



Course Weekly Outline

Course Lecturer	Dhuha Khalaf Shayal			
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Title	Information Theory			
Course Coordinator				
Course Objective	When was it established? Why and What are the basics of information theory and the basics of effective code also many measures of content.			
Course Description	The general model of communication, random variable, probability, entropy, channel coding, subjective information, information compression.			
Textbook	Information Theory			
References	Introduction to information theory and coding			
Course Assessment	Term Exam	Project	Quizzes and Attendance	Final Exam
	17		3	60
General Notes				



Week	Date	Topics Covered	Number of Hours	Notes
1	2-10-2022	Operations Applied To Information + Communication System Model		
2	9-10-2022	Random Variable + Probability + Sum Of Probabilities		
3	16-10-2022	Complementary Probability + Probability Of Intersection Or Joint Probability		
4	23-10-2022	The Probability Of Mutually Exclusive Choice + The Conditional Probability		
5	30-10-2022	Self-Information And Ambiguity		
6	6-11-2022	Conditional Ambiguity		
7	13-11-2022	Shared Information		
8	20-11-2022	Common Entropy, Conditional Entropy, And Common Information Upstream Coding		
9	27-11-2022	Entropy		
10	4-12-2022	Common Entropy		
11	11-12-2022	Conditional Entropy		
12	18-12-2022	Common Entropy, Conditional Entropy, And Common Information		
13	25-12-2022	Source Coding		
14	8-1-2023	Entropy and the Arabic language		

15	15-1-2023	Entropy and the Arabic language		
16	22-1-2023	Entropy and language		
17	29-1-2023	Memory source entropy		
18	5-2-2023	Surplus		
19	12-2-2023	Excess Of Language		
20	19-2-2023	Memory Surplus		
21	6-3-2023	Entropy Rate		
22	16-3-2023	Upstream Coding Issue		
23	27-3-2023	Instant Decoder		
24	5-4-2023	Prefix		
25	16-4-2023	Oscillatory Theory (Kraft)		
26	27-4-2023	Huffman's Algorithm		
27	9-5-2023	Information Compression		
28	18-5-2023	Lossless Compression Algorithms		
29	5-6-2023	Loss Information Compression Algorithms		
30	13-6-2023	Channel Encoding		

Lecturer signature

Head of Department Signature