1.	Title of the course	Deep Learning for Healthcare
2.	Course number	EE532L
3.	Structure of credits	3-0-0-3
4.	Offered to	PG
5.	New course/modification to	Modification To EE5043/16
6.	To be offered by	Department of Electrical Engineering
7.	To take effect from	July 2022
8.	Prerequisite	CoT
9.	**Course Objective(s):** To introduce the application of deep learning in healthcare, including the use of deep learning for diagnosis, classification, disease progression modeling, and risk stratification.	
10.	**Course Content:** Introduction to machine learning and deep learning, an overview of healthcare and clinical data, risk stratification, physiological time series, natural language processing, deep learning for disease diagnosis, classification, risk stratification, disease progression modeling, precision medicine, automating clinical workflows.	
11.	**Textbook(s):** 1. Chen Y and Jain L C, *Deep Learning in Healthcare - Paradigms and Applications*, 1st Edition, Springer (2020). 2. Goodfellow I, Yoshua B and Aaron C, *Deep Learning*, 1st Edition, MIT Press (2016).	
12.	**Reference(s):** 1. Duda R O, Hart P E and Stork D G, *Pattern Classification*, 2nd Edition, Wiley (2000). 2. Nordlinger B, Villani C and Rus D, *Healthcare and Artificial Intelligence*, 1st Edition, Springer (2020).	