

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

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

**Department** : Computer Science  
**Name/s of the Faculty** : Jeyapriya U  
**Course Title** : Programming with Python  
**Course Code** : 23CS/PC/PP14  
**Shift** : II

**COURSE OUTCOMES (COs)**

| <b>COs</b> | <b>Description</b>                                                                     | <b>CL</b> |
|------------|----------------------------------------------------------------------------------------|-----------|
| <b>CO1</b> | define the structure and concepts of python programming                                | K1        |
| <b>CO2</b> | demonstrate the programming concepts using python                                      | K2        |
| <b>CO3</b> | apply the programming knowledge learnt using python and solve any given problem        | K3        |
| <b>CO4</b> | compare the different ways of solving a problem and find out an effective one          | K4        |
| <b>CO5</b> | evaluate the given problem and write an effective and efficient code to solve the same | K5, K6    |
|            |                                                                                        |           |





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| July 17 – 24, 2026<br>(Day Order 1- 6) | 2.2                  | Common Errors in Selection Statement- - Logical Operators - Conditional Expressions- Operator Precedence and Associativity -The While Loop-The For Loop- Nested Loops- Minimizing Numerical Errors | K1 – K6                | 6 | CO1 – CO5 | Lecture, Demo, Case Study | Practical Exercises,<br><b>Component I</b> - Case Study – 10 marks, Portions - Unit 1, 2.1,2.2(if statements and loops)<br><br>Case Study |
| July 25 – 28, 2026<br>(Day Order 1- 3) | 1.2                  | Drawing Various Shapes- Drawing with Colors and Fonts<br><br>4.1 GUI Programming Using Tkinter                                                                                                     | K1 – K5<br><br>K1 – K6 | 3 | CO1 – CO5 | Lecture, Demo, Case Study | Practical Exercises, Group Discussion                                                                                                     |
| July 29 – Aug 3, 2026                  | <b>C.A. Test - I</b> |                                                                                                                                                                                                    |                        |   |           |                           |                                                                                                                                           |

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| Aug 4 - 6, 2026<br>(Day Order 4 - 6) | 3.1 | 3.1 Functions Defining a Function- Calling a Function- Function with or Without Return Values-Positional and Keyword Arguments                                  | K1 - K6 | 3 | CO1 – CO5 | Lecture, Demo             | Practical Exercises                                                                                                                     |
| Aug 7 – 14, 2026<br>(Day Order 1- 6) | 3.1 | Passing Argument by Reference- Modularizing the Code - The Scope of the Variables-Default Arguments -Returning Multiple Values- Function Abstraction- Recursion | K1 – K6 | 6 | CO1 – CO5 | Lecture, Demo, Case Study | <b>Component II - AI Assisted Open Book Test – 15 marks, Portions- loops, turtle, user defined functions</b><br><br>Practical Exercises |

|                                       |     |                                                                                                                                                                                                                                                                              |         |   |           |                              |                        |
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| Aug 17 - 24, 2026<br>(Day Order 1- 6) | 3.2 | <b>3.2 Object and Classes</b><br>Defining Classes for<br>Objects-Constructing<br>ObjectsAccessing The<br>Member of the Objects-<br>Self ParametersUsing<br>Classes- Hiding Data<br>Field- Immutable Objects<br>Vs Mutable Objects-<br>Class Abstraction and<br>Encapsulation | K1 – K6 | 6 | CO1 – CO5 | Lecture, Demo, Case<br>Study | Practical<br>Exercises |
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| <p>Aug 25 – Sep 2, 2026<br/>(Day Order 1- 6)</p> | <p>3.3</p> | <p><b>3.3 Strings and Special Methods</b></p> <p>The STR Class-Creating Strings- Functions for Strings-Index Operator []-The Slicing Operator - Concatenations Operators-In and Not in Operators - Comparing, Iterating and Strings- Searching, Converting and Formatting Strings</p> | <p>K1 – K5</p> | <p>6</p> | <p>CO1 – CO5</p> | <p>Lecture, Demo, Case Study</p> | <p>Practical Exercises</p>                                                                              |
| <p>Sep 3 – 11, 2026<br/>(Day Order 1- 6)</p>     | <p>4.1</p> | <p><b>4.1 List Processing</b></p> <p>List Basics - Copying The List</p>                                                                                                                                                                                                               | <p>K1 – K6</p> | <p>6</p> | <p>CO1 – CO5</p> | <p>Lecture, Demo, Case Study</p> | <p>Practical Exercises</p> <p><b>Component III – Mini Project and Viva – 25 marks - Units 1 - 4</b></p> |

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| Sep 15-17, 2026<br>(Day Order 1 - 3)      |                       | <b>5.1 Tuples, Sets and Dictionaries</b><br><br>Tuples- Sets-Comparing The Performances of Sets and Lists          | K1 – K6 | 3 | CO1 – CO5 | Lecture, Demo, Case Study | Practical Exercises |
| Sep 18 –23, 2026                          | <b>C.A. Test - II</b> |                                                                                                                    |         |   |           |                           |                     |
| Sep 24 - 28, 2026<br>(Day 4 – 6)          |                       | Dictionaries                                                                                                       | K1 – K6 | 3 | CO1 – CO5 | Lecture, Demo, Case Study | Practical Exercises |
| Sep 29 – Oct 7, 2026<br>(Day Order 1 - 6) | 5.2                   | <b>5.2 Files and Exceptional Handling</b><br><br>Text Input/Output                                                 | K1 – K6 | 6 | CO1 – CO5 | Lecture, Demo             |                     |
| Oct 8 - 14, 2026<br>(Day Order 1 - 6)     | 5.2                   | File Dialogs- Retrieving Data from Web-<br>Exception Handling-<br>Raising Exceptions -<br>Custom Exception Classes | K1 – K6 | 6 | CO1 – CO5 | Lecture, Demo, Case Study | Practical Exercises |
| Oct 15 - 21, 2026<br>(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. A R Charulatha  
**Course Title** : Discrete Mathematics for Computer Science  
**Course Code** : 23CS/PC/DM14  
**Shift** : II

