

Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
INF315	Discrete Mathematics	5	3	0	0	3	4

Prerequisites	
Admission Requirements	

Language of Instruction	
Course Type	
Course Level	Bachelor Degree
Objective	
Content	
References	

Theory Topics

Week	Weekly Contents
1	1. Arithmetic: Extended Euclidean algorithm and finding GCD of 2 integers
2	2. Arithmetic: Solution of Diophantine equations and congruence systems
3	3. Arithmetic: Convergence speed of Euclidean algorithm
4	4. Error correction codes: Presentation and first examples
5	5. Error correction codes: Hamming distance, number of detected and corrected errors
6	6. Error correcting codes: Generator matrices of linear codes
7	7. Error correction codes: Control matrices of linear codes and error correction via syndrome
8	Mid term exam
9	9. Circular codes: Presentation and first examples
10	10.Cyclic codes: Generating polynomials of cyclic codes
11	11. Markov chains: Introduction and first examples
12	12. Markov chains: Transition matrix and transition diagram of a Markov chain
13	13. Markov chains: Convergence theorem of transition matrices
14	14. Markov chains: Search and interpretation of boundary configurations