1.	Title of the course	Heat Transfer
2.	Course number	ME212L
3.	Structure of credits (L-T-P-C)	2-1-0-3
4.	New course/modification to	Modified with ME303M/HEAT AND MASS TRANSFER
5.	To be offered by	Mechanical Engineering
6.	Prerequisite	None
7.	**Course Objective(s):** To discuss the concepts of conduction, convection and radiation modes of heat transfer and apply them to the engineering problems.	
8.	**Course Content:** Introduction to different modes of heat transfer; Steady state conduction in one and two-dimensional systems; One-dimensional unsteady state conduction: analytical and numerical methods; Convection: basic equations, boundary layers, forced convection, external and internal flows, natural convection; Boiling and condensation; Analysis of heat exchangers; Radiation heat transfer: basic laws, properties of the surfaces, view factors, gray-diffuse enclosures.	
9.	**Textbook(s):** 1. Incropera F P, Dewitt D P, Bergman T H and Lavine A S, Principles of Heat and Mass Transfer, 8th Edition, Wiley (2018).	
10.	**Reference(s):** 1. Cengel Y A and Ghajar A J, Heat and Mass Transfer: Fundamentals and Applications, 6th Edition, McGraw Hill (2020). 2. Holman J P and Bhattacharyya S, Heat Transfer, 10th Edition, Wiley (2015).	