



# SRI BHARATHI

ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)  
Kaikkurichi, Pudukkottai -622 303

[www.sbec.edu.in](http://www.sbec.edu.in)

## NAAC DOCUMENTS



Quality Indicator Frame Work

Criterion – 2

Teaching-Learning and Evaluation

Submitted by

**IQAC**

**Internal Quality Assurance Cell**

**Sri Bharathi Engineering College for Women**



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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

**Criteria 2**

**Teaching-Learning and Evaluation**

**350**

## **Key Indicator- 2.6. Student Performance and Learning Outcome (90)**

2.6.2 Attainment of POs and COs are evaluated (20)

**2022-2023**

## **ATTAINMENT EVALUATION OF POs & COs ELECTRONICS AND COMMUNICATION ENGINEERING**

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KAIKKURICHI, PUDUKKOTTAI-622-303

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Academic Year (2022 - 2023)

### PO-PSO ATTAINMENT

PO/PSO	STATEMENT	TARGET	ATTAINED VALUE	ATTAINMENT %
PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	2.77	2.22	80.13
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences	2.47	1.94	80.30
PO3	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	2.11	1.71	80.73
PO4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	1.86	1.54	82.89
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	1.71	1.45	85.16
PO6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	1.64	1.38	84.24

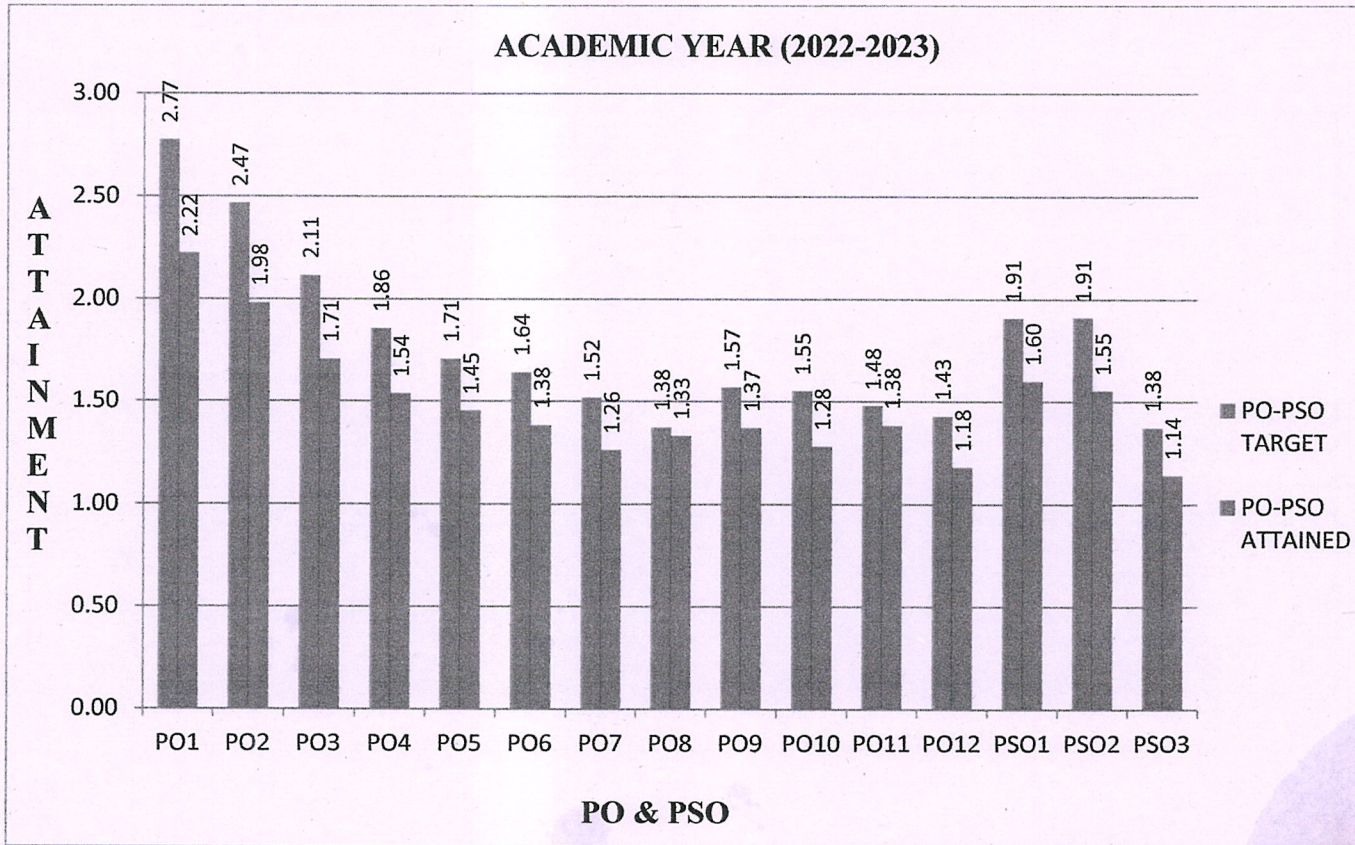
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<b>PO7</b>	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	<b>1.52</b>	<b>1.26</b>	<b>83.18</b>
<b>PO8</b>	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	<b>1.38</b>	<b>1.33</b>	<b>96.95</b>
<b>PO9</b>	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.	<b>1.57</b>	<b>1.37</b>	<b>87.33</b>
<b>PO10</b>	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	<b>1.55</b>	<b>1.28</b>	<b>82.56</b>
<b>PO11</b>	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	<b>1.48</b>	<b>1.38</b>	<b>93.52</b>
<b>PO12</b>	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	<b>1.43</b>	<b>1.18</b>	<b>82.61</b>
<b>PSO1</b>	Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles	<b>1.91</b>	<b>1.60</b>	<b>83.88</b>
<b>PSO2</b>	Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.	<b>1.91</b>	<b>1.55</b>	<b>81.36</b>
<b>PSO3</b>	Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems	<b>1.38</b>	<b>1.14</b>	<b>83.07</b>

