

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

**Course Schedule: November 2024 – April 2025**

**Department** : Computer Science  
**Name/s of the Faculty** : Dr. Swetha Margaret T.A, Ms. Nandhini S  
**Course Title** : Security Concepts  
**Course Code** : 19CS/MC/SC65  
**Shift** : II

<b>Week &amp; No. of hours</b>	<b>Units &amp; Topics</b>	<b>Teaching Methodology</b>	<b>Text &amp; References</b>	<b>Method of Evaluation</b>
Nov 18 – 25, 2024 (Day Order 1-6) 5 Hours	<b>Unit I</b> <b>1.1 Computer security overview</b> - Computer security concepts -The OSI security architecture - Security attacks- Security services -Security mechanisms- A Model for network security.	Lecture / Presentation /Discussions	Stallings William. Cryptography and Network Security: Principles and Practices. Prentice Hall, 5th Edition, 2010.	Demo packet-traveling practicalnetworking.net
Nov 26- Dec 3, 2024 (Day Order 1 to 6) 5 Hours	<b>1.2 Physical security</b> Classification of assets- Choosing site location for security- Securing assets: Locks and entry controls- Physical intrusion detection- Compliance with standards	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Video Observation Exploring different kinds of IDS system and their work mechanisms
Dec 4-11, 2024 (Day Order 1 to 6) 5 Hours	<b>1.3 Access Control</b> Access Control Techniques- Authentication Tokens- Authentication-Role of Tokens Access Control Administration - Accountability	Lecture and Presentation	Harold F. Tipton, Micki Krause, Information Security Management Handbook 6th Edition	Authentication Token Role-Play  Exploring Authentication Token Role-Play
Dec 12-19, 2024 (Day Order 1 to 6) 5 Hours	<b>Unit II - 2.1 Computer Security</b> -Operating System Models- Classic security model- Reference monitor - Case studies: UNIX security-Windows security - Securing infrastructure services VM and cloud	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Case Study based on Small Business  Cybersecurity Case Study Series   NIST

	computing- Securing mobile devices			
Dec 20, 2024 (Day Order 1) 1 Hour	<b>2.2 Network Security</b> Securing network design- Introduction to secure network design Network Device Security-Switch and router basics -Network hardening	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Activity: Network Scavenger Hunt  Find Out What Protocols Are And How to Create One
Jan 3 – 7, 2025 (Day Order 1 to 6) 5 Hours	<b>2.3 Firewall</b> Overview- Core firewall functions- Additional firewall capabilities - Firewall design	Lecture / Presentation /Discussions	-do-	Activity: Network Scavenger Hunt  Find Out What Protocols Are And How to Create One
Jan 8 – 17, 2024 (Day Order 1 to 6) 5 Hours	<b>Unit III</b> <b>3.1 VPN</b> - How a VPN works-VPN protocols- Remote access VPN security-Site-to-Site VPN security	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Component I (25 Marks)  Descriptive based test which will include objectives and case study analysis
Jan 18 - 23, 2025	<b>C.A. Test – I</b>			
Jan 24 - 30, 2025 (Day Order 1 to 6) 5 Hours	<b>3.2 Wireless network security</b> - Radio frequency security basics-Data-link layer Wireless security features, flaws and threats	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Role Play – Group Activity
Feb 3-8, 2025 (Day Order 1 to 6) 5 Hours	Wireless vulnerabilities and mitigations-Wireless network hardening practices and recommendations <b>3.3 VOIP</b> Background -VoIP components	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Role-Playing Activity for VoIP Security Simulated Phishing Attack  Role-Playing Compliance Officer

Feb 10– 18, 2025 (Day Order 1 to 6) 5 Hours	VoIP vulnerabilities and countermeasures <b>3.4 IDS and Prevention System</b> - IDS concepts-IDS types and detection models-IDS features	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Assignment
Feb 19- 26, 2025 (Day Order 1 to 6) 5 Hours	IDS deployment considerations <b>Unit IV</b> <b>4.1 Securing unstructured Data</b> Structured data vs. unstructured data - At rest, in transit, and in use - Approaches to securing unstructured data- newer approaches to securing unstructured data	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Role-Playing Data Breach Scenario  Unstructured Data Classification Exercise
Feb 27- Mar 6, 2025 (Day Order 1 to 6) 5 Hours	<b>4.2 Storage Security</b> Storage security evolution- Modern storage security <b>4.3 Database Security</b> General database security concepts -Understanding database security layers Understanding database-level security - Using other database objects for security	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Group Discussion on Ransome attacks  Data Encryption Challenge
Mar 7 – 11, 2025 (Day Order 1 to 6) 5 Hours	Database backup and recovery <b>Unit V</b> <b>5.1 User Security</b> Authentication – Authorization- Compliance with standards	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Component II (25 Marks)  Expo/ Exhibition on cyber security / security concept and awareness
Mar 12 –17, 2025	<b>C.A. Test – II</b>			
Mar 18 – 20, 2025 (Day Order 1 to 6) 5 Hours	<b>5.2 Application Security</b> Secure development life cycle- Application security practices-Web application Security - Client application security- Remote administration security	Lecture / Presentation /Discussions	Rhodes Mark. Ousley. Information Security: The Complete Reference. McGraw Hill, 2nd Edition, 2013	Group activity to explore multi-factor authentication (MFA) and role-based access control (RBAC).

