Course Name:
Advanced Mathematics

Course Number:
20014

Credit:
3

Course Content (outline):

- Chapter 1
    - Matrices, Vectors, Determinants, Linear Equation System
- Chapter 2
    - 3D vector differential calculus and vector integral
- Chapter 3
    - Complex Variables and Functions
- Chapter 4
    - Eigen value/vector
- Chapter 5
    - Fourier series analysis
- Chapter 6
    - Ordinary Differential Equation (ODE)
- Chapter 7
    - Partial Differential Equation (PDE)
- Chapter 8
    - Physical problems formulation (Heat, wave, Laplace)

References:

- "Advanced Engineering Mathematics", E. Kreyszig.
- "Mathematical Analysis in Engineering", C. C. Mei.
- "Advanced Engineering Mathematics", C. R. Wylie & L. C. Barrett.