	3	3	5	Fully Attained	
Paper No. Paper VIII: DSE-E-62 History of Medieval India (1206-1526 AD)	3	3	5	Fully Attained	
Paper No. Paper XI: DSE-E-63 Age of Revolution	3	3	5	Fully Attained	
Paper No. Paper X: DSE-E- 64 Political History of the Marathas	3	3	5	Fully Attained	
Paper No. Paper XI: DSE-E-65 History: Its Theory	3	3	5	Fully Attained	
Paper No. Paper XII: DSE-E-186 Ancient India (From 4th c BC to 7th c. AD)	3	3	5	Fully Attained	
Paper XIII: DSE- E- 187 History of Medieval India (1526-1707 AD)	3	3	5	Fully Attained	
Paper XIV: DSE- E- 188 Making of the Modern World (16 to 19 Century)	3	3	5	Fully Attained	
Paper No. Paper XV: DSE-E-189 Polity, Economy and Society under the Marathas	3	3	5	Fully Attained	
Paper No. Paper XVI: DSE-E-190 Methods and Applications of History	3	3	5	Fully Attained	

8. The Results of PO Attainment:

The Results of PO attainment are provided in Annexure-B

FOR EXAMPLE: PO NO.: a (Note: Refer to point No. 11 above which describes the attainment level and set target attainment level).

PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

(PSO-A) = 80% (2+2+3+2+3+3+3+3)/08=2.6 + 20% (3+3+3+3+3+3+3+3)/8 = 3
80% (2.6) + 20% (3) = 2.8 i.e. Level-5. The Target Level is -3, Hence, PO is attained

(PSO-B) = $80\% (2+3+3+3)/03 = 3 + 20\% (3+2+3)3 = 2.8$ $80\% (3) + 20\% (8) =$
 i.e. Level-5. The Target Level is -3, Hence, PO is attained

(PSO-C)=80%

$(2+2+3+3+2+2+3+3+3+3)/10=2.6+20\%(3+3+3+3+3+3+3+3+3+3)/10 = 3$ 80%
 $(2.6) + 20\% (3) = 2.8$ i.e. Level-5. The Target Level is -3, Hence, PO is attained

(PSO-D)=80%(2+2+3+3+2+2+3+3+3+3)/10=2.6 + 20%

$(3+3+3+3+3+3+3+3+3+3)/10 = 80\% (2.6) + 20\% (3) = 2.8$ i.e. Level-5. The Target
 Level is Level-3.

(PSO-E)=80% (2+2+3+3+2+2+3+3+3+3)/10 = 2.6 + 20%

$(3+3+3+3+3+3+3+3+3+3)/10 = 3$, $80\% (3) + 20\% (3) = 2.8$ i.e. Level-5. The Target
 Level is Level-3.

(PSO-F)=80% (2+2+3+3+2+2+3+3+3+3)/10 = 2.6 + 20%

$(3+3+3+3+3+3+3+3+3+3)/10 = 80\% (2.6) + 20\% (3) = 2.8$ i.e. Level-5. The Target
 Level is -3.

Table No. 2.0 PO Attainment Level

PO/PSO Number	Target Attainment	PO/PSOs Attainment		Fully Attained/ Not Attained	Remedial Measures
	Level	Value	Level		
POS-A	3	2.8	5	Fully Attained	
POS-B	3	2.8	5	Fully Attained	
POS-C	3	2.8	5	Fully Attained	
POS-D	3	2.8	5	Fully Attained	
POS-E	3	2.8	5	Fully Attained	
POS-F	3	2.8	5	Fully Attained	

9. Planned Actions for Course Attainment:

The courses for which the level attained is less than Level-2, the remedial measures will be taken in plan way that includes, tutorial, assignments, field work and remedial coaching.

10. Planned Actions for Program Outcome Attainment:

Not Applicable.