Mar 21 - 28, 2025 (Day Order 1 to 6) 5 Hours	<b>5.3 Classical Encryption Techniques</b> Symmetric cipher model- Substitution techniques	Lecture / Presentation /Discussions	Stallings William. Cryptography and Network Security: Principles and Practices. Prentice Hall, 5th Edition, 2010.	Discover How You Share Information and What to Share  Activity: Think Like A Hacker Build a Columnar Transposition Cipher
Mar 29- April 3, 2025 (Day Order 1 to 6) 5 Hours	Transposition techniques- Rotor machines Steganography	Lecture / Presentation /Discussions	Stallings William. Cryptography and Network Security: Principles and Practices. Prentice Hall, 5th Edition, 2010.	Information Online Lasts Forever  Activity: What Does Your Digital Footprint Look Like?  Implement a Caesar Cipher
Mar 20-22, 2024 (Day Order 1 to 6)	<b>REVISION</b>			

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

**Course Schedule: November 2024 – April 2025**

**Department : Computer Science**  
**Name/s of the Faculty : Dr. Renuka Devi D, Ms. Madhura Prabha R**  
**Course Title : Cloud Computing**  
**Course Code : 19CS/MC/CC65**  
**Shift : II**

<b>Week &amp; No. of hours</b>	<b>Units &amp; Topics</b>	<b>Teaching Methodology</b>	<b>Text &amp; References</b>	<b>Method of Evaluation</b>
Nov 18-25, 2024 (Day Order 1 to 6) 6 Hrs	<b>Unit 1</b> <b>1.1 Introduction</b> Cloud Computing at a Glance – The Vision of Cloud Computing - Defining a Cloud - A Closer Look – The Cloud Computing Reference Model - Characteristics and Benefits - Challenges Ahead – Historical Developments - Distributed Systems	Lecture and Presentation	<i>Buyya, Rajkumar, Christian Vecchiola, and S. Thamarai Selvi. Mastering cloud computing: foundations and applications programming. Elsevier, 2013.</i>	Quiz
Nov 26- Dec 3, 2024 (Day Order 1 to 6) 6 Hrs	Virtualization - Web 2.0 - Service-oriented Computing - Utility-oriented Computing - Building Cloud Computing Environments - Application Development – Infrastructure and System Development – Computing Platforms and Technologies	Lecture and Demo	<i>Buyya, Rajkumar, Christian Vecchiola, and S. Thamarai Selvi. Mastering cloud computing: foundations and applications programming. Elsevier, 2013.</i>	Assignment on cloud applications
Dec 4-11, 2024 (Day Order 1 to 6) 6 Hrs	<b>1.2 Principles of Parallel and Distributed Computing</b> Eras of Computing - Parallel vs. Distributed Computing – Elements of Parallel Computing - Elements of Distributed Computing – Technologies for Distributed Computing	Lecture and Presentation	<i>Buyya, Rajkumar, Christian Vecchiola, and S. Thamarai Selvi. Mastering cloud computing: foundations and applications programming. Elsevier, 2013.</i>	Puzzle
Dec 12-19, 2024 (Day Order 1 to 6) 6 Hrs	<b>Unit 2</b> <b>2.1 Virtualization</b> Introduction – Characteristics of Virtualized Environments –	Lecture and Presentation	<i>Buyya, Rajkumar, Christian Vecchiola, and S. Thamarai Selvi. Mastering cloud computing: foundations</i>	Crossword

6) 6 Hrs	Taxonomy of Virtualization Techniques – Virtualization and Cloud Computing - Pros and Cons of Virtualization	on	<b>and applications programming.</b> Elsevier, 2013.	
Dec 20, 2024 (Day Order 1 ) 1 Hr	<b>2.2 Cloud Computing Architecture</b> Introduction – The Cloud Reference Model	Lecture and Demo	<i>Buyya, Rajkumar, Christian Vecchiola, and S. Thamarai Selvi. Mastering cloud computing: foundations and applications programming.</i> Elsevier, 2013.	Questionnaire
Jan 3 – 7, 2025 (Day Order 3 to 6) 3 Hrs	Types of Clouds – Economics of the Cloud – Open Challenges  <b>2.3 Practical Demonstration</b> Virtualization in Cloud - Infrastructure as a Service - Software as a Service	Lecture and Demo	<i>Buyya, Rajkumar, Christian Vecchiola, and S. Thamarai Selvi. Mastering cloud computing: foundations and applications programming.</i> Elsevier, 2013.	<b>Component I:</b> Objective test <b>Max. Marks: 25</b>
Jan 8 – 17, 2025 (Day Order 1 to 6) 6 Hrs	<b>Unit 3</b> <b>3.1 Resource Pooling, Sharing and Provisioning</b> Resource Pooling - Commoditization of the Data Center - Standardization, Automation and Optimization – Resource Sharing – Resource Provisioning	Lecture and Demo	<i>Bhowmik, Sandeep. Cloud Computing Cambridge University Press, 2017.</i>	Utilizing Google, Amazon and Microsoft web services
Jan 18 - 23, 2025	<b>C.A. Test – I</b>			
Jan 24 - 30, 2025 (Day Order 1 to 6) 6 Hrs	<b>3.2 Scaling in the Cloud</b> What is Scaling – Scaling in Traditional Computing – Scaling in Cloud Computing – Foundation of Cloud Scaling – Scalable Application – Scaling Strategies in Cloud - Auto Scaling in Cloud – Types of Scaling – Horizontal Scaling is more Cloud- Native Approach – Performance and Scalability – The Resource Contention Problem – Cloud Bursting: a scenario of flexible scaling – Scalability is a business concern	Lecture and Presentati on	<i>Bhowmik, Sandeep. Cloud Computing Cambridge University Press, 2017.</i>	Presentation on different cloud application and its scalability

