MANGALORE UNIVERSITY
(Acredited by NAAC)
DEPARTMENT OF MATHEMATICS

Organizing

TEACHER'S ENRICHMENT WORKSHOP (TEW)

on

Group Theory, Linear Algebra and Enumerative Combinatorics

Sponsored by

National Centre for Mathematics
www.ncmath.org
(A joint centre of TIFR and IIT Bombay)
Advanced Training in Mathematics Schools
www.atmschools.org
(Supported by National Board for Higher Mathematics)

DATE: 5 AUG 2024 TO 10 AUG 2024

Venue: Department of Mathematics, Mangalore University

About TEW

The Teacher's Enrichment Workshop is conducted by the National Center for Mathematics (NCM) to inculcate college mathematics teachers to teach interesting topics in the subjects at graduation or post-graduation level. This workshop is basically aimed at teachers of different colleges and Universities around Mangalore. Interested teachers from other regions may also apply. The program intends to develop some basic concepts in Group Theory, Linear Algebra and Enumerative Combinatorics in a leisurely way. The lectures will be interactive, main focus will be on developing problem solving skills.

Speakers and Topics

Dr. Anuj Jakhar IIT, Madras	Prof. B R Shankar NITK, Surathkal	Dr. A. Satyanarayana Reddy Shiv Nadar Institution of Eminence	Dr. Chandru Hegde Mangalore University
Basic definitions and examples of groups and homomorphisms, including cyclic, dihedral, permutation, alternating groups, and matrix groups. Subgroups, and the induced equivalence relations, quotient groups. Introduction to Group actions.	Solving system of linear homogeneous and non-homogeneous equations, Vector spaces, Linear maps, Matrix representation of linear maps, Eigenvalues, Eigen vectors, Diagonalizability.	Basic principles of Counting: Pigeonhole principle, principle of inclusion and exclusion, permutations, binomial coefficients, bijections, Recurrence relations, Generating functions, Two way counting.	Symmetry of plane figures, Isometries, Isometries of the plane, Finite groups of orthogonal operators on the plane. Group of symmetries of Platonic Solids. Few applications of groups in counting.

For More Information Visit : https://www.atmschools.org/school/2024/TEW/gtlaec
To Apply Use https://www.atmschools.org/school/2024/TEW/gtlaec/application-form
Last Date to Apply: 15, July 2024