

**ARMY PUBLIC SCHOOL, BANGALORE**  
**SPLIT UP SYLLABUS 2024-25**

**CLASS - Xth**

**SUBJECT- ARTIFICIAL INTELLIGENCE**

SL. NO.	MONTH & WORKING DAYS	CONTENT
1.	<b>APRIL, 13 DAYS</b>	-
2.	<b>JUNE, 16 DAYS</b>	<p><b>UNIT 1: INTRODUCTION TO ARTIFICIAL INTELLIGENCE (Part B)</b></p> <p><b>UNIT 2 : AI PROJECT CYCLE (Part B)</b></p> <p>Introduction to AI Project Cycle            Understanding Problem Scoping &amp; Sustainable Development Goals            Simplifying Data Acquisition            Visualising Data            Introduction to modelling</p> <ul style="list-style-type: none"> <li>• Introduction to Rule Based &amp; Learning Based AI Approaches</li> <li>• Introduction to Supervised, Unsupervised</li> </ul> <p>Evaluation            Neural Networks</p> <p><b>UNIT 3 : ADVANCE PYTHON (Part B)</b></p> <p>Able to write basic Python programs using fundamental concepts such as variables, data types, operators, and control structures.            Able to use Python built-in functions and libraries.</p>
3.	<b>JULY, 25 DAYS</b>	<p><b>UNIT 4: DATA SCIENCES (Part B)</b></p> <p>Introduction to Data Science            Applications of Data Science            Revisiting AI Project Cycle, Data Collection, Data Access            Python for Data Sciences</p> <ul style="list-style-type: none"> <li>• Numpy</li> <li>• Pandas</li> <li>• Matplotlib</li> </ul> <p>Statistical Learning &amp; Data Visualisation</p>

4.	<p style="text-align: center;"><b>AUG, 23 DAYS</b></p>	<p><b>UNIT 5: COMPUTER VISION (Part B)</b>  Introduction to Computer Vision  Applications of CV  Understanding CV Concepts</p> <ul style="list-style-type: none"> <li>● Computer Vision Tasks</li> <li>● Basics of Images-Pixel, Resolution, Pixel value</li> <li>● Grayscale and RGB images</li> </ul> <p>Introduction to OpenCV  Image Processing</p> <p><b>Unit 6: Natural Language Processing (Part B)</b>  Introduction to Natural Language Processing  NLP Applications  Revisiting AI Project Cycle  Human Language VS Computer Language  Data Processing</p> <ul style="list-style-type: none"> <li>● Text Normalisation</li> <li>● Bag of Words</li> </ul> <p>Text processing</p> <ul style="list-style-type: none"> <li>● Data Processing</li> <li>● Bag of Words</li> </ul> <p><b>Unit 3: Information and Communication Technology Skills-II (Part A)</b></p>
5.	<p style="text-align: center;"><b>SEPT, 21 DAYS</b></p>	<p><b>Unit 4: Entrepreneurial Skills-II (Part A)</b>  <b>Unit 5: Green Skills-II (Part A)</b></p>
6.	<p style="text-align: center;"><b>OCT, 15 DAYS</b></p>	<p><b>Unit 7: Evaluation (Part B)</b>  Introduction to Model Evaluation</p> <ul style="list-style-type: none"> <li>● What is Evaluation?</li> <li>● Different types of Evaluation techniques Underfit, Perfect Fit, OverFit</li> </ul> <p>Model Evaluation Terminologies</p> <ul style="list-style-type: none"> <li>● The Scenario - Prediction, Reality, True Positive, True Negative, False Positive, False Negative</li> <li>● Confusion Matrix</li> <li>● Activity- to make a confusion matrix based on data given for Containment Zone Prediction Model</li> </ul> <p>Confusion Matrix  Evaluation Methods</p> <ul style="list-style-type: none"> <li>● Accuracy</li> <li>● Precision</li> <li>● Recall</li> </ul>

		<ul style="list-style-type: none"> <li>● Which Metric is Important? - Precision or Recall</li> <li>● F1 Score</li> </ul>
7.	<b>NOV, 21 DAYS</b>	<b>Unit 1: Communication Skills-II (Part A)</b> <b>Unit 2: Self-management Skills-II (Part A)</b> <b>REVISION</b>
8.	<b>DEC, 17 DAYS</b>	<b>REVISION</b>
9.	<b>JAN, 24 DAYS</b>	
10.	<b>FEB, 22 DAYS</b>	
11.	<b>MARCH, 23 DAYS</b>	

**BOOKS: ORANGE PUBLICATIONS**