

A technical talk was organized by the Department of ECE on 20th March 2021 for the students of I sem. The talk was presented by Dr.Karthik Upadhya, Alumni of ECE, JSSATE. He is a Senior Specialist in Radio Research, Finland. He has 12 years of experience in this field. Around 100 students of the I semester, ECE attended the session.

## **Objective:**

To create awareness about the importance of Mathematics in Electrical and Communication Engineering.

## **Outcomes:**

- 1. Exposure to the role of mathematics in the field of electronics and communication.
- 2. Introduction to the mathematical tools that will be used in various design applications.

Mathematics plays a central role in engineering and the sciences. The session was on the importance of Mathematics in the Electrical and Communication. The significance of Mathematical modeling in modern design was explained thoroughly. A big-picture perspective of the role of mathematics in the field of electronics and communication engineering in terms of modeling, optimizing and analyzing the systems was briefed with an example of radio design.

The optimization process and its main ingredients, viz., objective function and the constraints were also explained with examples. Also, some of the mathematical tools like Linear algebra, Probability and statistics, Fourier analysis that are taught in the undergraduate ECE course and their role in real-world applications were explained. Finally, the use of Machine learning and AI techniques were also briefly explained.

All students appreciated the talk and were enthralled to know the role of Mathematics in the field of Engineering.







Coordinator

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