**COURSE OUTCOMES (COs)**

| <b>COs</b>  | <b>Description</b>                                                                                                              | <b>CL</b>      |                        |                       |            |                                      |                           |
|-------------|---------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------|-----------------------|------------|--------------------------------------|---------------------------|
| <b>CO1</b>  | Understand mathematical reasoning including induction, recursion and apply mathematical logic to solve problems                 | K1, K2         |                        |                       |            |                                      |                           |
| <b>CO2</b>  | Apply logic Sets, Predicates, Propositional logic. Model Graphs, trees and able to determine their Properties                   | K3             |                        |                       |            |                                      |                           |
| <b>CO3</b>  | Analyze counting techniques to the representation and characterization of relational and functional concepts.                   | K4             |                        |                       |            |                                      |                           |
| <b>CO4</b>  | Evaluate counting problems and algorithms performances on finite and discrete Structures                                        | K5             |                        |                       |            |                                      |                           |
| <b>CO5</b>  | Construct mathematical proofs using case analysis, and mathematical induction. Application of concepts in Discrete Mathematics. | 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 22, 2026<br>(Day Order 6)             | 1 | Introduction<br><b>1.1 Sets and Induction</b><br>Lattices                                                                                                                                                      | K1-K3 | 1 | 1-2 | Lecture      | Questioning/<br>Discussion |
| Jun 23 – July 1, 2026<br>(Day Order 1- 6) | 1 | Boolean Algebra -<br>Principles of Inclusion –<br>Exclusion –<br>Mathematical Induction<br><b>1.2 Program</b><br><b>Correctness</b><br>Pseudocode Conventions<br>- An Algorithm to<br>Generate Perfect Squares | K1-K5 | 5 | 1-4 | Lecture      | Questioning                |
| July 2 – July 8, 2026<br>(Day Order 1- 6) | 1 | Two Algorithms for<br>Computing Square Roots<br>- Strong Form of<br>Mathematical Induction<br>- Application: Algorithm<br>to Compute Powers,<br>Finding Factorizations -<br>Application: Binary<br>Search      | K1-K5 | 5 | 1-4 | Presentation | Worksheet/<br>Tutorials    |
| July 9 – 16, 2026<br>(Day Order 1- 6)     | 2 | <b>2.1 Formal Logic</b><br>Truth and Logical Truth<br>- Tautologies -<br>Substitutions into<br>Tautologies – Logically<br>Valid Inferences -<br>Combinatorial Networks<br>- Substituting Equivalent            | K1-K6 | 5 | 1-5 | Presentation | Worksheet/<br>Tutorials    |

|                                        |                      |                                                                                                                                                                                            |       |   |     |         |                                                                                                               |
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|                                        |                      | Sub formulas -<br>Simplifying Negations                                                                                                                                                    |       |   |     |         |                                                                                                               |
| July 17 – 24, 2026<br>(Day Order 1- 6) | 2                    | <b>2.2 Normal Forms</b><br>Disjunctive Normal<br>Form - Application:<br>DNF and Combinatorial<br>Networks – Conjunctive<br>Normal Form -<br>Application: CNF and<br>Combinatorial Networks | K1-K6 | 5 | 1-5 | Lecture | Component I<br>– Test (25<br>marks)<br>(Portion -<br>Expression<br>Trees,<br>Tautologies,<br>Normal<br>Forms) |
| July 25 – 28, 2026<br>(Day Order 1- 3) | 2                    | Testing Satisfiability and<br>Validity - The Famous<br>$P \neq NP$ Conjecture –<br>Resolution Proofs:<br>Automating Logic                                                                  | K1-K6 | 3 | 1-5 | Lecture | Group<br>Discussion                                                                                           |
| July 29 – Aug 3, 2026                  | <b>C.A. Test – I</b> |                                                                                                                                                                                            |       |   |     |         |                                                                                                               |
| Aug 4 - 6, 2026<br>(Day Order 4 - 6)   | 3                    | <b>3.1 Predicates and<br/>Quantification</b><br>Predicates -<br>Quantification -<br>Restricted Quantification                                                                              | K1-K4 | 2 | 1-5 | Lecture | Quiz                                                                                                          |

|                                          |   |                                                                                                                                                                                                                                                     |                    |   |                |         |                                                                                                             |
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| Aug 7 – 14, 2026<br>(Day Order 1- 6)     | 3 | Nested Quantifiers –<br>Negation and<br>Quantification -<br>Quantification with<br>Conjunction and<br>Disjunction –<br>Application: Loop<br>Invariant Assertions<br><b>3.2 Relations</b><br>Binary Relations - n-ary<br>Relations                   | K1-K4              | 5 | 1-3            | Lecture | Discussion                                                                                                  |
| Aug 17 - 24, 2026<br>(Day Order 1- 6)    | 3 | Special Types of<br>Relations - Reflexive and<br>Irreflexive Relations -<br>Symmetric and<br>Antisymmetric Relations<br>- Transitive Relations -<br>Reflexive, Symmetric,<br>and Transitive Closures -<br>Application: Finding a<br>Minimal Element | K1-K4<br><br>K1-K6 | 5 | 1-3<br><br>1-5 | Lecture | Questioning/<br>Worksheet                                                                                   |
| Aug 25 – Sep 2, 2026<br>(Day Order 1- 6) | 4 | <b>4.1 The Pigeon-Hole<br/>Principle</b><br>k to 1 Functions -<br>Pigeon-Hole Principle -<br>Application: Decimal<br>Expansion of Rational<br>Numbers - Problems<br>with Divisors and                                                               | K1-K6              | 5 | 1-5            | Lecture | Component II<br>-Seminar (25<br>marks)<br>(Real time<br>Discrete<br>Mathematics,<br>Discrete<br>mathematics |