Feb 3-8, 2025 (Day Order 1 to 6) 6 Hrs	<b>3.3 Capacity Planning</b> What is Capacity Planning – Capacity Planning in Computing- Capacity Planning in Cloud Computing - Cloud Capacity: Consumers’ View vs. Providers’ View – Capacity Planning Then and Now Approaches for Maintaining Sufficient Capacity	Lecture and Presentation	<i>Bhowmik, Sandeep. Cloud Computing Cambridge University Press, 2017.</i>	Questionnaire
Feb 10–18, 2025 (Day Order 1 to 4) 4 Hrs	Role of Auto-Scaling in Capacity Planning - Capacity and Performance: Two Important System Attributes – Steps for Capacity Planning	Lecture and Presentation	<i>Bhowmik, Sandeep. Cloud Computing Cambridge University Press, 2017.</i>	Activity based on load balancing
Feb 19-26, 2025 (Day Order 1-6) 6 Hrs	<b>3.4 Load Balancing</b> Load Balancing – Importance of Load Balancing in Cloud Computing – How Load Balancing is done in Cloud – Goals of Load Balancing – Categories of Load Balancing – Parameters for Consideration - Load Balancing Algorithms – The Persistence Issue – Application Delivery Controller	Lecture and Presentation	<i>Bhowmik, Sandeep. Cloud Computing Cambridge University Press, 2017.</i>	<b>Component II:</b> Case study and presentation (Group presentation: Max. 2 students per team)  <b>Max Marks:25</b>
Feb 27- Mar 6, 2025 (Day Order 1 to 6) 6 Hrs	<b>Unit 4</b> <b>4.1 Understanding Cloud Security</b> Securing the Cloud – Securing Data – Establishing Identity and Presence	Lecture and Presentation	<i>Sosinsky, Barrie. Cloud Computing Bible. John Wiley &amp; Sons, 2011.</i>	Discussion
Mar 7 – 11, 2025 (Day Order 1 to 3) 3 Hrs	<b>4.2 SOA and Moving Applications to the Cloud</b> Introducing Service Oriented Architecture – Defining SOA Communications - Applications in the Clouds – Applications and Cloud APIs	Lecture and Presentation	<i>Sosinsky, Barrie. Cloud Computing Bible. John Wiley &amp; Sons, 2011.</i>	Questionnaire
Mar 12 – 17, 2025	<b>C.A. Test – II</b>			
Mar 18 – 20, 2025 (Day 4 to	<b>4.3 Working with Cloud-based Storage</b> Measuring the Digital Universe –	Lecture and Demo	<i>Sosinsky, Barrie. Cloud Computing Bible. John</i>	Case study

6) 3 Hrs	Provisioning Cloud Storage – Exploring Cloud Backup Solutions – Cloud Storage Interoperability		<i>Wiley &amp; Sons, 2011.</i>	
Mar 21 - 28, 2025 (Day Order 1 to 6) 6 Hrs	<b>Unit 5</b> 5.1 Case Studies Google Web Service - Amazon Web Service	Lecture and Demo	<i>Sosinsky, Barrie. <b>Cloud Computing Bible.</b> John Wiley &amp; Sons, 2011.</i>	Case study discussion
Mar 29- April 3, 2025 (Day Order 1 to 3) 3 Hrs	Microsoft Cloud Service	Lecture and Demo	<i>Sosinsky, Barrie. <b>Cloud Computing Bible.</b> John Wiley &amp; Sons, 2011.</i>	Case study discussion
	<b>REVISION</b>			



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

**Course Schedule: November 2024 – April 2025**

**Department** : Computer Science  
**Name/s of the Faculty** : Ms. A. R. Charulatha, Ms. Geethanjali S.  
**Course Title** : Mobile App Development for Android  
**Course Code** : 19CS/ME/MA45  
**Shift** : II

