

**DEPARTMENT OF MATHEMATICS**  
**VALUE ADDED COURSE**

Semester	Course Code	Course Title	Hours
III	22UMAVAC1	MATHEMATICAL COMPUTATIONS USING PYTHON	30

**Course outcome:**

- CO1. Using Python as a calculator.
- CO2. Implement and illustrate matrix arithmetic operations.
- CO3. Solving Statistical problems using Python.
- CO4. Implement and illustrate math functions and modules.
- CO5. calculate the value of  $\sin(x)$ ,  $\cos(x)$ ,  $e^x$ ,  $nCr$  and  $nPr$ .

**List of Practical**

S.No.	Programmes
1	To check the given number is prime number
2	To find first n Fibonacci numbers
3	To find out the roots of a quadratic equation
4	To calculate the value of $\sin(x)$ , $\cos(x)$ and $e^x$
5	To calculate the value of $nCr$ and $nPr$
6	To sort the given numbers in ascending/descending order
7	To perform matrix arithmetic operations
8	To calculate the Mean, Variance & Standard Deviation
9	To check the given number is Armstrong number
10	To find the sum of the digits of a given number
11	To find the GCD and LCM of two integers
12	To illustrate Math Functions
13	To create and assign lists
14	To illustrate functions and modules
15	To create and assign tuples

**Text Books:**

Chun, J Wesley, CORE Python Programming, 2nd Edition, Pearson, 2007 Reprint 2010.

Semester	Course Code	Course Title	Hours
V	22UMAVAC2	DOCUMENT PREPARATION USING LATEX	30

**Course outcome:**

CO1. Describes the development process of TeX and LaTeX.

CO2. Lists LaTeX compatible operating systems.

CO3. Describes mathematical equations via LaTeX.

CO4. Create tables and floating picture using LaTeX.

CO5. Demonstrate simple documents in LaTeX.

**List of Practical**

S.No.	Programmes
1	To prepare a page with four paragraphs with a heading. First containing single and double quoted words. Second contains an italic word, third contains some sashes and accents and fourth contains some symbols using LATEX
2	To prepare a leave letter using bold face, italic, underline words and indentation
3	To prepare labeled items containing bullets, dashes, stars and dots
4	To prepare simple table and multiple table
5	To typeset some Mathematical Equations
6	To typeset the system of equations and the corresponding matrix form
7	To create a floating picture using LATEX
8	To prepare a simple document contains theorem, definition, references, label and citations

**Text Book:**

E. Krishnan and Team members, '*LATEX Tutorials A PRIMER*', Indian TEX Users Group Trivandrum, India (2003).

Semester	Course Code	Course Title	Hours
III	22PMAVAC1	DOCUMENT PREPARATION USING LATEX	30

**Course outcome:**

CO1. Describes the development process of TeX and LaTeX.

CO2. Lists LaTeX compatible operating systems.

CO3. Describes mathematical equations via LaTeX.

CO4. Create tables and floating picture using LaTeX.

CO5. Demonstrate simple documents in LaTeX.

**List of Practical**

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1	To prepare a page with four paragraphs with a heading. First containing single and double quoted words. Second contains an italic word, third contains some sashes and accents and fourth contains some symbols using LATEX
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