



Kalyani Charitable Trust's
Late G. N. Sapkal College of Engineering

Kalyani Hills, Anjaneri, Trimbakeshwar Road, Nashik - 422 213



Ref: KCT's/LGNSCOE/2024-25/173 (1)

Date: 17/03/2025

To,

The Principal,

Late G.N. Sapkal College of Engineering,

Nashik (Maharashtra), 422213.

Subject: Requesting permission for conducting add-on program.

Sir,

I, Prof. Snehal H. Gorde, a faculty member of your esteemed institution, humbly request your permission on behalf of our Electronics & Telecommunication department to plan a Value Added /Add-on program on "Troubleshooting of RF based Products" in association with IQAC aimed at enhancing students' knowledge of the subjects. The program's objective is to foster industrial awareness among the students and improve their educational experience.

This program has been planned and implemented by a committed group of professionals, who have made sure that it is in line with both our educational objectives and institutional principles. We have a thorough schedule of events, a participation list, and the materials needed.

Kindly grant us permission to proceed with organization of this program. Your support and guidance will undoubtedly boost the confidence and enthusiasm of our students. We look forward to your positive response and approval for the same.

Thanking you in anticipation.

Yours sincerely,

Prof. Snehal H. Gorde

Encl.:

1. Program Module and Outcome

RLS sir
forwarded for your
Approval.

J. S. Bagul



Permitted
Sagul

KALYANI CHARITABLE TRUST'S
**LATE G.N. SAPKAL COLLEGE OF
ENGINEERING**



Kalyani Hills, Anjaneri-Vadholi, Trimbakeshwar Road, Dist: Nashik-422212(India)
Tel.: +91-2594-220168/71. Fax : +91-2594-220174

Website: www.sapkalknowledgehub.org, Email: gns_engineering@sapkalknowledgehub.com

**Department of Electronics & Telecommunication
Engineering**

Program Module and Outcome

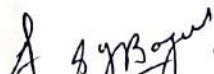
**30 Hrs Certificate Course/Add-on Course on
"Troubleshooting of RF based Products"**

Sr/ No.	Module	Syllabus
1	Module 1	Understanding RF Fundamentals Common RF Issues
2	Module 2	Troubleshooting Methodologies Specific Troubleshooting Scenarios
3	Module 3	Tools and Resources

Sr/ No.	Module	Outcome
1	Module 1	Students understand the fundamental principles of RF communication and identify and diagnose common RF communication issues.
2	Module 2	Students were able to apply step-by-step troubleshooting methods to identify faults in RF systems, evaluate common fault scenarios and select appropriate tools and techniques for effective resolution.
3	Module 3	Students identified and described key tools used in RF troubleshooting and develop test procedures for systematic troubleshooting using hardware and software resources.



Prof. S. H. Gorde
Program Coordinator

Prof. S. B. Borse
HoD E&TC



Prof. (Dr.) S. B. Bagal
Principal
Prof. (Dr.) Sahebrao B. Bagal
Principal
Late G. N. Sapkal College of Engineering
Anjaneri, Nashik-422 213



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Website: www.sapkalknowledgehub.org, E-mail: engg_engineering@sapkalknowledgehub.com



Department of Electronics and Telecommunication Engineering

Date : 18/03/2025

NOTICE

All the students of Third Year E&TC are hereby informed that our department has organized 30 Hours Add on Program on "Troubleshooting of RF based Products" from date 25/03/2025 to 29/03/2025 from 09.00 am to 04.00pm. It is compulsory for all the students to attend the program.

Venue: Basic Electronics Lab, E&TC department.

**Prof. S. H. Gorde
Program Coordinator**



**Prof. S. B. Borse
HOD, E&TC Engg.**

ACAD-R-39	Activity Report	Academic Year: 2024-25
Rev.: 00		Semester: II
Date: 01-12-2024		

