



Rubrics for Attainment of Course Outcomes (COs), Program Outcomes (POs) and Program Specific Outcomes (PSOs)

Introduction

- The syllabus and scheme of all the courses for respective semesters are decided by the State Board of Technical Education (SBTE), Bihar.
- The syllabus covers the entire aspects of the subject and the classes are so designed such that the course outcomes are achieved to the desired level.
- The course outcomes have been developed based on Bloom's taxonomy and consequently the lectures, assignments, practical, tutorials, and projects are aligned to achieve the set targets.
- The entire lesson is divided into various delivery modules.

A. Rubrics for Course Outcome:-

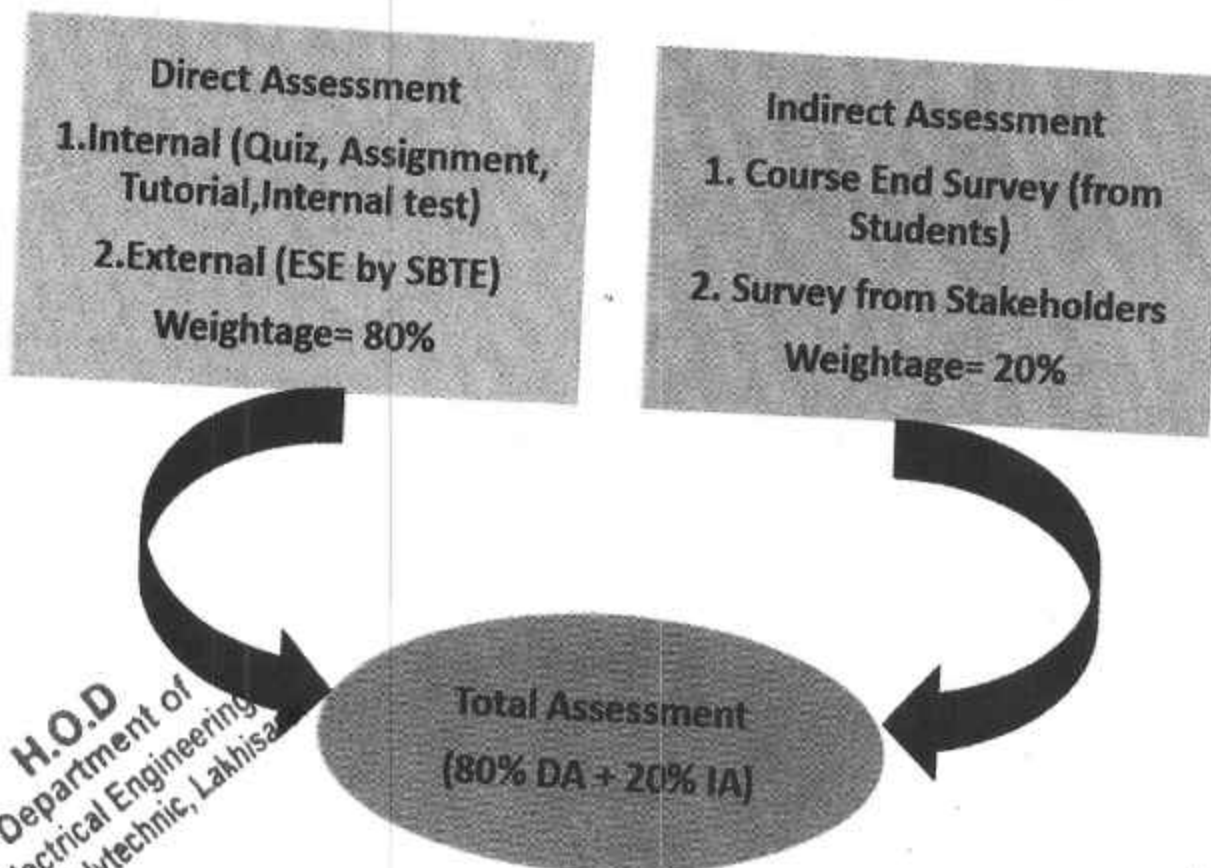


Fig. 1. Rubrics for attaining course outcome

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Procedure for Attainment-

1) **For Direct Assessment-** Weightage is assigned **80%** of total Assessment the direct assessment is done by taking both internal and end semester examinations marks. A weightage of **30% and 70%** is assigned respectively to internal and external assessment. Further a grading of **1, 2 and 3** is assigned based upon the average of the marks achieved by the students. The same has been described below:

(A) **Internal-** Weightage is assigned **30%** of the Direct Assessment

- If the average marks of all Students $\geq 70\%$ then marks assigned is **3**
- If the average marks of all Students lie **50 to 70%** then marks assign is **2**
- If the average marks of all Students $< 50\%$ then marks assigned is **1**

(B) **External-** Weightage is assigned **70%** of Direct Assessment

$$\text{Attainment} = \frac{\text{Average of obtained marks in External Exam}}{\text{Total Marks Assigned}} \times 3$$

Note: If a subject contains theory and practical both then equal weightage is assigned to Compute the CO of that subject. This has been done for both external and internal.

2. **For Indirect Assessment-** Weightage is assigned **20%** of total Assessment

Average of all survey is taken down according to the subject's Cos

Note: for academic year 2020-21 onwards indirect assessment is considered for evaluation of course outcomes.

Note: If a subject contains theory and practical both then equal weightage is assigned to Compute the CO of that subject. This has been done for both external and internal.

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The Following description is given below for recording CO – attainment

Internal Assessment CO-attainment

Attainment Level	Marks
1	less than 50%
2	greater than 50% and less than 70%
3	greater than 70%

CO attainment was calculated by analysing internal test and assignment marks for each course. Student

Question No.			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Maximum marks			1	1	1	1	1	1	4	4	6
Taxonomy			U	U	R	R	R	R	AP	AP	U
CO Mapping			CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3
Sl. No.	Roll No.	Name									
1	511262522001	RAJNISH KUMAR	1	1	1	1	1	1	3	2	3
2	511262522003	RITURAJ SINGH	1	1	1	1	1	1	3	3	3
3	511262522004	RAUSHAN KUMAR	1	1	1	1	1	1	4	3	5
4	511262522005	SONU KUMAR	1	1	1	1	1	1	3	2	5
5	511262522008	ALOK KUMAR	1	1	1	1	1	1	3	4	0
6	511262522009	VIKKI KUMAR	1	1	1	1	1	1	3	3	4
7	511262522010	SURAJ KUMAR	1	1	1	1	1	1	2	3	4
8	511262522012	RAKHI KUMARI	1	1	1	1	1	1	3	3	4
9	511262522014	ANKIT KUMAR	1	1	1	1	1	1	3	3	5
10	511262522015	AYUSH KUMAR	1	1	1	1	1	1	3	3	5
11	511262522016	SUNNY KUMAR	1	1	1	1	1	1	3	3	4
12	511262522017	KUNDAN KUMAR	1	1	1	1	1	1	3	3	4
13	511262522018	ROSHAN KUMAR	1	1	1	1	1	1	3	3	4
14	511262522020	SHIVANGI KUMARI	1	1	1	1	1	1	3	3	4
15	511262522021	MD EZAJ	1	1	1	1	1	1	3	3	4
16	511262522024	ANURADHA KUMARI	1	1	1	1	1	1	0	3	5
17	511262522028	CHANDA KUMARI	1	1	1	1	1	1	3	3	5
18	511262522601	SUSHANT KUMAR	1	1	1	1	1	1	3	3	5
19	511262522604	ANAND KUMAR	1	1	1	1	1	1	3	3	6
20			1	1	1	1	1	1	3	0	5

performance was mapped to predefined attainment levels, and CO-wise averages were computed to obtain overall CO attainment. Sample data demonstrates the process.

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		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
	Maximum Marks	1	1	1	1	1	1	4	4	6
	Taxonomy	U	U	R	R	R	R	AP	AP	U
		CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3
		Attainment level	Attainment level	Attainment level	Attainment level	Attainment level	Attainment level	Attainment level	Attainment level	Attainment level
511262522001	RAJNISH KUMAR	3	3	3	3	3	3	3	2	2
511262522003	RITURAJ SINGH	3	3	3	3	3	3	3	3	2
511262522004	RAUSHAN KUMAR	3	3	3	3	3	3	3	3	3
511262522005	SONU KUMAR	3	3	3	3	3	3	3	2	3
511262522008	ALOK KUMAR	3	3	3	3	3	3	3	3	1
511262522009	VIKKI KUMAR	3	3	3	3	3	3	3	3	2
511262522010	SURAJ KUMAR	3	3	3	3	3	3	2	3	2
511262522012	RAKHI KUMARI	3	3	3	3	3	3	3	3	2
511262522014	ANKIT KUMAR	3	3	3	3	3	3	3	3	3
511262522015	AYUSH KUMAR	3	3	3	3	3	3	3	3	3
511262522016	SUNNY KUMAR	3	3	3	3	3	3	3	3	2
511262522017	KUNDAN KUMAR	3	3	3	3	3	3	3	3	2
511262522018	ROSHAN KUMAR	3	3	3	3	3	3	3	3	2
511262522020	SHIVANGI KUMARI	3	3	3	3	3	3	3	3	2
511262522021	MD EZAJ	3	3	3	3	3	3	3	3	2
511262522024	ANURADHA KUMARI	3	3	3	3	3	3	3	3	3
511262522028	CHANDA KUMARI	3	3	3	3	3	3	3	3	3
511262522601	SUSHANT KUMAR	3	3	3	3	3	3	3	3	3
511262522604	ANAND KUMAR	3	3	3	3	3	3	3	3	3
	Attainment	3.00	3.00	3.00	3.00	3.00	3.00	2.84	2.79	2.42

Cos	Average Attainment CO wise
CO1	$\frac{3 + 3 + 2.84}{3} = 2.946$
CO2	$\frac{3 + 3 + 2.79}{3} = 2.930$
CO3	$\frac{3 + 3 + 2.42}{3} = 2.806$

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External/Board exam CO-attainment

The record of each student's marks for each question is not published by the board. In the calculation of CO-attainment, the average marks obtained by all students were calculated and divided into three scales using the formula as given below.

$$\text{Attainment level} = \frac{\text{average marks obtained by the students}}{\text{Maximum Marks}} \times 3$$

Equal attainment levels were assumed for all COs obtained from the above formula for the particular course.

The total attainment was calculated from internal and external assessments through a weighted average, with 70% from external assessment and 30% from internal assessment.

