Short Term Course on

THE SHEER JOY OF MATHEMATICS - 2

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Course Fee per participant: Rs.1000+18%GST
Registration Deadline: 25th July 2024
Registration link:
https://iisc.online/shortterm/home.html

For Apply

Minimum Qualification Required

The course will be accessible to students (undergraduates and above) and teachers in any science/math program.

Prerequisite: None

Course Content
Introduction:

This is a course for those with a healthy curiosity and the cognoscenti. To educate for a purpose is not the intent. Rather, it is to provide a loosely structured mode of engagement to appreciate the ubiquity of mathematics as a human endeavour. The topics listed below have been selected to convey a sense of diversity and harmony. While some of them aretaught to some degree, the emphasis here will be on moving beyond existing curricula by retrieving and highlighting lesser-known insights into their structure.

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Topics:

Unit 1: Projective Geometry: history, basic principles, collineations and their properties.
Unit 2: Conic Sections: history, elementary properties, polar correspondence, duality principle, Poncelet's theorem.
Unit 3: Numerical Methods: Why and how? Interpolation, Quadrature, Ordinary Differential Equations, Eigenvalues, Fourier Series.
Unit 4: Using a 3D printer for math visualization and the role of computation - possibilities and challenges.