

## MTP290: Computing Laboratory

### Course contents:

Programming concepts. Implementation of matrix operations, Complexity in Matrix Operations.

Implementation of linear algebraic solvers.

Solution of systems of linear equations. Gauss elimination, LU decomposition and Iterative methods.

Implementation of several Numerical Integration algorithms,

Initial value problems and Boundary Value Problems for ODEs.

**Reference books:** An Introduction to Numerical Analysis, 2nd Edition by Kendall Atkinson

**Software to be used:** MATLAB

**Grading Policy:** 3 Assignments (15+15+20) + 2 Viva (20+30)

**Information about the class:** Online classes in MS team every Wednesday from 2 PM to 6 PM. The first hour is allotted for discussing each numerical method's theoretical background and rest for programming.

**Course coordinator:** Prof. Kamana Porwal

**Tutorial teachers:** Dr. Pratibha Shakya, Dr. Biswarup Biswas

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