

# LOYOLA HIGH SCHOOL, PATNA-800010

## SYLLABUS FOR CLASS-9 (2026-2027)

ENGLISH			
MONTH	Literature	Grammar	Composition
April	1. How I Taught My Grandmother to Read - Bharat Our Land (Poem)	Determiners	Descriptive Paragraph Writing
May	2. The Pot Maker - Gifts of Grace: Honouring Our Vocations (Poem)	Modals	Notice Writing
June	2. The Pot Maker - Gifts of Grace: Honouring Our Vocations (Poem)	Conditional clause type-1	Unseen Passage
July	3. Winds of Change - Canvas of Soil (Poem)	-	Letter to the Editor
August	4. Vitamin - M - I cannot Remember My Mother (Poem)	Subject-Verb Concord	Essay writing (Descriptive)
September	REVISION	REVISION	REVISION
October	5. The World of Limitless Possibilities - Nine Gold Medals (Poem)	Tenses	Informal invitation
November	6. Twin Melodies - A Friend Found in Music (Poem)	Reported Speech	Email writing (formal)
December	7. Carrier of Words - Words (Poem)	Types of clauses- Noun/relative	Article Writing
January	8. Follow That Dream - Believe in Yourself (Poem)	Integrated Grammar (Practice)	Essay writing (Narrative)
February	REVISION	REVISION	REVISION

HINDI			
MONTH	पाठ्यपुस्तक+पूरक पाठ्यपुस्तक	व्याकरण	संस्कृत-संस्कृत
APRIL	●दुख का अधिकार ●रैदास के पद	●शब्द और पद ●अनुस्वार और अनुनासिक	●अपठित गद्यांश
MAY	गिल्लू	●उपसर्ग-प्रत्यय	●अनुच्छेद लेखन
JUNE	●एवरेस्ट मेरी शिखर यात्रा	●उपसर्ग -प्रत्यय	●अपठित गद्यांश ●अनौपचारिक पत्र
JULY	●एवरेस्ट मेरी शिखर यात्रा	●स्वर संधि	●चित्र वर्णन
AUG	●तुम कब जाओगे अतिथि	●स्वर संधि	●संवाद लेखन
SEPT	●रहीम के दोहे	●स्वर संधि	●अनुच्छेद लेखन
OCT	●गीत और अगीत ●स्मृति	●विराम चिन्ह	●अनौपचारिक पत्र
NOV	●वैज्ञानिक चेतना के वाहक चंद्रशेखर रामन	●विराम चिन्ह	●अनौपचारिक पत्र
DEC	●संस्कृत ●संस्कृत संस्कृत संस्कृत	●संस्कृत संस्कृत संस्कृत संस्कृत	●संस्कृत संस्कृत
JAN	●संस्कृत संस्कृत संस्कृत संस्कृत	●संस्कृत संस्कृत संस्कृत संस्कृत	●संस्कृत-संस्कृत
FEB	●नए इलाके में ●खुशबू रखते हैं हाथ	●अर्थ की दृष्टि से वाक्य-भेद	●संवाद-लेखन

MATHEMATICS		
MONTH	TOPICS	SUB TOPICS TO BE COVERED
APRIL	1. Number System	<ul style="list-style-type: none"> <li>Introduction of the chapter</li> <li>Real numbers and their Decimal Expansion</li> </ul>