B. Rubrics for Attaining Program Outcome and Program Specific Outcome:-

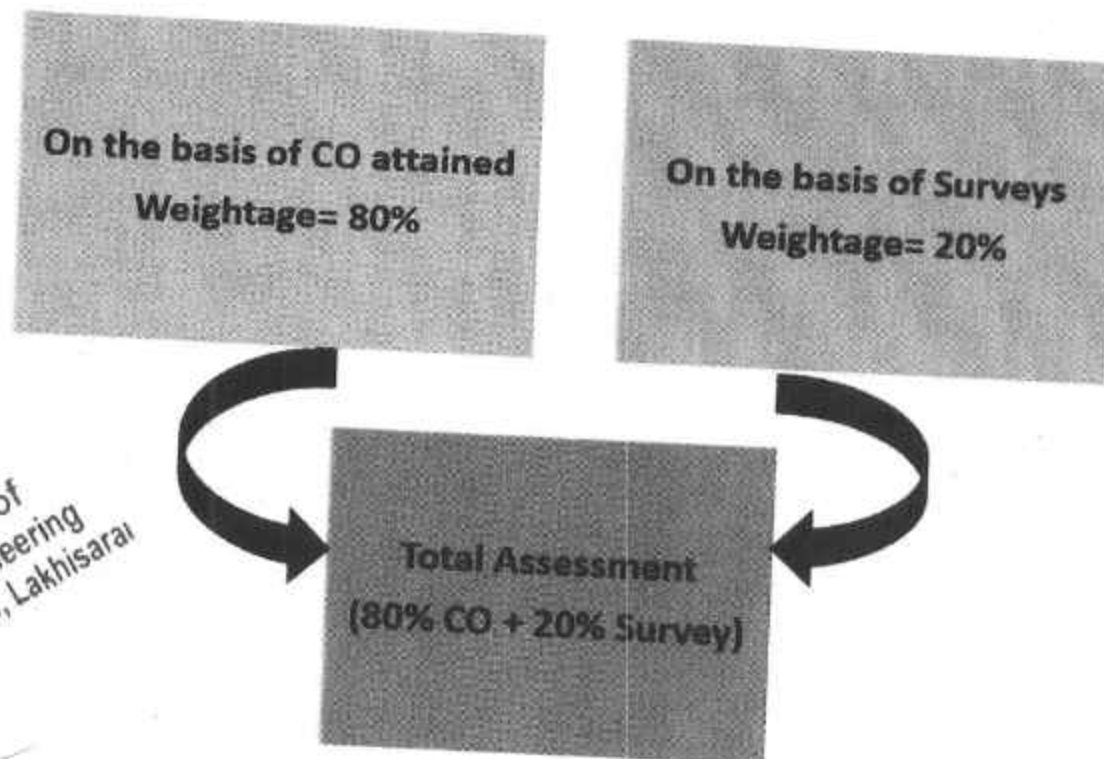


Fig. 2. Rubrics for attaining program outcome and program specific outcome

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Procedure:

The Course outcome attained is multiplied with each PO& PSO (taken as average on the basis of CO-PO mapping for each particular subject) on weightage average method on scale of 3. Weightage is assigned 80% of total assessment.

The average of POs and PSOs are calculated from various surveys conducted by the department. Weightage is assigned 20%.

Total attainment of POs and PSOs=80% of COs+20%of Surveys.

Note: for academic year 2020-21 onwards indirect assessment is considered for evaluation of course outcomes.

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Note: Number of Outcomes for a Course is expected to be 3 to 5.

Course Name :

C1 01

Course Year :

2022-23

Course Name	Statements
C1 01.1	Acquire necessary background in trigonometry for geometrical sketch (calculations and mathematical studies)
C1 01.2	Analyze the effect of changing conditions on a system
C1 01.3	Use coordinate geometry to establish the connection between algebra and geometry through graphs of lines and curves
C1 01.4	Apply complex numbers to understand physical and engineering phenomena
C1 01.5	Apply determinants and matrices to analyze systems of equations and appreciate their geometric significance

Course Name :

C1 03

Course Year :

2022-23

Course Name	Statements
C1 02.1	Understand the classification and general properties of engineering materials such as metal, alloys, and composite materials using knowledge of chemical bonding *
C1 02.2	Understand and assess the suitability of water source for domestic and industrial application, efficiency and minimize water pollution *
C1 02.3	Qualitatively analyze the engineering materials and understand their properties and applications
C1 02.4	Choose fuel and lubricants suitable for economical industrial processing to obtain eco-friendly, innovative
C1 02.5	Ascertain construction mechanism efficiency of electrochemical cells, solar cell fuel cells

Course Name :

C2 05

Course Year :

2023-24

Course Name	Statements
C2 03.1	Check the working of electrical measuring instruments
C2 03.2	Use different types of measuring instruments for measuring voltage and current
C2 03.3	Use different types of measuring instruments for measuring electric power
C2 03.4	Use different types of measuring instruments for measuring electric energy
C2 03.5	Use different types of electrical instruments for measuring various ranges of electrical parameters

Course Name :

C2 01

Course Year :

2023-24

Course Name	Statements
C2 01.1	Select a suitable power electronics device for a given application
C2 01.2	Choose a suitable turn on & turnoff circuit of a thyristor for a given application

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CS 01.3	Use different types of power electronic converters for a given application
CS 01.4	Select a suitable topology for a given application
CS 01.5	Compare an appropriate converter for a given application

Course Name :

CS 01

Course Year :

2024-25

Course Name	Statements
CS 01.1	Interpret the salient features of various types of microcontrollers
CS 01.2	Interpret the salient features of architecture microcontroller IC 8051
CS 01.3	Maintain the program features of microcontroller based applications
CS 01.4	Develop assembly language programs for 8051 microcontroller
CS 01.5	Develop programs to interface 8051 microcontroller with LED and switch

Course Name :

CS 04

Course Year :

2024-25

Course Name	Statements
CS 04.1	Analyze basic circuit elements and standard signal waveforms including sinusoidal signals.
CS 04.2	Apply Kirchhoff's laws, source transformation, mesh and nodal analysis techniques to solve electrical networks.
CS 04.3	Analyze periodic signals using Fourier series and Fourier transform techniques.
CS 04.4	Apply Laplace transform techniques to analyze electrical networks and solve linear differential equations.
CS 04.5	Analyze resonance phenomenon in series and parallel RLC circuits.
CS 04.6	Evaluate two-port networks, passive networks synthesis and first and second order systems.

3.1.2 CO-PO matrices of courses selected in 3.1.1 (Six matrices to be mentioned; one per semester from 1st to 6th semester) (5)

1. Course name : C201

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C201.1	3	2	1	1	1	1	1
C201.2	2	3	1	1	1	1	1
C201.3	3	3	1	1	1	1	1
C201.4	3	2	1	1	1	1	1
C201.5	3	3	1	1	1	1	1
Average	2.80	2.60	1.00	0.00	0.00	0.00	0.00

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2. course name : C203

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C102.1	3	2	1	-	-	-	-
C102.2	3	3	2	-	2	-	1
C102.3	3	3	2	2	2	-	1
C102.4	3	2	1	2	1	1	1
C102.5	3	1	1	1	1	1	1
Average	3.00	2.00	1.00	1.50	1.33	1.00	1.20

3. course name : C303

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C203.1	3	2	1	3	-	-	2
C203.2	3	2	1	3	-	-	2
C203.3	3	2	1	3	-	-	2
C203.4	3	2	1	1	-	-	2
C203.5	3	2	1	3	-	-	2
Average	3.00	2.00	1.20	3.00	0.00	0.00	2.00

4. course name : C301

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C201.1	2	3	-	-	1	-	-
C201.2	2	3	-	-	1	-	-
C201.3	3	3	-	-	1	-	-
C201.4	2	3	-	-	-	-	-
C201.5	2	3	-	-	1	-	-
Average	2.20	3.00	0.00	0.00	0.80	0.00	0.00

5. course name : C401

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C301.1	3	3	1	2	-	-	2
C301.2	3	2	1	2	-	-	2
C301.3	3	2	1	2	-	-	2
C301.4	3	2	2	2	-	-	2
C301.5	3	3	3	2	-	-	2
Average	3	3	3	3	-	-	3

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Average	3.00	2.60	2.00	2.20	0.00	0.00	2.00
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6. Course Name : CAD4

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CAD4.1	3	2	1	2			
CAD4.2	3	3	2	3			2
CAD4.3	3	3	2	3			2
CAD4.4	3	3	2	2			2
CAD4.5	3	3	2	2			2
CAD4.6	3	3	2	2			2
Average	3.00	2.83	2.00	2.00	0.00	0.00	2.17

1. Course Name : C201

Course	PSO1	PSO2
C201.1		
C201.2		
C201.3		
C201.4		
C201.5		
Average	0.00	0.00

2. Course Name : C203

Course	PSO1	PSO2
C102.1		
C102.2		
C102.3		
C102.4		
C102.5		
Average	0.00	0.00

3. Course Name : C303

Course	PSO1	PSO2
C203.1		
C203.2		

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CS01.3	3	✓	1	✓
CS01.4	3	✓	1	✓
CS01.5	3	✓	1	✓
Average	3.00		1.00	

4. Course Name : CS01

Course	PSO1	PSO2
CS01.1	✓	✓
CS01.2	✓	✓
CS01.3	✓	✓
CS01.4	✓	✓
CS01.5	✓	✓
Average	0.00	0.00

5. Course Name : CS01

Course	PSO1	PSO2
CS01.1	2	✓
CS01.2	3	✓
CS01.3	3	✓
CS01.4	3	✓
CS01.5	3	✓
Average	2.80	1.00

6. Course Name : CS04

Course	PSO1	PSO2
CS04.1	3	✓
CS04.2	3	✓
CS04.3	2	✓
CS04.4	2	✓
CS04.5	3	✓
CS04.6	3	✓
Average	2.66	1.17

3.1.3 - A Program level Course-PO matrix of all courses INCLUDING first year courses (10)

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Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C001	2.80	2.00	1.25	0.50	0.50	0.00	2.75
C002	3.00	2.50	1.67	2.00	1.54	1.00	0.50
C003	3.00	2.00	1.00	1.50	1.33	1.00	1.50
C004	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C005	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C006	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C007	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C008	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C009	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C010	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C011	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C012	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C013	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C014	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C015	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C016	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C017	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C018	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C019	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C020	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C021	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C022	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C023	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C024	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C025	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C026	1.00	1.00	1.00	1.00	1.00	1.00	1.00
C027	1.00	1.00	1.00	1.00	1.00	1.00	1.00



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C206	2.80	2.20	2.40	2.60	2.00	2.00	1.20
C209	3.00	2.00	1.20	3.00	0.00	0.00	2.00
C210	3.00	2.40	1.20	2.00	0.00	0.00	2.00
C211	2.00	2.60	2.00	2.00	2.00	0.00	1.70
C212	2.60	2.00	2.50	2.00	2.00	0.00	1.70
C213	2.20	3.00	0.00	0.00	1.00	0.00	0.00
C214	2.70	2.20	2.00	3.00	2.00	2.00	2.50
C215	1.00	1.30	1.00	3.00	2.00	2.00	2.50
C216	3.00	3.00	1.00	0.00	0.00	0.00	1.20
C217	3.00	2.00	0.00	1.00	0.00	0.00	0.00
C218	2.60	0.00	0.00	3.00	0.00	0.00	1.00
C219	3.00	2.50	1.70	1.00	1.20	1.70	1.00
C220	2.50	0.00	0.00	3.00	0.00	2.00	2.00
C221	2.60	0.00	0.00	3.00	0.00	2.00	2.00
C222	3.00	3.00	2.00	1.00	1.00	2.00	1.00
C223	3.00	2.50	2.20	2.50	1.20	2.70	1.00
C224	2.00	1.20	2.70	2.50	2.50	0.00	1.20
C225	2.40	2.00	2.00	2.00	2.00	3.00	2.40
C226	3.00	2.60	2.00	0.00	0.00	0.00	2.00
C227	3.00	2.10	2.00	2.20	2.50	2.00	1.00
C228	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C229	3.00	2.10	2.00	2.20	2.50	2.00	2.00
C230	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C231	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C232	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C233	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C234	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C235	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C236	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C237	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C238	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C239	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C240	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C241	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C242	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C243	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C244	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C245	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C246	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C247	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C248	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C249	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C250	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C251	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C252	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C253	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C254	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C255	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C256	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C257	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C258	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C259	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C260	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C261	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C262	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C263	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C264	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C265	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C266	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C267	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C268	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C269	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C270	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C271	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C272	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C273	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C274	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C275	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C276	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C277	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C278	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C279	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C280	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C281	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C282	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C283	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C284	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C285	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C286	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C287	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C288	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C289	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C290	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C291	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C292	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C293	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C294	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C295	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C296	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C297	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C298	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C299	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C300	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C301	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C302	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C303	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C304	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C305	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C306	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C307	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C308	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C309	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C310	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C311	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C312	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C313	3.00	2.60	2.00	2.20	2.50	2.00	2.00
C314	3.00	2.60	2.00	2.20	2.50	2.00	2.00