|                                      |                       |                                                                                                                                                                                                        |       |   |     |              |                                                        |
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|                                      |                       | Schedules - Two Combinatorial Results                                                                                                                                                                  |       |   |     |              | for programming , Event Probability etc..) Questioning |
| Sep 3 – 11, 2026<br>(Day Order 1- 6) | 4                     | <b>4.2 Analysis of Algorithms</b><br>Algorithms - Complexity Analysis - Comparing Growth Rate of functions - Asymptotic notations - Complexity of Programs                                             | K1-K6 | 5 | 1-5 | Presentation | Group Discussion                                       |
| Sep 15-17, 2026<br>(Day Order 1 - 3) | 5                     | <b>5.1 Graph Theory</b><br>Introduction to Graph Theory – Definitions - Subgraphs - Paths and Cycles – Euler Paths and Circuits - Hamiltonian Paths and Circuits- Applications of Hamiltonian Circuits | K1-K6 | 3 | 1-5 | Presentation | Group Discussion                                       |
| Sep 18 –23, 2026                     | <b>C.A. Test - II</b> |                                                                                                                                                                                                        |       |   |     |              |                                                        |
| Sep 24 - 28, 2026<br>(Day 4 – 6)     | 5                     | Graph Isomorphism - Representation of Graphs - Adjacency Matrix – Adjacency Lists - The Relation CONN -                                                                                                | K1-K6 | 2 | 1-5 | Lecture      | Tutorial/<br>Worksheet                                 |

|                                           |                 |                                                                                                                                                                                                                                             |       |   |     |         |                        |
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|                                           |                 | Finding Connected Components - Reachability matrix                                                                                                                                                                                          |       |   |     |         |                        |
| Sep 29 – Oct 7, 2026<br>(Day Order 1 - 6) | 5               | Planar Graphs -<br>Definitions -<br>Applications - Euler<br>Formula - Kuratowski's<br>Theorem- Graph<br>Colouring -<br>Terminologies - The<br>Four colour Theorem -<br>Applications of Graph<br>Colouring                                   | K1-K6 | 5 | 1-5 | Lecture | Tutorial/<br>Worksheet |
| Oct 8 - 14, 2026<br>(Day Order 1 - 6)     | 5               | <b>5.2 Trees</b><br>Definition of Trees -<br>Characterization of Trees<br>- Application: Decision<br>Trees – Directed Graphs<br>- Basic Definitions -<br>Directed Trails, Paths,<br>Circuits, and Cycles -<br>Directed Graph<br>Isomorphism | K1-K3 | 5 | 1-2 | Lecture | Tutorial/<br>Worksheet |
| Oct 15 - 21, 2026<br>(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** : Madhura Prabha R  
**Course Title** : Software Engineering  
**Course Code** : 23CS/PC/SE14  
**Shift** : II

**COURSE OUTCOMES (COs)**

| <b>Cos</b> | <b>Description</b>                                                                                            | <b>CL</b> |
|------------|---------------------------------------------------------------------------------------------------------------|-----------|
| <b>CO1</b> | explain the software engineering principles and techniques                                                    | K1, K2    |
| <b>CO2</b> | choose an appropriate software lifecycle model for a given problem                                            | K3        |
| <b>CO3</b> | analyse and design complex systems and Ability to develop, maintain and evaluate large-scale software systems | K4        |
| <b>CO4</b> | assess the efficiency, reliability, robustness and develop cost- effective software solutions                 | K5        |
| <b>CO5</b> | discuss about the new modelling, design, management techniques used for a future product                      | K6        |
|            |                                                                                                               |           |

| Week                                      | Unit No. | Content                                                                                                                                                                                                                                                                                            | Cognitive Level | Teaching Hours | COs | Teaching Learning Methodology | Assessment Methods |
|-------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|-----|-------------------------------|--------------------|
| Jun 22, 2026<br>(Day Order 6)             | 1        | <b>1.1 Software and Software Engineering</b><br><br>Nature of Software - Defining Software Engineering                                                                                                                                                                                             | K1-K4           | 1              | 1-3 | Lecture / Presentation        | Group discussion   |
| Jun 23 – July 1, 2026<br>(Day Order 1- 6) | 1        | Software Process - Process, Activities, Work Product - Process Framework - Categories of Activities (Framework, Umbrella)                                                                                                                                                                          | K1-K4           | 5              | 1-3 | Lecture / Presentation        | Quiz               |
| July 2 – July 8, 2026<br>(Day Order 1- 6) | 1        | <b>1.2 Process Models</b><br><br>SDLC - Waterfall Model - Prototyping - Agile Philosophy - Agility, Agility and Cost Change, Agile Process - Agility Principles - Scrum - Test driven development - continuous integration - Impact of Process on End Product - Process Assessment and Improvement | K1-K4           | 5              | 1-3 | Role play                     | Case studies       |
| July 9 – 16, 2026<br>(Day Order 1- 6)     | 1        | <b>1.3 Software Engineering Principles</b><br><br>Planning - Separation of Concerns - Modularity - Modeling - Abstraction - Anticipation of change - Reusability                                                                                                                                   | K1-K4           | 5              | 1-3 | Case analysis                 | Case studies       |

|                                        |                      |                                                                                                                                                                            |       |   |     |                   |                                                                                                                                                                            |
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|                                        |                      | - Incrementality - Measurement – Tools                                                                                                                                     |       |   |     |                   |                                                                                                                                                                            |
| July 17 – 24, 2026<br>(Day Order 1- 6) | 2                    | <b>2.1 Requirements Gathering</b><br>Requirements Engineering Tasks - Software Requirements Specification - Types of Requirements (Normal, Expected) - Traceability Matrix | K1-K6 | 5 | 1-5 | Case analysis     | Puzzle                                                                                                                                                                     |
| July 25 – 28, 2026<br>(Day Order 1- 3) | 2                    | <b>2.2 Modeling</b><br>Significance of requirement analysis - Arlow and Neustadt rules of thumb - application domain analysis                                              | K1-K6 | 2 | 1-5 | Case analysis     | <b>Component I:</b><br>Case study Activity<br><b>Max Marks: 25 marks</b><br>Problem Identification: 5 marks<br>Requirement specification: 10 marks<br>UML model : 10 marks |
| July 29 – Aug 3, 2026                  | <b>C.A. Test – I</b> |                                                                                                                                                                            |       |   |     |                   |                                                                                                                                                                            |
| Aug 4 - 6, 2026<br>(Day Order 4 - 6)   | 2                    | Writing Use Cases - Use Case Diagram - Activity Diagram - Swimlane Diagram                                                                                                 | K1-K6 | 3 | 1-5 | Learning by doing | Design exercises                                                                                                                                                           |

