SUBJECT NO-MM61504, SUBJECT NAME- PATTERN RECOGNITION AND MACHINE INTELLIGENCE IN MEDICINE

LTP- 3-1-0,CRD- 4

SYLLABUS :-

Feature Extraction and classification stages. Different approaches to pattern recognition. Statistical Pattern Recognition: Hypothesis testing, Linear classifiers, Bayes decision theory, Parametric and nonparametric classification techniques, Unsupervised learning and clustering, Syntactic pattern recognition, Fuzzy set theoretic approach to PR.Introduction to AI, Problem Space Representation, Heuristic Search Techniques, Knowledge Representation, Predicate Logic, Reasoning under uncertainty, Statistical Reasoning, Planning, Learning, Expert System Design, Expert System Shell, Case Studies of Typical Expert Systems in Medicine. Neural networks: Multi-layer perceptrons, radial basis functions, self organizing feature map, counter propagation and recurrent networks. Signal processing, non-stationary time-series analysis