<b>Week &amp; No. of hours</b>	<b>Units &amp; Topics</b>	<b>Teaching Methodology</b>	<b>Text &amp; References</b>	<b>Method of Evaluation</b>
Nov 18 – 25, 2024 (Day Order 1-6) 6 Hrs.	<b>Unit 1</b> <b>1.1 Introduction to Mobile App</b> Concept – Various App Development Platforms – Android - History, Versions - Overview of Android architecture - Android Stack - Linux, Dalvik Virtual Machine, Core Libraries, Application Framework, Applications - OS vs iOS	Lecture and Presentation	Smyth, Neil. <i>Android App Development Essentials</i> .1st ed. CreateSpace Independent Publishing Platform, 2014.	Discussion on Android Versions
Nov 26- Dec 3, 2024 (Day Order 1 to 6) 6 Hrs.	<b>1.2 Understanding an Android App</b> Creating an Example Android Application - Creating an Example Android Application - Anatomy of Android Application	Lecture/ Presentation, Demonstration	Smyth,Neil. <i>Android App Development Essentials</i> .1st ed. CreateSpace Independent Publishing Platform, 2014.	Creating a simple Android App
Dec 4-11, 2024 (Day Order 1 to 6) 6 Hrs.	<b>Unit 2</b> <b>2.1 Activities, Intents, Fragments</b> Activities and Activity Lifecycle - Activity state changes – Example - Saving and restoring UI state	Lecture/ Presentation, Demonstration	Smyth,Neil. <i>Android App Development Essentials</i> .1st ed. CreateSpace Independent Publishing Platform, 2014.	Exercise on Android Activity Life Cycle

Dec 12-19, 2024 (Day Order 1 to 6) 6 Hrs.	Intents - Explicit and Implicit Intents, Example - Fragments - Creating, Adding and managing fragments	Lecture/ Presentation, Demonstration	Deitel, Paul, Harvey Deitel and Abbey Deitel. <i>Android™ for Programmers: An App-Driven Approach</i> . 2nd ed. Prentice Hall, 2014.  Meier Reto. <i>Professional Android 4 Application Development</i> . Wiley India, (Wrox), 2012	Exercise on Intents
Dec 20, 2024 (Day Order 1) 1 Hr.	Handling Fragment events, Example	Lecture/ Presentation, Demonstration Case study	-do-	Exercise on Fragments
Jan 3 – 7, 2025 (Day Order 3 to 6) 4 Hrs.	<b>2.2 Android User Interface</b> Creating views and view groups - Layouts - Linear, Table, Relative, Absolute, Frame, Scroll view - Changing screen orientation	Lecture/ Presentation, Demonstration	Deitel, Paul, Harvey Deitel and Abbey Deitel. <i>Android™ for Programmers: An App-Driven Approach</i> . 2nd ed. Prentice Hall, 2014.  Meier Reto. <i>Professional Android 4 Application Development</i> . Wiley India, (Wrox), 2012	Exercise on layouts and controls Exercise on Event Handling
Jan 8 – 17, 2024 (Day Order 1 to 6) 6 Hrs.	Creating GUI – button, text, checkbox, radio, Menus - Event Handling - ClickListener, FocusChangeListener, Touch Listener, MenuItemClickListener, LongClickListener	Lecture/ Presentation, Demonstration	-do-	<b>Component I:</b> (25 marks) MCQ (15 marks) and case study on existing apps (10 marks)
Jan 18 - 23, 2025	<b>C.A. Test – I</b>			

Jan 24 - 30, 2025 (Day Order 1 to 6) 6 Hrs.	<b>Unit 3</b> <b>3.1 Persistent Storage</b> Files – Using application specific folders and files - creating files, reading data from files, listing contents of a directory - Shared Preferences – Creating shared preferences, saving and retrieving data using Shared Preference Database	Lecture/ Presentation, Group Discussion	Wei, Jason. Android database programming. Packt, 2012	Discussion
Feb 3-8, 2025 (Day Order 1 to 6) 6 Hrs.	<b>3.2 Database Programming</b> SQLite - SQLite classes, Cursor, SQLite database, SQLite Queries – create, insert, select, update and delete - Connecting to a Remote database using MySQL/PHP	Lecture/ Presentation, Demonstration	Wei, Jason. Android database programming. Packt, 2012	Exercise on Creating and Connecting to a Database
Feb 10– 18, 2025 (Day Order 1 to 4) 4 Hrs.	<b>Unit 4</b> <b>4.1 Enhancing Android User Interface</b> Notification - Action Bar – Dialogs – Search	Lecture/ Presentation, Demonstration	Meier Reto. <i>Professional Android 4 Application Development.</i> Wiley India, (Wrox), 2012	Exercise using notification, action bar, dialogs
Feb 19- 26, 2025 (Day Order 1-6) 6 Hrs.	Styles and Themes – Defining, using Inheritance, Android themes, Default styles and themes, Android SMS	Lecture/ Presentation, Demonstration	Meier Reto. <i>Professional Android 4 Application Development.</i> Wiley India, (Wrox), 2012	Exercise using dialogs, styles and themes