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C116	3.00	2.03	2.00	2.00	0.00	0.00	2.16
C118	2.25	2.88	2.40	2.00	1.00	2.00	1.00
C117	2.66	1.60	1.66	2.40	1.80	1.00	2.00
C118	2.66	2.00	2.00	2.00	2.00	2.40	2.40
C119	3.00	2.00	2.00	1.80	2.40	1.00	2.00
C120	2.00	2.25	2.40	1.90	2.40	2.00	2.00

3.1.3 - B Program level Course-PSO matrix of all courses INCLUDING first year courses

Course	PSO1	PSO2
C101	0	0
C102	2.83	2.02
C103	0	0
C104	2.8	2.8
C105	2.13	2.13
C106	2	1.67
C107	0	0
C108	1	1
C109	2.67	2.67
C110	0	0
C111	0	0
C112	1.4	1.8
C113	3	2
C114	2.42	2.41
C115	0	0
C116	2.04	2.04
C117	2.4	1.8
C118	1.5	2
C119	2.78	2.79
C120	2.75	2.70
C121	0	0
C122	0	0



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C123	0	0
C201	0.4	2.4
C202	3	1
C203	3	1
C204	3	1
C206	2.33	1.33
C208	3	1
C207	3	1
C210	0	0
C209	3	1
C210	3	1
C211	0	0
C212	0	0
C213	0	0
C214	1	3
C215	4.33	2.5
C216	0	0
C217	0	0
C218	0	0
C219	3	3
C220	0	0
C221	0	0
C222	0	3
C223	3	3
C224	2.4	1.6
C225	2	1.75
C301	2.8	1
C302	2.75	2.4
C303	2.83	1.33
C304	2	2
C305	1.5	2
C306	2.8	1



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C007	2.75	2.4
C09	2	2
C010	3	3
C011	0	0
C012	2	2
C013	0	0
C014	2.85	1.5
C015	2.65	1.18
C016	2.66	1.16
C017	0	0
C018	0	0
C019	2.4	2.8
C020	0	0

3.1 Achievement of Course Outcomes (40)

3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

- The syllabus and scheme of all the courses for respective semesters are decided by the State Board of Technical Education (SBTE), Bihar.
- The syllabus covers the entire aspects of the subject and the classes are so designed such that the course outcomes are achieved to the desired level.
- The course outcomes have been developed based on Bloom's taxonomy and consequently the lectures, assignments, tutorials, practical, and projects are aligned to achieve
- The entire lesson is divided into various delivery modules.

Rubrics for Course Outcome

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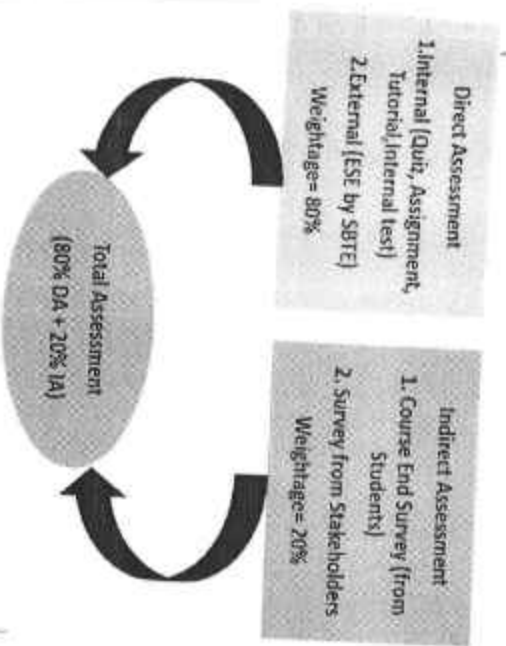


Fig. 3.1 Rubric for course outcomes (CO)

Procedure for Attainment-

- For Direct Assessment-Weightage is assigned 80% of total Assessment the direct assessment is done by taking both internal and end semester examinations marks. A weighting assessment. Further a grading of 1, 2 and 3 is assigned based upon the average of the marks achieved by the students. The same has been described below:

A. Internal- Weightage is assigned 30% of the Direct Assessment

If the average marks of all Students $\geq 70\%$ then marks assigned is 3

If the average marks of all Students lie 65 to 75% then marks assign is 2

If the average marks of all Students $< 65\%$ then marks assigned is 1

External- Weightage is assigned 70% of Direct Assessment

$$\text{Attainment} = \frac{\text{Average of obtained marks in External Exam}}{\text{Total marks assigned}} \times 3$$

Note: If a subject contains theory and practical both then equal weightage is assigned to Compute the CO of that subject. This has been done for both external and internal.

1. For Indirect Assessment- Weightage is assigned 20% of total Assessment

Average of all survey is taken down according to the subject's Cos

Note: For academic year 2020-21 onwards indirect assessment is considered for evaluation of course outcomes.

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Note: If a subject contains theory and practical both then equal weightage is assigned to Compute the CO of that subject.
This has been done for both external and internal.

3.2.2 Record the attainment of Course Outcome of all courses with respect to set attainment levels (30)

The following description is given below for recording CO - attainment
Internal Assessment CO-attainment

Attainment Level	Marks
1	less than 50%
2	greater than 50% and less than 70%
3	greater than 70%

The internal test results were analyzed for every student in every course, and based on the above table, attainment was defined according to the scores obtained by the students. Course, and the averages were calculated for the overall attainment of Course Outcome (CO) wise. Sample data is provided for reference to calculate the CO attainment.

Question No.	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Total Marks	Q1	Q2	Q3	Q4
Max. Marks	1	1	1	1	1	1	1	4	4	6	1	1	1	1
Taxonomy	Understanding (U)	Understanding (U)	Remembering (R)	Remembering (R)	Remembering (R)	Remembering (R)	Applying (A)	Applying (A)	Applying (A)	Understanding (U)	Understanding (U)	Applying (A)	Applying (A)	Applying (A)
CO mapping	CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO2	CO3	CO1	CO1
Attainment %														

Sl. No.	Roll No.	Name	Attainment Level	Attainment Level	Attainment Level	Attainment Level	Attainment Level	Attainment Level	Attainment Level	Attainment Level	Attainment Level	Attainment Level	Attainment Level	Attainment Level
1311262022001	1311262022001	GULSHAN KUMAR	1	1	1	1	1	1	1	1	1	1	1	1
2311262022003	2311262022003	VIRENDRA KUMAR	1	1	1	1	1	1	1	1	1	1	1	1
3311262022004	3311262022004	ANSHU KUMAR	1	1	1	1	1	1	1	1	1	1	1	1
4311262022008	4311262022008	MANISH KUMAR	1	1	1	1	1	1	1	1	1	1	1	1
5311262022009	5311262022009	KHUSHI KUMARI	1	1	1	1	1	1	1	1	1	1	1	1
6311262022010	6311262022010	SHYAM KUMAR	1	1	1	1	1	1	1	1	1	1	1	1
7311262022014	7311262022014	AVINASH KUMAR	1	1	1	1	1	1	1	1	1	1	1	1
8311262022019	8311262022019	RAUSHAN RAJ	1	1	1	1	1	1	1	1	1	1	1	1

Attainment Level Attainment Level Attainment Level Attainment Level

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9311262022020	PRASHANT KUMAR	1	1	1	1	1	1	1	0	4	3	4	163	3	3	3
1031126202202	SHIVAM KUMAR	1	1	1	1	1	1	1	0	3	4	4	163	3	3	3
1131126202202	SOURABH KUMAR	1	1	1	1	1	1	1	0	3	4	4	163	3	3	3
1231126202202	UTTAM KUMAR	1	1	1	1	1	1	1	1	4	4	4	183	3	3	3
13311262022026	PANKAJ KUMAR	1	1	1	1	1	1	1	0	3	2	3	133	3	3	3
14311262022030	ANNE KUMARI	1	1	1	1	1	1	1	0	4	3	3	163	3	3	3
15311262022301	CHANDAN SINGH	1	1	1	1	1	1	1	0	4	3	3	153	3	3	3
16311262022401	SUMIT KUMAR	1	1	1	1	1	1	1	0	3	4	4	163	3	3	3
17311262022402	KUNDAN KUMAR	1	1	1	1	1	1	1	0	3	3	3	143	3	3	3
18311262022404	SANDEEP KUMAR	1	1	1	1	1	1	1	0	3	3	2	133	3	3	3
19311262022405	SINPI KUMARI	1	1	1	1	1	1	1	0	2	4	2	133	3	3	3
20311262022601	SINHA SHIVANI KUMARI	1	1	1	1	1	1	1	0	3	2	3	133	3	3	3
21311262022602	WANDANA KUMARI	1	1	1	1	1	1	1	0	2	3	3	133	3	3	3
22311262022603	PRITAM KUMAR	1	1	1	1	1	1	1	0	3	3	2	133	3	3	3

Course No.	Course Name	CO's No.	Average CO Attainment	%CO Attainment
C101	Mathematics-I	C101.1	2.06	68.76
		C101.2	2.06	68.73
		C101.3	2.04	68.06
		C101.4	2.08	69.18
		C101.5	2.04	67.86
C102	Applied Physics-I	C102.1	2.22	73.97
		C102.2	2.40	80.09
		C102.3	2.38	79.30
		C102.4	2.42	80.52
		C102.5	2.38	79.38
		C103.1	2.03	67.54
		C103.2	2.00	66.58
		C103.3	1.99	66.19
		C103.4	2.03	67.82
		C103.5	1.99	66.48
C103	Applied Chemistry			


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C104	Comm. Skills in Eng.	C104.1	0.00	0.00	0.00
		C104.2	0.00	0.00	0.00
		C104.3	0.00	0.00	0.00
		C104.4	0.00	0.00	0.00
		C104.5	0.00	0.00	0.00
C105	Engg. Graphics	C105.1	2.17	72.33	0.00
		C105.2	2.12	70.67	0.00
		C105.3	2.1	70.00	0.00
		C105.4	2.13	71.00	0.00
		C105.5		92.86	93.65
C106	Applied Physics Lab-I	C106.1	2.79	92.86	90.48
		C106.2	2.81	93.65	98.41
		C106.3	2.71	95.50	87.80
		C106.4	2.95	88.25	87.65
		C106.5	2.87	87.62	87.92
C107	Applied Chemistry Lab	C107.1		0.00	0.00
		C107.2	2.63	0.00	0.00
		C107.3	2.65	0.00	0.00
		C107.4	2.63	0.00	0.00
		C107.5	2.63	0.00	0.00
C108	Comm. Skills in Eng. Lab	C108.1	2.64	0.00	0.00
		C108.2		0.00	0.00
		C108.3		0.00	0.00
		C108.4		0.00	0.00
C109	Engg. Workshop Practice	C109.1	2.89	96.41	96.41
		C109.2	2.89	96.41	96.41
		C109.3	2.89	96.41	96.41
		C109.4	2.89	96.41	96.41
		C109.5	2.89	96.41	96.41
C110	Sports and Yoga	C110.1	2.89	96.41	96.41
		C110.2	2.89	96.41	96.41
		C110.3	2.89	96.41	96.41
		C110.4	2.89	96.41	96.41
		C110.5	2.89	96.41	96.41
C111	C/KY/P/IT Essec. / Python/ Other	C111.1	2.86	95.29	95.29
		C111.2	2.86	95.29	95.29
		C111.3	2.86	95.29	95.29
		C111.4	2.86	95.29	95.29
C201	Mathematics-II	C201.1	2.08	69.50	69.50
		C201.2	2.07	68.91	68.91
		C201.3	2.05	68.35	69.03
		C201.4	2.07	67.85	67.85
C202	Applied Physics-II	C202.1	2.20	73.29	73.29
		C202.2	2.40	80.14	80.14
		C202.3	2.37	79.01	79.01
		C202.4	2.40	80.05	80.05
		C202.5	2.37	78.91	78.91
C203	Introduction to IT Systems 2	C203.1	1.96	65.31	65.31
		C203.2	2.22	74.12	74.12
		C203.3	2.21	73.60	73.60

