

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI****COURSE PLAN (June - November 2026)**

**Department** : Computer Science  
**Name/s of the Faculty** : Ms. Blessy Boaz (A), Dr. Anita Priscilla Mary (B)  
**Course Title** : Object Oriented Programming with Java  
**Course Code** : 25CS/MC/OP35  
**Shift** : II

**COURSE OUTCOMES (COs)**

<b>COs</b>	<b>Description</b>					<b>CL</b>	
<b>CO1</b>	define and explain OOPs concepts					K1, K2	
<b>CO2</b>	apply Java concepts appropriately to solve a given problem					K3	
<b>CO3</b>	compare and contrast Java concepts and identify an effective approach					K4	
<b>CO4</b>	evaluate the different problem solving strategies and justify the selection					K5	
<b>CO5</b>	create, debug and execute Java applications					K6	
<b>Week</b>	<b>Unit No.</b>	<b>Content</b>	<b>Cognitive Level</b>	<b>Teaching Hours</b>	<b>COs</b>	<b>Teaching Learning Methodology</b>	<b>Assessment Methods</b>

Jun 15 – 22, 2026 (Day Order 1- 6)	1	<b>Java Fundamentals: Data, Classes, and Methods</b> <b>1.1 Introduction to Java</b> OOPs concepts - Prerequisites for Java programming – Structure of a Java program – Data Types - Arrays – javap	K1-K6	5	1-5	Discussion	Practical Exercises on basic java program
Jun 23 – July 1, 2026 (Day Order 1- 6)	1	<b>1.2 Classes and Methods</b> Defining a Class – access specifiers – object creation and destruction - methods – passing objects – constructors – array of non-primitive type	K1-K6	5	1-5	Lecture and demo	Practical Exercises on Classes and Objects
July 2 – July 8, 2026 (Day Order 1- 6)	1	<b>Polymorphism</b> <b>2.1 Overloading</b> Overloading methods and constructors – static variables – static methods – main method -	K1-K6	5	1-5	Presentation and Demo	Practical Exercises on Overloading
July 9 – 16, 2026	1	strings – comparing	K1-K6	5	1-5	Lecture and demo	Practical

(Day Order 1- 6)	2	strings <b>2.2 Inheritance</b> IS-A relationship – Deriving a Class –					exercises on Inheritance
July 17 – 24, 2026 (Day Order 1- 6)	2	java.lang.Object- Method Overriding– Overriding toString() Method	K1-K6	5	1-5	Role Play	Exercises on Overriding  <b>Component I – 25 marks</b>  <b>Practical Test on Unit 1 &amp; 2</b>
July 25 – 28, 2026 (Day Order 1- 3)	2	Protected Access	K1-K6	2	1-5	Demonstration	Exercises access modifiers
July 29 – Aug 3, 2026	<b>C.A. Test – I</b>						
Aug 4 - 6, 2026 (Day Order 4 - 6)	3	<b>Abstraction and Modularization</b> <b>3.1 Abstract classes and Interfaces</b> Abstract classes –	K1-K6	3	1-5	Learning by doing	Exercises on abstract classes
Aug 7 – 14, 2026 (Day Order 1- 6)	3	Interfaces – Anonymous Classes	K1-K6	5	1-5	Case studies	Exercises on Interface

Aug 17 - 24, 2026 (Day Order 1- 6)	3	<b>3.2 Packages</b> Creating a package – Compiling Files in a Package – Specifying the Class File to Run – CLASSPATH	K1-K6	5	1-5	Lecture and Demo	Exercises on packages
Aug 25 – Sep 2, 2026 (Day Order 1- 6)	4	<b>Exception Handling and Wrapper Classes</b> <b>4.1 Exception Handling</b> try, catch, throw, throws – Exception Classes Hierarchy – Handling Exception -	K1-K6	5	1-5	Presentation and Demo	Exercises on exception handling
Sep 3 – 11, 2026 (Day Order 1- 6)		Programmatic Context, Data Context – Combining catch Blocks – finally block – Custom Exception Class	K1-K6	5	1-5	Case studies	Exercises on exception handling
Sep 15-17, 2026 (Day Order 1 - 3)		4.2 Primitive Type Wrappers	K1-K6	2	1-5	Demonstration	Project development
Sep 18 –23, 2026	<b>C.A. Test – II</b>						
Sep 24 - 28, 2026 (Day 4 – 6)	5	<b>Generics</b> <b>5.1 Generics and its Forms</b> Generic Classes -	K1-K6	3	1-5	Lecture and Demo	Exercises on Generics

