

	<b>Dr. N.G.P. ARTS AND SCIENCE COLLEGE</b> (An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore) Approved by Government of Tamil Nadu and Accredited by NAAC A++ Grade (3 <sup>rd</sup> Cycle- 3.64 CGPA) Dr. N.G.P.-Kalapatti Road, Coimbatore-641048, Tamil Nadu, India Web: <a href="http://www.dmgpasc.ac.in">www.dmgpasc.ac.in</a>   Email: <a href="mailto:info@dmgpasc.ac.in">info@dmgpasc.ac.in</a>   Phone: +91-422-2369100	<b>BoS</b>
		<b>3<sup>rd</sup></b>

### Department of Computer Science with Cyber Security

#### Board of Studies Meeting

The minutes of the 3<sup>rd</sup> meeting of the Board of Studies held on 28.06.2025 at 09.30 am at D1 Block 602.

#### Members Present:

S.No.	Name	Category
1.	Dr. V. Shobana	Chairman
2.	Dr. K. Preetha, Assistant Professor & Head, Department of Computer Science with Cyber Security, Vellalar College for Women, Erode.	University Nominee
3.	Dr. Shina Sheen, Professor and Head, Department of Applied Mathematics and Computational Sciences, PSG College of Technology, Coimbatore.	Subject Expert
4.	Dr. Ambili. P. S. Associate Professor, School of Computer Science and Applications, Reva University, Bengaluru.	Subject Expert
5.	Mr. Ajith. M, Senior Security Engineer Plume Design Inc. Hyderabad.	Industry Expert
6.	Dr. N. Kuppuchamy	Co-opted Member
7.	Dr. A. Hazel Verbina	Co-opted Member
8.	Dr. R. Sowrirajan	Co-opted Member
9.	Dr. V. Malathi	Member
10.	Ms. A. Vinitha	Member
11.	Mr. C. Sasthikumar	Member
12.	Ms. M. Nagarani	Member
13.	Ms. Mirulashini Thangavelu III B.Sc. CS CY	Student Representative

The HoD and Chairman of the Department of Computer Science with Cyber Security welcomed and introduced all the members and appreciated them for their continuous support, contribution for the development of academic standard and enrichment of the syllabus.

Further, Chairman informed the inability of the following members to attend the meeting and requested to grant leave of absence.

1. Dr. Shina Sheen -Subject Expert
2. Dr. Ambili. P.S-Subject Expert

The items of the agenda were taken one by one for discussion and the following resolutions were passed.

**Item 3.1:** *To review and approve the minutes of the previous meeting held on 09.11.2024.*

The chairman of the Board presented the minutes of the previous meeting held on 09.11.2024 and requested the members to approve. After brief discussion the following resolution was passed

**Resolution:**

Resolved to approve the minutes of the previous meeting held on 09.11.2024.

**Item 3.2:** *To consider and approve the scheme and syllabi for I semester for the students admitted during the academic year 2025-26.*

The chairman presented the detailed scheme and syllabus for the I semester for the students admitted during the academic year 2025-26.

After discussion the following resolution was passed.

**Resolution:**

**Resolved to retain the existing syllabus of 2024-2027 batch without any modification for students admitted during the academic year 2025-2026.**

**Item 3.3:** *To consider and approve the syllabi for III semester for the students admitted during the academic year 2024-25.*

The Chairman presented the detailed syllabus for the III semester for the students admitted during the academic year 2024-25.

The following are the self-study courses offered in III semester for the students of 2024 batch.

Course Code	Course Name
24CYUSSA	Web Essentials
24CYUSSB	Digital Marketing

After discussion the following resolution was passed.

**Resolution:**

**Resolved to retain the existing syllabus of 2023-2026 batch without any modification for students admitted during the academic year 2024-2025.**

**Item 3.4:** *To consider and approve the syllabi for V semester for the students admitted during the academic year 2023-24.*

The Chairman presented the detailed syllabus for the V semester for the students admitted during the academic year 2023-24.