|                                          |   |                                                                                                                                                                                                                                                                                                         |       |   |     |                                  |                  |
|------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|-----|----------------------------------|------------------|
| Aug 7 – 14, 2026<br>(Day Order 1- 6)     | 2 | Identifying classes – Attributes – Operations - associations and dependencies - Class diagram - packaging classes - State Diagram - Sequence Diagram - Agile Requirements Elicitation (User Stories) - Agile Requirements Engineering                                                                   | K1-K6 | 5 | 1-5 | Flipped classroom                | Group discussion |
| Aug 17 - 24, 2026<br>(Day Order 1- 6)    | 3 | <b>3.1 Software Designing</b> Design Concepts (Abstraction, Architecture, Patterns, Separation of Concerns, Modularity, Information Hiding, Functional Dependence, Refinement, Aspects, Refactoring)<br><br><b>3.2 Basic Design Principles</b> Open Closed - Liskov Substitution - Dependency Inversion | K1-K6 | 5 | 1-5 | Lecture / problem based learning | Objective test   |
| Aug 25 – Sep 2, 2026<br>(Day Order 1- 6) | 3 | Interface Segregation - Release Reuse Equivalency- Common Closure - Common Reuse<br><br><b>3.3 Software Quality and Assurance</b><br><br>McCall's quality factors - ISO 9126 Quality factors -Cost of Quality - Defect - Defect Amplification and removal - Reviews – Informal,                         | K1-K6 | 5 | 1-5 | Learning by doing                | Assignments      |

|                                      |                       |                                                                                                                                                                                                                                                             |       |   |     |                                 |                                                                                                                                                                 |
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|                                      |                       | Formal Technical Reviews -<br>Inspection - Walkthroughs - Audits –<br>Testing                                                                                                                                                                               |       |   |     |                                 |                                                                                                                                                                 |
| Sep 3 – 11, 2026<br>(Day Order 1- 6) | 4                     | <b>4.1 Software Testing</b><br><br>Levels of Testing - Unit Testing,<br>Integration Testing, Validation<br>Testing, System Testing - Test Cases<br>- Test Case Template -Types of<br>Testing - White Box, Basis Path<br>Testing , Control Structure Testing | K1-K6 | 5 | 1-5 | Lecture /<br>Demo               | Test case reports                                                                                                                                               |
| Sep 15-17, 2026<br>(Day Order 1 - 3) | 4                     | <b>4.2 Software Configuration<br/>Management</b><br><br>Need - Baselines - Software<br>Configuration Items - SCM<br>Repository - SCM Process                                                                                                                | K1-K6 | 2 | 1-5 | Problem<br>based learning       | <b>Component II:</b><br>Mini project<br><br><b>Max Marks: 25 marks</b><br><br>System design: 10 marks<br><br>Test case design: 10<br>marks<br><br>Viva: 5 marks |
| Sep 18 –23, 2026                     | <b>C.A. Test – II</b> |                                                                                                                                                                                                                                                             |       |   |     |                                 |                                                                                                                                                                 |
| Sep 24 - 28, 2026<br>(Day 4 – 6)     | 4                     | <b>4.3 Metrics</b><br><br>Terms (Metrics, Measurement,<br>Indicators) - Function Points -                                                                                                                                                                   | K1-K6 | 3 | 1-5 | Problem-<br>solving<br>sessions | Exercises on metrics                                                                                                                                            |

|                                           |   |                                                                                                                                                                                                                                                                                                                                                                                          |       |   |     |                         |                       |
|-------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|-----|-------------------------|-----------------------|
|                                           |   | Deriving Function points - Metrics - CK Metrics - Defects per KLOC - FP per Person-Month - McCabe Cyclomatic Complexity - code coverage                                                                                                                                                                                                                                                  |       |   |     |                         |                       |
| Sep 29 – Oct 7, 2026<br>(Day Order 1 - 6) | 5 | <p><b>5.1 Software Project Estimation</b></p> <p>Software sizing- LOC Based Estimation - FP based estimation - COCOMO Model II - Estimation for WebApp Projects</p> <p><b>5.2 Project Management and Scheduling</b></p> <p>Training plan - Defect prevention meeting Root causes for delays - Principles (Compartmentalization, Interdependence, Effort Validation, Time Allocation,</p> | K1-K6 | 5 | 1-5 | Lecture / Presentations | Case study estimation |
| Oct 8 - 14, 2026<br>(Day Order 1 - 6)     | 5 | <p>Responsibilities, Outcomes, Milestones) - Relationship between People and Effort - Effort Distribution (40-20-40 rule) - Scheduling Tools and Techniques (Time- Line charts, Tracking the schedule)</p> <p><b>5.3 Risk Management</b></p>                                                                                                                                             | K1-K6 | 5 | 1-5 | Lecture / Discussion    | Risk report creation  |

|                                       |                 |                                                                                                                                                                                |  |  |  |  |  |
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|                                       |                 | Term - Proactive Vs Reactive Risk Strategies - Risk Identification - Risk Projection (Risk Table, Assessing Risk Impact) - Risk Mitigation, Monitoring, Management - RMMM Plan |  |  |  |  |  |
| Oct 15 - 21, 2026<br>(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. Blessy Boaz  
**Course Title** : OPERATING SYSTEMS: CONCEPTS AND APPLICATIONS  
**Course Code** : 23CS/PC/OC14  
**Shift** : II

