Vishnu Waman Thakur Charitable Trust's
VIVA Institute of Technology
Approved by AICTE New Delhi, Recognized by DTE, Govt. of Maharashtra
And Affiliated to University of Mumbai
NAAC "B++" Grade
Department of Electronics and Telecommunication Engineering

Course Name:	Microwave Circuits and Sub Systems
Name of the Faculty:	Mrs. Jyoti Deore
Designation:	**Assistant Professor**
Organization/Institution:	**VIVA Institute of Technology**
Duration:	08th July 2024 to 11th October2024
Time:	**30 hours**
Number of Students:	15

Course Objectives:

1. To analyze and study rectangular and circular wave guides using field theory.
2. To understand the theoretical principles underlying microwave devices and networks.
3. To design microwave components such as hybrid junctions, Directional Couplers, Microwave Wave-guides and Components, Ferrite Devices.

Course Outcomes:

After successful completion of the course, the students are able to

1. Understand fundamentals of Microwave engineering
2. Design of different passive and some active microwave circuits/subsystems
3. Understand application of microwave in communication and other areas.

Programme Summary:

Duration: 30 Hours

Venue: VIVA Institute of Technology, Shirgaon.

Electronics & Telecommunication Engineering Department of VIVA Institute of Technology organized a 30 hours' certificate course on **"Microwave Circuits and Sub Systems"** during **8th July 2024 to 11th October 2024.**

This course is indented to provide a foundation for microwave engineering to the undergradua te students. Rigorous treatment of the fundamentals of microwave engineering will be provide d. Design of different passive and some active microwave devices will be covered in detail. This course will also provide an overview of application of microwave in communication and other areas.

The event was a success with very positive feedback from the participants. The speech by the Principal Dr. Arun Kumar was an inspiring one that covered the broad future scopes of the fie ld. The Principal being an encouraging one who said that for such events where in student dev elopment is involved, he will always be supportive. In the speech given by Mrs. Archana Ingl e, H.O.D of EXTC, students gained an idea of how this workshop can be utilized to take creat ive projects in the field of engineering.

Topics covered in course:

Sr.no	Contents	Hrs.
1	Introduction to Microwave Engineering and Transmission line theory	3
2	Rectangular and Circular waveguides	3
3	Microwave Networks and Scattering Matrix	3
4	Impedance Matching	3
5	Microwave Resonators	2
6	Power divider, directional couplers and filters	2
7	Microwave Semiconductor Devices	2
8	Microwave Amplifiers and Oscillators	3

9	Microwave Tubes	3
10	Ferrite devices	2
11	Introduction to Microwave Integrated Circuits (MIC)	2
12	Microwave Communication Systems and other application areas.	2

CO-PO MAPPING

Course Outcome	Program Outcome												
	PO 1	PO 2	PO 3	PO 4	P0 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	CO Target level
CO1	3	3	3		-	-	-	-	-	-	-	-	3
CO2	2	3	3		-	-	-	-	-	-	-	-	2.66
CO3	3	3	3		-	-	-	-	-	-	-	-	3
PO Target	2.66	3	3		-	-	-	-	-	-	-	-	3

STUDENT CERTIFICATE

Vishnu Waman Thakur Charitable Trust's
VIVA Institute of Technology
Approved by AICTE, New Delhi, DTE, Govt. of Maharashtra and Affiliated to the University of Mumbai
Shirgaon, VirarE.), Dist: Palghar-401305, Maharashtra
NAAC "B++" GRADE

Certificate of Appreciation

This is to certify that

ALI FIROZ ASGAR

Student of **Electronics and Telecommunication Engineering department** has successfully completed bridge course on **"Microwave Circuits and Sub Systems"** conducted during 8th July 2024 to 11th October, 2024 at

VIVA Institute of Technology, Shirgaon.

His / Her contribution is highly appreciated.

(Mrs. Archana Ingle)
HEAD OF DEPARTMENT

(Dr. Arun Kumar)
Principal

In Association with: VIVA-TECH IJRI ANNUAL RESEARCH JOURNAL ICTACADEMY