MAY	Continued of Number System 2. Polynomials	<ul style="list-style-type: none"> <li>Representing Real numbers on number line</li> <li>Rationalisation of Irrational numbers</li> <li>Laws of exponents for Real Numbers</li> <li>Polynomial of one variable</li> <li>Zeros of polynomial</li> </ul>
JUNE	Continued of Polynomial 3. Coordinate Geometry	<ul style="list-style-type: none"> <li>Remainder Theorem</li> <li>Factorisation of Polynomial</li> <li>Algebraic Identities</li> <li>Cartesian System</li> <li>Plotting a point in the plane</li> </ul>
JULY	4. Linear Equations in Two Variables 5. Introduction to Euclid's Geometry 6. Lines and Angles	<ul style="list-style-type: none"> <li>Linear Equation; Solution of Linear Equations</li> <li>Graph of Linear Equations in two variables</li> <li>Euclid's Definitions, Axioms and Postulates</li> <li>Basic terms and definition; Pairs of angles</li> </ul>
AUG	Continued of Lines and Angles 7. Triangles	<ul style="list-style-type: none"> <li>Parallel lines and transversal</li> <li>Angle sum property</li> <li>Some properties of triangles</li> <li>Congruence of triangles</li> </ul>
SEPT	8. Quadrilaterals 9. Circles	<ul style="list-style-type: none"> <li>Angle sum property of quadrilaterals</li> <li>Types of quadrilaterals</li> <li>Mid-Point Theorem; Converse of MPT</li> <li>Circle and related Terms</li> </ul>
OCT	Continued of Circles 10. Heron's Formula	<ul style="list-style-type: none"> <li>Theorems related to Circle</li> <li>Cyclic Quadrilaterals</li> <li>Area of triangle by Heron's formula</li> </ul>
NOV	Continued of Heron's Formula 11. Surface Area and Volumes	<ul style="list-style-type: none"> <li>Application of Heron's Formula</li> <li>Surface Area of Right Circular Cone</li> <li>Surface Area of Sphere/Hemisphere</li> </ul>
DEC	Continued of Surface Area and Volume	<ul style="list-style-type: none"> <li>Volume of Right Circular Cone</li> <li>Volume of Sphere</li> <li>Volume of Hemisphere</li> </ul>
JAN	Statistics Revision	<ul style="list-style-type: none"> <li>Representation of Data (Bar Graph)</li> <li>Measure of Central Tendency (Histogram)</li> <li>Frequency Polygon</li> <li>Revision</li> </ul>
FEB	Revision of Syllabus	

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<b>SCIENCE</b>			
<b>MONTH</b>	<b>PHYSICS</b>	<b>CHEMISTRY</b>	<b>BIOLOGY</b>
APRIL	Ch-: Motion	Ch-: Exploring Mixtures and Their Separation	Ch-: Cell
MAY	Ch-: Motion-continues	Ch-: Exploring Mixtures and Their Separation: continues	Ch-: Cell: continues
JUNE	Ch-: Force and Its Laws	Ch-: Exploring Mixtures and Their Separation: continues	Ch-: Tissues
JULY	Ch-: Force and Its Laws: continues	Ch-: Structure of an Atom	Ch-: Tissues: continues
AUG	Ch-: Work, Energy and simple machine	Ch-: Structure of an Atom: continues	Ch-: Reproduction
SEPT	<b>Revision</b>	<b>Revision</b>	<b>Revision</b>
OCT	Ch-: Work, Energy and simple machine: continues	Ch-: Atoms and Molecules	Ch-: Reproduction: continues
NOV	Ch-: Sound	Ch-: Atoms and Molecules: continues	Ch-: Diversity
DEC	Ch-: Sound	Ch-: Atoms and Molecules: continues	Ch-: Diversity: continues
JAN	Ch-: Earth as a System: Energy (PART)	Revision	Ch-: Earth as a System ; Matter and Life(PART)
FEB	<b>Revision</b>	<b>Revision</b>	<b>Revision</b>

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SOCIAL SCIENCE				
MONTH	HISTORY	CIVICS	GEOGRAPHY	ECONOMICS
April	4: Early Humans & Beginning of civilisation (PART- 1)	Ch 6: Democracy (PART- 1)	Ch 1: Understanding Social Science (PART- 1)	Ch 8: Building Blocks in Economics (PART- 1)
May	4: Early Humans & Beginning of civilisation (PART- 1)	Ch 6: Democracy (PART- 1)	Ch 2: Shaping of the Earth's Surface (PART- 1)	Ch 8: Building Blocks in Economics (PART- 1)
June	4: Early Humans & Beginning of civilisation (PART- 1)	Ch 6: Democracy (PART- 1)	Ch 2: Shaping of the Earth's Surface (PART- 1)	Ch 9: The Price Puzzle: What Drives the Market (PART- 1)
July	Ch 5: State and Society (up to 1000CE) (PART- 1)	Ch 7: Elections (PART- 1)	Ch 3: Atmosphere and Climate (PART- 1)	Ch 9: The Price Puzzle: What Drives the Market (PART- 1)
August	Ch 5: State and Society (up to 1000CE) (PART- 1)	Ch 7: Elections (PART- 1)	Ch 3: Atmosphere and Climate (PART- 1)	Ch 9: The Price Puzzle: What Drives the Market (PART- 1)
September	3: Resistance and Resilience (1000 CE - 1700 CE) (PART- 2) Revision	Ch 5: Authority (PART- 2) Revision	Ch 3: Atmosphere and Climate (PART- 1) Revision	Ch 9: The Price Puzzle: What Drives the Market (PART- 1) Revision
October	3: Resistance and Resilience (1000 CE - 1700 CE) (PART- 2)	Ch 5: Authority (PART- 2)	Ch 1: Oceans and Life (PART- 2)	Ch 6: From Ideas to Startups (PART- 2)
NOVEMBER	4: India and the World I (1000 BCE - 1200 CE) (PART- 2)	5: Authority (PART- 2)	1: Oceans and Life (PART- 2)	6: From Ideas to Startups (PART- 2)
DECEMBER	4: India and the World I (1000 BCE - 1200 CE) (PART- 2)	Ch 5: Authority (PART- 2)	Ch 2: Life on Earth (PART- 2)	Ch 7: Smart Ways to Manage Your Finances (PART- 2)
JANUARY	Revision	Revision	Ch 2: Life on Earth (PART- 2)	Ch 7: Smart Ways to Manage Your Finances (PART- 2)
FEBRUARY	Revision	Revision	Revision	Revision
ARTIFICIAL INTELLIGENCE				
Month				
APRIL	<b>The Three Domains of AI and their applications:</b>			

