

Curriculum Plan (EVEN SEM 2025): B.Sc. (H) Mathematics 2 Year (Semester IV)
Paper SEC: ANALYTICS / COMPUTING WITH PYTHON

<p>Dr. Tajender Kumar</p> <p>Assistant Professor Department of Mathematics Kalindi College (University of Delhi) Delhi- 110008 Mobile: +91 7417837644 E- mail: tajenderkumar@kalindi.du.ac.in</p>		<p>Marks Distribution</p>	<p>Theory</p>	
				<p>Practical</p> <p>80 Marks</p>
		<p>Classes Assigned</p>	<p>Practical</p>	<p>4 Practical per week</p>
<p>References</p>	<ol style="list-style-type: none"> Pilgrim, M. (2004). Dive Into Python. Apress. Ch. 1,2,4 S Raschka, Python Machine Learning, V Mirjalili (2020), Ch 3 Mitchell, T. M. (1997). Machine Learning. New York: McGraw-Hill. 			
	<p>Week</p>	<p>Topics</p>		
<p>Beginning/1st week with 2 days</p> <p>02nd Jan. - 10th Jan.</p>		<p>Python: General overview, Python vs. Excel.</p>		
<p>2nd week</p> <p>12th Jan. – 17th Jan</p>		<p>Anaconda and Jupyter notebook: Interface overview.</p>		
<p>3rd week</p> <p>19th Jan. – 24th Jan.</p>		<p>Data types in Python, Python basic syntax: Assignment statements, creating Variables.</p>		

	4th week 26 th Jan. – 31 st Jan.	Indentation, conditionals, and loops.	
	5th week 02 rd Feb.- 07 th Feb.	Writing user defined functions.	
	6th week 09 th Feb. – 14 th Feb.	Working with libraries: Pandas, NumPy.	
	7th week 16 th Feb. – 21 st Feb.	Working with libraries: Matplotlib, and Seaborn.	
	8th week 23 rd Feb. – 28 th Feb.	Python SQL Database Access: Introduction, Installation, DB Connection, Creating DB Table.	
	9th week 09 th Mar.– 14 th Mar.	Machine learning: Introduction.	
	10th week 16 th March. – 21 st Mar.	Machine learning: Definitions, Supervised, unsupervised.	

	11th week 23 rd Mar. – 28 th Mar.	Machine learning: Definitions, Supervised, unsupervised.	
	12th week 30 th Mar. – 04 th Apr.	Python libraries for machine learning: Sci-kit learn, over- fitting and regularization.	
	13th week 06 th Apr. – 11 th Apr.	Revision	
	14th week 13 th Apr. – 18 th Apr.	Revision	
	15th week with 3 Days 20 th Apr. – 29 th Apr.	Revision	
Dispersal of classes, preparation leave and practical examination begin- 30 April, 2026.			