Particulars	Description
Department	Electronics & Telecommunication
Activity	Add On Program
Activity level	College
Title	Troubleshooting of RF based products.
Organized by	Prof. S. H. Gorde
Venue	K.C.T's Late G. N. Sapkal College of Engineering, Anjaneri, Nashik
Date	25/03/25 to 29/03/25
Time	9.00 am to 4.00 pm
Objectives of the activity	<ul style="list-style-type: none"> To enhance students' skills and knowledge in troubleshooting of RF based products. To enable users to diagnose and resolve issues related to radio frequency (RF) communication. To improve performance of RF based products and ensure reliable connectivity in RF communication.
Outcomes of activity	<ul style="list-style-type: none"> Improved practical problem-solving abilities and increased confidence in diagnosing and resolving issues with RF based products. Users will be able to identify and interpret common RF issues (e.g., interference, attenuation, signal loss) and enhance ability to distinguish between hardware, software, or environmental causes of RF problems. Increased signal strength and stability across RF products and mitigation of common RF issues like co-channel interference, multipath fading, and signal attenuation.
Targeted Participants	TE students
Total no. of Participants & % of students	66 and 90%
Speaker/ Resource Person	1. Name: Mr. Gaurav Prakash Sawant (Mob. 8390004298) Test Engineer, Jabil Circuit India Pvt. Ltd. Ranjangaon MIDC, Pune



The day wise sessions were delivered through lectures. The topics covered are mentioned below-

Day 1: Introduction to RF systems, Architecture of typical RF-based products and Overview of transceivers, antennas, impedance matching.

Day 2: Signal flow analysis in transmit and receive chains and Understanding RF path losses and interference.

Day 3: Common RF Issues & Debugging Techniques.

Day 4: Real-world product failure analysis (IoT node, RF remote, telemetry device), Replacing faulty RF ICs, filters, and capacitors.

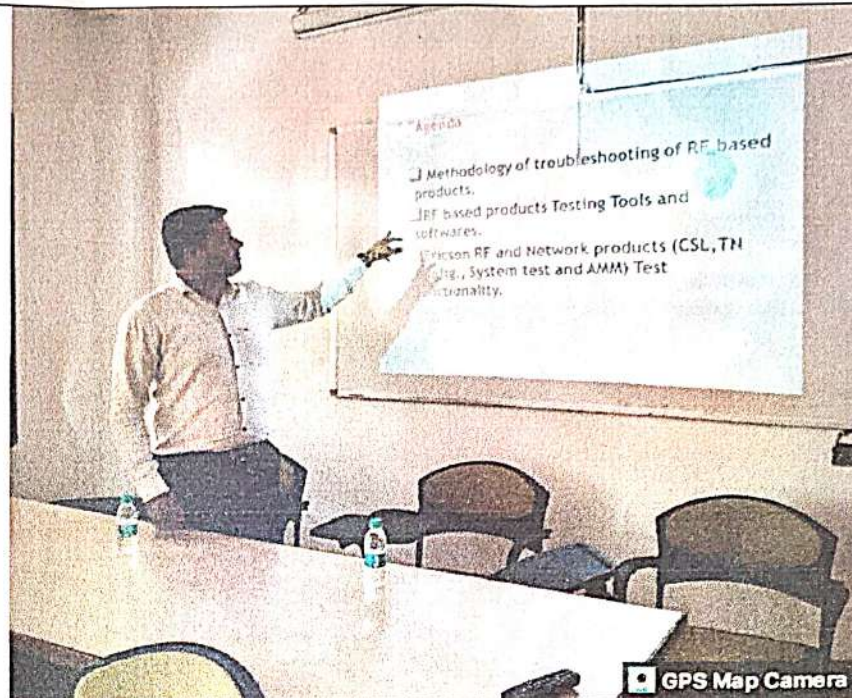
Day 5: Team-based troubleshooting challenge: identify, diagnose, and repair a non-functional RF device, Documentation and reporting techniques.

All sessions were well-received and contributed to students' professional development. Participant engagement was active, and the feedback received indicated a positive learning experience. Overall, the program met its objectives and contributed value beyond the core curriculum.