**COURSE OUTCOMES (COs)**

| <b>COs</b> | <b>Description</b>                                                                            | <b>CL</b> |
|------------|-----------------------------------------------------------------------------------------------|-----------|
| <b>CO1</b> | explain the fundamental concepts and security of operating systems                            | K1, K2    |
| <b>CO2</b> | apply the various algorithms, methods and security measures to each OS components             | K3        |
| <b>CO3</b> | analyse the algorithms, methods, security and the state of the system in various time periods | K4        |
| <b>CO4</b> | evaluate the performance of the algorithms, file and memory management techniques             | K5        |
| <b>CO5</b> | create solutions to ensure synchronization for real time 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 Methodolog</b> | <b>Assessment Methods</b> |
|-------------|-----------------|----------------|------------------------|-----------------------|------------|-------------------------------------|---------------------------|
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|                                           |   |                                                                                                                                                                                                                                                                                                                                                          |                     |   |              | y                    |                     |
| Jun 22, 2026<br>(Day Order 6)             | 1 | <b>1.1 Introduction to Operating System</b><br>Introduction to OS -<br>Structure, Operations                                                                                                                                                                                                                                                             | K1, K2              | 1 | 1            | Group discussion     | Quiz                |
| Jun 23 – July 1, 2026<br>(Day Order 1- 6) | 1 | Protection and Security, Kernel<br>Data Structures, Computing<br>Environments, Services, System<br>Calls and its types, System<br>Programs, OS Design and<br>Implementation OS Debugging<br>Operating, System Generation,<br>System Boot                                                                                                                 | K1, K2              | 6 | 1            | Group discussion     | Quiz                |
| July 2 – July 8, 2026<br>(Day Order 1- 6) | 1 | <b>1.2 UNIX Operating System</b><br>History of UNIX, Shell, UNIX<br>File System Structure<br><b>1.3 Basic UNIX Commands*</b><br>Commands for files and<br>directories cd, cp, mv, rm, mkdir,<br>more, less, creating and viewing<br>files, using cat, date, who, pwd -<br>filter commands –head tail, cut,<br>paste, grep – regular expression –<br>sort | K1, K2<br><br>K1-K4 | 6 | 1<br><br>1-3 | Learning by<br>doing | Practical Exercises |
| July 9 – 16, 2026<br>(Day Order 1- 6)     | 2 | <b>2.1 Process Management</b><br>Process - Concept, Process                                                                                                                                                                                                                                                                                              | K1, K2              | 6 | 1            | Simulation           | Role play           |

|                                        |   |                                                                                                                                                                                                                                                                                                   |       |   |     |                   |                                                                                                              |
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|                                        |   | Control Block, Process operations, Scheduling Algorithms - Short term and long-term process scheduling policies – Scheduling Criteria - Multiple Processor Scheduling<br><b>2.2 CPU Scheduling</b><br>Scheduling Criteria – Scheduling Algorithms: FCFS, SJF, Priority and Round Robin Scheduling | K1-K5 |   | 1-4 |                   |                                                                                                              |
| July 17 – 24, 2026<br>(Day Order 1- 6) | 2 | <b>2.3 Process Synchronization and Deadlocks</b><br>The Critical-section Problem – Petersons solution – Mutex locks - Semaphores – Monitors, Deadlock Prevention and Avoidance, Deadlock Detection and Deadlock Recovery                                                                          | K1-K6 | 6 | 1-5 | Case studies      | Self-assessment<br><b>Component I</b><br><b>(25 marks)</b><br><b>Linux Commands</b><br><b>Practical Test</b> |
| July 25 – 28, 2026<br>(Day Order 1- 3) | 2 | <b>2.4 Process Utilities*</b><br>sh process, Parents and children, Process status, System process, Mechanism of process creation, Internal and external commands, running jobs in background, KILL, NICE, Job control, at and batch, cron - Case Study on Processes in LINUX                      | K1-K6 | 3 | 1-5 | Learning by doing | Practical Exercises                                                                                          |

| July 29 – Aug 3, 2026                 | <b>C.A. Test – I</b> |                                                                                                                                                                                                                                                                                                                                                         |       |   |     |                   |                     |
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| Aug 4 - 6, 2026<br>(Day Order 4 - 6)  | 3                    | <b>3.1 File Organisation</b><br>File organisation and Access methods - Logical and Physical File structure – File Allocation methods, - Linked and Index Allocation - File Protection and Security - Directory structure - Single level, two level, Tree structure                                                                                      | K1-K5 | 3 | 1-4 | Presentation      | Peer assessment     |
| Aug 7 – 14, 2026<br>(Day Order 1- 6)  | 3                    | Free Space Management - Allocation Methods - Efficiency and Performance – Recovery – FAT32 and NTFS                                                                                                                                                                                                                                                     | K1-K5 | 6 | 1-4 | Experiments       | Worksheet           |
| Aug 17 - 24, 2026<br>(Day Order 1- 6) | 3                    | <b>3.2 File System*</b><br>File Access Permission – chmod, chown, chgrp - File Comparisons - View Files – Listing files with attributes – Wildcards - Translating Characters - Links and its types - The File System – Partitions, File Systems, Kernel Accesses – Mounting – umask, ulimit - I/O redirection – Pipes - Case Study on LINUX File System | K1-K6 | 6 | 1-5 | Learning by doing | Practical Exercises |

|                                          |   |                                                                                                                                                                                                                                                                                                                                                                                                         |       |   |     |                   |                                                                                                    |
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| Aug 25 – Sep 2, 2026<br>(Day Order 1- 6) | 4 | <b>4.1 Memory Management</b><br>Memory Management Techniques, Single Partition Allocation, Multiple Partition Allocation – Swapping - Paging and Segmentation - Segmented-Paged Memory Management Techniques - Logical and Physical Address space – Address Mapping - Demand paging - Virtual memory, protection and address mapping hardware, Page fault, Page replacement and Page removal algorithms | K1-K5 | 6 | 1-4 | Story telling     | Puzzle                                                                                             |
| Sep 3 – 11, 2026<br>(Day Order 1- 6)     | 4 | <b>4.2 Device Management</b><br>Classification of device according to speed, Disk structure - Disk scheduling – FCFS scheduling, SSTF scheduling - Access method and storage capacity                                                                                                                                                                                                                   | K1-K5 | 6 | 1-4 | Simulation        | Discussions<br><b>Component II (25 marks)</b><br><b>Case study implementation and presentation</b> |
| ep 15-17, 2026<br>(Day Order 1 - 3)      |   | <b>4.3 Disk Utilities*</b><br>Disk usage, disk free, dd, Backups- cpio, tar, System calls for file management, directory management - Case Study on                                                                                                                                                                                                                                                     | K1-K6 | 3 | 1-5 | Learning by doing | Practical exercises                                                                                |

