SDM COLLEGE OF ENGINEERING & TECHNOLOGY, DHARWAD-580002
Karnataka State- INDIA
OUTCOME BASED EDUCATION
Workbook for measuring attainment of COs

Course Code/ Name		Sem:
Name of the course Teacher		

Total students registered=4. Total COs=5. Total Test=02. Total Questions in each test=02. All questions are compulsory.

Tests→	TEST-1				TEST-2			
Questions→	Q1-a	Q1-b	Q2-a	Q2-b	Q1-a	Q1-b	Q2-a	Q2-b
Course Outcome→	CO-1	CO-2	CO-2	CO-1	CO-2	CO-3	CO-4	CO-5
Max. Marks→	10	10	10	10	10	10	10	10
Student-S1	-	-	-	-	-	-	-	-
Student-S2	6	10	8	2	8	7	8	0
Student-S3	8	7	-	8	-	8	0	0
Student-S4	9	9	9	9	8	9	8	9

Performance Targets and Bench Mark: Bench Mark [set % of marks] = 70 %

Target Level	Description of the performance Level in-terms of % of students reaching set % of Marks
L3	80 % of the students getting >= 70 % of the marks
L2	70 % of the students getting >=70 % of the marks
L1	60 % of the students getting >=70 % of the marks
L0	Not Attained

Note: All these are to be set before the semester begins. They may be different for different courses.

Procedure for calculating attainment of Course Outcomes:

Step-1: **For each student & for each CO,** calculate the % of marks they got as shown below.

For each student→ $CO_{i\ ;\ i=1\ to\ 10}$ X= $= \dfrac{\textbf{Total Marks scored by this student}}{\textbf{Total Marks } \underline{\textbf{attempted}} \textbf{ by this student}}$ X 100

If X >= **Benchmark set,** then tick **mark (y̌) indicating that, this student has attained this CO_i.** Cross mark (X) indicates not attained.

Students	CO-1		CO-2		CO-3	CO-4	CO-5
	Space for computing value of X	Mark attained or not?	Space for computing value of X	Mark attained or not?	Mark attained or not?	Mark attained or not?	Mark attained or not?
S1	-	X	-	X	X	X	X
S2	$(6+2) \div 20 =$ 40%	X	$(10+8+8) \div 30 =$ 86.67%	y̌	y̌ 70%	y̌ 80%	X 0%
S3	$(8+8) \div 20 =$ 80%	y̌	$7 \div 10 \times 100$ $= 70\%$	y̌	y̌ 80%	X 0%	X 0%
S4	$(9+9) \div 20 =$ 90%	y̌	$(9+9+8) \div 30 =$ 86.67%	y̌	y̌ 90%	y̌ 80%	y̌ 90%

Step-2: @ the class level, calculate the % of students getting marks >= Benchmarks marks set as below.

<div align="center">

Total number of students attained this CO

Attainment → $CO_{i;\ i=1\ to\ 10}$ Y= --   X 100

Total number of students registered this course

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Step-3: Represent the results of step-2 i.e. Y for each COs using target levels set above and also in %.

Class Level Attainment Report		~~CO~~ᵢ	CO-1	CO-2	CO-3	CO-4	CO-5
		~~Sample~~	Value of Y	Value of Y	Value of Y	Value of Y	Value of Y
Attainment	%	~~88%~~	50%	75%	75%	50%	25%
	Level	~~L3 or 3~~	L0	L2	L2	L0	L0
Action Plan to improve the performance?			?	?	?	?	?

Note: Action plan in-terms of curriculum intervention, pedagogical initiatives and support system improvements are to be thought for improving the learning results of the students.

For any Details contact Dr. U.P.Kulkarni @   upkulkarni@yahoo.com or alternatively @ 9448915301