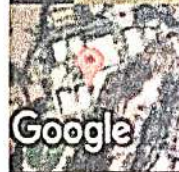
Geo- tag
photos of the
activity



Content of the activity	<p>1. Understanding RF Fundamentals:</p> <ul style="list-style-type: none"> Basic concepts of radio frequency, including frequency, wavelength, and signal propagation. Different types of RF signals and their characteristics. RF spectrum and common frequency bands used in wireless communication. RF modulation techniques. <p>2. Common RF Issues:</p> <ul style="list-style-type: none"> Signal interference from other devices or environmental factors. Range limitations and signal strength issues. Hardware failures in RF components. <p>3. Troubleshooting Methodologies:</p> <ul style="list-style-type: none"> Systematic approach to identifying the root cause of RF problems. Using test equipment like spectrum analyzers and signal generators. Using test equipment like spectrum analyzers and signal generators. <p>4. Specific Troubleshooting Scenarios:</p> <ul style="list-style-type: none"> Troubleshooting Wi-Fi and Bluetooth devices. Resolving issues with wireless sensor networks. Resolving issues with wireless sensor networks. <p>5. Tools and Resources:</p> <ul style="list-style-type: none"> Spectrum analyzers, signal generators, and other RF test equipment. Software tools for analyzing RF data and network performance.
Relevance to POs	PO1, PO2, PO3, PO5, PO12
Relevance to PSOs	PSO2
Methodology used	<ol style="list-style-type: none"> Presentation Study and Demonstration Notes and comments Questions and Discussion
Brief Description of the activity	<p>An add-on program was designed to enhance core curriculum knowledge and skills of students of TE Electronics & Telecommunication. The program focused on RF communication and methods of troubleshooting of RF based products and involved 66 students successfully completing it.</p> <p>We initially welcomed our resource person Mr. Gaurav Prakash Sawant in presence of respected Principal, Prof. (Dr.) S. B. Bagal and HOD Prof. S. B. Borse. Mr. Gaurav Sawant introduced himself and interacted with students on various aspects. The program inaugurated by presenting a token of love to the resource person. The sessions started just after the inauguration. All participants were fully active and enthusiastic during the start of session.</p>



GPS Map Camera



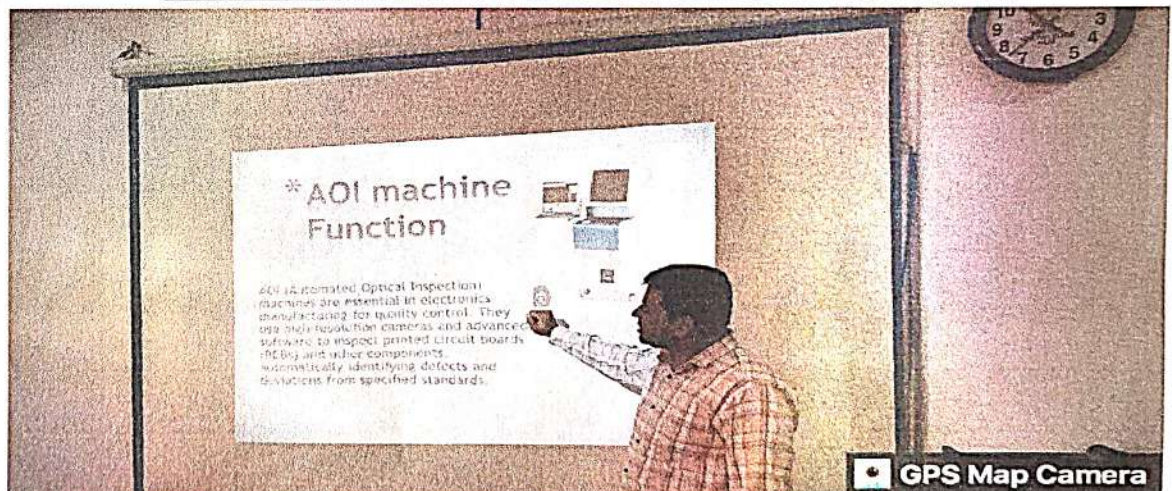
Anjaneri, Maharashtra, India

Trimbakeshwar Rd, Anjaneri, Maharashtra, 422213

Lat 19.943180°

Long 73.600170°

26/03/2025 11:10 AM GMT +05:30



GPS Map Camera



Anjaneri, Maharashtra, India

Trimbakeshwar Rd, Anjaneri, Maharashtra, 422213

Lat 19.943180°

Long 73.600170°

29/03/2025 10:53 AM GMT +05:30





Prof. S. H. Gorde
Coordinator / Prepared by



Prof. S. B. Borse
HOD



Prof. (Dr.) V. A. Kolhe
IQAC coordinator





Prof. (Dr.) S. B. Bagal
Principal
Prof. (Dr.) Sahebrao B. Bagal
Principal
Late G. N. Sapkal College of Engineering
Anjaneri, Nashik-422 213



Kalyani Charitable Trust's
Late G. N. Sapkal College of Engineering
Kalyani Hills, Anjaneri, Trimbakeshwar Road,
Nashik - 422 213



Ref: KCT's /LGNSCOE/2024-25/

Date: 20/03/2025

To,

Prof. Gaurav Prakash Sawant
Test Engineer,
Jabil Circuit India Pvt. Ltd.,
Ranjangaon MIDC, Pune.