ANNEXURE-B RESULTS OF CO-PO ATTAINMENT

Sr. No	Course Title	PSO-A	PSO-B	PSO-C	PSO-D	PSO-E	PSO-F
1.	Paper No. Paper VII: DSE- E- 61 Early India (from beginning to 4th c. BC)	3	3	3	3	3	3
2.	Paper No. Paper VIII: DSE-E- 62 History of Medieval India (1206-1526 AD)	3	--	3	3	3	3
3.	Paper No. Paper XI: DSE-E- 63 Age of Revolution	3	3	3	3	3	3
4.	Paper No. Paper X: DSE-E- 64 Political History of the Marathas	3		3	3	3	3
5.	Paper No. Paper XI: DSE-E- 65 History: Its Theory	3		3	3	3	3
6.	Paper No. Paper XII: DSE-E- 186 Ancient India (From 4th c BC to 7th c. AD)	3		3	3	3	3
7.	Paper XIII: DSE- E- 187 History of Medieval India (1526-1707 AD)	3		3	3	3	3
8.	Paper XIV: DSE- E- 188 Making of the Modern World (16 to 19 Century)	3	3	3	3	3	3
9.	Paper No. Paper XV: DSE-E-189 Polity, Economy and Society under the Marathas	3		3	3	3	3
10.	Paper No. Paper XVI: DSE-E- 190 Methods and Applications of History	3		3	3	3	3
Average		3	3	3	3	3	3

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DEPARTMENT OF COMMERCE

COMMERCE OBE PROCESS

Academic Year 2021-2022

1. Course- Program outcome Matrix: The Program Outcomes are developed through the curriculum (curricular/co-curricular extra-curricular activities). The program outcomes are attained through course implementation. As an educator, one must know, **"to which POs his/her course is contributing?"**. So that one can design the learning experiences, select teaching methods and design the tool for assessment. Hence, establishing the Course-PO matrix is an essential step in the OBE. The course-program outcomes matrix indicates the correlation between the courses and program outcomes. The CO-PO matrix is the map of the list of **courses contributing to the development of respective Pos.**

The Template is provided in the table below

Sr. No	Course Title	A	B	C	D	E	F	G
1.	Business Environment	√		√	√	√		
2.	Business Regulatory Framework	√	√	√	√	√	√	√
3.	Modern Management Practices	√		√	√	√		√
4.	Co-operative Development	√			√	√		
5.	Advanced Accountancy I	√	√		√		√	
6.	Advanced Accountancy II	√	√		√		√	√
7.	Business Environment	√		√	√	√		
8.	Business Regulatory Framework	√	√	√	√	√	√	√
9.	Modern Management Practices	√		√	√	√		√
10.	Co-operative Development	√			√	√		
11.	Advanced Accountancy III	√	√		√		√	
12.	Advanced Accountancy IV	√	√		√		√	√

2. Course Outcomes (for all courses):

The course outcomes are the statement that describes the knowledge & abilities developed in the student by the end of course (subject) teaching. The focus is on development of abilities rather than mere content. There can be 5 to 7 course outcomes of any course. These are to be written in the specific terms and not in general. The list of Course Outcomes is the part of **Annexure-C** attached herewith.

3. Set Target levels for Attainment of Course Outcomes:

The course outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess students' performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment are measured/calculated. In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done.

4. Set Target level for Attainment of Program Outcomes:

The program outcome attainment is assessed in order to track the graduates' performance w.r.t target level of performance. The CO-PO attainment is the tool used for continuous improvement in the graduates' abilities through appropriate learning & teaching strategies. In order to assess student's performance with respect to abilities (at the end of course teaching/by the end of program) the course outcome attainment and program outcome attainment is measured/calculated. The program outcome attainment is governed by curricular, co-curricular and extra-curricular activities including the stakeholders' participation. The direct method and indirect method is adopted to calculate the PO attainment. **The direct method implies the attainment by course outcomes contributing to respective program outcomes. And indirect method is the satisfaction/feed-back survey of stakeholders.** In order to calculate the program outcome attainment, the course outcome attainment is calculated. Prior to that, the course-program outcome mapping is done. The set target level is the set benchmark to ensure continuous improvements in the learners/ graduates' performance.

