

I. Introduction to AI (AI1)		Prof. Partha Pratim Chakrabarti	
<ul style="list-style-type: none"> • What Is AI? • The Foundations of Artificial Intelligence • The History of Artificial Intelligence • The State of the Art • Risks and Benefits of AI 	2 hours	Week 9	26.10.2022 (10:00-12:00)
II. Problem Solving Techniques (AI2)		Prof. Partha Pratim Chakrabarti	
<ul style="list-style-type: none"> • Solving Problems by Searching • Problem-Solving Agents • Example Problems • Search Algorithms • Uninformed Search Strategies • Informed (Heuristic) Search Strategies • Heuristic Functions • State Space Search • Heuristic Search • Game Tree Search • Local Search 	8 hours	Week 9 Week 10	28.10.2022 (10:00-12:00) (15:00-17:00) 01.11.2022 (10:00-12:00) (15:00-17:00)
III. Optimization Techniques (AI3)		Prof. Debjani Chakraborty	
<ul style="list-style-type: none"> • Genetic Algorithms • Simulated annealing • Evolutionary computing 	4 hours	Week 10	02.11.2022 (10:00-12:00) 03.11.2022 (10:00-12:00)
IV. Reasoning (AI4)		Prof. Aritra Hazra	
<ul style="list-style-type: none"> • Propositional logic • Propositional Logic to Predicate Logic • Predicate Logic Fundamentals • Resolution Refutation • Constraint Satisfaction Problems • Fuzzy Logic and Fuzzy algebra • Fuzzy logic controller 	10 hours	Week 10 Week 11	04.11.2022 (10:00-12:00) 07.11.2022 (10:00-12:00) (15:00-17:00) 09.11.2022 (10:00-12:00) (15:00-17:00)
V. Knowledge Representation (AI5)		Prof. Plaban Bhowmik	
<ul style="list-style-type: none"> • Knowledge Representation • Ontological Engineering • Categories and Objects • Events • Mental Objects and Modal Logic • Reasoning Systems for Categories • Reasoning with Default Information 	6 hours	Week 7 Week 8	11.11.2022 (10:00-12:00) (15:00-17:00) 14.11.2022 (10:00-12:00)

VI. Planning in AI (AI6)		Prof. Plaban Bhowmik	
<ul style="list-style-type: none"> • Planning problem • Planning languages • Planning algorithms • Forward Chaining • Backward Chaining • Resolution • Automated Planning • Definition of Classical Planning • Algorithms for Classical Planning • Heuristics for Planning • Hierarchical Planning • Planning and Acting in Nondeterministic Domains • Analysis of Planning Approaches 378 	6 hours	Week 8	<p style="text-align: center;">14.11.2022 (15:00-17:00)</p> <p style="text-align: center;">15.11.2022 (10:00-12:00)</p> <p style="text-align: center;">16.11.2022 (10:00-12:00)</p>
VII. Reasoning Under Uncertainty (AI7)		Prof. Pabitra Mitra	
<ul style="list-style-type: none"> • Partial order planners • Properties of Bayesian Networks • Inference in Bayesian Networks • Bayesian Networks 	6 hours	Week	<p style="text-align: center;">17.11.2022 (10:00-12:00)</p> <p style="text-align: center;">18.11.2022 (10:00-12:00) (15:00-17:00)</p>