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C204	Fund. of Ele. & Electr. Engg	C203.4	2.26	75.33
		C203.5	2.22	73.92
		C204.1	1.99	66.20
		C204.2	1.91	63.81
		C204.3	1.94	64.60
C205	Engg. Mechanics	C204.4	1.94	64.71
		C204.5	1.95	65.13
		C205.1	2.16	71.99
		C205.2	2.04	67.90
		C205.3	2.04	67.89
C206	Applied Physics Lab-II	C205.4	1.99	66.18
		C205.5	1.99	66.17
		C206.1	2.70	89.96
		C206.2	2.70	89.83
		C206.3	2.60	86.50
C207	Introduction to IT Systems Lab	C206.4	2.68	89.34
		C206.5	2.70	89.83
		C207.1	0.00	0.00
		C207.2	2.77	92.44
		C207.3	2.82	94.05
C208	Fund. of Ele. & Electr. Engg Lab	C207.4	2.58	86.08
		C207.5	2.67	89.05
		C208.1	2.83	94.38
		C208.2	2.83	94.38
		C208.3	2.82	94.15
C209	Engg. Mechanics Lab	C208.4	2.83	94.38
		C208.5	2.82	94.15
		C209.1	2.80	93.29
		C209.2	2.80	93.29
		C209.3	2.79	93.05
C210	MOOCS / SWAYAM / ETC / Other	C209.4	2.80	93.29
		C209.5	2.79	93.05
		C210.1	2.64	88.06
		C210.2	2.64	88.06
		C210.3	2.64	88.06
C211	KVP/IT Essential/Python Others	C210.4	2.64	88.06
		C210.5	2.64	88.06
		C211.1	2.66	88.06
		C211.2	2.66	88.57
		C211.3	2.66	88.57
C212	Environmental Science	C211.4	2.66	88.57
		C211.5	2.66	88.57
		C212.1	1.54	51.49
		C212.2	1.54	51.49
		C212.3	1.54	51.49
C301	Introduction to Electric Power Generation Systems	C212.4	1.54	51.49
		C212.5	1.54	51.49
		C301.1	2.08	69.31
		C301.2	2.07	69.09

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C302	Electrical Circuits	C301.3	1.98	66.16
		C301.4	2.06	68.66
		C301.5	2.02	67.20
		C302.1	2.17	72.33
		C302.2	2.15	71.67
C303	Electrical and Electronic Measurements	C302.3	2.08	69.33
		C302.4	2.14	71.33
		C302.5	2.11	70.33
		C303.1	2.1	70.00
		C303.2	2.09	69.67
C304	Electric Motors and Transformers	C303.3	1.98	66.00
		C303.4	2.09	69.67
		C303.5	1.98	66.00
		C304.1	2.16	72.00
		C304.2	2.15	71.67
C305	Fundamentals of Basic electronics & Digital Electronics	C304.3	2.08	69.33
		C304.4	2.15	71.67
		C304.5	2.11	70.33
		C305.1	2.03	67.67
		C305.2	2.02	67.33
C306	Introduction to electric power generation laboratory	C305.3	1.95	65.00
		C305.4	2.01	67.00
		C305.5	1.99	66.33
		C306.1	2.7	90.00
		C306.2	2.7	90.00
C307	Electrical Circuits Laboratory	C306.3	2.69	89.67
		C306.4	2.7	90.00
		C306.5	2.69	89.67
		C307.1	2.86	95.33
		C307.2	2.86	95.33
C308	Web Technology Lab	C307.3	2.85	95.00
		C307.4	2.86	95.33
		C307.5	2.85	95.00
		C308.1	2.76	92.00
		C308.2	2.76	92.00
C309	Electrical and Electronic Measurements Laboratory	C308.3	2.75	91.67
		C308.4	2.76	92.00
		C308.5	2.75	91.67
		C309.1	2.76	92.00
		C309.2	2.76	92.00
C310	Electric Motors and Transformers Laboratory	C309.3	2.75	91.67
		C309.4	2.76	92.00
		C309.5	2.75	91.67
		C310.1	2.87	95.67
		C310.2	2.87	95.67
		C310.3	2.87	95.67

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C311	Python	C310.4	2.87	95.67
		C310.5	2.87	95.67
		C311.1	2.76	92.00
		C311.2	2.76	92.00
		C311.3	2.76	92.00
C312	Fundamentals of Basic electronics & Digital Electronics	C311.4	2.76	92.00
		C311.5	2.76	92.00
		C312.1	2.76	92.00
		C312.2	2.76	92.00
		C312.3	2.76	92.00
C401	Power Electronics	C312.4	2.76	92.00
		C312.5	2.76	92.00
		C401.1	2.15	71.67
		C401.2	2.12	70.67
		C401.3	2.08	69.33
C402	Electric Power Transmission and Distribution	C401.4	2.12	70.67
		C401.5	2.11	70.33
		C402.1	2.13	71.00
		C402.2	2.1	70.00
		C402.3	2.06	68.67
C403	Induction, Synchronous and Special Electrical Machines	C402.4	2.11	70.33
		C402.5	2.11	70.33
		C403.1	2.29	76.33
		C403.2	2.26	75.33
		C403.3	2.22	74.00
C404	Solar Power technologies	C403.4	2.28	76.00
		C403.5	2.25	75.00
		C404.1	2.29	76.33
		C404.2	2.26	75.33
		C404.3	2.22	74.00
C405	Industrial drives	C404.4	2.28	76.00
		C404.5	2.25	75.00
		C405.1	2.17	72.33
		C405.2	2.16	72.00
		C405.3	2.1	70.00
C406	Power Electronics Laboratory	C405.4	2.15	71.67
		C405.5	2.14	71.33
		C406.1	2.88	96.00
		C406.2	2.88	96.00
		C406.3	2.88	96.00
C407	Induction, Synchronous and Special Electrical Machines Laboratory	C406.4	2.88	96.00
		C406.5	2.88	96.00
		C407.1	2.86	95.33
		C407.2	2.87	95.67
		C407.3	2.87	95.67
		C407.4	2.87	95.67

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C408	Industrial Drives laboratory	C407.3	2.87	95.67
		C408.1	2.83	94.33
		C408.2	2.81	93.67
		C408.3	2.81	93.67
		C408.4	2.81	93.67
C409	MATLAB	C408.5	2.81	93.67
		C409.1	2.81	93.67
		C409.2	2.85	95.00
		C409.3	2.84	94.67
		C409.4	2.84	94.67
C410	Electric power transmission and distribution (T.W)	C409.5	2.84	94.67
		C410.1	2.85	95.00
		C410.2	2.85	95.00
		C410.3	2.85	95.00
		C410.4	2.85	95.00
C411	Solar power technologies (T.W)	C410.5	2.85	95.00
		C411.1	2.85	95.00
		C411.2	2.85	95.00
		C411.3	2.85	95.00
		C411.4	2.85	95.00
C412	Course Under Moocs /SWAYAM/AutoCAD in electrical engineering or others	C411.5	2.85	95.00
		C412.1	2.86	95.33
		C412.2	2.86	95.33
		C412.3	2.86	95.33
		C412.4	2.86	95.33
C413	Summer training/Industrial Visits	C412.5	2.86	95.33
		C413.1	2.85	95.00
		C413.2	2.85	95.00
		C413.3	2.85	95.00
		C413.4	2.85	95.00
C501	Microprocessor & Microcontroller	C413.5	2.85	95.00
		C501.1	2.29	76.33
		C501.2	2.26	75.33
		C501.3	2.22	74.00
		C501.4	2.28	76.00
C502	Energy Conservation and Audit	C501.5	2.25	75.00
		C502.1	2.35	78.33
		C502.2	2.32	77.33
		C502.3	2.24	74.67
		C502.4	2.33	77.67
C503	Electric Vehicles (Basics)	C502.5	2.29	76.33
		C503.1	2.44	81.33
		C503.2	2.43	81.00
		C503.3	2.39	79.67
		C503.4	2.42	80.67
C504	Illumination Practices	C503.5	2.43	81.00
		C504.1	2.33	77.67


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C505	Electric Vehicles (Basics)	C504.2	2.33	77.67
		C504.3	2.29	76.33
		C504.4	2.33	77.67
		C504.5	2.32	77.33
		C505.1	2.29	76.33
C506	Microcontroller Applications Laboratory	C505.2	2.26	75.33
		C505.3	2.22	74.00
		C505.4	2.28	76.00
		C505.5	2.25	75.00
		C506.1	2.87	95.67
C507	Energy Conservation and Audit	C506.2	2.87	95.67
		C506.3	2.87	95.67
		C506.4	2.87	95.67
		C506.5	2.87	95.67
		C507.1	2.8	93.33
C508	Electric Vehicles Lab (Basics)	C507.2	2.8	93.33
		C507.3	2.8	93.33
		C507.4	2.8	93.33
		C507.5	2.8	93.33
		C508.1	2.67	89.00
C509	Illumination Practices Laboratory	C508.2	2.67	89.00
		C508.3	2.67	89.00
		C508.4	2.67	89.00
		C508.5	2.67	89.00
		C509.1	2.8	93.33
C510	Minor Project	C509.2	2.8	93.33
		C509.3	2.8	93.33
		C509.4	2.8	93.33
		C509.5	2.8	93.33
		C510.1	2.89	96.33
C511	Electric Vehicles (Basics) (TW)	C510.2	2.89	96.33
		C510.3	2.89	96.33
		C510.4	2.89	96.33
		C510.5	2.89	96.33
		C511.1	2.86	95.33
C601	Entrepreneurship and start-ups	C511.2	2.86	95.33
		C511.3	2.86	95.33
		C511.4	2.86	95.33
		C511.5	2.86	95.33
		C601.1	2.27	75.67
C602	Building Electrification	C601.2	2.23	74.33
		C601.3	2.16	72.00
		C601.4	2.25	75.00
		C601.5	2.22	74.00
		C602.1	2.38	79.33
		C602.2	2.35	78.33
		C602.3	2.29	76.33
		C602.4	2.36	78.67
		C602.5	2.35	78.33


