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SYLLABUS FOR CERTIFICATE COURSE

DEPARTMENT OF MATHEMATICS

Name of the Course: Basic Application of Mathematics in Computer

Course Code: ADC-MAT-01

Total marks: 100 (Theory: 50, Practical: 30, Internal Assessment: 20)

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Course Objectives: The purpose of this course is to familiarize students with the mathematical typesetting skills in MS Word and LaTeX and to introduce to Mathematica for some basic mathematical calculations.

Course Outcome: After studying the course the student will be able to:

i. To impart the vital skills and foundational knowledge of computational mathematics.
ii. Type mathematical expressions in MS Word.
iii. Create LaTeX documents containing mathematical expressions, graphics, tables.
iv. Perform basic mathematical calculations, plot graphs, make tables.

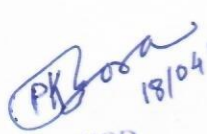### Unit-1: Mathematical typesetting using MS Word (10 Hours)

Introduction to mathematical typesetting, Mathematical symbols, Superscripts and subscripts, Fractions, Square roots, Matrices, basic mathematical equations, Multi-line equations and alignment.

Unit-2: Introduction to Mathematica (10 Hours)

Numerical calculation by Mathematica, Plotting of graph, Making of table, Algebra of matrices with solutions.

Unit-3: Introduction to LaTeX (10 Hours)

Creation of a LaTeX document, Mathematical typesetting: Math mode, Math symbols, Math functions, Arrays, Multi-line expressions; Graphics, Tables.

18/04/2018

HOD
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