

# OBE DESIGN- ZOOLOGY DEPARTMENT

SHIVAJI UNIVERSITY KOLHAPUR (M.S.)

## 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 the 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 method and design the tool for assessment. Hence, establishing the Course-PO matrix is essential step in the OBE. The course-program outcomes matrix indicates the co-relation between the courses and program outcomes. The CO-PO matrix is the map of list of courses contributing to the development of respective POs.

The template is provided in the below table.

Course Title	a	b	c	d	e
401	*	*	*		
402	*	*	*		
403	*	*	*		
404	*	*	*		
405	*	*	*		
406	*	*	*		
441	*	*	*	*	*
442	*	*	*	*	*
443	*	*	*	*	*
444	*	*	*	*	*
446	*	*	*	*	*
447	*	*	*	*	*
411	*	*	*		
412	*	*	*		
413	*	*	*		
414	*	*	*	*	*
415	*	*	*		
416	*	*	*		
451	*	*	*	*	*
452	*	*	*	*	*
453	*	*	*	*	*
454	*	*	*	*	*
456	*	*	*	*	*
457	*	*	*	*	*
501		*	*	*	
502		*	*	*	*
503		*	*	*	

504		*	*	*	
505		*	*	*	
506		*	*	*	
541		*	*	*	
542		*	*	*	
543		*	*	*	
544		*	*	*	
545		*	*	*	
546		*	*	*	
547		*	*	*	
511		*	*	*	*
512		*	*	*	*
513		*	*	*	*
514		*	*	*	*
515		*	*	*	*
516		*	*	*	*
551		*	*	*	*
552		*	*	*	*
553		*	*	*	*
554		*	*	*	*
555		*	*	*	*
557		*	*	*	*
PROJECT		*	*	*	*

## 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 students' 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 the 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;
  - ii. Level-1: 30% students scored more than class average
  - iii. Level-2: 40% students score more than class average;
  - iv. Level-3: 50% students score more than class average.
- d. The target level is set (e.g. Level-2). It indicates that, the current target is level-2; 40% 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;
  - i. Level-1: Greater than 0.5 and less than 1.0 ( $0.5 > 1$ )- Poor
  - ii. Level-2:  $1.0 > 1.5$ -Average
  - iii. Level-3:  $1.5 > 2.0$ -Good
  - iv. Level-4:  $2.0 > 2.5$ -Very Good

- v. Level-5: 2.5>3.0 -Excellent
- 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: ZOO-502**

- 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

Average Marks in External examination: 45.53 i.e. 46.00

% Students score more than 46 is 33/68 i.e. 48.53% i.e. Level-2

Average Marks in Internal examination= 10.70 i.e. 11.00

% Students score more than 11 is 35/68 i.e. 51.47 %, i.e. Level-3

A (CO) CHE-103= 80% (2) +20(3)

$$=1.6+0.6$$

$$= 2.2$$

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

**Table No. 1.0: CO Attainment Level**

<b>Course Title</b>	<b>CO Attainment Value</b>	<b>Target Attainment Level</b>	<b>Fully Attained/ Not Attained</b>	<b>Remedial Measures</b>
401	3	2	Fully Attained	
402	2.2	2	Fully Attained	
403	2.8	2	Fully Attained	
404	1	2	Fully Attained	
405	3	2	Fully Attained	
406	3	2	Fully Attained	
441	3	2	Fully Attained	
442	2	2	Fully Attained	
443	3	2	Fully Attained	
444	3	2	Fully Attained	
446	3	2	Fully Attained	
447	3	2	Fully Attained	
411	3	2	Fully Attained	
412	2.2	2	Fully Attained	
413	3	2	Fully Attained	
414	2	2	Fully Attained	
415	3	2	Fully Attained	
416	2	2	Fully Attained	
451	3	2	Fully Attained	
452	3	2	Fully Attained	
453	3	2	Fully Attained	
454	3	2	Fully Attained	
456	3	2	Fully Attained	
457	3	2	Fully Attained	
501	2.8	2	Fully Attained	
502	2.2	2	Fully Attained	
503	2.6	2	Fully Attained	
504	3	2	Fully Attained	
505	2.2	2	Fully Attained	
506	2	2	Fully Attained	
541	3	2	Fully Attained	
542	3	2	Fully Attained	
543	3	2	Fully Attained	
544	2	2	Fully Attained	
545	3	2	Fully Attained	
546	3	2	Fully Attained	
547	2	2	Fully Attained	
511	2.2	2	Fully Attained	
512	3	2	Fully Attained	
513	3	2	Fully Attained	
531	3	2	Fully Attained	

