1.	Title of the course	RF-CAD and Circuits Laboratory
2.	Course number	EE557P
3.	Structure of credits	0-0-3-2
4.	Offered to	PG
5.	New course/modification to	Modification To EE5194/21
6.	To be offered by	Department of Electrical Engineering
7.	To take effect from	July 2022
8.	Prerequisite	CoT for UG
9.	**Course Objective(s):** To introduce RF-CAD modelling tools for full-wave electromagnetic and circuit simulation followed by the fabrication and testing of the designed RF/Microwave components.	
10.	**Course Content:** RF-CAD using HFSS and CST MWS: design of microstrip patch antenna with microstrip feeding, design of microstrip patch antenna with coaxial coupling feeding technique, design of circular polarized microstrip patch antenna, design of X-band horn antenna, design of dipole antenna, radar cross-section simulation of an antenna; RF-CAD using ADS/MWO: design of binomial impedance transformer, design of Chebyshev impedance transformer, design of hybrid coupler, design of parallel coupled band pass filter; Fabrication: fabrication of designed microstrip antenna and characterization, fabrication of designed band pass filter and characterization.	
11.	**Textbook(s):** 1. Basu A, *An Introduction to Microwave Measurements*, 1st Edition, CRC Press (2014). 2. Pozar D M, *Microwave Engineering*, 4th Edition, John Wiley & Sons (2012).	
12.	**Reference(s):** 1. Dunsmore J P, *Handbook of Microwave Component Measurements*, 2nd Edition, Wiley & Sons (2020). 2. Sucher M and Fox J, *Handbook of Microwave Measurements (vol.1-3)*, 3rd Edition, Polytechnic Press of the Polytechnic Institute of Brooklyn (1963).	