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C603	Utilization of Electrical Energy	C603.1	2.39	79.67
		C603.2	2.39	79.67
		C603.3	2.37	79.00
		C603.4	2.39	79.67
		C603.5	2.4	80.00
C604	Network Theory	C604.1	2.08	69.33
		C604.2	2.07	69.00
		C604.3	2.02	67.33
		C604.4	2.07	69.00
		C604.5	2.06	68.67
C605	Electric Vehicles (Advance)	C605.1	2.57	85.67
		C605.2	2.56	85.33
		C605.3	2.54	84.67
		C605.4	2.57	85.67
		C605.5	2.55	85.00
C606	Electric Vehicles (Advance) Lab	C606.1	2.81	93.67
		C606.2	2.87	95.67
		C606.3	2.87	95.67
		C606.4	2.87	95.67
		C606.5	2.87	95.67
C607	Seminar	C607.1	2.91	97.00
		C607.2	2.91	97.00
		C607.3	2.91	97.00
		C607.4	2.91	97.00
		C607.5	2.91	97.00
C608	Major Project	C608.1	2.91	97.00
		C608.2	2.91	97.00
		C608.3	2.91	97.00
		C608.4	2.91	97.00
		C608.5	0	0.00
C609	Electric Vehicles (Advance) TW	C609.1	2.78	92.67
		C609.2	2.77	92.33
		C609.3	2.78	92.67
		C609.4	2.79	93.00
		C609.5	0	0.00

3.3 Attainment of Program Outcomes and Program Specific Outcomes (10)

3.3.1 Describe assessment tools and processes used for assessing the attainment of each POs and PSOs as mentioned in Annexure 1 (10)

Rubrics for Attaining Program Outcome and Program Specific Outcome

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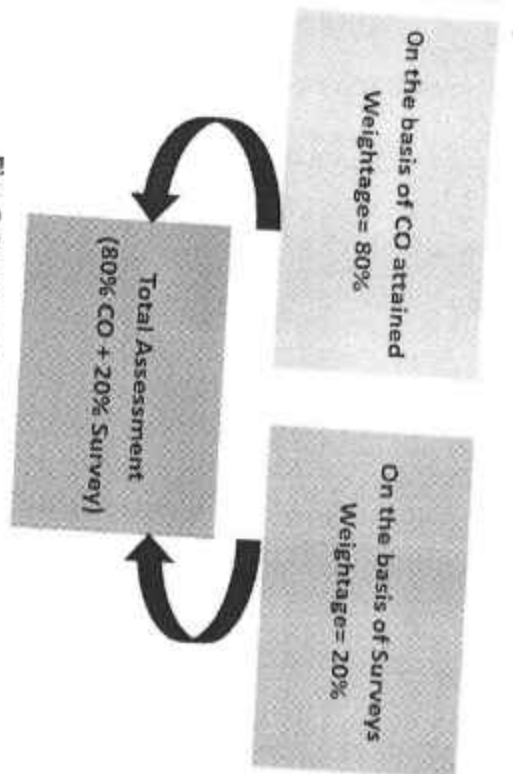


Fig. 3.2 Rubrics for attaining program outcome and program specific outcome

Procedure:

The Course outcome attained is multiplied with each PO& PSO (taken as average on the basis of CO-PO mapping for each particular subject) on weightage average method on the basis of POs and PSOs are calculated from various surveys conducted by the department. Weightage is assigned 20%. Total attainment of POs and PSOs=80% of COs+20% of PSOs

Note: for academic year 2020-21 onwards indirect assessment is considered for evaluation of course outcomes.

3.3.2 Provide results of evaluation of each PO & PSO (30)

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5
C101	2.05	2.05	2.03	2.03	2
C102	1.86	1.88	2.24	2.20	5
C103	1.78	1.77	1.77	1.77	2.25
C104	1.96	2.02	2.01	2.01	1.77
C105	2.13	2.13	2.13	2.13	1.96
C106	2.33	2.00	1.78	2.13	2.13

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C107	2	2	2	2	2	2	2
C108	2						
C109	2.87	2	2.87	2	2	2	2
C110	2.87	2.87	2.87	2.87	2.87	2.87	2.87
C111	2.82	2.82	2.82	2.82	2.82	2.82	2.82
C201	2.08	2.08	2.08	2.08	2.08	2.08	2.08
C202	1.88	2.22	2.05	2.05	2.05	2.05	2.82
C203	2.45	2.44	2.73	2.20	2.20	2.27	2.87
C204	1.45	1.51	2.44	2.44	2.24	2.27	2.84
C205	2.04	2.04	1.09	1.39	1.39	0.00	0.00
C206	2.70	2.04	2.02	2.04	2.04	2.00	2.00
C207	1.35	2.12	2.49	2.69	2.69	2.70	2.57
C208	2.79	2.79	2.43	2.57	2.57	2.79	2.79
C209	2.75	2.75	2.79	2.79	2.79	2.75	2.75
C210	2.56	2.56	2.55	2.55	2.55	2.55	2.55
C211	2.07	2.57	2.57	2.57	2.57	2.57	2.57
C212	1.18	1.18	1.18	1.18	1.18	1.18	1.18
C301	1.88	1.88	1.87	1.87	1.87	1.87	1.87
C302	1.93	1.93	1.93	1.93	1.93	1.93	1.93
C303	1.89	1.89	2.11	2.11	2.11	2.11	2.11
C304	1.88	1.88	1.87	1.87	1.87	1.87	1.87
C305	1.51	1.49	1.50	1.50	1.50	1.50	1.50
C306	2.35	2.30	1.53	1.36	1.36	1.34	1.34
C307	2.82	2.82	2.38	2.31	2.31	2.45	2.45
C308	2.70	2.70	2.82	2.82	2.82	2.82	2.82
C309	2.70	2.70	2.70	2.70	2.70	2.70	2.70
C310	2.83	2.83	2.70	2.70	2.70	2.70	2.70
C311	2.70	2.70	2.83	2.83	2.83	2.83	2.83
C312	2.70	2.70	2.70	2.70	2.70	2.70	2.70
C401	1.96	1.97	2.70	2.70	2.70	2.70	2.70



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1.97

C602	1.56	1.96	1.96	1.96	1.94	1.95
C603	2.14	2.14	2.14	2.14	2.14	2.15
C604	2.07	2.07	2.07	2.07	2.07	2.08
C605	2.00	2.00	2.00	2.00	2.00	2.00
C606	2.98	2.98	2.98	2.98	2.98	2.98
C607	2.63	2.63	2.63	2.63	2.63	2.63
C608	2.79	2.79	2.79	2.79	2.79	2.79
C609	2.81	2.81	2.81	2.81	2.81	2.81
C610	2.82	2.82	2.82	2.82	2.82	2.82
C611	2.82	2.82	2.82	2.82	2.82	2.82
C612	2.82	2.82	2.82	2.82	2.82	2.82
C613	2.87	2.87	2.87	2.87	2.87	2.87
C614	2.07	2.07	2.07	2.07	2.07	2.07
C615	2.20	2.20	2.20	2.20	2.20	2.20
C616	1.91	1.91	1.91	1.91	1.91	1.91
C617	2.22	2.22	2.22	2.22	2.22	2.22
C618	2.35	2.35	2.35	2.35	2.35	2.35
C619	2.84	2.84	2.84	2.84	2.84	2.84
C620	2.75	2.75	2.75	2.75	2.75	2.75
C621	2.59	2.59	2.59	2.59	2.59	2.59
C622	2.86	2.86	2.86	2.86	2.86	2.86
C623	2.62	2.62	2.62	2.62	2.62	2.62
C624	1.55	1.55	1.55	1.55	1.55	1.55
C625	1.59	1.59	1.59	1.59	1.59	1.59
C626	2.04	2.04	2.04	2.04	2.04	2.04
C627	1.86	1.86	1.86	1.86	1.86	1.86
C628	2.71	2.71	2.71	2.71	2.71	2.71
C629	2.84	2.84	2.84	2.84	2.84	2.84
C630	2.89	2.89	2.89	2.89	2.89	2.89


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2.84

2.89

PO Attainment Level

C810	2.50	2.80	2.83	2.88	00
C811	2.84	2.84	2.84	2.84	2.84

PSO Attainment

Course	PO1	PO2	PO3	PO4	PO5
Direct Attainment	2.15	2.23	2.13	2.23	1.65
Indirect Attainment	2.50	2.50	2.50	2.49	2.53
PO Attainment	2.38	2.28	2.20	2.28	1.83

Course	PSO1
C101	0
C102	2.22
C103	0
C104	2.318
C105	2.13
C106	2.68
C107	2.68
C108	2.78
C109	2.87
C110	0
C111	0
C201	0
C202	2.21
C203	2.42
C204	0
C205	2.04
C206	2.22
C207	2.68
C208	2.79
C209	2.75


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 2.75

C210	0		
C211	0		0
C212	0		0
C201	1.86		0
C202	1.86		1.87
C203	1.86		1.86
C204	1.86		1.89
C205	1.42		1.86
C206	2.27		1.56
C207	2.82		2.46
C208	0		2.87
C209	2.70		0
C210	2.83		2.70
C211	0		2.83
C212	0		0
C201	0		0
C202	1.06		0
C203	2.14		1.96
C204	0		2.13
C205	0		0
C206	0		0
C207	2.83		0
C208	0		2.83
C209	0		0
C210	0		0
C211	2.82		2.82
C212	2.82		2.82
C213	2.81		2.82
C201	2.07		2.81
C202	2.19		2.07
C203	1.59		2.20
C204	2.02		1.45

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CS06	2.35		2.32
CS06	2.32		
CS07	2.75		2.33
CS08	2.83		2.75
CS09	2.76		2.82
CS10	0		2.75
CS11	2.82		0
CS04	0		2.82
CS02	1.98		0
CS03	2.91		1.98
CS04	1.54		1.80
CS05	2.47		1.36
CS14	2.88		2.48
CS09	0		2.88
CS10	0		0
CS11	2.84		2.84

PSO Attainment Level

Direct Attainment	Course	PSO1
Indirect Attainment		
PSO Attainment		
		2.40
		2.51
		2.42
		2.41
		2.53
		2.43