5. Course Attainment Levels:

- a) CO attainment is defined/set at three levels;
- b) The CO attainment is based on end term examination assessment and internal assessment;

c) The Co attainment is defined at three levels in ascending order

i. e.g. For end term and internal examination;

Sr. No	Level	CO Attainments
1.	Level-1:	30% students scored more than class average
2.	Level-2:	40% students score more than class average
3.	Level-3	50% students score more than class average

. The target level is set (e.g. Level-2). It indicates that, **the current target is level-2; 40% of students score more than class average.** The CO attainment is measured and the results are obtained. Based on the results of attainment, the corrective measures/remedial action are taken.

e. CO Attainment= 80% (Attainment level in end term examination) + 20% (Attainment level in internal examination)

6. Program attainment Level:

a. PO attainment is defined at five levels in ascending order;

b. **The PO attainment is based on the average attainment level of corresponding courses (Direct Method) and feed-back survey (Indirect method);**

c. The PO attainment levels are defined/set as stated below;

Sr. No	Level	PO Attainments
1.	Level-1:	Poor: Greater than 0.5 and less than 1.0 (0.5>1
2.	Level-2:	Average: 1.0 to 1.5
3.	Level-3	Good: 3: 1.5 to 2.0
4.	Level-4	Very Good: 2.0 to 2.5
5.	Level-5	Excellent: 2.5 to 3.0

d. The PO attainment target level is set/defined (say, Level-4). It implies that, the department is aiming at minimum level-4 (very good) in the performance of abilities by the graduates. Based upon the results of attainment, the remedial measures are taken;

e. PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

7. The Results of CO Attainment: The Results of CO Attainment is provided in Annexure-B

FOR EXAMPLE COURSE CODE/TITLE: **Business Environment**

e.g. For end-term and internal examination;

- i. Level-1: 30% students scored more than class average
- ii. Level-2: 40% students score more than class average;
- iii. Level-3: 50% students score more than class average

Business Environment		
Average Marks in External examination:	27	
% Students score more than 27 is = 27	62.79	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is =36	81.82	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Business Regulatory Framework		
Average Marks in External examination:	25	
% Students score more than 25 is = 27	62.791	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is =20	45.455	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Modern Management Practices		
Average Marks in External examination:	23	
% Students score more than 23 is =29	67.44	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is =23	52.27	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Co-operative Development		
Average Marks in External examination:	29	
% Students score more than 29 is = 29	67.442	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is = 36	81.818	Level: 3
	=	80% (3) +20 (3)

	=	2.4+0.6
	=	3

Advanced Accountancy I		
Average Marks in External examination:	31	
% Students score more than 31 is =31	72.09	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is =18	40.91	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Advanced Accountancy II		
Average Marks in External examination:	29	
% Students score more than 29 is =29	67.442	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is =18	40.909	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Business Environment		
Average Marks in External examination:	27	
% Students score more than 27 is =27	62.79	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is =36	81.82	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Business Regulatory Framework		
Average Marks in External examination:	20	
% Students score more than 20 is = 22	51.163	Level: 3
Average Marks in Internal examination	10	
% Students score more than 10 is = 13	29.545	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Modern Management Practices		
Average Marks in External examination:	25	
% Students score more than 25 is =24	55.81	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is = 44	100	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Co-operative Development		
Average Marks in External examination:	22	
% Students score more than 22 is = 26	60.465	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is = 44	100	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Advanced Accountancy III		
Average Marks in External examination:	21	
% Students score more than 21 is = 28	65	Level: 3
Average Marks in Internal examination	9	
% Students score more than 9 is = 44	100	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Advanced Accountancy IV		
Average Marks in External examination:	22	
% Students score more than 22 is = 23	53.488	Level: 3
Average Marks in Internal examination	8	
% Students score more than 8 is = 44	100	Level: 3
	=	80% (3) +20 (3)
	=	2.4+0.6
	=	3

Hence, the attainment level is Level-3 and the set target level is Level-2 and therefore the CO is Fully attained.

