



PMRF-ISSS157/II/2024

Information Theory I

Name of the PMRF student

Sachin Sampath H

Required background of the students taught

ECE

Details of the content of the module

Module 1 – Entropy – Entropy, Relative Entropy, Joint Entropy, Mutual Information, Jensen's Inequality, Fano's Inequality, etc

Module 2 – AEP – Asymptotic Equipartition Property Theorem, Consequences of AEP, Typical Sets, etc.

Module 3 – Entropy Rates – Markov Chains, Entropy Rate, Random Walks, etc.

Module 4 – Data Compression – Introduction, Examples of Codes, Kraft Inequality, etc.

1 hour lecture followed by 30 min problem solving.

Channel Capacity and other topics will be covered in part II.



Schedule of the module

November 1 - December 20

Every Friday 6:30 pm – 8:00 pm.

Meeting link : Will be shared later

[Link](#)

Contact email ID: issf.forum@gmail.com

Registration link:

<https://forms.gle/hiSQhgZNGSFDXMMY5>