Department of Computer Science & Engineering
Indian Institute of Technology Kharagpur

Introduction to Soft Computing
Syllabus and Course Plan
Spring-2018 Semester

Week		Topics
Week 1	:	Introduction to Soft Computing
	:	Introduction to Fuzzy logic
	:	Fuzzy membership functions
	:	Operations on Fuzzy sets
Week 2	:	Fuzzy relations
	:	Fuzzy propositions
	:	Fuzzy implications
	:	Fuzzy inferences
Week 3	:	Defuzzyfication Techniques-I
	:	Defuzzyfication Techniques-II
	:	Fuzzy logic controller-I
	:	Fuzzy logic controller-II
Week 4		Solving optimization problems
		Concept of GA
		GA Operators: Encoding
		GA Operators: Selection-I
Week 5		GA Operators: Selection-II
		GA Operators: Crossover-I
		GA Operators: Crossover-II
		GA Operators: Mutation
Week 6		Introduction to EC-I
		Introduction to EC-II
		MOEA Approaches: Non-Pareto
		MOEA Approaches: Pareto-I

Week 7		MOEA Approaches: Pareto-II
		Introduction to ANN
		ANN Architecture
Week 8		ANN Training-I
		ANN Training-II
		ANN Training-III
		Applications of ANN