1.	Title of the course	RF-CAD Lab-based Project
2.	Course number	EE545M
3.	Structure of credits	1-0-3-3
4.	Offered to	PG
5.	New course/modification to	Modification To EE5127/16
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 the design / analysis / fabrication / testing of RF and microwave Systems / sub-systems, sources, and allied components (passives or actives) for wireless communications, green / clean energy, microwave Imaging and other ISM applications.	
10.	**Course Content:** Research based RF-CAD course in the area of RF and microwave engineering, particularly in RF-to-THz domain dealing with systems / sub-systems / front-ends, sources, and allied transmission line components such as: (a) active sources, amplifiers, oscillators, etc. (b) passive components: periodic structures, filters, couplers, power dividers and splitters, etc. (c) antennas and arrays (d) metamaterials, fractals, Defected Ground Structures (DSGs), Electromagnetic Bandgap Structures (EBGs), and Photonic Bandgap Structures (PBGs) (e) electron optical systems (f) quasi-optical transmission lines.	
11.	**Textbook(s):** 1. IEEE Trans, *IEEE Transactions*, 1st Edition, IEEE (2020).	
12.	**Reference(s):** 1. IEEE Journals, *IEEE Journals*, 1st Edition, IEEE (2020). 2. IEEE Magazines, *IEEE Magazines*, 1st Edition, IEEE (2020).	