	<p><b>Game based on Domains of AI:</b> Rock Paper Scissors, Semantris. Quick Draw</p> <p><b>Lab Sessions:</b> Features of Python Python Script and Interactive Mode Python Character Set Python Statements: Single line and Multiline Statements Python Comments: Single line and Multiline Identifiers and Keywords: Rules for identifiers Variables Rules for naming variables</p>
MAY	<p><b>AI Project Cycle:</b> <b>Introduction and brief:</b></p> <ul style="list-style-type: none"> <li>• Problem Scoping</li> <li>• Data Acquisition</li> <li>• Data Exploration</li> <li>• Modeling</li> <li>• Evaluation</li> <li>• Deployment</li> </ul> <p><b>Details:</b> <b>Problem Scoping:</b> Description with an example case-study</p> <p><b>Assignment:</b> scope a problem. Look around and select a theme which interest's student the most. (such as Environment, Agriculture, Traffic, Infrastructure, Health, Security, Education, Digital Literacy, Women-Safety, Transport, Entertainment, Cyber Security, Travel and Tourism, Social welfare, Research etc.) Suggested themes can be: either selected by the students or they can also refer to the 17 Sustainable Development Goals.</p> <p><b>4Ws Problem Canvas:</b></p> <ul style="list-style-type: none"> <li>• Who, What, Where, why?</li> </ul> <p><b>Problem Statement Template</b></p> <p><b>Data Acquisitions:</b> <b>Acquiring Data from reliable resources:</b></p> <ul style="list-style-type: none"> <li>• Survey</li> <li>• Web Scraping</li> <li>• Sensors</li> <li>• Cameras</li> <li>• Observations</li> <li>• API (Application Programming Interface)</li> </ul> <p style="text-align: right;"><b>Lab Sessions:</b> <b>Tokens:</b></p> <p>Keywords/Identifiers/Literals/Operators/ Punctuators Escape sequence Comment/expressions/statement/function/ blocks and indentations Variables, operators, expressions Static and Dynamic typing</p> <p><b>Data Types in Python:</b></p> <ul style="list-style-type: none"> <li>• Number: int, float, string</li> <li>• Sequence: list, tuple</li> <li>• Sets</li> <li>• None</li> <li>• Maps: Dictionary (introduction only)</li> </ul>

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	<p>Summer Vacation Assignment carry 15 marks and will be used as one of the internal assessments that is <b>PORTFOLIO</b></p>
JUNE	<p><b>System Map (Data Acquisition Stage):</b></p> <ul style="list-style-type: none"> <li>• Student Performance/The Water Cycle</li> </ul> <p><b>Lab Sessions:</b></p> <p><b>Operators in Python:</b></p> <ul style="list-style-type: none"> <li>• Arithmetic</li> <li>• Relational</li> <li>• Logical</li> </ul> <p>Assignment</p>
JULY	<p><b>Data Exploration</b></p> <ul style="list-style-type: none"> <li>• Visualization Tools for Data Exploration</li> <li>• Bar, Line, Scatter, Tree, Bubble etc.</li> </ul> <p><b>Modeling:</b></p> <ul style="list-style-type: none"> <li>• Understand and differentiate between AI, ML, and DL.</li> <li>• Explain the differences between <b>Rule-Based</b> and <b>Learning-Based</b> AI approaches.</li> <li>• <b>Supervised Learning:</b> Classification Regression</li> <li>• <b>Unsupervised Learning:</b> Clustering Association Dimensionality Reduction</li> <li>• <b>Reinforcement Learning</b></li> </ul> <p><b>Evaluation:</b></p> <p><b>Model Evaluation Parameters (introduction)</b></p> <ul style="list-style-type: none"> <li>• Accuracy</li> <li>• Precision</li> <li>• Recall</li> <li>• F1 Score</li> </ul> <ul style="list-style-type: none"> <li>• Model Evaluation Terminologies and conditions: TP/TN/FP/FN</li> </ul> <p><b>Lab Sessions:</b></p> <p><b>Python Basic Programs</b></p> <ul style="list-style-type: none"> <li>• Programs to obtain three numbers and print their sum.</li> <li>• Program to calculate area and perimeter of a rectangle and a square by taking the user input.</li> <li>• program to obtain temperature in Celsius and convert it into Fahrenheit using formula.</li> </ul>
AUGUST	<p><b>Deployment:</b></p> <ul style="list-style-type: none"> <li>• Methods and Process</li> <li>• Common Challenges in Deployment</li> <li>• Develop a basic understanding of how AI models are trained and tested.</li> </ul> <p><b>AI Ethics:</b></p> <ul style="list-style-type: none"> <li>• Moral Machine game based on AI Ethics</li> </ul> <p><b>PART-A</b></p> <p><b>Employability Skills:</b></p> <p><b>Communication Skills</b></p>

