SUBJECT NO-MF41601, SUBJECT NAME- SOFT COMPUTING

LTP- 3-0-0,CRD- 3

SYLLABUS :-

MF41601 Soft Computing (3-0-0-3) Genetic Algorithms: introduction, mathematical foundation, computer implementation, genetic based machine learning, applications. Neural Networks: introduction, multi-layer networks, recurrent networks, learning paradigms. Fuzzy Control: an industrial perspective, knowledge based system for process control, mathematics of fuzzy control, non-linear and adaptive fuzzy control. Chaos: complexity and simplicity, evolution of possibilities, simple models of chaos, strange attractors, deterministic chaos, self-organisation, synergetics. Evolutionary Computing: hybrid intelligent system, evolutionary dynamics, evolutionary engineering and its application. p-component (Manufacturing software lab): Development of software for the control of network based distributed and real time systems using techniques based on Corba, Java and XML etc. Development of software for collaboration using agents and other approaches. Development of process control software using neural network, fuzzy logic, genetics and other emerging approaches.