		Benefits - Multiple Type Parameters –					
Sep 29 – Oct 7, 2026 (Day Order 1 - 6)	5	Bounded Types – Generic Methods and Interfaces	K1-K6	5	1-5	Case studies	Project <b>Component II –</b> <b>25 marks</b> <b>Java Project</b>
Oct 8 - 14, 2026 (Day Order 1 - 6)	Revision and Java Project						
Oct 15 - 21, 2026 (Day Order 1- 4)	<b>REVISION</b>						

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI**

**COURSE PLAN (June - November 2026)**

**Department** : Computer Science  
**Name/s of the Faculty** : Dr Renuka Devi D [A], Ms Madhura Prabha R [B]  
**Course Title** : Fundamentals of Database Management System  
**Course Code** : 25CS/MC/FD35  
**Shift** : II

**COURSE OUTCOMES (COs)**

<b>COs</b>	<b>Description</b>	<b>CL</b>
<b>CO1</b>	define and explain the database concepts, relational models, SQL operations, ER modeling, normalization, advanced SQL, and PL/SQL	K1,K2
<b>CO2</b>	apply relational concepts, SQL queries, normalization techniques, and PL/SQL programming to manage data	K3
<b>CO3</b>	analyze schema design, query optimization, functional dependencies, and PL/SQL control structures	K4
<b>CO4</b>	evaluate and determine the appropriate normal forms for a given relational database schema with SQL and PL/SQL for data management	K5
<b>CO5</b>	design normalized database and create database schema using SQL, advanced SQL, and PL/SQL procedures for an application	K6

Week	Unit No.	Content	Cognitive Level	Teaching Hours	COs	Teaching Learning Methodology	Assessment Methods
Jun 15 – 22, 2026 (Day Order 1- 6)	1	<p><b>Fundamentals of Database Systems</b></p> <p><b>1.1 Introduction and Relational Model</b></p> <p>Database Systems and Applications - Advantages of DBMS Approach - Roles of Database users and administrators - Data Models, Schemas, Instances</p>	K1-K2	5	1	Lecture/ Presentation/Practical Demo	Questionnaire/ Elicitation Activity
Jun 23 – July 1, 2026 (Day Order 1- 6)	1	<p>Three-Schema Architecture and Data Independence - DBMS Classification - Structure, Keys, Schema Diagrams</p>	K1-K2	5	1	Lecture/ Presentation/Practical Demo	Quiz
July 2 – July 8, 2026 (Day Order 1- 6)	2	<p><b>SQL and Database Constraints</b></p> <p><b>2.1 SQL Commands</b></p> <p>Overview and Features -</p>	K1-K6	5	1-5	Lecture/ Presentation/Practical Demo	Lab exercises using DDL and DML

		Data Definition Language (DDL) - Data Manipulation Language (DML)					
July 9 – 16, 2026 (Day Order 1- 6)	2	Data Control Language (DCL) - Transaction Control Language (TCL) - Integrity Constraints - Domain, Check, Not Null	K1-K6	5	1-5	Lecture/ Presentation/Practical Demo	Lab exercises using DCL and TCL
July 17 – 24, 2026 (Day Order 1- 6)	2	Entity Integrity, Referential Integrity - Aggregate Functions - SQL Clauses - ORDER BY	K1-K6	5	1-5	Lecture/ Presentation/Practical Demo	Lab exercises using integrity constraints
July 25 – 28, 2026 (Day Order 1- 3)	2	GROUP BY, HAVING - ACID Properties	K1-K6	5	1-5	Lecture/ Presentation/Practical Demo	<b>Component I:</b> Test based on Relational model and SQL commands  <b>Max. Marks:25</b>  Theory: 10  Practical : 15