	<ul style="list-style-type: none"> <li>• Communication cycle</li> <li>• Methods of communication</li> <li>• Factors affecting Communications</li> <li>• Effective Communication</li> <li>• English Language Skills</li> </ul> <p><b>Lab Sessions:</b></p> <p><b>Python Basic Programs</b></p> <ul style="list-style-type: none"> <li>• Program that accepts radius of a circle and prints its area.</li> <li>• Programs to find average of the marks by taking the user input.</li> <li>• Program to read a number n and print n<sup>2</sup>, n<sup>3</sup>, n<sup>4</sup></li> <li>• Program to compute simple interest and compound interest.</li> </ul> <p>Programs to read details like name, class, age of a student and then print the details.</p>
SEPTEMBER	<p><b>Self-Management Skills</b></p> <ul style="list-style-type: none"> <li>• Knowing own Strength and weakness</li> <li>• Self-Confidence and positive thinking</li> <li>• Personal Hygiene and Self-Grooming</li> </ul> <p><b>ICT Skills</b></p> <ul style="list-style-type: none"> <li>• What is ICT</li> <li>• Functioning of a computer</li> <li>• Input /output devices</li> <li>• Peripheral devices</li> <li>• Software / Hardware</li> </ul> <p>OS</p>
OCTOBER	<p><b>PART-B</b></p> <p><b>Data Literacy:</b></p> <ul style="list-style-type: none"> <li>• Data Pyramid</li> <li>• How to become Data Literate?</li> <li>• Data Literacy Process Framework</li> <li>• Data Privacy and Security</li> <li>• Best Practices for Cyber Security</li> <li>• <b>Types of Data:</b> <b>Quantitative/Numeric:</b> Discrete (Whole Number) Continuous (Real or Fractional) <b>Qualitative/Textual:</b> Nominal (Categorical without any order) Ordinal (Meaningful Order)</li> <li>• <b>Various Sources of Acquiring Data:</b> Primary (Direct Source) Secondary (Indirect Source)</li> <li>• <b>Best Practices of Acquiring data:</b> Good Data Bad Data</li> <li>• <b>Features of Data:</b> Independent Features Dependent Features</li> <li>• <b>Data Interpretation:</b> Importance of Data Interpretation</li> <li>• Types of Data Interpretation: Textual DI Tabular DI Graphical DI Data Visualization using Tableau</li> </ul>
NOVEMBER	<p><b>Maths for AI</b></p> <ul style="list-style-type: none"> <li>• Finding Patterns in number and images</li> </ul>

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## **SYLLABUS FOR CLASS-9 (2026-2027)**

	<ul style="list-style-type: none"><li>• Statistics: How it works in an AI</li><li>• Applications of statistics</li><li>• Linear Algebra</li><li>• Probability</li><li>• Calculus</li></ul> <p><b>Lab Sessions:</b> <b>List in Python</b></p> <ul style="list-style-type: none"><li>• Creating and modification of list</li></ul> <p>List Functions</p>
DECEMBER	<p><b>Generative AI:</b></p> <ul style="list-style-type: none"><li>• Introduction</li><li>• Definition</li><li>• Types</li><li>• Examples</li><li>• Benefits and Limitations</li></ul> <p>Generative AI Tools</p>
JANUARY	<p><b>PART-A</b></p> <p><b>Internet and Internet Services</b> <b>Entrepreneurial Skills</b> <b>Green Skills</b></p>
FEBRUARY	<p><b>REVISION</b></p>