532	2.2	2	Fully Attained	
534	2	2	Fully Attained	
551	2	2	Fully Attained	
552	1	2	Fully Attained	
553	3	2	Fully Attained	
554	3	2	Fully Attained	
555	3	2	Fully Attained	
557	3	2	Fully Attained	
PROJECT	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 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).

A (PO) a = 80% ( 3+2.2+2.8+1+3+3+3+2+3+3+3+3+2.2+3+2+3+2+3+3+3+3+3 )/24 +  
 20% (2.72)  
 =80% (2.7) 2+ 20% (2.72)  
 = 2.72 i.e. Level-5. The Target Level is Level-4.  
 Hence, PO is attained

**Table No. 2.0 PO Attainment Level**

PO/PSO number	PO Attainment Value	Target Attainment level	Fully attained/ Not Attained	Remedial Measures
<b>a</b>	2.72	4	Fully attained	Not Applicable
<b>b</b>	2.66	4	Fully attained	
<b>c</b>	2.66	4	Fully attained	
<b>d</b>	2.69	4	Fully attained	
<b>e</b>	2.71	4	Fully attained	

**9. Planned Actions for Course Attainment:**

Not applicable.

**10.Planned Actions for Program Outcome Attainment:**

Not Applicable.

**ANNEXURE-B****RESULTS OF CO-PO ATTAINMENT**

PO ATTAINMENT: M.Sc. ZOOLOGY						
Course Code		A	b	c	d	e
401	3	3	3	3		
402	2.2	2.2	2.2	2.2		
403	2.8	2.8	2.8	2.8		
404	1	1	1	1		
405	3	3	3	3		
406	3	3	3	3		
441	3	3	3	3	3	3
442	2	2	2	2	2	2
443	3	3	3	3	3	3
444	3	3	3	3	3	3
446	3	3	3	3	3	3
447	3	3	3	3	3	3
411	3	3	3	3		
412	2.2	2.2	2.2	2.2		
413	3	3	3	3		
414	2	2	2	2	2	2
415	3	3	3	3		
416	2	2	2	2		
451	3	3	3	3	3	3
452	3	3	3	3	3	3
453	3	3	3	3	3	3
454	3	3	3	3	3	3
456	3	3	3	3	3	3
457	3	3	3	3	3	3
501	2.8		2.8	2.8	2.8	
502	2.2		2.2	2.2	2.2	2.2
503	2.6		2.6	2.6	2.6	
504	3		2	2	2	
505	2.2		2.2	2.2	2.2	



506	2		3	3	3	
541	3		3	3	3	
542	3		3	3	3	
543	3		3	3	3	
544	2		2	2	2	
545	3		3	3	3	
546	3		3	3	3	
547	2		2	2	2	
511	2.2		2.2	2.2	2.2	2.2
512	3		3	3	3	3
513	3		3	3	3	3
531	3		3	3	3	3
532	2.2		2.2	2.2	2.2	2.2
534	2		2	2	2	2
551	2		2	2	2	2
552	1		1	1	1	1
553	3		3	3	3	3
554	3		3	3	3	3
555	3		3	3	3	3
557	3		3	3	3	3
PROJECT	3		3	3	3	3
	2.66	2.72	2.66	2.66	2.69	2.71