|                                           |                       |                                                                                                                                                                                                                                                                   |       |   |     |                   |            |
|-------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|-----|-------------------|------------|
|                                           |                       | Memory Management in LINUX                                                                                                                                                                                                                                        |       |   |     |                   |            |
| Sep 18 –23, 2026                          | <b>C.A. Test – II</b> |                                                                                                                                                                                                                                                                   |       |   |     |                   |            |
| Sep 24 - 28, 2026<br>(Day 4 – 6)          | 5                     | <b>5.1 Security</b><br>The Security Environment –<br>Operating System Security –<br>Controlling Access to resources –<br>Formal models of Secure systems<br>- Basics of cryptography                                                                              | K1-K4 | 3 | 1-3 | Case studies      | Worksheets |
| Sep 29 – Oct 7, 2026<br>(Day Order 1 - 6) | 5                     | Authentication – Exploiting<br>Software –Insider Attacks –<br>Malware – Defenses<br><b>5.2 Virtualization and the<br/>Cloud</b><br>History – Requirements for<br>virtualization – Type 1 and Type<br>2 Hypervisors – Techniques for<br>efficient virtualization – | K1-K4 | 6 | 1-3 | Discussion        | Crosswords |
| Oct 8 - 14, 2026<br>(Day Order 1 - 6)     |                       | Memory virtualization – I/O<br>Virtualization –Virtual<br>Appliances – Virtual machines<br>on multicore CPUs – Clouds:<br>Clouds as service – Virtual<br>machine migration –<br>checkpointing - Case Study on<br>Security in LINUX                                | K1-K4 | 6 | 1-3 | Stack<br>overflow | Quiz       |

Oct 15 - 21, 2026  
(Day Order 1- 4)

**REVISION**

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

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

**Department** : Computer Science  
**Name/s of the Faculty** : Dr. Faustina Joan S P  
**Course Title** : UI, UX and Design Thinking  
**Course Code** : 23CS/PE/XI15  
**Shift** : II

**COURSE OUTCOMES (COs)**

| <b>COs</b>                    | <b>Description</b>                                                                                                                    |                                                 |                        |                       |            |                                      | <b>CL</b>                                     |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------|-----------------------|------------|--------------------------------------|-----------------------------------------------|
| <b>CO1</b>                    | recall the core concepts of UI, UX and demonstrate their need in designing a web application using front-end development technologies |                                                 |                        |                       |            |                                      | K1, K2                                        |
| <b>CO2</b>                    | apply the knowledge and build web applications using HTML5, CSS, JavaScript, Bootstrap                                                |                                                 |                        |                       |            |                                      | K3                                            |
| <b>CO3</b>                    | analyse between different users, user behaviours and their role in frontend application design                                        |                                                 |                        |                       |            |                                      | K4                                            |
| <b>CO4</b>                    | evaluate the design using wireframing and prototyping to build user centric front-end applications                                    |                                                 |                        |                       |            |                                      | K5                                            |
| <b>CO5</b>                    | design and develop the front-end of a web application with all the learnt concepts                                                    |                                                 |                        |                       |            |                                      | 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 22, 2026<br>(Day Order 6) | 1                                                                                                                                     | <b>1.1 UX and Design Process</b><br>What is UX? | K1                     | 1                     | CO1        | Inquiry-Based Learning               | Activity:<br>Torrance<br>Tests of<br>Creative |

|                                            |      |                                                                                                                                                                                                                                          |                        |            |                    |                                        |                                               |
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|                                            |      |                                                                                                                                                                                                                                          |                        |            |                    |                                        | Thinking                                      |
| Jun 23 – July 1, 2026<br>(Day Order 1 - 6) | 4    | <b>4.1 HTML5 and CSS3</b><br>HTML Elements –<br>Structural/Semantic,<br>Phrasing, Table –<br>Embedded – Form                                                                                                                             | K1 – K6                | 6          | 1 – 5              | Learning by Doing                      | Group<br>Discussion<br>on known<br>HTML tags  |
| July 2 – July 8, 2026<br>(Day Order 1 - 6) | 2    | <b>2.2 Visual Design<br/>Principles and<br/>Processes</b><br>Basics of Visual Design<br>– Design Principles –<br>Visual Design Tools –<br>Five Factors /<br>Preconditions for Users<br>to Take Actions –<br>Models of Behavior<br>Change | K1 – K4                | 6          | 1 – 3              | Lecture &<br>Presentation              | Activity:<br>Single<br>Screen<br>Poster Audit |
| July 9 – 16, 2026<br>(Day Order 1 - 6)     | 4    | <b>4.1 HTML5 and CSS</b><br>CSS Selectors –<br>Positioning Content –<br>Text Styles – Borders<br>and Backgrounds -<br>Styling Tables                                                                                                     | K1 – K6                | 6          | 1 – 5              | Learning by Doing                      | Practical<br>Exercises                        |
| July 17 – 24, 2026<br>(Day Order 1 - 6)    | 4, 2 | <b>4.1 HTML5 and CSS3</b><br>Flexbox – Animation<br>and Transforms<br><b>2.1 Designing Behavior</b>                                                                                                                                      | K1 – K6<br><br>K1 – K4 | 4<br><br>2 | 1 – 5<br><br>1 – 3 | Learning by Doing<br><br>Inquiry-Based | Practical<br>Exercises                        |

|                                         |                      | Behavioral Approach for Product Design                                                                                              |         |   |       | Learning               |                                                                              |
|-----------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------|---|-------|------------------------|------------------------------------------------------------------------------|
| July 25 – 28, 2026<br>(Day Order 1 - 3) | 5                    | <b>5.2 Bootstrap Framework</b><br>Installation – Responsive Grid System                                                             | K1 – K6 | 3 | 1 – 5 | Learning by Doing      | <b>Component I:</b> Quiz on HTML5 and CSS3 (25 marks)<br>Portions:<br>Unit 4 |
| July 29 – Aug 3, 2026                   | <b>C.A. Test – I</b> |                                                                                                                                     |         |   |       |                        |                                                                              |
| Aug 4 – 6, 2026<br>(Day Order 4 - 6)    | 5                    | <b>5.2 Bootstrap Framework</b><br>Bootstrap's Style Standard – Responsive CSS – Responsive Development with Browser devTools        | K1 – K6 | 3 | 1 – 5 | Learning by Doing      | Practical Exercises                                                          |
| Aug 7 – 14, 2026<br>(Day Order 1- 6)    | 1                    | <b>1.1 UX and Design Process</b><br>What is UX? – UX Design Process – Discovery and Planning – The UX Strategy – UX Research Stages | K1 – K4 | 6 | 1 – 3 | Lecture & Presentation | Discussion                                                                   |
| Aug 17 – 24, 2026<br>(Day Order 1- 6)   | 1                    | <b>1.1 UX and Design Process</b>                                                                                                    | K1 – K4 | 6 | 1 – 3 | Lecture & Presentation | Activity:<br>Quizizz                                                         |

