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:

- “Mathematical Analysis in Engineering”, C. C. Mei.