Subject: - Invitation letter to conduct Add on Program on "Troubleshooting of RF based Products"

Respected Sir,

We are pleased to invite you as a resource person for conducting Add on Program on "Troubleshooting of RF based Products" organized by Electronics & Telecommunication Engineering Department from date 25/03/2025 to 29/03/25 in association with IQAC of Late G. N. Sapkal College of Engineering, Anjaneri, Nashik 422212.

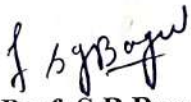
We will be grateful if you could share your valuable expertise on the topic aforementioned. We hope that the students will be benefitted by attending the this program with the topic of Python Programming"

We look forward to your presence in the campus.


Thanking You,

With warm regards.

Yours Faithfully,


Prof. S.B. Borse
HOD, E&TC Engg.




Prof. (Dr.) S. B. Bagal
Principal
Prof. (Dr.) Sahebrao B. Bagal
Principal
Late G. N. Sapkal College of Engineering
Anjaneri, Nashik-422 213



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Website: www.sapkalknowledgehub.org E-mail: gns_engineering@sapkalknowledgehub.com



Date: 29/03/2025

To,
Mr. Gaurav Prakash Sawant
Test Engineer,
Jabil Circuit India Pvt. Ltd.,
Ranjangaon MIDC, Pune.

Subject: Letter of Appreciation.

Reference: 30 Hours Add on Program on "Troubleshooting of RF based Products"

Respected Sir,

We would like to take this opportunity to thank you for delivering 30 Hours Add on Program on "Troubleshooting of RF based Products" organized in Late G. N. Sapkal College of Engineering from 25/03/2025 to 29/03/2025. The program was successful and was appreciated by the participating students.

During the program students actively interacted with you, which will surely help them in future. The participants were significantly benefited by this Add on Program.

The department and college appreciate your time, dedicated efforts for conducting 30 Hours Add on Program on "Troubleshooting of RF based Products" and contribution in improving the well-being of the participants.

Yours Sincerely,

Prof. S. B. Borse
HOD, E&TC Department,
LGNSCOE, Nashik

Received
29/03/2025

FFEDBACK FORM – RESOURCE PERSON

We would appreciate if you could take a few minute to share your opinion with us.

Name of the Resource Person: Gaurav Prakash Sawant

Mobile No: 8390004298 E-mail id: gauravsawant@gmail.com

Name of the Affiliating Organisation: Jabil Circuit Ind. Pvt. Ltd.

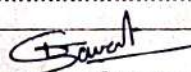
Address of the Affiliating Organisation: B-26, MIDC, Industrial Area, Ranjanga, Tal. Shirur

Title of Event: Troubleshooting of RF Based Product

Date(s) of Participation: From 25-03-2025 to 29-03-2025 Days: 05

Kindly tick mark (✓) in the relevant box below

Sr.	Performance Attributes	Rating		
1.	Involvement of the participants in the event	1	2	3 ✓
		1 – Not ; 2 – Moderate ; 3 – Very Inquisitive		
2.	Nature of the event organized (Relevance to students / Academics)	1	2	3 ✓
		1 – Not; 2 - Moderately; 3 – Most Relevant		
3.	Infrastructural capacity of the organizing Department / Institute	1	2	3 ✓
		1 –Insufficient; 2 – Sufficient; 3 – Excellent		
4.	Overall impact of the event on the participants	1	2	3 ✓
		1 – Beneficial; 2 – More Beneficial; 3 – Most Beneficial		
5.	Comments on the boarding and lodging facilities (if availed)	1	2 ✓	3
		1 – Average; 2 – Good; 3 – Excellent		
6.	In near future how would you like to associate with the Students / Department / Institute?			
	Mentoring	Infrastructure Sharing	Employment	Financial Support
				All of the above ✓
7.	Comments / Suggestions:	<u>All participant actively interacted & co-operated.</u>		


Signature of Resource Person

Late G. N. Sapkal College of Engineering
Department of Electronics & Telecommunication Engineering
FEEDBACK OF PARTICIPANTS

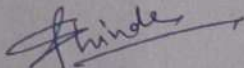
Title of the Program/Event: 30 Hours Add on Program on "Troubleshooting of RF based Products" in Department of Electronics & Telecommunication Engineering

Name of Participant:Shubham Shinde.....