July 29 – Aug 3, 2026	<b>C.A. Test – I</b>						
Aug 4 - 6, 2026 (Day Order 4 - 6)	3	<b>Data Modeling and Normal Forms</b>  <b>3.1 ER Model and Normalization</b>  Entity-Relationship Model - Entities, Relationships, Attributes, Keys - Weak Entities, ER Diagrams, Naming Conventions	K1-K6	5	1-5	Lecture/ Presentation/Practical Demo	Practical exercises
Aug 7 – 14, 2026 (Day Order 1- 6)	3	Functional Dependencies - Normalization - 1NF, 2NF, 3NF, BCNF	K1-K6	5	1-5	Lecture/ Presentation/Practical Demo	Puzzle/ Elicitation Activity
Aug 17 - 24, 2026 (Day Order 1- 6)	4	<b>Advanced SQL</b>  <b>4.1 SQL Operations for Multiple Tables</b>  Joins - INNER, LEFT, RIGHT, FULL - Set Operations	K1-K6	5	1-5	Lecture/ Presentation/Practical Demo	Lab exercises using joins
Aug 25 – Sep 2, 2026	4	Table Aliases - Views,	K1-K6	5	1-5	Lecture/ Presentation / Problem-based	Lab exercises using views

(Day Order 1- 6)		Synonyms, Sequences,				learning	synonyms and sequences
Sep 3 – 11, 2026 (Day Order 1- 6)	4	Indexes - Subqueries, Nested Queries	K1-K6	5	1-5	Problem-based learning	Lab exercises using subqueries and nested queries
Sep 15-17, 2026 (Day Order 1 - 3)	5	<b>SQL Procedural Programming</b>  <b>5.1 PL/SQL</b>  PL/SQL Blocks – Architecture - Data Types	K1-K6	3	1-5	Problem-based learning	<b>Component II:</b> Mini Project: Database creation  <b>Max. marks:25</b>  ER diagrams: 5 marks  SQL Commands :10 marks  PL/SQL :5 marks  Viva : 5 marks
Sep 18 –23, 2026	<b>C.A. Test – II</b>						
Sep 24 - 28, 2026 (Day 4 – 6)	5	Control Structures	K1-K6	2	1-5	Lecture/ Presentation/Practical Demo	Lab exercises using control structures

Sep 29 – Oct 7, 2026 (Day Order 1 - 6)	5	Exception Handling - Procedures - Functions	K1-K6	5	1-5	Lecture/ Presentation/Practical Demo	Lab exercises using procedures and functions
Oct 8 - 14, 2026 (Day Order 1 - 6)	5	Triggers – Cursors	K1-K6	5	1-5	Lecture/ Presentation/Practical Demo	Lab exercises using triggers and cursors
Oct 15 - 21, 2026 (Day Order 1- 4)	<b>REVISION</b>						

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI**

**COURSE PLAN (June - November 2026)**

**Department** : Computer Science  
**Name/s of the Faculty** : Ms Madhura Prabha R [A], Ms X [B]  
**Course Title** : Python Programming  
**Course Code** : 25CS/SE/PP32  
**Shift** : II

**COURSE OUTCOMES (COs)**

<b>COs</b>	<b>Description</b>	<b>CL</b>
<b>CO1</b>	Explain the fundamental concepts of Python programming	K3
<b>CO2</b>	Analyse Python code for bugs and troubleshoot issues	K4
<b>CO3</b>	Build Python programs to solve real-world problems	K6

<b>Week</b>	<b>Unit No.</b>	<b>Content</b>	<b>Cognitive Level</b>	<b>Teaching Hours</b>	<b>COs</b>	<b>Teaching Learning Methodology</b>	<b>Assessment Methods</b>
Jun 15 – 22, 2026 (Day Order 1- 6)	1	<b>Python Constructs</b> <b>1.1 Python Programming Basics</b>	K3, K4, K6	2	1-3	Demo / Learning by doing	Quiz

		Setting up the Environment - Running a simple program					
Jun 23 – July 1, 2026 (Day Order 1- 6)	1	Common troubleshooting - Variables - Strings - Numbers	K3, K4, K6	2	1-3	Presentation / Learning by doing	Lab exercises on python basics
July 2 – July 8, 2026 (Day Order 1- 6)	1	Type casting - Comments - input() and print() functions	K3, K4, K6	2	1-3	Demo / Learning by doing	Lab exercises using input and output functions
July 9 – 16, 2026 (Day Order 1- 6)	1	<b>1.2 Control Flow</b> if Statements - Logical operators - for and while loops, break, continue and pass statements	K3, K4, K6	2	1-3	Demo / Learning by doing	Lab exercises using control statements
July 17 – 24, 2026 (Day Order 1- 6)	2	<b>Data Structures and Functions</b> <b>2.1 Data Structures</b> Lists – Tuples	K3, K4, K6	2	1-3	Demo / Learning by doing	Lab exercises using lists and tuples

