Artificial Intelligence and Machine Learning:Sem VII								
Course Code	**Course Name**	**Teaching Scheme (Contact Hours)**			**Credits Assigned**			
		Theory	**Practical**	**Tutorial**	**Theory**	**Practical**	**Tutorial**	**Total**
HAIMLSBL701	**AI&ML in Healthcare: Lab**	**--**	**04**	**--**	**--**	**02**	**--**	**02**

Course Code	**Course Name**	**Examination Scheme**							
		Theory Marks				**Exam Duration**	**Term Work**	**Oral**	**Total**
		Internal Assessment			**End Sem. Exam.**				
		Test1	**Test2**	**Avg.**					
HAIMLSBL701	**AI&ML in Healthcare: Lab**						**50**	**50**	**100**

Course Prerequisites:	
Python	
Course Outcomes:	
After successful completion of the course, the student will be able to:	
1	Students will be able to understand computational models of AI and ML.
2	Students will be able to develop healthcare applications using appropriate computational tools.
3	Students will be able to apply appropriate models to solve specific healthcare problems.
4	Students will be able to analyze and justify the performance of specific models as applied to healthcare problems.
5	Students will be able to design and implement AI and ML-based healthcare applications.

Suggested Experiments:	
Sr. No.	**Name of the Experiment**
1	Collect, Clean, Integrate and Transform Healthcare Data based on specific disease.
2	Perform Exploratory data analysis of Healthcare Data.
3	AI for medical diagnosis based on MRI/X-ray data.
4	AI for medical prognosis .
5	Natural language Entity Extraction from medical reports.
6	Predict disease risk from Patient data.
7	Medical Reviews Analysis from social media data.
8	Explainable AI in healthcare for model interpretation.
9	Mini Project-Design and implement innovative web/mobile based AI application using Healthcare Data.

10	Documentation and Presentation of Mini Project.

Useful Links:

1. https://www.coursera.org/learn/introduction-tensorflow?specialization=tensorflow-in-practice
2. https://www.coursera.org/learn/convolutional-neural-networks-tensorflow?specialization=tensorflow-in-practice
3. https://datarade.ai/data-categories/electronic-health-record-ehr-data
4. https://www.cms.gov/Medicare/E-Health/EHealthRecords
5. https://www.coursera.org/learn/tensorflow-sequences-time-series-and-prediction?specialization=tensorflow-in-practice

Term Work:

1. Term work should consist of 8 experiments and a Mini Project.
2. The final certification and acceptance of term work ensures satisfactory performance of laboratory work and minimum passing marks in term work.
3. Total 25 Marks (Experiments: 10-Marks, Mini Project-10 Marks, Attendance Theory & Practical: 05-marks)

Oral & Practical exam

1. Based on the entire syllabus of **AI ML for Healthcare**