Course Type	Course Code	Name of the Course	L	T	P	Credits
DP	NECC525	**RF and CAD Laboratory**	0	0	3	1.5

Course Objective
The lab aims to provide the idea to the student how to simulate different RF components using simulation software.
Learning Outcomes
By the end of the lab, the students get the confidence on simulation of basic RF & Microwave components.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	Introduction of simulation software's like HFSS & CST MWS, and ADS	6	Familiarization of simulating software's.
2	Modelling and simulation of Rectangular Waveguide using CST and HFSS Software	6	Learning of simulation of Rectangular Waveguide using CST and HFSS Software
3	Design and Simulation of a Simple Polarization Reconfigurable Microstrip Based Monopole Antenna using HFSS Software.	6	Learning of design & simulation of Simple Polarization Reconfigurable Microstrip Based Monopole Antenna using HFSS Software
4	Design and simulation of a Dielectric Resonator Antenna using HFSS Software.	6	Learning of design & simulation of Dielectric Resonator Antenna using HFSS Software
5	Design and simulation of a metamaterial absorber using HFSS Software.	9	Learning of design & simulation of a metamaterial absorber using HFSS Software.
6	Design the Lumped and Distributed Network of Microstrip Low Pass Filter, with cut-off frequency of 3.2 GHz. Using Advanced Design System (ADS).	9	Learning of design & simulation of Microstrip Low Pass Filter using ADS
	Total	42	

Text Books:
1. David M. Pozar, "Microwave Engineering", John Wiley & Sons.
2. C. A. Ballanis , "Antenna Theory, Analysis and Design " , John Wiley & Sons.

Reference Books:
1. Ansys HFSS manual.
2. CST Microwave Studio manual.
3. ADS manual.