

1.	Title of the course	Linear Integral Equations
2.	Course number	MA609L
3.	Structure of credits	3-0-0-3
4.	Offered to	PG
5.	New course/modification to	Modification To MA6101/2
6.	To be offered by	Department of Mathematics and Statistics
7.	To take effect from	July 2022
8.	Prerequisite	functional Analysis
9.	Course Objective(s): The main objective of this course is to introduce Integral Equations, to know the relationship between Integral Equations and Differential Equations, and the methods and concepts to solve Integral Equations.	
10.	Course Content: Classification of Integral Equations; Fredholm Equations of Second Kind: Mapping Properties, Compact Operators, Adjoint Operators, Riesz Theory, Fredholm Theory; Numerics for Fredholm Equations: Degenerate Kernel Approximations, Projection Methods, Collocation Methods, Quadrature Methods; Volterra Equations;	
11.	Textbook(s): 1. Kress R, <i>Linear Integral Equations</i> , 3rd Edition, Springer, New York (2014).	
12.	Reference(s): 1. Kōsaku Y, <i>Lectures on Differential and Integral Equations</i> , Translated from the Japanese. Reprint of the 1960 translation, Dover Publications, New York, 1991. 2. Porter D and Stirling D S G, <i>Integral Equations: A Practical Treatment from Spectral Theory to Applications</i> , Cambridge University Press (1990). 3. Lovitt W V, <i>Linear Integral Equations</i> . Dover Publications, New York, 1950.	