4 STUDENTS' PERFORMANCE (2001)

Intake Information:
Table 4.1

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Item	2025-26 (CAV)	2024-25 (CAV m1)	2023-24 (CAV m2)	2022-23 (CAV)
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INDIRECT ATTAINMENT(PO AND PSO)(2020-23)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	Course	PSO1	PSO2
C101	2.708	2.709	2.708				2.709	C101	2.707	2.707
C102	2.267	2.327	2.443	2.273	2.126	1.375		C102	2.400	2.208
C103	2.818	2.816	2.817	2.835	2.835	2.828	2.812	C103		
C104	1.639	1.490	1.490		1.490	1.490	1.397	C104		
C105	1.490	1.490	1.397	1.639	1.490	1.490		C105		
C106	2.356	2.017	1.783	2.017	2.140	2.800	2.800	C106	2.253	2.143
C107	2.544	2.544		2.541	2.549	2.580	2.550	C107	2.544	2.551
C108	2.350	2.484	2.443	1.112			2.544	C108		
C109	2.836			1.490	1.490	1.397	2.484	C109	1.490	1.490
C110	2.791	2.791	2.791	1.315	1.426	1.217		C110	1.315	1.426
C111	1.490	1.490		1.490	1.490	1.397	2.791	C111		
C112	1.315	1.426		1.490	1.490	1.397	2.791	C112		
C113	1.898	1.941	1.941	2.164	1.151			C113	1.993	1.661
C114	1.112				1.898	1.897		C114	2.544	
C115	1.490	1.490	1.397		1.897	1.897	1.898	C115	2.484	
C116	1.315	1.426	1.217		1.868	2.418	2.350	C116		
C117	2.806	2.803	2.800	2.803	2.805			C117	2.791	2.803
C118	2.215	2.262	2.023	2.682	2.682			C118	1.490	1.490
C119	2.292	2.436	2.320	2.554	1.898	1.897		C119	1.315	1.426
C120	2.973	2.969	2.973		1.897	1.897	1.898	C120		
C121	2.978	2.980	2.978	2.966	1.868	2.418	2.350	C121		
C122	2.973	2.966	2.973					C122		
C123	3.000	3.000	3.000					C123		
C201	2.695	2.708	2.700	2.689	2.690	2.705	2.700	C201	2.703	2.690
C202	2.923	2.923	2.907	2.923			2.911	C202	2.923	2.923
C203	2.932	2.932	2.902	2.932			2.932	C203	2.932	2.932
C204	2.695	2.699	2.705	2.695			2.695	C204	2.695	2.695
C205	2.246	2.215	2.262	2.023	2.682	2.682	2.246	C205	2.107	2.308
C206	2.384	2.292	2.436	2.320	2.554	2.480	2.436	C206	2.237	2.554
C207	2.973	2.973	2.969	2.973			2.969	C207	2.973	2.973
C208	2.978	2.978	2.980	2.978	2.966	2.966	2.977	C208		
C209	2.973	2.973	2.966	2.973			2.973	C209	2.973	2.973
C210	3.000	3.000	3.000	3.000			3.000	C210	3.000	3.000
C211	2.976	2.971	2.963	2.956			2.966	C211		
C212	2.976	2.971	2.966	2.955	2.966		2.966	C212		
C213	2.955	2.950		1.112				C213		
C214	3.000	3.000	1.639	1.490	1.490	1.397	0.974	C214	1.112	
C215	2.950	2.938	1.575	1.315	1.426	1.217	1.296	C215	1.296	
C216	2.950	2.950						C216		
C217	1.897	1.897	1.898	1.897				C217		
C218	1.868	1.872	1.897	1.897	1.898	1.897		C218		
C219			1.868	2.418	2.350	2.484		C219		
C220	2.418	2.350	2.484	2.836	2.836			C220		
C221	2.836	2.418	2.350	2.484	2.699	2.705	2.695	C221		
C222		2.836	2.836		2.215	2.262	2.023			
C301	2.950	2.942	1.721			1.675	1.810	C301	1.315	
C302	2.950	2.942	1.519	1.634	1.292	1.387	1.661	C302	1.315	
C303	2.458	2.500	1.812	2.127		1.535	1.883	C303	1.721	

C304	2.950	2.942	1.642	1.642		1.344	1.642	C304	1.642	
C305	2.964	2.964	2.964	2.964	2.964	2.964	2.964	C305	2.964	2.964
C306	3.000	3.000	3.000	3.000				C306	3.000	3.000
C307	2.938	2.938	2.938	2.938	2.938	2.938	2.938	C307	2.938	2.938
C308	2.575	2.580	2.607	2.587	2.580	2.607	2.581	C308	2.619	2.643
C309	3.000	3.000	3.000	3.000	3.000		3.000	C309	3.000	3.000
C310	2.984	2.988	2.973	2.965		3.000	2.983	C310		
C311	2.455	2.459	2.464	2.464	2.464	2.464	2.459	C311	2.457	2.460
C312	2.500	2.350		1.767	1.812	1.815		C312		
C313	2.426	2.550	1.828	1.803		1.538	1.874	C313	1.735	
C314	2.458	2.426	1.717			1.763	1.787	C314	1.612	
C315	2.458	2.426	1.780			1.828	1.857	C315	1.657	
C316	2.985	2.991	2.976	2.984	2.987	2.980	2.980	C316	2.982	2.984
C317	2.578	2.592	2.566	2.582	2.592	2.586	2.605	C317	2.592	2.592
C318	2.981	2.977	3.000	3.000	3.000	2.953	2.980	C318		
C319	3.000	3.000	3.000	3.000		3.000	3.000	C319		
C320	2.430	2.421	2.384	2.392	2.507	2.474	2.492	C320	2.425	2.492
Average	2.561	2.576	2.416	2.367	2.224	2.137	2.460	Average	2.501	

DIRECT ATTAINMENT(PO AND PSO)(2020-23)										
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	Course	PSO1	PSO2
C101	2.919	2.918	2.926				2.921	C101	2.925	2.925
C102	2.188	2.246	2.357	2.189	2.044	1.298		C102	2.315	2.132
C103	2.567	2.563	2.565	2.559	2.563	2.563	2.565	C103		
C104	2.544		1.639	1.490	1.490			C104		
C105	2.484	1.490	1.490	1.397	2.791			C105		
C106		1.999	1.777	1.999	2.132	2.669	2.669	C106	2.133	1.133
C107	2.791	2.653		2.656	2.662	2.678	2.660	C107	2.656	1.056
C108		1.490	1.490	1.397				C108		
C109		2.350	2.484	2.443	1.112			C109	1.490	1.490
C110		2.836			1.490	1.490	1.397	C110	1.411	1.476
C111		2.791	2.791	2.791	1.315	1.426	1.217	C111	2.594	
C112		1.490	1.490	1.397	2.544			C112	2.484	
C113	1.366	1.403	1.388	1.566	2.484			C113		1.195
C114		1.112				1.490	1.490	C114	2.7	
C115		1.490	1.490	1.397	2.791	1.315	1.426	C115		
C116		1.315	1.426	1.217				C116		
C117	2.696	2.692	2.690	2.692	2.697			C117	2.69	1.994
C118	2.544	2.215	2.262	2.023	2.682	2.682		C118	1.490	1.490
C119	2.484	2.292	2.436	2.320	2.554	2.480		C119	1.315	1.426
C120	0.000	2.973	2.969	2.973				C120		
C121	2.791	2.978	2.980	2.978	2.966	2.966		C121	1.4	1.90
C122		2.973	2.966	2.973				C122	1.3	1.426
C123		3.000	3.000	3.000				C123		
C201	1.879	1.876	1.878	1.879	1.880	1.878	1.878	C201	1.878	1.878
C202	1.854	1.854	1.855	1.854			1.856	C202	1.854	1.854
C203	1.897	1.897	1.898	1.897			1.897	C203	1.897	1.897
C204	1.868	1.872	1.868	1.868			1.868	C204	1.868	1.868
C205	1.527	1.508	1.552	1.372	1.854	1.854	1.527	C205	1.4	1.73
C206	2.387	2.335	2.418	2.350	2.484	2.443		C206	2.3	2.384

C207	2.836	2.836	2.836	2.836			2.836	C207	2.836	2.836
C208	2.791	2.791	2.791	2.791	2.791	2.791	2.791	C208		
C209	2.686	2.686	2.686	2.686			2.686	C209	2.686	2.686
C210	2.829	2.829	2.829	2.829			2.829	C210	2.829	2.829
C211	2.809	2.809	2.809	2.809			2.809	C211		
C212	2.809	2.809	2.809	2.809	2.809		2.809	C212		
C213	1.882	1.883	0.000	1.887				C213		
C214	2.048	2.049	2.057	2.057	2.057	2.062	2.041	C214	2.061	
C215	1.845	1.835	1.846	1.844	1.845	1.844	1.842	C215	1.839	
C216	1.997	1.997						C216		
C217	2.418	2.350	2.484	1.897	1.898	1.897		C217		
C218	2.836	2.836	0.000	1.872	1.868	1.868		C218		
C219	1.897	1.897	1.552	1.372	2.686	2.686		C219		
C220	1.868	1.897	2.418	2.350	2.829	2.829		C220		
C221	2.686	2.686	2.836	2.836	1.868			C221		
C222	2.829	2.829	2.791	2.791				C222		
C301	2.162	2.166	2.163			2.162	2.163	C301	2.162	
C302	1.988	1.987	1.982	1.989	1.990	1.988	1.983	C302	1.989	
C303	1.766	1.794	1.733			1.766	1.746	C303	1.591	
C304	2.113	2.114	2.113	2.117		2.113	2.113	C304	2.117	
C305	2.210	2.205	2.194	2.202	2.200	2.185	2.202	C305	2.173	
C306	2.873	2.873	2.873	2.873			2.873	C306	2.873	
C307	2.775	2.775	2.775	2.775	2.775	2.775	2.775	C307	2.775	
C308	2.880	2.880	2.880	2.880	2.880	2.880	2.880	C308	2.880	
C309	2.777	2.777	2.777	2.777	2.777		2.777	C309	2.777	
C310	2.859	2.859	2.859	2.859		2.859	2.859	C310		
C311	2.880	2.880	2.880	2.880	2.880	2.880	2.880	C311	2.880	
C312	1.779	1.682		1.751	1.744	1.616	0.000	C312		
C313	1.749	1.842	1.824	1.486		1.771	1.750	C313		
C314	1.695	1.678	1.695			1.565	1.652	C314		
C315	1.766	1.745	1.766			1.630	1.722	C315		
C316	2.274	2.274	2.271	2.273	2.265	2.251	2.267	C316	2.274	
C317	2.916	2.916	2.916	2.916	2.916	2.916	2.916	C317	2.916	
C318	2.891	2.891	2.891	2.891	2.891	2.891	2.891	C318		
C319	2.891	2.891	2.891	2.891		2.891	2.891	C319		
C320	2.898	2.898	2.898	2.898	2.898	2.898	2.898	C320	2.898	2.898
Average	2.333	2.309	2.254	2.295	2.344	2.237	2.254	Average	2.333	2.333

PO and PSO ATTAINMENT LEVEL									
ATTAINMENT(PO AND PSO)(2020-23)									
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
Direct Attainment	2.333	2.309	2.254	2.295	2.344	2.237	2.254	2.333	2.333
INDIRECT ATTAINMENT	2.561	2.576	2.416	2.367	2.224	2.137	2.460	2.561	2.561
PO and PSO ATTAINMENT	2.379	2.362	2.286	2.309	2.320	2.217	2.295	2.379	2.379

