

Course Code	Course Title	C	H	I	E	T
17U2MSM2	Major Skill Based Elective –II: Fourier series and Z -Transforms	2	2	25	75	100

Unit I Fourier Series

6 Hrs

Definition - Euler's formula (Statement only) - Fourier coefficients-Fourier Series Simple Problems.

Unit II Half Range Fourier Series

6 Hrs

Half Range Sine Series, Half Range Cosine Series - Problems.

Unit III Harmonic Analysis

6 Hrs

Definitions - First Harmonic - Second Harmonic Coefficients.

Unit IV Z-Transforms

6 Hrs

Introduction -Definition - Damping Rule, Shifting Theorem - Initial value theorem - Final value theorem - Convolution theorem (Statement only) - Simple Problems.

Unit V Inverse Z-Transform and its Application

6 Hrs

Definition - Inverse Z-transform - Applications of Z-transform - Problems.

Text Book:

1. S. Arumugam A. Thangapandi Isaac and A. Somasundaram, Higher Engineering Mathematics Volume-II, Edition 2010, Scietech Publications.

Chapters: 13(13.3,13.5,13.8),16(16.1-16.4).

Reference Books:

1. B.S Grewal, Higher Engineering Mathematics, 40th Edition, Khanna Publishers.
2. T.Veerarajan, Engineering Mathematics, 4th Edition 2005, Tata McGraw Hill Publishers.