


Curriculum Plan: B. Sc. (Hons) Mathematics I (Semester II) Analysis- I

<p>Ms. Charu Khanna Department of Mathematics Kalindi College, University of Mobile: +91-9811834446 E- mail: charuanuj@rhotmail.com</p>			<p>Marks Distribution</p>	<p>Theory -75</p> <hr/> <p>Internal Assessment-25</p>	
			<p>Classes Assigned</p>	<p>Lectures</p>	<p>4 per week</p>
				<p>Tutorials</p>	<p>3 per week</p>
Reference	[1]	R.G. Bartle and D. R. Sherbert, Introduction to Real Analysis, John Wiley and Sons (Asia) Pvt. Ltd., Singapore, 2002			
	[2]	Gerald G. Bilodeau , Paul R. Thie, C.E. Keough, An Introduction to Analysis, Jones & Bartlett, Second Edition, 2010.			
	[3]	Brian S. Thomson , Andrew. M. Bruckner , and Judith B. Bruckner , Elementary Real Analysis, Prentice Hall, 2001			
Section	Week	Topics			
	1st week , April 7-16, 2022	Algebraic and Order Properties of \mathbb{R} , d -neighborhood of a point in \mathbb{R} , Idea of countable sets, uncountable sets and uncountability of \mathbb{R} . [1]			
	2nd week , April 18- 23, 2022	Bounded above sets, Bounded below sets, Bounded Sets, Unbounded sets, Suprema and Infima, The Completeness Property of \mathbb{R} , [1]			
	3rd week , April 25- 30, 2022	The Archimedean Property, Density of Rational (and Irrational) numbers in \mathbb{R} , Intervals [1]			
	4th week , May 02- 07, 2022	Limit points of a set, Isolated points, Illustrations of Bolzano-Weierstrass theorem for sets [1]			
	5th week , May 09- 14, 2022	Problems Discussion [1]			
	6th week , May 16- 21, 2022	Algebraic and Order Properties of \mathbb{R} , d -neighborhood of a point in \mathbb{R} , Idea of countable sets, uncountable sets and uncountability of \mathbb{R} . [1]			
	7th week , May 23- 28, 2022	Bounded above sets, Bounded below sets, Bounded Sets, Unbounded sets, Suprema and Infima, The Completeness Property of \mathbb{R} , [1]			
	8th week , May 30-31, June 1 -4, 2022	The Archimedean Property, Density of Rational (and Irrational) numbers in \mathbb{R} , Intervals [1]			
	9th week , June 06- 11, 2022	Limit points of a set, Isolated points, Illustrations of Bolzano-Weierstrass theorem for sets [1]			
2	10th week , June 13- 18, 2022	Sequences, Bounded sequence, Convergent sequence, Limit of a sequence. Limit Theorems [1]			
	11th week , June 20- 25, 2022	Monotone Sequences, Monotone Convergence Theorem. Subsequences, Divergence Criteria, Monotone Subsequence Theorem (statement only) [1]			
	12th week , June 27- 30, July, 1-2 2022	Bolzano Weierstrass Theorem for Sequences. Cauchy sequence, Cauchy's Convergence Criterion [1]			
3	13th week , July, 04-09 2022	Infinite series, convergence and divergence of infinite series [2]			
	14th week , July, 11-16 2022	Cauchy Criterion, Tests for convergence: Comparison test, Limit Comparison test [2]			
	15th week , July, 18-23 2022	Ratio Test, Cauchy's n th root test, Integral test [2]			