Lesson Plan 2018-2019
B.Sc(H) Mathematics (Semester IV)
C9-Riemann Integration & Series of Functions

References	1. K.A.Ross,Elementary Analysis:The Theory of Calculus, Undergraduate Texts in Mathematics, 2.R.G.Bartle & D.R. Sherberte,Introduction to Real Analysis(3rd edition),John Wiley & 3. Charles G.Denlinger,Elements of Real Analysis,Jones & Bartlett(Student edition),2011	
Unit	**Week**	**Topics Covered**
1	**Week-1** January 01-04, 2019	Introduction to Riemann integration,Definition,Inequalities for upper & lower Darboux sums.
	Week-2 January 07 - 11, 2019	Necessary & Sufficient conditions for integrability
	Week-3 January 14-18, 2019	Definition of Riemann Integration & equivalence of definition.
	Week-4 January 21-25, 2019	Riemann integrability of monotone function & continous function,Properties of Riemann integral
	Week-5 January 28-February 1, 2019	Definition of piecewise continuos and monotone function & their Riemann intergration,intermediate theorem for integrals
	Week-6 February 04-08, 2019	First & Second fundamental theorems of integral calculus & integration by parts
	Week-7 February 11-15, 2019	Definition & examples of pointwise &uniformly convergent sequence of functions.
	Week-8 February 18-22, 2019	Motivation for uniform convergent through examples,Theorem on contunity of limit of function of sequence of function,This statement of the theorem on interchange limit function and derivatives & illustration by examples.The interchage of limit function & integrability of a sequence of functions.
2	**Week-9** February 25-March 1, 2019	Pointwise & uniform convergence of series of functions,theorem on contunity
	Week-10 March 04-08, 2019	Intergrability of sum function of a series of function,Cauchy criterion
	Week-11 March 11-15 , 2019	Weierstrass M-Test for unform convergence of series,Excerise problems.
	Week-12 March 25-29, 2019	Test , Definition of a power series , radius of convergence .

Week-13 April 01-05,2019	Absolute an uniform convergence of a power series,Differentiation & Intergration of power series.	
Week-14 April 08-12,2019	Statement of Abel's Theorem & it's illustration with examples,improper integrals of Type-1.	
Week-15 April 15-19,2019	Improper integrals of Type-2 and mixed type.	
Week-16 April 22-26,2019	Exercise problems,Doubt class,Final test and Assignment submission.	