|                                          |   |                                                                                                                                                                                                                                    |         |   |       |                             |                                                                             |
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|                                          |   | <p>UX Analysis, Design, Production</p> <p><b>1.2 User Behavior and User Research</b></p> <p>Basics – Gestalt Theory – Psychology in UX – User Research, Benefits of User Research – Getting to know Your Users – User Personas</p> |         |   |       |                             | Interactive Class                                                           |
| Aug 25 – Sep 2, 2026<br>(Day Order 1- 6) | 3 | <p><b>3.1 Wireframes and Prototyping</b></p> <p>Wireframe – Creating Wireframes – Types – Tools – Prototyping – Methods, Creating Prototypes, Tools</p>                                                                            | K1 – K5 | 6 | 1 – 5 | Lecture & Learning by Doing | Activity: Review of Wireframes and Prototyping Tools                        |
| Sep 3 – 11, 2026<br>(Day Order 1- 6)     | 5 | <p><b>5.1 JavaScript</b></p> <p>JavaScript Essentials - Browser Environment – Window Object – DOM Elements Constraint Validation API</p>                                                                                           | K1 – K6 | 6 | 1 – 5 | Lecture & Learning by Doing | <b>Component II:</b> UX-Driven App Review (15 marks)<br>Portions: Units 1-2 |
| Sep 15 – 17, 2026<br>(Day Order 1 - 3)   | 5 | <p><b>5.1 JavaScript</b></p> <p>JQuery – Dynamic styling - Events</p>                                                                                                                                                              | K1 – K6 | 3 | 1 – 5 | Learning by Doing           | Practical Exercises                                                         |

|                                           |                       |                                                                                                                                                                                                                                                      |                        |            |                    |                                |                                                                                                                                 |
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| Sep 18 – 23, 2026                         | <b>C.A. Test - II</b> |                                                                                                                                                                                                                                                      |                        |            |                    |                                |                                                                                                                                 |
| Sep 24 – 28, 2026<br>(Day Order 4 – 6)    | 5                     | <b>5.1 JavaScript</b><br>TypeScript – Installing<br>TypeScript, Benefits,<br>Building a TypeScript<br>file                                                                                                                                           | K1 – K6                | 3          | 1 – 5              | Lecture &<br>Presentation      | <b>Component II:</b><br>Wireframing<br>the Web<br>Application<br>UI Design –<br>Submission<br>(10 marks)<br>Portions:<br>Unit 3 |
| Sep 29 – Oct 7, 2026<br>(Day Order 1 - 6) | 5, 3                  | <b>5.2 Bootstrap<br/>Framework</b><br>Z dimension - Transform<br>- Transition – Animation<br>- Flexbox - Responsive<br>Website Clone<br><b>3.2 UI Design and<br/>Implementation</b><br>User Interface Design -<br>UI design Tools - Design<br>System | K1 – K6<br><br>K1 – K5 | 4<br><br>2 | 1 – 5<br><br>1 – 4 | Lecture & Learning<br>by Doing | Practical<br>Exercises                                                                                                          |
| Oct 8 – 14, 2026<br>(Day Order 1 - 6)     | 3                     | <b>3.2 UI Design and<br/>Implementation</b><br>UI Design Handover -<br>Tools - User Feedback -<br>Testing - Tracking and<br>Recording - Creating and                                                                                                 | K1 – K6                | 6          | 1 – 5              | Lecture &<br>Presentation      | Discussion                                                                                                                      |

|                                       |                 |                              |  |  |  |  |  |
|---------------------------------------|-----------------|------------------------------|--|--|--|--|--|
|                                       |                 | Analyzing Conversion funnels |  |  |  |  |  |
| Oct 15 – 21, 2026<br>(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  
**Course Title** : Cyber Security  
**Course Code** : 23CS/PE/CS15  
**Shift** : II

**COURSE OUTCOMES (COs)**

| <b>COs</b> | <b>Description</b>                                                | <b>CL</b> |
|------------|-------------------------------------------------------------------|-----------|
| <b>CO1</b> | recall the fundamentals of cybercrimes and computer forensics     | K1        |
| <b>CO2</b> | understand the preventive measures to safeguard from cyber crimes | K2        |
| <b>CO3</b> | apply the various methodologies involved in attacks               | K3        |
| <b>CO4</b> | analyse the strategies used in cybercrime and cyber forensics     | K4        |
| <b>CO5</b> | evaluate policies to secure data                                  | K5        |

| <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 22, 2026<br>(Day Order 6) | 1               | <b>1.1 Introduction to Cybercrime</b><br>Introduction | K1                     | 1                     | CO1        | Lecture & Presentation               | Questioning               |
| Jun 23 – July 1, 2026         | 1               | <b>1.1 Introduction to</b>                            | K1 – K4                | 6                     | 1 – 4      | Flipped Classroom                    | Discussion                |

|                                            |   |                                                                                                                                                                                                                                                                                                                                    |         |   |       |                        |                                |
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| (Day Order 1 - 6)                          |   | <p><b>Cybercrime</b><br/> Cybercrime: Definition and Origins of the Word<br/> - Cybercrime and Information Security -<br/> Who are Cybercriminals? -<br/> Classifications of Cybercrimes -<br/> Cybercrime: The Legal Perspectives -<br/> Cybercrimes: An Indian Perspective</p>                                                   |         |   |       |                        |                                |
| July 2 – July 8, 2026<br>(Day Order 1 - 6) | 1 | <p>Cybercrime and the Indian ITA 2000 - A Global Perspective on Cybercrimes<br/> <b>1.2 Cyber Offenses: How Criminals Plan Them</b><br/> Introduction - How Criminals Plan the Attacks - Social Engineering - Cyber stalking - Cyber cafe and Cybercrime - Botnets - The Fuel for Cybercrime - Attack Vector - Cloud Computing</p> | K1 – K4 | 6 | 1 – 4 | Lecture & Presentation | Activity: Cyber Crime Match-Up |