  
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**ECE DEPARTMENT**  
**ACADEMIC YEAR 2022-2023**  
**CO-PO-PSO ATTAINMENT**



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**PUDUKKOTTAI - 622 303**

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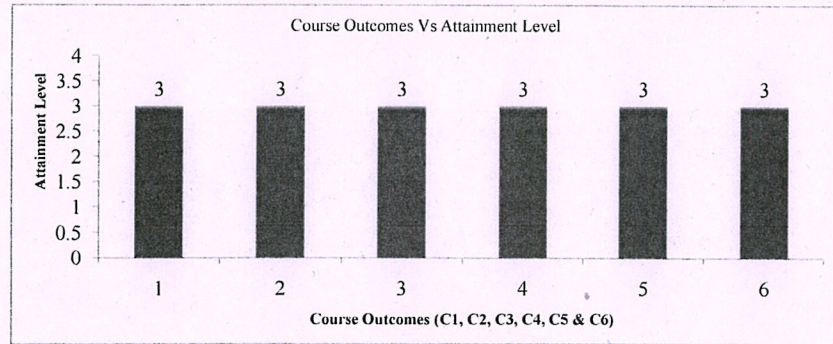


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Department of Electronics and Communication Engineering

**Internal Assessment -Attainment of Course Outcomes (Through Direct Assessment)**

ACADEMIC YEAR - 2022 - 23																		BATCH						2021 - 2025										
COURSE CODE/TITLE		EC 3354 /SIGNALS AND SYSTEMS																COURSE OUTCOME						1	2	3	4	5	6					
YEAR / SEM		II/III																TARGET(%)						65	65	65	65	65	65					
COURSE COORDINATOR		Mrs R. Yogeshwari																TOTAL STRENGTH						12										
ATTAINMENT LEVEL		Level		Range																														
		1		UP TO 60% of the students scored more than target																														
		2		61 - 79% of the students scored more than target																														
		3		80% & ABOVE of the students scored more than target																														
S.NO	REG NO	NAME OF THE STUDENT	IAT 1 - MARKS ALLOTTED						IAT 2 - MARKS ALLOTTED						IAT 3 - MARKS ALLOTTED						Assignment / Mini Project /Tutorial / Seminar						TOTAL COURSE OUTCOME							
			C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6		
			-40	30	30										30	30	-40										10	10		10	10	40	30	30
1	9.12621E+11	AMRIN M	36	27	27							33	25	25										7	9		9	8	36	34	36	33	34	33
2	9.12621E+11	BHUVANESWARI C	34	25	25							33	25	25										8	8		9	7	34	33	33	33	34	32
3	9.12621E+11	DHANYASHREE A	34	26	26							32	24	24										9	8		9	8	34	35	34	32	33	32
4	9.12621E+11	KALAIVANI R	35	26	26							32	24	24										7	8		9	8	35	33	34	32	33	32
5	9.12621E+11	KAVIYA K	36	27	27							37	28	28										8	7		9	9	36	35	34	37	37	37
6	9.12621E+11	KEERTHANA V	40	30	30							38	28	28										7	8		9	9	40	37	38	38	37	37
7	9.12621E+11	PAVITHRA P	35	26	26							34	26	26										9	9		9	9	35	35	35	34	35	35
8	9.12621E+11	RAJESHWARI R	38	29	29							40	30	30										9	8		9	7	38	38	37	40	39	37
9	9.12621E+11	SUBALAKSHMI M	32	24	24							33	25	25										7	8		9	9	32	31	32	33	34	34
	9.12621E+11	SUGUNA C	34	26	26							35	26	26										9	9		9	9	34	35	35	35	35	35
	9.12621E+11	JAYAPRIYA M	33	25	25							32	24	24										9	9		9	9	33	34	34	32	33	33
10	9.12621E+11	KIRUBASHINI C	36	27	27							31	23	23										9	9		9	9	36	36	36	31	32	32
CO's Target Value																		26.0	19.5	19.5	26.0	19.5	19.5											
No. of Students scored above CO's Target Value																		12	12	12	12	12	12											
Percentage of Students scored above Target																		100.0	100.0	100.0	100.0	100.0	100.0											
CO Attainment																		3	3	3	3	3	3											
CO attainment Values to plot the Graph																		3	3	3	3	3	3											



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Faculty Incharge

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**SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN**  
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**  
**COURSE OUTCOME ATTAINMENT - UNIVERSITY EXAMINATION**  
**ACADEMIC YEAR : 2022 - 2023 (ODD SEM)**

YEAR /SEM: II / III

Batch:2021-2025

SUBJECT : EC3354 /SIGNALS AND SYSTEMS

CO Attainment Level: 1 - (UPTO 60%) 2- (61%-79%) 3-(80% and Above)

TOTAL STRENGTH : 12

S.NO	Register No	NAME	Univ. Grade	
1	912621106001	AMRIN M	B+	
2	912621106002	BHUVANESWARI C	B+	
3	912621106003	DHANYASHREE A	B+	
4	912621106004	KALAIVANI R	U	
5	912621106005	KAVIYA K	B+	
6	912621106006	KEERTHANA V	A	
7	912621106007	PAVITHRA P	B+	
8	912621106008	RAJESHWARI R	B+	
9	912621106009	SUBALAKSHMI M	U	
10	912621106010	SUGUNA C	B+	
11	912621106301	JAYAPRIYA M	U	
12	912621106301	KIRUBASHINI C	U	
No. of O Grade			0	0
No. of A+ Grade			0	0
No. of A Grade			1	1
No. of B+ Grade			7	7
No. of B Grade			0	0
No of C Grade			0	0
No. of U Grade			4	4
No. of UA Grade			0	0
Target for course outcome Attainment			60	12
No of students above the target			8	
CO-Attainment University (%)			66.67	

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Overall Attainment Sheet – COs - POs & PSOs attainment calculation

