VIT

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

School of Electronics Engineering
Department of Communication Engineering




## VALUE ADDED COURSE

# VAC2521:
# ADVANCED RF AND MICROWAVE DESIGN FOR SMART DEVICE APPLICATIONS

## ABOUT THE COURSE

This course provides in-depth knowledge of advanced RF and microwave design techniques for modern smart device applications.

It integrates theoretical concepts with practical design, simulation, and measurement using state-of-the-art tools and anechoic chamber facilities.

## COURSE OUTCOMES

- Students may be able to design RF/microwave antennas and related circuits for smart device applications.
- Students will understand the fabrication aspects and gain hands-on experience through anechoic chamber measurements and practical sessions.

## COURSE HIGHLIGHTS

- Advanced RF & Microwave Antenna Design, Filters and Waveguides
- Smart Phased Array and MIMO Antenna Design
- Additive Metallic Printed Waveguide for mm-Wave and 6G Applications
- Radio-frequency Energy Harvesting (RFEH) and Ground Penetrating Radar (GPR)
- Wearable and Implantable Sensors for Biomedical Applications
- AI/ML Based Antenna Array Design
- Reconfigurable Intelligent Surface (RIS) for 6G Applications
- Hands-on Measurements using Anechoic Chamber

**PROJECT PHASE**
02 December 2026 – 28 February 2027

**DURATION**
3 Months

**ELIGIBILITY**
UG / PG / Research Students

**VENUE**
TT312 (Offline)

## REGISTRATION

Registration fee:
Rs. 500/- + GST

Registration Link:
https://events.vit.ac.in/

8870458556
8126757626
9976254449

karthikeyan.m@vit.ac.in
naveen.mishra@vit.ac.in
rajesh.natarajan@vit.ac.in

## CONVENERS:

**Dr. M. Jasmine Pemeena Priyadarsini**
Dean / SENSE

**Dr. D. Kannadassan**
HoD, Communication Engineering

## ADDRESSING SUSTAINABLE DEVELOPMENT GOALS (SDGs)




This course contributes to building sustainable technologies for healthcare, communication, smart cities, and energy efficiency through innovation, responsible design, and hands-on learning.

**MANDATORY FOR CERTIFICATE:**

- Minimum 50% Marks in Final Assessment Test
- Minimum 75% Attendance

*Gain expertise in RF & Microwave technologies, Antenna Design, 6G Innovations, AI/ML and practical measurements using state-of-the-art Anechoic Chamber.*