Feb 27- Mar 6, 2025 (Day Order 1 to 6) 6 Hrs.	Deploying App in Play Store – Multilingual <b>4.2 Location Based Services</b> Using Location Manager, Location Provider	Lecture/ Presentation, Demonstration	Meier Reto. <i>Professional Android 4 Application Development.</i> Wiley India, (Wrox), 2012	<b>Component II:</b> (25 marks) Mini Project evaluation – Story board creation, Layout Design, Execution of the project
Mar 7 – 11, 2025 (Day Order 1 to 3) 3 Hrs.	Using emulator with Location based services, Selecting a Location provider, Finding your current location	Lecture/ Presentation, Demonstration Discussion	Meier Reto. <i>Professional Android 4 Application Development.</i> Wiley India, (Wrox), 2012	Discussion
Mar 12 –17, 2025	<b>C.A. Test – II</b>			
Mar 18 – 20, 2025 (Day 4 to 6) 3 Hrs.	Using the Geocoder – Creating map based activities	Lecture/ Presentation, Demonstration, Critically Analyse the existing Apps	Meier Reto. <i>Professional Android 4 Application Development.</i> Wiley India, (Wrox), 2012	Discussion
Mar 21 - 28, 2025 (Day Order 1 to 6) 6 Hrs.	<b>Unit 5</b> <b>5.1 Advanced User Experience</b> Designing for every screen size and density – Ensuring Accessibility - Introducing Android Text-to-Speech – Using Speech recognition	Lecture/ Presentation, Demonstration	Meier Reto. <i>Professional Android 4 Application Development.</i> Wiley India, (Wrox), 2012	Discussion
Mar 29- April 3, 2025 (Day Order 1 to 3) 3 Hrs.	<b>5.2 Case Study</b> Case study on recent apps	Lecture/ Presentation, Demonstration, Critically Analyse the existing Apps	Meier Reto. <i>Professional Android 4 Application Development.</i> Wiley India, (Wrox), 2012	Discussion
<b>REVISION</b>				

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

**Course Schedule: November 2024 – April 2025**

**Department : Computer Science**

**Name/s of the Faculty : Ms. Rajalakshmi S**

**Course Title : Cyber Security**

**Course Code : 19CS/GE/CS22**

**Shift : II**

<b>Week &amp; No. of hours</b>	<b>Units &amp; Topics</b>	<b>Teaching Methodology</b>	<b>Text &amp; References</b>	<b>Method of Evaluation</b>
Nov 18 – 25, 2024 (Day Order 1-6) 2 hrs	<b>Unit 1</b> <b>1.1 Introduction to Information Security:</b> The History of Information Security-	Lecture and Presentation	<i>Whitman, Michael E., Whitman and Herbert J. Mattord. Principles of Information Security. Cengage Learning, 2011</i>	Discussion
Nov 26- Dec 3, 2024 (Day Order 1 to 6) 2 hrs	What Is Security CNSS Security Model-The Need for Security:	Lecture/ Analogy	<i>Whitman, Michael E., Whitman and Herbert J. Mattord. Principles of Information Security. Cengage Learning, 2011</i>	Chart Preparation
Dec 4-11, 2024 (Day Order 1 to 6) 2 hrs	Business Needs First Threats- Attacks  <b>1.2 Cyber Security Fundamentals</b> Cyber Attack: Attackers	Lecture and Presentation	<i>Information Security Handbook for Network Beginners. National Center of Incident Readiness and Strategy for Cybersecurity (NISC), The Government of JAPAN, Ver 2.11e</i>	Puzzle

Dec 12-19, 2024 (Day Order 1 to 6) 2 hrs	Hackers- Crackers-	Lecture and Presentation	<i>Information Security Handbook for Network Beginners.National Center of Incident Readiness and Strategy for Cybersecurity (NISC), The Government of JAPAN, Ver 2.11e</i>	<b>Comp I :</b> Presentation – Case study of a Hacking Scenario (25 marks)
Dec 20, 2024 (Day Order 1 ) 1 hr	Crimes and Problems- Social Engineering Attacks	Lecture and Presentation	<i>Information Security Handbook for Network Beginners.National Center of Incident Readiness and Strategy for Cybersecurity (NISC), The Government of JAPAN, Ver 2.11e</i>	Questionnaire
Jan 3 – 7, 2025 (Day Order 3 to 6) 1 hr	A Step-By-Step Guide for Strengthen Your Security.	Lecture/ Video Demo	<i>Lawrence C. Miller Cyber security for dummies. CISSP</i>	Crossword
Jan 8 – 17, 2024 (Day Order 1 to 6) 2 hrs	<b>2.1 Understanding The Cyber Security Landscape: The Changing Face of Cybercriminals The Lifecycle of an Advanced Attack-Role of</b>	Lecture and Presentation	<i>Lawrence C. Miller Cyber security for dummies. CISSP</i>	Quiz