CO	CO-Attainment Internal (CO-INT) (Avg. Attainment of All section) (%)	CO-Attainment University (CO-UNI) (Avg. Attainment of All section) (%)	Direct CO Attainment (0.20xCO-INT + 0.80xCO-UNI) (%)	CO Attainment Level
C203.1	100.0	66.67	73.3	2
C203.2	100.0	66.67	73.3	2
C203.3	100.0	66.67	73.3	2
C203.4	100.0	66.67	73.3	2
C203.5	100.0	66.67	73.3	2
C203.6	100.0	66.67	73.3	2

Expected CO-PO Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C203.1	3	3	3	3	2	2	-	-	-	-	-	1	2	1	1
C203.2	3	3	3	3	2	2	-	-	-	-	-	1	2	1	1
C203.3	3	3	3	3	2	2	-	-	-	-	-	1	2	1	1
C203.4	3	3	3	3	2	2	-	-	-	-	-	1	2	1	1
C203.5	3	3	3	3	2	2	-	-	-	-	-	1	2	1	1
C203.6	3	3	3	3	2	2	-	-	-	-	-	1	2	1	1
C203	3	3	3	3	2	2	-	-	-	-	-	1	2	1	1


PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C203.1	2	2	2	2	1.33	1.33	-	-	-	-	-	0.67	1.33	0.67	0.67
C203.2	2	2	2	2	1.33	1.33	-	-	-	-	-	0.67	1.33	0.67	0.67
C203.3	2	2	2	2	1.33	1.33	-	-	-	-	-	0.67	1.33	0.67	0.67
C203.4	2	2	2	2	1.33	1.33	-	-	-	-	-	0.67	1.33	0.67	0.67
C203.5	2	2	2	2	1.33	1.33	-	-	-	-	-	0.67	1.33	0.67	0.67
C203.6	2	2	2	2	1.33	1.33	-	-	-	-	-	0.67	1.33	0.67	0.67
C203	2	2	2	2	1.33	1.33	-	-	-	-	-	0.67	1.33	0.67	0.67

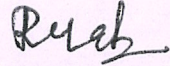
Attainment of POs and PSOs:

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C203	3	3	3	3	2	2	-	-	-	-	-	1	2	1	1
Attainment	2	2	2	2	1.33	1.33	-	-	-	-	-	0.67	1.33	0.67	0.67

Comments by Program Coordinator	1. 2.
Remarks by HoD	

  
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 Name and Signature  
 of the Faculty Member

  
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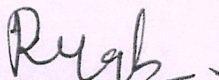
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**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**


**ACTION TAKEN REPORT FOR CO-PO-PSO ATTAINMENT**  
**ACADEMIC YEAR 2022-2023**

In order to bridge the gap between the attained level with respect to the target level in each POs and PSOs, the following corrective measures were taken.

S.NO	Name of the activity Proposed	Focused POs and PSOs
1	<b>Value Added Course (VAC) -</b> “Foundational of Electronics & PCB Designing”	PO1,PO2,PO3,PO4,PO5,PO10,PO9,PO12, PSO1,PSO2,PSO3
2	<b>Entrepreneurship Development Cell (EDC)</b> – Awareness about Entrepreneurship, Innovation and Importance of an E & I cell	PO6,PO7,PO8,PO11
3	<b>Intellectual Property Rights (IPR)</b> – Role of IPR in Green Technologies	PO6,PO7,PO8,PO11
4	<b>Language and Communication Technology (LCT)</b> – Effect of Technology in Intercultural Communication.	PO9,PO10
5	<b>Soft Skill Program-</b> Way from Campus to Corporate.	PO10
6	<b>Life Skill Program-</b> Entrepreneurship and Innovation	PO8
7	<b>Information Communication Technology (ICT) tools</b> – AI in Communication Tools.	PO5, PO12
8	<b>Research Methodology(RM)</b> - Research outlook in Embedded Systems	PO1,PO2,PO3,PO4, PSO1,PSO2,PSO3

  
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