H.O.D.
Department of
Engineering

Government Polytechnic Lakhisarai
Department of Electrical Engineering

INDIRECT ATTAINMENT(PO AND PSO)(2021-24)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	Course	PSO1	PSO2
C101	1.920	1.917	1.920				1.919	C101	1.919	1.917
C102	2.248	2.311	1.826	2.245	2.101	1.375		C102	3.000	3.000
C103	1.675	2.982	2.095		2.292	3.000		C103	2.896	2.696
C104	2.880	2.880	2.880	2.982	2.975	2.696		C104		
C105	2.484	2.432	2.515	2.447	1.675	2.540	2.292	C105		
C106	2.292	2.017	1.783	2.896	2.696	2.800	2.975	C106	2.253	2.143
C107	2.975	2.544		2.541	2.549	2.580	1.675	C107	2.544	2.551
C108	1.675	2.773	1.675	1.526	2.653	1.675	3.000	C108	3.000	3.000
C109	2.642	2.642	2.274	2.271	2.880	2.896	2.696	C109	2.896	2.696
C110	2.017	1.783	2.350	2.699	2.699			C110		
C111	1.826		2.292	2.436		2.773	2.773	C111		
C112	2.773	2.773	1.526	2.653	2.653	2.642	2.642	C112	2.653	2.653
C113	2.642	2.642	2.271	2.880	2.880	2.759	2.759	C113	2.880	2.880
C114	2.759	2.759	1.675	2.699	2.699	1.826		C114	2.699	2.699
C115	1.826		2.833	2.833		2.095	2.097	C115	2.699	2.699
C116	2.095	2.097	2.974	2.966		2.075	2.078	C116	2.859	2.859
C117	2.075	2.078	2.973	2.969		2.128	2.139	C117	2.880	2.880
C118	2.128	2.139		2.432	2.515	2.447		C118	1.214	
C119	2.009		1.526	2.773	2.773	3.000	3.000	C119	2.642	
C120			1.826	2.596	2.596	2.896	2.696	C120	3.000	3.000
C121	2.980	2.982	2.095	2.713	2.713	2.713		C121	2.896	2.696
C122	2.880	2.880	1.526	2.880	2.880			C122	3.000	3.000
C123	2.699	2.699	2.271	2.699	2.699			C123	2.896	2.696
C201	2.861	2.858	2.851	2.874	2.861	2.843	2.851	C201	2.867	2.861
C202	2.855	2.855	2.845	2.855			2.849	C202	2.855	2.855
C203	2.848	2.848	2.831	2.848			2.848	C203	2.848	2.848
C204	2.841	2.835	2.826	2.841			2.841	C204	2.841	2.841
C205	2.379	2.350	2.416	2.137	2.898	2.898	2.379	C205	2.241	2.453
C206	2.384	2.292	2.436	2.320	2.554	2.480	2.436	C206	2.237	2.554
C207	2.975	2.975	2.972	2.975			2.971	C207	2.975	2.975
C208	2.980	2.980	2.982	2.980	2.969	2.969	2.979	C208		
C209	2.975	2.975	2.969	2.975			2.975	C209	2.975	2.975
C210	2.833	2.833	2.833	2.833			2.833	C210	2.833	2.833
C211	2.978	2.974	2.966	2.960			2.969	C211		
C212	2.978	2.973	2.969	2.958	2.969		2.969	C212		
C213	2.852	2.855		1.089				C213		
C214	2.885	2.879	2.898	2.886	2.886	2.886	2.870	C214	2.915	2.898
C215	2.834	2.835	2.807	2.827	2.810	2.834	2.839	C215	2.849	2.850
C216	2.855	2.855	2.788					C216		
C217	2.861	2.861		0.991			0.991	C217		
C218	2.009	2.009		1.414				C218	2.935	2.995
C219	3.000	3.000	3.000	3.000	3.000	3.000	1.414	C219	3.000	3.000
C220	2.870	2.870	2.870	2.870	2.870	2.870	2.870	C220	2.870	2.870
C221	2.870	2.870	2.870	2.870	2.870	2.870	2.870	C221	2.870	2.870
C222	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C222		
C223	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C223	3.000	3.000
C224	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C224	3.000	3.000
C225	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C225	3.000	3.000
C301	2.861	2.856	2.840	1.467	0.000	0.000	1.386	C301	1.587	1.032
C302	2.861	2.861	2.852	1.310	1.551	1.212	1.196	C302	1.549	1.551
C303	2.379	2.416	2.275	1.654	1.096		1.241	C303	1.781	1.481
C304	2.861	2.856	2.856	1.359	1.444		1.015	C304	1.359	1.444
C305	2.964	2.964	2.964	2.964	2.964	2.964	2.964	C305	2.964	2.964
C306	3.000	3.000	3.000	3.000				C306	3.000	3.000

C307	2.957	2.896	2.696	2.696	2.913	2.696	2.913	C307	2.696	2.913
C308	2.575	2.580	2.607	2.587	2.580	2.607	2.581	C308	2.619	2.643
C309	2.987	2.985	2.985	2.987	2.984		2.987	C309	2.987	2.984
C310	3.000	3.000	3.000	3.000		3.000	3.000	C310		
C311	2.455	2.459	2.464	2.464	2.464	2.464	2.459	C311	2.457	2.460
C312	2.096	1.899	1.515		1.766	1.858	1.877	C312		
C313	2.348	2.468	2.448	1.718	1.589		1.255	C313	1.770	1.483
C314	2.379	2.350	2.139	1.582			1.656	C314	1.692	1.387
C315	2.360	2.329	2.120	1.504			1.572	C315	1.603	1.324
C316	2.985	2.991	2.976	2.984	2.987	2.980	2.980	C316	2.982	2.984
C317	2.578	2.592	2.566	2.582	2.592	2.586	2.605	C317	2.592	2.582
C318	2.984	2.980	3.000	3.000	3.000	2.961	2.984	C318		
C319	3.000	3.000	3.000	3.000		1.800	2.182	C319		
C320	2.430	2.421	2.384	2.392	2.507	2.474	2.492	C320	2.425	2.492
Average	2.634	2.688	2.554	2.545	2.554	2.526	2.479	Average	2.604	2.597

DIRECT ATTAINMENT(PO AND PSO)(2021-24)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	Course	PSO1	PSO2
C101	2.919	2.918	2.926				2.921	C101	2.017	1.783
C102	2.663	2.662		2.664	2.668	2.678	2.666	C102	2.663	2.664
C103	2.880	2.350	2.880		2.980	2.982	2.980	C103		
C104	2.699	2.292	1.526	2.980				C104		
C105		2.975	2.271		2.138	3.000		C105		
C106	2.333	1.675	2.696	1.999	2.350	2.696	2.669	C106	2.221	2.133
C107	2.663	1.675		2.664	2.292	2.678	2.666	C107	2.663	2.664
C108	2.432	2.833	1.826	2.773	2.975			C108	2.773	2.773
C109	2.292	2.773	2.095	2.596	1.675	2.596		C109	2.642	2.642
C110	2.975	2.596	2.596	2.835	1.675		2.713	C110	2.759	2.292
C111	1.675	2.713	2.713	2.350	2.833		2.773	C111	1.826	2.975
C112	2.841	2.835	2.384	2.292	2.138	2.713	2.642	C112	2.095	1.675
C113	2.379	2.350	1.826	1.783	1.967	2.773		C113	2.075	2.078
C114	2.384	2.292	2.095	2.653	2.020	3.000	1.526	C114	2.128	2.292
C115	2.484	2.432	1.675	2.447	2.581	2.540	2.271	C115	2.009	2.975
C116	2.017	1.783	2.699	2.699	2.400	2.972		C116	2.653	1.675
C117	2.975	2.975	2.017	1.783	1.783	2.982		C117	2.880	2.880
C118	2.833	2.833	2.978	2.975	2.975	2.969		C118	2.699	2.699
C119	2.978	2.974	1.526	2.833	2.833	1.675	1.526	C119	2.699	2.699
C120	2.978	2.973	2.271	2.978	2.974	2.274	2.271	C120	2.859	2.859
C121				2.017	1.783	2.969		C121	2.017	1.783
C122		1.675	1.526		2.773	2.773		C122	1.214	
C123		2.274	2.271		2.596	2.596	2.596	C123		
C201	2.039	2.038	2.040	2.038	2.038	2.040	2.040	C201	2.038	2.038
C202	2.138	2.138	2.137	2.138			2.139	C202	2.138	2.138
C203	1.967	1.967	1.967	1.967			1.967	C203	1.967	1.967
C204	2.020	2.022	2.021	2.020			2.020	C204	2.020	2.020
C205	1.723	1.703	1.752	1.549	2.100	2.100	1.723	C205	1.624	1.777
C206	2.484	2.432	2.515	2.447	2.581	2.540	2.515	C206	2.400	2.581
C207	2.773	2.773	2.773	2.773			2.773	C207	2.773	2.773
C208	2.596	2.596	2.596	2.596	2.596	2.596	2.596	C208		
C209	2.713	2.713	2.713	2.713			2.713	C209	2.713	2.713
C210	2.773	2.773	2.773	2.773			2.773	C210	2.773	2.773
C211	2.642	2.642	2.642	2.642			2.642	C211		
C212	2.759	2.759	2.759	2.759	2.759		2.759	C212		
C213	1.826	1.826		1.826				C213		
C214	2.098	2.095	2.097	2.108	2.108	2.108	2.100	C214	2.111	2.124
C215	2.085	2.075	2.078	2.085	2.091	2.087	2.084	C215	2.076	2.070
C216	2.128	2.128	2.139					C216		

C217	2.009	2.009		1.414			1.414	C217		
C218	2.911	2.911	2.911	2.911	2.911	2.911	2.911	C218	2.911	2.911
C219	2.906	2.906	2.906	2.906	2.906	2.906	2.906	C219	2.906	2.906
C220	2.778	2.778	2.778	2.778	2.778	2.778	2.778	C220	2.778	2.778
C221	2.778	2.778	2.778	2.778	2.778	2.778	2.778	C221	2.778	2.778
C222	2.819	2.819	2.819	2.819	2.819	2.819	2.819	C222		2.819
C223	2.785	2.785	2.785	2.785	2.785	2.785	2.785	C223	2.785	2.785
C224	2.842	2.842	2.842	2.842	2.842	0.000	2.842	C224	2.842	2.842
C225	2.779	2.779	2.779	2.779	2.779	2.779	2.779	C225	2.779	2.779
C301	2.213	2.215	2.218	1.861			1.814	C301	1.963	1.479
C302	2.263	2.262	2.265	1.779	1.931	1.506	1.619	C302	1.962	1.931
C303	1.885	1.913	1.813	2.021	2.363		1.704	C303	2.105	1.896
C304	2.125	2.127	2.127	1.773	1.775		1.452	C304	1.773	1.775
C305	2.210	2.205	2.194	2.202	2.200	2.185	2.202	C305	2.173	2.144
C306	2.884	2.884	2.884	2.884			2.884	C306	2.884	2.884
C307	2.653	2.653	2.653	2.653	2.653	2.653	2.653	C307	2.653	2.653
C308	2.880	2.880	2.880	2.880	2.880	2.880	2.880	C308	2.880	2.880
C309	2.699	2.699	2.699	2.699	2.699		2.699	C309	2.699	2.699
C310	2.859	2.859	2.859	2.859		2.859	2.859	C310		
C311	2.880	2.880	2.880	2.880	2.880	2.880	2.880	C311	2.880	2.880
C312	1.648	1.501	1.214		1.732	1.714	1.684	C312		
C313	1.909	2.010	1.988	2.070	2.037		1.728	C313	2.124	1.961
C314	1.859	1.838	1.674	1.969			2.021	C314	2.054	1.838
C315	1.695	1.675	1.526	1.855			1.901	C315	1.930	1.738
C316	2.274	2.274	2.271	2.273	2.265	2.251	2.267	C316	2.279	2.251
C317	2.916	2.916	2.916	2.916	2.916	2.916	2.916	C317	2.916	2.916
C318	2.891	2.891	2.891	2.891	2.891	2.891	2.891	C318		
C319	2.891	2.891	2.891	2.891		2.891	2.891	C319		
C320	2.898	2.898	2.898	2.898	2.898	2.898	2.898	C320	2.898	2.898
Average	2.489	2.457	2.383	2.459	2.468	2.559	2.427	Average	2.405	2.414

PO and PSO ATTAINMENT LEVEL									
ATTAINMENT (PO AND PSO) (2021-24)									
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
Direct Attainment	2.489	2.457	2.383	2.459	2.468	2.559	2.427	2.405	2.414
INDIRECT ATTAINMENT	2.634	2.688	2.554	2.545	2.554	2.526	2.479	2.604	2.597
PO and PSO ATTAINMENT	2.518	2.503	2.417	2.477	2.485	2.553	2.438	2.445	2.451

