

DATE: 2502/2021

Event Coordinator(s)

Ms Yashonanda Maurya

Ms Zeba Ansari

Ms. Shilpa Dingankar

Time & Place:

**20 Feb 2021, Saturday,
11 am-12:30 pm.**

Microsoft Teams

Department:

**Applied Sciences and
Humanities**

No of participants:

123

The Department of Applied Sciences and Humanities had arranged a Webinar for students of FE (All branches) on Application of Mathematics in Real life on 20th February 2021. Guest speaker was Dr. V. R. Lakshmi Gorty from MPSTME, Vile Parle, Mumbai.

Dr. Madhavi Parimi, HOD Applied Sciences and Humanities, commenced the event by introducing the speaker, Dr. V. R. Lakshmi Gorty to the students.

Dr. Gorty enlightened students with examples of different fields where various mathematical principles are extensively used for smooth functioning. She highlighted specific examples, keeping in mind the topics from the syllabus of Engineering Mathematics in First-Year Engineering. Applications of topics such as Complex Numbers, Partial Differentiation, Matrices, Numerical Methods, Differential Equations, Special Functions and Multiple Integration in the fields of video games, calculators, search engines, Biology, Telecommunications, voice recognition, data analysis, and prediction models were discussed in detail. She emphasized the importance of integrated learning and to learn the course as an interconnected web rather than focusing on each of the subjects separately.

The webinar was concluded by a vote of thanks from Ms. Yashonanda Maurya, Assistant Professor, XIE.

The talk was aimed at bridging the gap between Mathematics and Applications and the feedback from students was very encouraging.



Ms. Yashonanda Maurya, Asst Prof, XIE
Ms. Zeba Ansari, Asst Prof, XIE
Ms. Shilpa Dingankar, Asst Prof, XIE



Dr Madhavi Parimi
(HoD-AS&H, XIE)

Images



Complex Numbers Partial differentiation Matrices Numerical Methods Differential equations Special functions Multiple Integrals

Partial differentiation in Computer Games

Prof. Dr. V. R. Lakshmi Gory NMIMS, MPSTME, Mumbai-400 056, Maharashtra, India. Ph. +91 22 42334000
Applications of Mathematics in the Real Field

Complex Numbers Partial differentiation Matrices Numerical Methods Differential equations Special functions Multiple Integrals

Matrices in Computer Graphics

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Numerical Methods in Carbon dating

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Numerical Methods in Ocean Currents and airflow over aeroplane

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Differential equations in Physics

Applications of 1st Order Homogeneous Differential Equations

The general form of the solution of the homogeneous differential equation can be applied to a large number of physical problems.

Barometric pressure variation with altitude:

$$\frac{dP}{dh} = -\frac{mg}{RT} P \quad \frac{P}{P_0} = P_0 e^{-mgh/RT}$$

Atmospheric pressure variation with height h

Discharge of a capacitor:

Differential equation: $\frac{dQ}{dt} + \frac{Q}{RC} = 0$

$$V_C = V_0 e^{-t/RC}$$

$$Q = CV_0 e^{-t/RC}$$

$$I = \frac{V_0}{R} e^{-t/RC}$$

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