Table No. 1.0: CO Attainment Level

Course Title	Course Attainment Value	Target Attainment Level	Fully Attained/ Not Attained	Remedial Measures
Business Environment	3	2	Fully Attained	
Business Regulatory Framework	3	2	Fully Attained	
Modern Management Practices	3	2	Fully Attained	
Co-operative Development	3	2	Fully Attained	
Advanced Accountancy I	3	2	Fully Attained	
Advanced Accountancy II	3	2	Fully Attained	
Business Environment	3	2	Fully Attained	
Business Regulatory Framework	3	2	Fully Attained	
Modern Management Practices	3	2	Fully Attained	
Co-operative Development	3	2	Fully Attained	
Advanced Accountancy III	3	2	Fully Attained	
Advanced Accountancy IV	3	2	Fully Attained	

8.The Results of PO Attainment:

The Results of PO attainment are provided in Annexure-B

FOR EXAMPLE: PO NO.: a (Note: Refer to point No. 11 above which describes the attainment level and set target attainment level).

PO Attainment= 80% (Average attainment level by direct method) + 20% (Average attainment level by indirect method).

(PSOs-A) = $80\% (3+3+3+3+3+3+3+3+3+3+3+3)/12 + 20\% (3+3+3+3+3+3+3+3+3+3+3+3)/12 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. . The Target Level is Level-5.
Hence the course level is attained

(PSOs-B) = $80\% (3+3+3+3+3+3)/06 + 20\% (3+3+3+3+3+3)/06 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-3.

(PSOs-C) = $80\% (3+3+3+3+3+3)/06 + 20\% (3+3+3+3+3+3)/06 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-3. Hence the course level is attained

(PSOs-D) = $80\% (3+3+3+3+3+3+3+3+3+3+3+3)/12 + 20\% (3+3+3+3+3+3+3+3+3+3+3+3)/12 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. . The Target Level is Level-3. Hence the course level is attained

(PSOs-E) = $80\% (3+3+3+3+3+3+3+3)/08 + 20\% (3+3+3+3+3+3+3+3)/08 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. . The Target Level is Level-3 Hence the course level is attained.

(PSOs-F) = $80\% (3+3+3+3+3+3)/06 + 20\% (3+3+3+3+3+3)/06 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-3. Hence the course level is attained

(PSOs-G) = $80\% (3+3+3+3+3+3)/06 + 20\% (3+3+3+3+3+3)/06 = 80\% (3) + 20\% (3) = 3$ i.e. Level-5. The Target Level is Level-3. Hence the course level is attained

Table No. 2.0 PSO Attainment Level

PO/PSO Number	PO/PSOs Attainment Value	Target Attainment		Fully Attained/ Not Attained	Remedial Measures
		Level	Value		
POs-A	3	5	3	Fully Attained	
POs-B	3	5	3	Fully Attained	
POs-C	3	5	3	Fully Attained	
POs-D	3	5	3	Fully Attained	
POs-E	3	5	3	Fully Attained	
POs-F	3	5	3	Fully Attained	
POs-G	3	5	3	Fully Attained	

9. Planned Actions for Course Attainment:

The courses for which the level attained is less than Level-2, the remedial measures will be taken in plan way that includes, tutorial, assignments, field work and remedial coaching.

10. Planned Actions for Program Outcome Attainment:

Not Applicable.

ANNEXURE-B RESULTS OF CO-PO ATTAINMENT

Sr. No	Course Title	PSO-A	PSO-B	PSO-C	PSO-D	PSO-E	PSO-F	PSO-G
1.	Business Environment	3		3	3	3		
2.	Business Regulatory Framework	3	3	3	3	3	3	3
3.	Modern Management Practices	3		3	3	3		3
4.	Co-operative Development	3			3	3		
5.	Advanced Accountancy I	3	3		3		3	
6.	Advanced Accountancy II	3	3		3		3	3
7.	Business Environment	3		3	3	3		
8.	Business Regulatory Framework	3	3	3	3	3	3	3
9.	Modern Management Practices	3		3	3	3		3
10.	Co-operative Development	3			3	3		
11.	Advanced Accountancy III	3	3		3		3	
12.	Advanced Accountancy IV	3	3		3		3	3
Average		3	3	3	3	3	3	3

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