July 25 – 28, 2026 (Day Order 1- 3)	2	Dictionaries - Sets	K3, K4, K6	1	1-3	Demo / Learning by doing	<b>Component I:</b> Problem solving  <b>Max. Marks:20</b>  Writing programs: 10  Debugging: 5  Execution and validation: 5
July 29 – Aug 3, 2026	<b>C.A. Test – I</b>						
Aug 4 - 6, 2026 (Day Order 4 - 6)	2	<b>2.2 Functions</b>  Defining functions	K3, K4, K6	1	1-3	Problem-based learning	Quiz
Aug 7 – 14, 2026 (Day Order 1- 6)	2	Passing arguments	K3, K4, K6	2	1-3	Problem-based learning	Puzzle
Aug 17 - 24, 2026 (Day Order 1- 6)	2	Return values	K3, K4, K6	2	1-3	Problem-based learning	Lab exercises using functions
Aug 25 – Sep 2, 2026 (Day Order 1- 6)	2	Variable scope and lifetime	K3, K4, K6	2	1-3	Problem-based learning	Lab exercises using variables

Sep 3 – 11, 2026 (Day Order 1- 6)	2	Lambda functions	K3, K4, K6	2	1-3	Problem-based learning	Lab exercises using lambda functions
Sep 15-17, 2026 (Day Order 1 - 3)	3	<b>Files, Exceptions and Built-in Libraries</b>  <b>3.1 File Handling</b>  Reading from files	K3, K4, K6	1	1-3	Problem-based learning	<b>Component II:</b> Application development  <b>Max. marks:30</b>  Problem Identification: 5 marks  Modularization: 10  Development and integration : 15 marks
Sep 18 –23, 2026	<b>C.A. Test – II</b>						
Sep 24 - 28, 2026 (Day 4 – 6)	3	Writing to files - with Statement	K3, K4, K6	1	1-3	Learning by doing	Lab exercises using files
Sep 29 – Oct 7, 2026 (Day Order 1 - 6)	3	<b>3.2 Exception Handling</b>	K3, K4, K6	2	1-3	Learning by doing	Lab exercises using exception handling

		Using try, catch, else and finally blocks					
Oct 8 - 14, 2026 (Day Order 1 - 6)	3	<b>3.3 Importing Libraries</b> math - random - datetime - numpy – pandas	K3, K4, K6	2	1-3	Learning by doing	Lab exercises using libraries
Oct 15 - 21, 2026 (Day Order 1- 4)	<b>REVISION</b>						

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI**

**COURSE PLAN (June - November 2026)**

**Department** : Computer Science  
**Name/s of the Faculty** : Dr. Faustina Joan S P, Ms. Nancy Arokia Rani S  
**Course Title** : Fundamentals of Artificial Intelligence and Cybersecurity  
**Course Code** : 25CS/GE/AC22  
**Shift** : II

**COURSE OUTCOMES (COs)**

COs	Description	CL
CO1	explain key AI concepts such as machine learning, data types, and natural language processing along with basics of cybersecurity	K2
CO2	demonstrate the ability to use AI tools in learning, business, and cybersecurity applications	K3
CO3	evaluate the ethical, security, and privacy concerns in AI and cybersecurity	K5

Week	Unit No.	Content	Cognitive Level	Teaching Hours	COs	Teaching Learning Methodology	Assessment Methods
Jun 15 – 22, 2026 (Day Order 1 - 6)	1	<b>1.1 AI Basics</b> Non intelligent systems vs. intelligent systems - turing test - definition of AI - human intelligence vs.	K2, K3	2	1 – 2	Lecture and Analogy-based Teaching	Demo: Basic AI Model

