COURSE: TRANSFORM CALCULUS , FOURIER SERIES AND NUMERICAL METHODS

COURSE CODE:18MAT31

SEMESTER: III

SCHEME: 2018

Course outcomes: At the end of the course the student will be able to:

• **CO1:** Use Laplace transform and inverse Laplace transform in solving differential/ integral equation arising in network analysis, control systems and other fields of engineering.

• **CO2:** Demonstrate Fourier series to study the behaviour of periodic functions and their applications in system communications, digital signal processing and field theory.

• **CO3:** Make use of Fourier transform and Z-transform to illustrate discrete/continuous function arising in wave and heat propagation, signals and systems.

•**CO4:** Solve first and second order ordinary differential equations arising in engineering problems using single step and multistep numerical methods.

• **CO5:**Determine the externals of functionals using calculus of variations and solve problems arising in dynamics of rigid bodies and vibrational analysis.

SUBJECT: COMPLEX ANALYSIS, PROBABILITY AND STATISTICAL METHODS

SUBJECT CODE:18MAT41

SCHEME:2018

SEMESTER: IV

Course outcomes: At the end of the course the student will be able to:

CO1 :Use the concepts of analytic function and complex potentials to solve the problems arising in electromagnetic field theory.

CO2: Utilize conformal transformation and complex integral arising in aerofoil theory, fluid flow visualization and image processing.

CO3: Apply discrete and continuous probability distributions in analyzing the probability models arising in engineering field.

CO4: Make use of the correlation and regression analysis to fit a suitable mathematical model for the statistical data.

CO5: Construct joint probability distributions and demonstrate the validity of testing the hypothesis.