Jan 18 - 23, 2025	<b>C.A. Test – I</b>			
Jan 24 - 30, 2025 (Day Order 1 to 6) 2 hrs	<b>2.2 Cyber Terrorism</b> Terrorist Use of the Internet	Lecture and Presentation	<i>Lawrence C. Miller Cyber security for dummies. CISSP</i>	Discussion
Feb 3-8, 2025 (Day Order 1 to 6) 2 hrs	Internet as Weapon, Wireless Threat <b>2.3 Laws and Regulatory Requirements:</b> Need of Cyber Law in India	Lecture and Analogy	<a href="https://littlefield.co/cyber-terrorism-understanding-and-preventing-acts-of-terror-within-our-cyber-space-26ae6d53cfbb">https://littlefield.co/cyber-terrorism-understanding-and-preventing-acts-of-terror-within-our-cyber-space-26ae6d53cfbb</a> <i>Lawrence C. Miller Cyber security for dummies. CISSP</i>	<b>Comp II:</b> Seminar on Internet Banking (25 marks)
Feb 10– 18, 2025 (Day Order 1 to 4) 1 hr	Laws Related to Information Security IT Act of India 2000	Lecture and Analogy	<i>Lawrence C. Miller Cyber security for dummies. CISSP</i>	Quiz
Feb 19- 26, 2025 (Day Order 1-6) 2 hrs	Copyright law in India- Intellectual property rights	Lecture and Presentation	<i>Whitman, Michael E., Whitman and Herbert J. Mattord. Principles of Information Security. Cengage Learning, 2011</i>	Quiz
Feb 27- Mar 6, 2025 (Day Order 1 to 6) 2 hrs	<b>3.1 Cryptography:</b> Foundations of Cryptology Cipher Methods	Lecture and Presentation	<i>Whitman, Michael E., Whitman and Herbert J. Mattord. Principles of Information Security. Cengage Learning, 2011</i>	
Mar 7 – 11, 2025 (Day Order 1 to 3) 1 hr	<b>3.2 Security Measures:</b> Basic- Passwords -	Lecture and Presentation	<i>Whitman, Michael E., Whitman and Herbert J. Mattord. Principles of Information Security. Cengage Learning, 2011</i>	Discussion

Mar 12 –17, 2025	<b>C.A. Test – II</b>			
Mar 18 – 20, 2025 (Day 4 to 6) 1 hr	Computers	Lecture and Presentation	<i>Whitman, Michael E., Whitman and Herbert J. Mattord. Principles of Information Security. Cengage Learning, 2011</i>	Assignment on Security measures of Phones and Tablets
Mar 21 - 28, 2025 (Day Order 1 to 6) 2 hrs	Phones and Tablets	Lecture and Presentation	<i>Whitman, Michael E., Whitman and Herbert J. Mattord. Principles of Information Security. Cengage Learning, 2011</i>	Quiz
Mar 29- April 3, 2025 (Day Order 1 to 3) 1 hr	Social Media-Chatting and Phone Calls- Internet Banking	Lecture and Presentation	<i>Whitman, Michael E., Whitman and Herbert J. Mattord. Principles of Information Security. Cengage Learning, 2011</i>	Group Discussion
	<b>REVISION</b>			



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

**Course Schedule: November 2024 – April 2025**

**Department** : **Computer Science**  
**Name of the Faculty** : **Ms. Nandhini S**  
**Course Title** : **Image Editing and Animation**  
**Course Code** : **19CS/GE/IA22**  
**Shift** : **II**

<b>Week &amp; No. of hours</b>	<b>Units &amp; Topics</b>	<b>Teaching Methodology</b>	<b>Text &amp; References</b>	<b>Method of Evaluation</b>
Nov 18 – 25, 2024 (Day Order 1-6)	<b>Unit 1</b> 1.1 Photoshop Workspace overview - Custom workspace - Cruising main	Demo and Presentation	Dayley ,Lisa DaNae and Brad Dayley. Photoshop CS5 Bible. 1st ed. Wiley Dreamtech	Discussion
Nov 26- Dec 3, 2024 (Day Order 1 to 6)	Panels-Layers Organising files- Saving the files- Creating-slideshow	Demo and Presentation	Dayley ,Lisa DaNae and Brad Dayley. Photoshop CS5 Bible. 1st ed. Wiley Dreamtech India Pvt Ltd, 2010.	Quiz
Dec 4-11, 2024 (Day Order 1 to 6)	- Drawing tools – Painting-Selection tools- Lasso Options, Magic Wand	Demo and Presentation	Dayley ,Lisa DaNae and Brad Dayley. Photoshop CS5 Bible. 1st ed. Wiley Dreamtech India Pvt Ltd, 2010.	Group Discussion

Dec 12-19, 2024 (Day Order 1 to 6)	Quick - Selection - Correction Tools - Heal and Spot Healing, Patch tool Eyedropper tool – Brush - Clone Source - Rubber	Demo and Presentation	Dayley ,Lisa DaNae and Brad Dayley. Photoshop CS5 Bible. 1st ed. Wiley Dreamtech India Pvt Ltd, 2010.	Practical Exercise
Dec 20, 2024 (Day Order 1 )	Text Tool-Smudge - Blur and Sharpen - Dodge - Burn - Blending modes - Transparency - Moving Path –	Demo and Presentation	Dayley ,Lisa DaNae and Brad Dayley. Photoshop CS5 Bible. 1st ed. Wiley Dreamtech India	Practical Exercise
Jan 3 – 7, 2025 (Day Order 3 to 6)	Filters - Masking – Designing-a Collage <b>Unit 2</b> 2.1 Flash FlashWork Environment	Demo and Presentation	Dayley ,Lisa DaNae and Brad Dayley. Photoshop CS5 Bible. 1st ed. Wiley Dreamtech India Pvt Ltd, 2010.  Parekh ,Rajan. Principles of Multimedia. 2nd ed. Tata McGraw Hill Publishing, 2013.	Practical Exercise and Quiz
Jan 8 – 17, 2024 (Day Order 1 to 6)	Stage - Drawing tools and their modifiers Basic drawing techniques –	Demo and Presentation	Parekh ,Rajan. Principles of Multimedia. 2nd ed. Tata McGraw Hill Publishing, 2013.	Component I (25 Marks)  Practical Exercise with Photoshop
Jan 18 - 23, 2025	<b>C.A. Test – I</b>			

