



Indraprastha College for Women

University of Delhi

Course Name:	B. A. Programme
Paper Title:	Elements of Real Analysis
Unique Paper Code:	
Semester:	V
Faculty(s):	Monika Bansal
Year:	August 2024- Dec 2024

Work Plan			
Period	Unit No.	Learning Objective	Topics to be Covered
1 st Aug -3 rd Aug	II	Convergence and divergence of sequences of real numbers with applications.	Convergence of a real sequence
5 th Aug-10 th Aug	II	Convergence and divergence of sequences of real numbers with applications.	Examples : Convergence of a real sequence
12 th Aug-17 th Aug	II	Convergence and divergence of sequences of real numbers with applications.	Algebra of limits
19 th Aug-24 th Aug	II	Convergence and divergence of sequences of real numbers with applications.	Algebra of limits
26 th Aug-31 st Aug	II	Convergence and divergence of sequences of real numbers with applications.	Behaviour of Convergent Sequences and Results based on these.
2 nd Sep-7 th Sep	II	Convergence and divergence of sequences of real numbers with applications.	The squeeze principle and applications

9 th Sep-14 th Sep	II	Convergence and divergence of sequences of real numbers with applications.	Monotone sequences
16 th Sep-21 st Sep	II	Convergence and divergence of sequences of real numbers with applications.	Monotone sequences
23 rd Sep-28 th Sep	II	Convergence and divergence of sequences of real numbers with applications.	Monotone convergence theorem and applications
30 th Sep-5 th Oct	II	Convergence and divergence of sequences of real numbers with applications.	Monotone convergence theorem and applications
7 th Oct-12 th Oct	II	Convergence and divergence of sequences of real numbers with applications.	Cauchy sequences
14 th Oct-19 th Oct	II	Convergence and divergence of sequences of real numbers with applications.	Cauchy sequences
21 st Oct-26 th Oct	II	Convergence and divergence of sequences of real numbers with applications.	Cauchy sequences
28 th Oct-2 nd Nov			MID SEMESTER BREAK
4 th Nov-9 th Nov	II	Convergence and divergence of sequences of real numbers with applications.	Cauchy criterion for convergence and applications
11 th Nov-16 th Nov	II	Convergence and divergence of sequences of real numbers with applications.	Cauchy criterion for convergence and applications
18 th Nov-23 rd Nov	II	Convergence and divergence of sequences of real numbers with applications.	Cauchy criterion for convergence and applications
25 th Nov-27 th Nov	II	Convergence and divergence of sequences	Revision

		of real numbers with applications.	
28 th Nov	DISPERSAL OF CLASSES		

Unit	TOPICS
I	
II	<p>Real Sequences Convergence of a real sequence, Algebra of limits, The squeeze principle and applications, Monotone sequences, Monotone convergence theorem and applications, Cauchy sequences, Cauchy criterion for convergence and applications.</p>
III	
S. No.	Name of Authors/Books/Publishers
1.	<p>Essential Reading 1. Denlinger, Charles G. (2011). Elements of Real Analysis. Jones & Bartlett India Pvt. Ltd. Student Edition. Reprinted 2015.</p>
2.	<p>Suggestive Readings Bartle, Robert G., & Sherbert, Donald R. (2011). Introduction to Real Analysis (4th ed.). John Wiley & Sons. Wiley India Edition 2015.</p>
3.	<p>Bilodeau, Gerald G., Thie, Paul R., & Keough, G. E. (2010). An Introduction to Analysis (2nd ed.). Jones & Bartlett India Pvt. Ltd. Student Edition. Reprinted 2015.</p>