		artificial intelligence - strengths and limitations - types of AI					
Jun 23 – July 1, 2026 (Day Order 1 - 6)	1	<b>1.2 Data</b> Role of data in AI systems - structured and unstructured data - big data - 3Vs of big data	K2, K3	2	1 – 2	Lecture and Demonstration	Demo: Dataset Search
July 2 – July 8, 2026 (Day Order 1 - 6)	1	<b>1.3 Machine Learning (ML)</b> ML process - types of ML algorithms - supervised learning, unsupervised learning, reinforcement learning	K2, K3	2	1 – 2	Lecture and Case-based Learning	Demo: AI-Based Interactive Tools
July 9 – 16, 2026 (Day Order 1 - 6)	1	<b>1.4 Natural Language Processing (NLP)</b> Challenges in processing natural language - conversational AI - generative AI	K2, K3	2	1 – 2	Lecture and Demonstration	Demo: NLP Tools
July 17 – 24, 2026 (Day Order 1 - 6)	2	<b>2.1 AI Use Cases, Applications and Tools</b> AI for learning and education, business and industry	K2, K3, K5	2	1 – 3	Lecture and Case-based Learning	<b>Skill Component 1:</b> Worksheet on Basic Concepts and Terms in Artificial Intelligence Portions: Unit 1

July 25 – 28, 2026 (Day Order 1- 3)	2	<b>2.1 AI Use Cases, Applications and Tools</b> transparency and accountability - AI and ethics: bias, fairness, and responsible usage of AI -	K2, K3, K5	1	1 – 3	Lecture and Case-based Learning	Demo: AI Tools in Education (10 Marks)
July 29 – Aug 3, 2026	<b>C.A. Test – I</b>						
Aug 4 – 6, 2026 (Day Order 4 - 6)	2	<b>2.1 AI Use Cases, Applications and Tools</b> disclosure of AI usage	K2, K3, K5	1	1 – 3	Lecture and Presentation	Discussion
Aug 7 – 14, 2026 (Day Order 1- 6)	2	<b>2.2 Prompts</b> Importance - understanding prompts by AI, types	K2, K3, K5	2	1 – 3	Lecture and Presentation	Discussion
Aug 17 – 24, 2026 (Day Order 1- 6)	2	<b>2.2 Prompts</b> elements of a good prompt - prompting techniques	K2, K3, K5	2	1 – 3	Lecture and Demonstration	Demo: Crafting Prompts for Different AI Tools
Aug 25 – Sep 2, 2026 (Day Order 1- 6)	2	<b>2.2 Prompts</b> best practices, mistakes to avoid when writing AI prompts	K2, K3, K5	2	1 – 3	Lecture and Demonstration	Demo: Prompt Refinement
Sep 3 – 11, 2026 (Day Order 1- 6)	2	<b>3.1 Basics of Cybersecurity</b> Threat - attack - malicious apps - phishing - safe browsing <b>3.2 Cyber Hygiene</b> Protecting files and devices	K2, K3, K5	2	1 – 3	Lecture and Presentation	<b>Skill Component 2:</b> Assignment on crafting effective prompts Portions:

							Unit 2 (20 Marks)
Sep 15 – 17, 2026 (Day Order 1 - 3)	3	<b>3.2 Cyber Hygiene</b> software updates, strong passwords, multi-factor authentication, encrypting files	K2, K3, K5	2	1 – 3	Lecture and Case-based Learning	Discussion
Sep 18 –23, 2026	<b>C.A. Test – II</b>						
Sep 24 – 28, 2026 (Day Order 4 - 6)	3	<b>3.2 Cyber Hygiene</b> non-disclosure of sensitive data - best practices in protecting devices: wifi, mobile devices	K2, K3, K5	1	1 – 3	Lecture and Demonstration	<b>Skill Component 3:</b> Implement and Audit Cyber Hygiene Practices Portions: Unit 3 (20 Marks)
Sep 29 – Oct 7, 2026 (Day Order 1 - 6)	3	<b>3.3 AI and Cybersecurity: Opportunities and Threats</b> Positive impact of AI on cybersecurity - challenges associated with AI in security - AI powered cyberattacks: risks, ethical concerns and data privacy issues	K2, K3, K5	2	1 – 3	Lecture and Discussion	Demo: Identifying phishing
Oct 8 – 14, 2026 (Day Order 1 - 6)	3	<b>3.3 AI and Cybersecurity: Opportunities and Threats</b>	K2, K3, K5	2	1 – 3	Lecture and Demonstration	Demo: Identifying Secure

		cyberstalking - cyberbullying - reporting and handling cybercrimes					Websites
Oct 15 – 21, 2026 (Day Order 1- 4)	<b>REVISION</b>						