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INDIRECT ATTAINMENT(PO AND PSO)(2022-25)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	Course	PSO1	PSO2
C101	2.730	1.998	2.100					C101		
C102	2.705	2.715	2.897	2.904	2.893	2.821		C102	2.900	2.898
C103	2.938	2.938	2.937	2.930	2.930	2.930	2.937	C103		
C104	2.155	2.186	2.184	2.184	2.182	2.171	2.175	C104	2.174	2.178
C105	2.962	2.968	2.968	2.968	2.968	2.976	2.968	C105		
C106	2.356	2.017	1.783	2.017	2.140	2.800	2.800	C106	2.253	2.143
C107	2.544	2.544		2.541	2.549	2.580	2.550	C107	2.544	2.551
C108	2.962	2.968	2.968	2.968	2.968	2.976	2.968	C108	2.968	2.968
C109	3.000	3.000	3.000	3.000	3.000		3.000	C109	3.000	3.000
C110	3.000	3.000		3.000	3.000		3.000	C110		
C111	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C111		
C112	1.947	1.946	1.949				1.947	C112	1.949	1.949
C113	2.705	2.899	2.893	2.897	2.881			C113	2.900	2.900
C114	2.986	2.986	2.983	2.986			2.986	C114		
C115	2.284	2.375	2.179	2.179			2.284	C115		
C116	2.351	2.299	2.381	2.313	2.447	2.407	2.381	C116		
C117	2.806	2.803	2.800	2.803	2.805			C117	2.803	2.803
C118	2.986	2.986	2.985	2.986			2.986	C118		
C119	2.987	2.987	2.988	2.976	2.964		2.982	C119	2.987	2.982
C120	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C120		
C121	3.000	3.000	3.000	3.000	3.000			C121		
C122	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C122	2.868	2.868
C123	3.000	3.000	3.000		3.000			C123	2.882	2.882
C201	2.895	2.892	2.882	2.912	2.893	2.871	2.882	C201	2.904	2.893
C202	2.868	2.868	2.857	2.868			2.864	C202	2.868	2.868
C203	2.882	2.882	2.860	2.882			2.882	C203	2.882	2.882
C204	2.868	2.864	2.848	2.868			2.868	C204	2.868	2.868
C205	2.384	2.354	2.421	2.143	2.898	2.898	2.384	C205	2.248	2.458
C206	2.384	2.292	2.436	2.320	2.554	2.480	2.436	C206	2.237	2.554
C207	2.986	2.986	2.985	2.986			2.986	C207	2.986	2.986
C208	2.985	2.985	2.986	2.985	2.966	2.966	2.983	C208		
C209	2.986	2.986	2.983	2.986			2.986	C209	2.986	2.986
C210	3.000	3.000	3.000	3.000			3.000	C210	3.000	3.000
C211	3.000	3.000	3.000	3.000			3.000	C211		
C212	3.000	3.000	3.000	3.000	3.000		3.000	C212		
C213	2.854	2.855		1.148			0.000	C213		
C214	2.888	2.888	2.888	2.888	2.888	2.888	2.888	C214	2.888	2.888
C215	2.853	2.834	2.800	2.844	2.819	2.856	2.858	C215	2.877	2.865
C216	2.845	2.845	2.796				0.000	C216		
C217	2.853	2.853		2.853			2.853	C217		
C218	3.000			3.000		3.000	3.000	C218		
C219	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C219	3.000	3.000
C220	2.923			2.900		2.900	2.900	C220		
C221	2.962			2.950		2.950	2.950	C221		
C222	2.810			2.810		2.810	2.810	C222	0.000	3.000
C223	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C223	3.000	3.000
C224	3.000	3.000	3.000	3.000	3.000		3.000	C224	3.000	3.000
C225	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C225	3.000	3.000
C301	2.860	2.859	2.850	2.850			2.860	C301	2.861	2.860
C302	2.860	2.856	2.853	2.829	2.846	2.819	2.842	C302	2.850	2.853
C303	2.383	2.422	2.283	2.338				C303		

C304	2.845	2.838	2.838	2.845	2.813		2.845	C304	2.845	2.828
C305	2.943	2.939	2.949	2.952	2.921	2.929	2.936	C305	2.947	2.961
C306	3.000	3.000	3.000	3.000			3.000	C306	3.000	3.000
C307	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C307	3.000	3.000
C308	2.483	2.487	2.493	2.487	2.487	2.497	2.483	C308	2.500	2.487
C309	3.000	3.000	3.000	3.000	3.000		3.000	C309	3.000	3.000
C310	3.000	3.000	3.000	3.000		3.000	3.000	C310		
C311	2.487	2.487	2.497	2.503	2.457	2.487	2.487	C311	2.495	2.478
C312	1.982	1.801	1.458		1.811	1.798	1.689	C312		
C313	2.129	2.066	2.010	2.066	1.716		1.521	C313	2.123	1.795
C314	2.176	2.179	2.044	1.951			2.038	C314	2.080	1.703
C315	2.385	2.351	2.138	2.385			2.201	C315	2.324	2.044
C316	2.863	2.921	2.905	2.888	2.912	2.901	2.887	C316	2.900	2.889
C317	2.479	2.478	2.447	2.471	2.482	2.487	2.481	C317	2.461	2.495
C318	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C318		
C319	3.000	3.000	3.000	3.000		1.800	2.182	C319		
C320	2.482	2.474	2.447	2.447	2.546	2.526	2.538	C320	2.481	2.536
Average	2.779	2.752	2.732	2.762	2.779	2.765	2.659	Average	2.663	2.714

DIRECT ATTAINMENT (PO AND PSO) (2022-25)										
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	Course	PSO1	PSO2
C101	1.814	2.730	2.001					C101		
C102	2.541	2.855	2.245	2.199	2.205	2.271		C102	2.224	2.215
C103	2.968	2.888	1.773	1.766	1.772	1.771	2.865	C103		
C104	3.000	2.834	2.870	2.870	2.923	2.917	2.865	C104	2.918	2.920
C105	2.823	2.823	2.823	2.823	2.823	2.823	2.823	C105		
C106	2.333	1.999	1.777	1.999	2.132	2.669	2.669	C106	2.221	2.133
C107	2.659	2.659		2.658	2.657	2.652	2.657	C107	2.659	2.659
C108	2.778	2.778	2.778	2.778	2.778	2.778	2.778	C108	2.778	2.778
C109	2.865	2.865	2.865	2.865	2.865		2.865	C109	2.865	2.865
C110	2.865	2.865		2.865	2.865		2.865	C110		
C111	2.823	2.823	2.823	2.823	2.823	2.823	2.823	C111		
C112	2.919	2.918	2.926				2.921	C112	2.925	2.925
C113	2.541	2.217	2.232	2.203	2.268			C113	2.210	2.210
C114	2.968	2.855	2.385	1.938	1.951	1.938	1.926	C114		
C115	3.000	2.888	2.863	1.392			1.457	C115		
C116	1.612	2.834	2.479	1.575			1.612	C116		
C117	2.696	2.692	3.000	2.692	2.697			C117	2.693	2.694
C118	3.000	3.000	3.000	3.000	3.000	3.000	3.000	C118		
C119	2.789	2.789	2.789	2.789	2.789		2.865	C119	2.789	2.789
C120	1.949	1.949	1.957	1.938	1.951	1.938	2.865	C120		
C121	2.552	2.552	2.552	2.552	2.552		2.823	C121		
C122	2.571	2.571	2.571	2.571	2.571	2.571	2.571	C122		
C123	1.181	1.181	1.181		1.181		1.181	C123		
C201	1.877	1.878	1.873	1.882	1.874	1.869	1.873	C201	1.882	1.874
C202	1.979	1.979	1.976	1.979			1.978	C202	1.979	1.979
C203	1.882	1.882	1.867	1.882			1.882	C203	1.882	1.882
C204	1.982	1.981	1.976	1.982			1.982	C204	1.982	1.982
C205	1.513	1.494	1.533	1.360	1.838	1.838	1.513	C205	1.424	1.560
C206	2.351	2.299	2.381	2.313	2.447	2.407	2.381	C206	2.266	2.447
C207	2.825	2.825	2.825	2.825			2.825	C207	2.825	2.825
C208	2.700	2.700	2.700	2.700	2.700	2.700	2.700	C208		
C209	2.695	2.695	2.695	2.695			2.695	C209	2.695	2.695
C210	2.834	2.834	2.834	2.834			2.834	C210	2.834	2.834

C211	2.700	2.700	2.700	2.700			2.700	C211		
C212	2.700	2.700	2.700	2.700	2.700		2.700	C212		
C213	1.964	1.967		1.975				C213		
C214	1.949	1.949	1.957	1.938	1.951	1.938	1.926	C214	1.951	1.958
C215	2.144	2.144	2.131	2.137	2.146	2.147	2.148	C215	2.138	2.130
C216	2.073	2.073	2.065					C216		
C217	1.999	1.999		1.999			1.999	C217		
C218	2.856			2.856		2.856	2.856	C218		
C219	2.831	2.829	2.833	2.833	2.833	2.833	2.833	C219	2.833	2.833
C220	2.790			2.790		2.790	2.790	C220		
C221	2.810			2.810		2.810	2.810	C221		
C222	2.816	2.816	2.816	2.816	2.816	2.816	2.816	C222		
C223	2.816	2.816	2.816	2.816	2.816	2.816	2.816	C223	2.816	2.816
C224	2.821	2.821	2.821	2.821	2.821	2.821	2.821	C224	2.821	2.821
C225	2.811	2.811	2.811	2.811	2.811	2.811	2.811	C225	2.811	2.811
C301	2.074	2.072	2.073	2.075			2.074	C301	2.074	2.074
C302	2.204	2.198	2.193	2.178	2.218	2.208	2.200	C302	2.189	2.205
C303	1.612	1.637	1.542	1.575			1.612	C303	1.591	1.447
C304	2.221	2.220	2.220	2.221	2.224		2.221	C304	2.221	2.220
C305	2.341	2.337	2.332	2.335	2.332	2.323	2.335	C305	2.314	2.293
C306	2.843	2.843	2.843	2.843			2.843	C306	2.843	2.843
C307	2.750	2.750	2.750	2.750	2.750	2.750	2.750	C307	2.750	2.750
C308	2.820	2.820	2.820	2.820	2.820	2.820	2.820	C308	2.820	2.820
C309	2.745	2.745	2.745	2.745	2.745		2.745	C309	2.745	2.745
C310	2.859	2.859	2.859	2.859		2.859	2.859	C310		
C311	2.820	2.820	2.820	2.820	2.820	2.820	2.820	C311	2.820	2.820
C312	1.549	1.399	1.120		1.416	1.393	1.317	C312		
C313	1.984	1.953	1.933	1.927	1.863		1.617	C313	1.979	1.838
C314	2.035	2.038	1.982	1.921			1.975	C314	2.006	1.793
C315	1.579	1.560	1.420	1.579			1.457	C315	1.540	1.353
C316	2.490	2.489	2.486	2.488	2.483	2.474	2.483	C316	2.490	2.476
C317	2.880	2.880	2.880	2.880	2.880	2.880	2.880	C317	2.880	2.880
C318	2.891	2.891	2.891	2.891	2.891	2.891	2.891	C318		
C319	2.891	2.891	2.891	2.891		2.891	2.891	C319		
C320	2.844	2.844	2.844	2.844	2.844	2.844	2.844	C320	2.844	2.844
Average	2.476	2.477	2.424	2.435	2.474	2.539	2.464	Average	2.428	2.416

PO and PSO ATTAINMENT LEVEL									
ATTAINMENT(PO AND PSO)(2022-25)									
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
Direct Attainment	2.476	2.477	2.424	2.435	2.474	2.539	2.464	2.428	2.416
INDIRECT ATTAINMENT	2.779	2.752	2.732	2.762	2.779	2.765	2.659	2.663	2.714
PO and PSO ATTAINMENT	2.54	2.53	2.49	2.50	2.53	2.58	2.50	2.47	2.48


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