|                                         |                      |                                                                                                                                                                                                                                                                         |         |   |       |                        |                                                                                                 |
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| July 9 – 16, 2026<br>(Day Order 1 - 6)  | 2                    | <b>2.1 Cybercrime: Mobile and Wireless Devices</b><br>Introduction -<br>Proliferation of Mobile and Wireless Devices -<br>Trends in Mobility -<br>Credit Card Frauds in Mobile and Wireless Computing Era                                                               | K1 – K4 | 6 | 1 – 4 | Lecture & Presentation | Group Discussion                                                                                |
| July 17 – 24, 2026<br>(Day Order 1 - 6) | 2                    | Security Challenges Posed by Mobile Device<br>- Registry Settings for Mobile Devices -<br>Authentication Service Security - Attacks on Mobile/Cell Phones -<br>Mobile Devices: Security Implications for Organizations -<br>Organizational Measures for Handling Mobile | K1 – K4 | 6 | 1 – 4 | Lecture & Presentation | <b>Component I:</b><br>Cybercrimes Case Study Presentation (25 marks)<br>Portions:<br>Units 1-2 |
| July 25 – 28, 2026<br>(Day Order 1 - 3) | 2                    | Organizational Security Policies and Measures in Mobile Computing Era -<br>Laptops                                                                                                                                                                                      | K1 – K4 | 3 | 1 – 4 | Lecture & Presentation | Mobile Phone Audit                                                                              |
| July 29 – Aug 3, 2026                   | <b>C.A. Test – I</b> |                                                                                                                                                                                                                                                                         |         |   |       |                        |                                                                                                 |
| Aug 4 – 6, 2026<br>(Day Order 4 - 6)    | 3                    | <b>3.1 Tools and Methods Used in Cybercrime</b>                                                                                                                                                                                                                         | K1 – K5 | 3 | 1 – 5 | Lecture &              | Discussion                                                                                      |

|                                          |      |                                                                                                                                                                                                           |         |   |       |                        |                                              |
|------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---|-------|------------------------|----------------------------------------------|
|                                          |      | Introduction - Proxy Servers and Anonymizers - Phishing-Identity Theft (ID Theft)                                                                                                                         |         |   |       | Presentation           |                                              |
| Aug 7 – 14, 2026<br>(Day Order 1- 6)     | 3    | Password Cracking - Keyloggers and Spywares - Virus and Worms - Trojan Horses and Backdoors, Steganography - DoS and DDoS Attacks: DoS - DoS and DDoS Attacks: DDoS                                       | K1 – K5 | 6 | 1 – 5 | Lecture & Presentation | Activity:<br>Phishing<br>Email Hunt          |
| Aug 17 – 24, 2026<br>(Day Order 1- 6)    | 3, 4 | SQL Injection - Buffer Overflow - Attacks on Wireless Networks<br><b>4.1 Cybercrimes and Cyber security: The Legal Perspectives</b><br>Introduction - Cybercrime and the Legal Landscape around the World | K1 – K5 | 6 | 1 – 5 | Lecture & Presentation | Discussion                                   |
| Aug 25 – Sep 2, 2026<br>(Day Order 1- 6) | 4    | Why Do We Need Cyber laws: The Indian Context - The Indian IT Act - Challenges to Indian Law and Cybercrime Scenario in India -                                                                           | K1 – K5 | 6 | 1 – 5 | Lecture & Presentation | Activity:<br>Digital<br>Footprint<br>Tracker |

|                                        |                       |                                                                                                                                                                              |         |   |       |                        |                                                                                                                      |
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|                                        |                       | Consequences of Not Addressing the Weakness in Information Technology Act                                                                                                    |         |   |       |                        |                                                                                                                      |
| Sep 3 – 11, 2026<br>(Day Order 1- 6)   | 4                     | Digital Signatures and the Indian IT Act - Amendments to the Indian IT Act - Cybercrime and Punishment - Cyber law - Technology and Students with respect to Indian Scenario | K1 – K5 | 6 | 1 – 5 | Inquiry-based Learning | <b>Component II:</b> Test based on Cyber Scenarios – Case Study, Puzzle, Crossword (25 marks)<br>Portions:<br>Unit 3 |
| Sep 15 – 17, 2026<br>(Day Order 1 - 3) | 5                     | <b>5.1 Computer Forensics</b><br>Understanding Computer Forensics – Introduction<br>- Historical Background of Cyber forensics                                               | K1 – K5 | 3 | 1 – 5 | Lecture & Presentation | Questioning                                                                                                          |
| Sep 18 – 23, 2026                      | <b>C.A. Test - II</b> |                                                                                                                                                                              |         |   |       |                        |                                                                                                                      |
| Sep 24 – 28, 2026<br>(Day Order 4 – 6) | 5                     | The Need for Computer Forensics - Cyber forensics and Digital Evidence - Forensics Analysis of E-Mail - Digital Forensics Life                                               | K1 – K5 | 3 | 1 – 5 | Lecture & Presentation | Activity:<br>File Metadata Extraction                                                                                |

|                                           |                 | Cycle                                                                                                                                                  |         |   |       |                           |            |
|-------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---|-------|---------------------------|------------|
| Sep 29 – Oct 7, 2026<br>(Day Order 1 - 6) | 5               | Chain of Custody<br>Concept - Network<br>Forensics - Approaching<br>a Computer Forensics<br>Investigation - Computer<br>Forensics and<br>Steganography | K1 – K5 | 6 | 1 – 5 | Case-based Learning       | Discussion |
| Oct 8 – 14, 2026<br>(Day Order 1 - 6)     | 5               | Challenges in Computer<br>Forensics - Special Tools<br>and Techniques -<br>Forensics Auditing -<br>Antiforensics                                       | K1 – K5 | 6 | 1 – 5 | Lecture &<br>Presentation | Discussion |
| Oct 15 – 21, 2026<br>(Day Order 1- 4)     | <b>REVISION</b> |                                                                                                                                                        |         |   |       |                           |            |