VIT®
Vellore Institute of Technology
Vellore – 632014, Tamil Nadu, India

School of Electronics Engineering
Department of Communication Engineering

VALUE ADDED COURSE (VAC)

VAC2521
ADVANCED RF AND MICROWAVE DESIGN FOR SMART DEVICE APPLICATIONS

STARTING FROM
05th December, 2026 (Staturday)
(9:00 AM - 1:00 PM)
(9:00 AM - 1:00 PM)

Eligibility: UG/ PG/Ph.D Students

CO-ORDINATORS

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COURSE HIGHLIGHTS

- In-depth learning on RF & Microwave design for modern smart devices
- Hands-on sessions & project-based learning
- Applications in 5G/6G, IoT, Wearables, Radar, and Smart Systems
- Expert sessions and advanced tools & platforms

REGISTRATION FEE

₹200/- + 18% GST
Total Amount: ₹236/-

MANDATORY FOR CERTIFICATE
- Minimum 50% Marks in Final Assessment Test
- Completion of Project

ELIGIBILITY
UG/ PG/Ph.D Students

Department of Communication Engineering

COURSE CONTENT & SCHEDULE

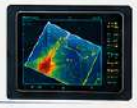
Week 1 (05/12/2026) 4 Hours
- Overview of RF/Microwave: Antennas, Filters,
- Radar Antennas: Design and Applications
- Microwave Filters, Absorbers, and Frequency Selective Surfaces

Week 2 (12/12/2026) 4 Hours
- Antennas and Filter: Design,
- Numerical Modelling and Characterization
- AI and Machine learning (ML) Based Antenna Array Design
- Reconfiguration Intelligence Surface (RIS) for 6G Application

Week 3 (19/12/2026) 4 Hours
- Sustainable IoT-Based Smart Phased Array
- MIMO Antenna: Design and Characterization

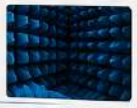
Week 4 (09/01/2027) 4 Hours
- Additive Metallic Printed Waveguide for millimeter waves
- Design Principles of Additive Metallic Printed Waveguides for 6G

Week 5 (23/01/2027) 4 Hours
- Radio-frequency energy harvesting microwave components Design
- Ground penetrating Radar (GPR): Design and Characterization



Week 6 (13/02/2027) 4 Hours (9:00 AM - 1:00 PM)
- Wearable and Implantable Sensors for Biomedical Applications.
- SAR Analysis and Measurements for WBAN Applications

Week 7 (20/02/2027) 4 Hours (9:00 AM - 1:00 PM)
- Discussion on Fabrications of the prototype
- Hands-on Session using the Anechoic Chamber



Week 8 (27/02/2027) 5 Hours
- Prototype Development

RF/Microwave · Antennas · Filters · IoT · Wearables · Radar · 6G