Jan 24 - 30, 2025 (Day Order 1 to 6)	Animation – Timeline Tweening and its types - The power of layers – Learning about symbols –	Demo and Presentation	Parekh ,Rajan. Principles of Multimedia. 2nd ed. Tata McGraw Hill Publishing, 2013.	Crossword puzzle
Feb 3-8, 2025 (Day Order 1 to 6)	Libraries – Onion skinning Text tool- Basic Action Scripting –	Demo and Presentation	Parekh ,Rajan. Principles of Multimedia. 2nd ed. Tata McGraw Hill Publishing, 2013.	Practical Exercise
Feb 10– 18, 2025 (Day Order 1 to 4)	Button behaviors – Navigation Making presentation using Action Script	Lecture and Presentation	Parekh ,Rajan. Principles of Multimedia. 2nd ed. Tata McGraw Hill Publishing, 2013.  Perkins , Todd. Flash Professional CS5 Bible. 1st ed. Wiley Dreamtech, 2010	Quiz with Practical exercise
Feb 19- 26, 2025 (Day Order 1-6)	Symbols - Instances, Instance properties and methods	Demo and Presentation	Perkins , Todd. Flash Professional CS5 Bible. 1st ed. Wiley Dreamtech, 2010	Discussion
Feb 27- Mar 6, 2025 (Day Order 1 to 6)	Dynamic input and text – Events – Button Event Handling Adding sound to movies – save files	Demo and Presentation	Perkins , Todd. Flash Professional CS5 Bible. 1st ed. Wiley Dreamtech, 2010	Component II (25 Marks)  Mini project using Flash

Mar 7 – 11, 2025 (Day Order 1 to 3)	Publishing movies	Lecture and Presentation	Perkins , Todd. Flash Professional CS5 Bible. 1st ed. Wiley Dreamtech, 2010	Group Discussion
Mar 12 –17, 2025	<b>C.A. Test – II</b>			
Mar 18 – 20, 2025 (Day 4 to 6)	<b>Unit 3</b> 3.1 Mini Project Mini Project using Photoshop and Flash	Demo and Presentation	Parekh ,Rajan. Principles of Multimedia. 2nd ed. Tata McGraw Hill Publishing, 2013.	Project Review
Mar 21 - 28, 2025 (Day Order 1 to 6)	3.1 Mini Project Mini Project using Photoshop and Flash	Demo and Presentation	Parekh ,Rajan. Principles of Multimedia. 2nd ed. Tata McGraw Hill Publishing, 2013.	Project Review
Mar 29- April 3, 2025 (Day Order 1 to 3)	3.1 Mini Project Mini Project using Photoshop and Flash	Lecture and Presentation	Parekh ,Rajan. Principles of Multimedia. 2nd ed. Tata McGraw Hill Publishing, 2013.	Project Review
	<b>REVISION</b>			

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

**Course Schedule: November 2024 – April 2025**

**Department** : Computer Science  
**Name/s of the Faculty** : Dr. Diana Judith I, Ms. Madhura Prabha R  
**Course Title** : Project  
**Course Code** : 19CS/MC/PR64  
**Shift** : II

<b>Week &amp; No. of hours</b>	<b>Units &amp; Topics</b>	<b>Teaching Methodology</b>	<b>Text &amp; References</b>	<b>Method of Evaluation</b>
Nov 18-25, 2024 (Day Order 1 to 6) 8 Hrs	Requirements Gathering and Analysis	Discussion with Project Guides	<a href="#">Software Engineering: A Practitioner's Approach</a> Roger Pressman <i>Refer: Software Requirements template</i>	Submission of Abstract
Nov 26-Dec 3, 2024 (Day Order 1 to 6) 8 Hrs	Requirements Gathering and Analysis	Discussion with Project Guides	<a href="#">Software Engineering: A Practitioner's Approach</a> Roger Pressman <i>Refer: Software Requirements template</i>	Submission of Software requirements document (Nov 30, 2024)
Dec 4-11, 2024 (Day Order 1 to 6) 8 hrs	System Analysis and Design [Identifying the different components required for the application, what happens within the system when user interacts with it]	Discussion with Project Guides	<a href="#">Software Engineering: A Practitioner's Approach</a> Roger Pressman <i>Refer: Software Requirements template</i>	Preparation of Design Document
Dec 12-19, 2024 (Day Order 1 to 6) 8 hrs	Designing /Review	Discussion with Project Guides	<a href="#">Software Engineering: A Practitioner's Approach</a> Roger Pressman System analysis and Design Dennis, Wixom, Roth	Preparation of Design Document
Dec 20, 2024 (Day Order 1 ) 1 Hr	Designing /Review	Review by Project Guides	<a href="#">Software Engineering: A Practitioner's Approach</a> Roger Pressman. System	Preparation of Design Document