Name of the Department: Mechanical/Civil/Electrical/E&TC/Computer/Other

1.	Did you find the Expert talk is useful?	1	2	3
				✓
		1-not useful ; 2-To some Extend ; 3-Very useful		
2.	Did it fulfill your expectation?	1	2	3
				✓
		1-not useful ; 2-To some Extend ; 3-Very useful		
3.	Did the Seminar improve your knowledge about the topic discussed?	1	2	3
			✓	
		1-not useful ; 2-To some Extend ; 3-Very useful		
3.	Suggestion to further improvement:	No		

Date: 29/03/2025


Signature of Participants

Late G. N. Sapkal College of Engineering
Department of Electronics & Telecommunication Engineering
FEEDBACK OF PARTICIPANTS

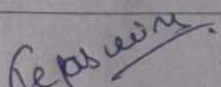
Title of the Program/Event: 30 Hours Add on Program on "Troubleshooting of RF based Products" in Department of Electronics & Telecommunication Engineering

Name of Participant:Tejaswini Khade.....

Name of the Department: Mechanical/Civil/Electrical/E&TC/Computer/Other

1.	Did you find the Expert talk is useful?	1	2	3
				✓
		1-not useful ; 2-To some Extend ; 3-Very useful		
2.	Did it fulfill your expectation?	1	2	3
				✓
		1-not useful ; 2-To some Extend ; 3-Very useful		
3.	Did the Seminar improve your knowledge about the topic discussed?	1	2	3
				✓
		1-not useful ; 2-To some Extend ; 3-Very useful		
3.	Suggestion to further improvement:	No		

Date: 29/03/2025


Signature of Participants

Department of Electronics & Telecommunication Engineering

30 Hours Add on Program on "Troubleshooting of RF based Products"

ATTENDANCE OF PARTICIPANTS

Sr. No.	Name of Participants	Sign				
		25/03/25	26/03/25	27/03/25	28/03/25	29/03/25
1	Aadesh sunil Kapadnis	(31)h	(31)h	(31)h	(31)h	(31)h
2	Shivanjali DEEPAK MULT	Smulit	Smulit	Smulit	Smulit	Smulit
3	Roshani Suresh Gavali	Euli	Euli	Euli	Euli	Euli
4	Kharmane Tanuja Rangnath	Th	Th	Th	Th	Th
5	Khade Tejaswini Rajendra	Jadwin	Jadwin	Jadwin	Jadwin	Jadwin
6	Ankush Ravindra Pagar	Gagae	Gagae	Gagae	Gagae	Gagae
7	Gayatri Ravindra Patil	Th	Th	Th	Th	Th
8	Jaydip Sandip Hyari	Th	Th	Th	Th	Th
9	Jagtap Arti Vinayak	Th	Th	Th	Th	Th
10	Umare Vaishali Papat	Rhoe	Rhoe	Rhoe	Rhoe	Rhoe
11	Patil Jyoti Jaysing	Jyoti	Jyoti	Jyoti	Jyoti	Jyoti
12	Mahale Pratiksha Paraji	Pratiksha	Pratiksha	Pratiksha	Pratiksha	Pratiksha
13	Mahajan Raj Bharat	Raj	Raj	Raj	Raj	Raj
14	Gosavi Akshay Gajrudhar	Akshay	Akshay	Akshay	Akshay	Akshay
15	Aher pooja Papat	Th	Th	Th	Th	Th
16	Gaikwad Bhagyashri Ankush	Th	Th	Th	Th	Th
17	Shirwal Mrudula Sandip	Miss Shirwal	Miss Shirwal	Miss Shirwal	Miss Shirwal	Miss Shirwal
18	Savant Pavan Eknath	Pant	Pant	Pant	Pant	Pant
19	Gumule Sakshi Kailas	Sakshi	Sakshi	Sakshi	Sakshi	Sakshi
20	Sonanis Sakshi Kishor	Sonanis	Sonanis	Sonanis	Sonanis	Sonanis
21	Patil Pavan Bhagwan	Patil	Patil	Patil	Patil	Patil
22	Mahajan Bhagyashri Govind	BM	BM	BM	BM	BM
23	Shelke Ajay Balasaheb	Shelke	Shelke	Shelke	Shelke	Shelke
24	Patil snehal navneet	Patil	Patil	Patil	Patil	Patil
25	Hire Leena Bhalchandra	Th	Th	Th	Th	Th
26	Tambe Aditya Vasudev	Th	Th	Th	Th	Th
27	Mahale Siddesh Dattatray	Th	Th	Th	Th	Th
28	Shinde Satyarn Rajendra	Th	Th	Th	Th	Th
29	Mahajan Manas Raghunath	Th	Th	Th	Th	Th
30	Nikam Kanchan Annasaheb	Th	Th	Th	Th	Th
31	Vise Pranav Rajendra	Th	Th	Th	Th	Th
32	Richa Sudhakar Kothawade	Th	Th	Th	Th	Th
33	Mokale Vaibhav Bhausaheb	Th	Th	Th	Th	Th

