Adani University

Faculty of Engineering Sciences and Technology (FEST)

Department of Computer Science and Engineering (AI-ML)

CSE (AIML)-Sem-7 (ODD- Term 2025-26)

Subject: **Soft Computing- ECSCI24401**

Mid-Sem-Syllabus

Unit	Content
1	**Introduction to Computing:** Concept of computing systems, "Soft" computing versus "Hard" computing, Characteristics of Soft computing, Some applications of soft computing techniques. **Computing Inspired by Nature:** Evolutionary Computing, Hill Climbing and Simulated Annealing, Darwin's Dangerous Idea, Genetics Principles, Introduction to Standard Evolutionary Algorithms.
3	**Genetic Algorithms:** Concept of "Genetics" and "Evolution" and its application to probabilistic search techniques, Basic GA framework and different GA architectures. GA operators: Encoding, Crossover, Selection, Mutation, etc. Solving single-objective optimization problems using GAs. **Fuzzy Logic & Fuzzy Reasoning:** Fuzzy sets, Fuzzy Relations, Defuzzification, Fuzzy inference system, Fuzzy Logic Controller