			analysis and Design Dennis, Wixom, Roth	
Jan 3 – 7, 2025 (Day Order 3 to 6) 4 hrs	Implementation and further updation of design document	Review by Project Guides	Reference to be made by students according to the software used for development. Refer: Test Case Templates	<b>Component I:</b> Submission of i) Updated design Document (Jan 6, 2025) ii) Prototype (Jan 6, 2025) iii) Test Cases <b>Max. Marks:25</b>
Jan 8 – 17, 2025 (Day Order 1 to 6) 8 Hrs	Implementation [Development of a working model of one module]	Review by Project Guides	Reference to be made by students according to the software used for development	Implementation of 40% of the Project
Jan 18 - 23, 2025	<b>C.A. Test – I</b>			
Jan 24 - 30, 2025 (Day Order 1 to 6) 8 hrs	Implementation	Discussion with Project Guides	Reference to be made by students according to the software used for development	Discussion
Feb 3-8, 2025 (Day Order 1 to 6) 8 hrs	Implementation	Discussion with Project Guides	Reference to be made by students according to the software used for development	Implementation of 60% of the Project (Feb 5, 2025)
Feb 10– 18, 2025 (Day Order 1 to 4) 6 hrs	Implementation	Review by Project Guides	Reference to be made by students according to the software used for development	Review
Feb 19- 26, 2025 (Day Order 1- 6) 8 Hrs	Implementation	Discussion with Project Guides	Reference to be made by students according to the software used for development	<b>Component II:</b> i) 80% of project completion ii) Submission of Integrated Project (Feb 24, 2025) <b>Max. Marks:25</b>
Feb 27- Mar 6, 2025 (Day Order 1	Implementation	Discussion with Project Guides	Reference to be made by students according to the software used for	Review

to 6) 8 Hrs			development	
Mar 7 – 11, 2025 (Day Order 1 to 3) 4 Hrs	Implementation and Integration of all modules	Discussion with Project Guides	Reference to be made by students according to the software used for development	Discussion
Mar 12 –17, 2025	<b>C.A. Test – II</b>			
Mar 18 – 20, 2025 (Day 4 to 6) 4 Hrs	Testing and Documentation	Review by Project Guides	<i>Refer: Testcase template attached below</i>	Submission of Documentation (Mar 18, 2025)
Mar 21 - 28, 2025 (Day Order 1 to 6) 8 Hrs	Deployment and Testing	Review by Project Guides	Reference to be made by students according to the software used for development	Review
Mar 29- April 3, 2025 (Day Order 1 to 3) 4 Hrs	<b>REVISION</b>			

All Templates given below

## Software Requirements Document template

### Introduction

#### Overview

<Overview of the software system that needs to be built>

#### Scope

<What is included – mention as bullet points>

<What is excluded – mention as bullet points>

### System Interfaces

<Give each screen if it is a GUI based application/Explain parameters/data >

### **User Prerequisites**

<Whether user should have basic knowledge about browsers>

<Whether user should know english language?>

<Whether user should have decent degree of expertise in a particular domain?>

### **Assumptions and Dependencies**

<assumptions>

### **Software and Hardware system attributes**

Portability

System Load

<Single user environment or multi-user environment>

<if multi-user is it concurrent, if concurrent how many concurrent users to be supported>

### **References**

Documents Referred

Images referred



# Design Document Template

## 1. Introduction

<Purpose of this document>

## 2. Architecture Design

<The architectural design is the design of the entire software system; it gives a high-level overview of the software system, such that the reader can more easily follow the more detailed descriptions in the later sections. It provides information on the decomposition of the system into modules (classes), dependencies between modules, hierarchy and partitioning of the software modules.

Draw use case diagram>

## 3. Activity Diagram

## 4. Database Design

<Draw an ER diagram

The database design specifies how the data of the software is going to be stored.>

### Tables schemas

The complete (compliant) set of CREATE TABLE statements (and other SQL statements) that declare the database schema, including integrity constraints, domain specifications, assertions, and access privileges -- documented in a template with the intended use of each table and column.

This is a suggested template you may use:

Name of the table			
Description	This table describes...		
Attribute	Description	Type	Examples of values
Id	Id of a student	Integer	Between 1 and 999999999
Name	Name of a student	String	John
Primary Key			
Foreign Keys			

### SQL queries:

Provide all SQL queries that you will need.

## **5. Graphical User Interface**

<Design, in an organized way, the pictures of all the forms in the graphical user interface with a reference to the functional requirement it implements.

For each form in the graphical user interface, provide:

- The names of the controls and fields on that form,
- The names of the events, methods, or procedures that cause that form to be displayed, and
- The names of the events, methods, or procedures triggered by each control.>

## **6. References**

<List of books, papers, URLs, tools that you consulted and used to design this document>

## Test case template

### Sample Test cases for all screens and functionalities

Screen Name: Flight Home Page

Test case id: 1

Test Name:  
Verify Launch

Purpose:  
Ensure that users can log into the application.

Pre-Condition:  
None

Step	User Action	Expected Result	Actual Result	Status (Pass/Fail)
1	Launch the AUT	The Login screen appears		
2	Type in <b>tester1</b> as the username and <b>mercury</b> as the password			
3	Click the OK Button	Main window displays		
4	Close the application			

Post-Condition:  
None

Valid Test Data:  
N/A

## Test case template

### Sample Test cases for all screens and functionalities

Screen Name: Flight Home Page

Test case id: 1

Test Name:  
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Valid Test Data:  
N/A