Sr. No.	Name of Participants	Sign				
		25/03/25	26/03/25	27/03/25	28/03/25	29/03/25
34	Chavan Nibin Dattu					
35	Dattaraj Sumit Rajendra					
36	Darade Pranjal Sharad					
37	Nagare Kanchan Sukdev					
38	Bhadange Om Chandrakant					
39	Sangale Sharang Suresh					
40	Bhushan Rajendra Patil					
41	Chetan Mahadev Pardeshi					
42	Kaveri Everest Borse					
43	Tanmay Shamrao Jadhav					
44	Nilampari Jayesh Jagtap					
45	Disha Bhausaheb Jadhav					
46	Anuska Kalpesh Kordile					
47	Swapnil Sanjay Nikam					
48	Bhushan S. Lonar					
49	Pawar Gaurav Mahendra					
50	Shinde Sai Yogesh					
51	Bachhav Yash Ganesh					
52	Mogal Shivam Sanjay					
53	Shinde Shubham Sukdeo					
54	Dwivedi Pratham Sunil					
55	Mali Manav Nitin					
56	Rooshid. Mukhtar. Sikkalgao					
57	Mahajan Chandan Ashok					
58	Mohane Gaurav Suresh					
59	Komal Dhananjay Bhamare					
60	Rushikesh Dada Lakde					
61	Prasad Nitin Thete					
62	Pranav Keda Bachhav					
63	Mayur S. Tarle					
64	Valbhav B. Suryavanshi					
65	Prasad G. Baviskar					
66	Saniya A. Teipathi					

Prof. S. H. Gorde
Program Co-ordinator



Prof. (Dr.) Sahibrao B. Bagal
HOD
Principal

Late G. N. Sapkal College of Engineering



K.C.T'S

LATE G. N. SAPKAL COLLEGE OF ENGINEERING

Approved by AICTE Affiliated to SPPU

Anjaneri, Trimbakeshwar Road,

Tal & Dist.: Nashik-422213, Mob. No. 09420695484

Email: administrative.officer@sapkalknowledgeclub.org Website: ignscoe.sapkalknowledgeclub.org



CERTIFICATE

OF APPRECIATION

This certificate is proudly awarded to

Jaybhavi Jangade

has participated in 30 Hours Certified Course on "Troubleshooting of RF Based Products" organized by Department of Electronics and Telecommunication Engineering of K.C.T's, Late G. N. Sapkal College of Engineering, Anjaneri, Nashik from 25th March, 2025 to 29th March, 2025.



Prof. S. H. Gorde

Program Incharge

Prof. S. B. Borse

HOD, E&TC Dpt.

Prof. (Dr.) S. B. Bagal

Principal



K.C.T's
LATE G. N. SAPKAL COLLEGE OF ENGINEERING

Approved by AICTE Affiliated to SPPU

Anjaneri, Trimbakeshwar Road,

Tal & Dist.: Nashik-422213, Mob. No. 09420695484

Email: administrative.officer@sapkalknowledgehub.org Website: lgnscoe.sapkalknowledgehub.org



CERTIFICATE


OF APPRECIATION

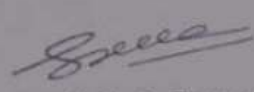
This certificate is proudly awarded to

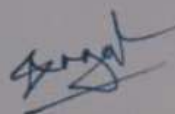
Yash Bachhav

has participated in 30 Hours Certified Course on "Troubleshooting of RF Based Products" organized by Department of Electronics and Telecommunication Engineering of K.C.T's, Late G. N. Sapkal College of Engineering, Anjaneri, Nashik from 25th March, 2025 to 29th March, 2025.




Prof. S. H. Gorde
Program Incharge


Prof. S. B. Borse
HOD, E&TC Dpt.


Prof. (Dr.) S. B. Bagal
Principal