The details of changes made also presented as follows:

**New Courses Introduced:**

<b>B.Sc. Computer Science with Cyber Security</b>		
<b>Course Code</b>	<b>Course Name</b>	<b>Reason</b>
234CY1A5CA	Core: Linux and Shell Programming	<ul style="list-style-type: none"> <li>To understand the security tools, system internals and secure real-world infrastructure.</li> </ul>
234CY1A5CB	Core: Secure Software Engineering	<ul style="list-style-type: none"> <li>To impart knowledge on identifying vulnerabilities, writing secure code, analyzing threats and protecting applications from cyberattack.</li> <li>Dr. Preetha suggested to use case tools in Unit IV to have practical exposure.</li> </ul>
234CY1A5CC	Core: Machine Learning in Cyber Security	<ul style="list-style-type: none"> <li>To equip with the knowledge on machine learning algorithms to detect complex and evolving cyber threats automatically and build intelligent systems that can adapt and respond to new attacks in real time.</li> <li>Mr. Ajith insisted to introduce case studies in Unit IV and V</li> </ul>
234CY1A5CP	Core Practical: Linux and Shell Programming	<ul style="list-style-type: none"> <li>To impart practical knowledge on Linux and shell scripts which is used to automate security tasks, analyze logs and monitor system activity.</li> </ul>
234CY1A5CQ	Core Practical: Machine Learning in Cyber Security	<ul style="list-style-type: none"> <li>To have practical exposure on use of machine learning algorithms for cybersecurity applications.</li> <li>Mr. Ajith suggested to have specific Cyber Security logs.</li> </ul>

234CY1A5SP	SEC Practical III: Digital Forensics Analysis	<ul style="list-style-type: none"> <li>• To perform digital forensic investigations, understand how to trace cybercrimes, analyze systems after breaches and present digital evidence legally.</li> <li>• Mr. Ajith suggested to incorporate capturing of Forensic images.</li> </ul>
234CY1A5DA	DSE I: Network Security and Cryptography	<ul style="list-style-type: none"> <li>• To equip students with foundational techniques used to secure networks and data through cryptographic methods.</li> </ul>
234CY1A5DB	DSE I: Cybercrime Investigation and Digital Forensics	<ul style="list-style-type: none"> <li>• To have basic understanding of legal, technical and procedural aspects of investigating cybercrimes and how to analyze digital evidences legally.</li> </ul>
234CY1A5DC	DSE I: Data Warehousing and Mining	<ul style="list-style-type: none"> <li>• To impart knowledge on architecture and design of data warehouses and to explore data mining algorithms</li> </ul>

**GE offered**

Course Code	Course	Department
234CY1A5GA	Basics of Cyber Security	To all UG programmes other than Computer Science.

After discussion the following resolution was passed with the above changes and modifications.

**Resolution:**

**Resolved to approve the above syllabus for the V semester for the students admitted during the academic year 2023-24.**

**Item 3.5:** *To consider and approve the Student Skill Development Course offered by NPTEL, Spoken Tutorial and Swayam Plus during the academic year 2025-26*

The board discussed the following courses offered by NPTEL, Spoken Tutorial and Swayam Plus as the Student Skill Development Course.

1. Cyber Security and Privacy
2. Joy of Computing using Python
3. Cloud Computing
4. Ethical Hacking
5. Software Engineering
6. C and CPP
7. Linux
8. Ns3 -Network Simulator

## Resolution

**Resolved to approve the above Student Skill Development Courses during the academic year 2025-26.**

**Item 3.6:** *To consider and approve the Diploma Course on Cyber Security offered by Bharathiar University during the academic year 2025-26*

The board discussed the syllabus of Diploma Course on Cyber Security and the following resolution was passed.

## Resolution:

**Resolved to retain the existing syllabus of Diploma in Cyber Security for the academic year 2025-26.**

**Item 3.7:** *To approve the panel of examiners for question paper setting and evaluation of answer scripts for the odd semester of the academic year 2025-26.*

The Chairman presented the panel of examiners for Question paper setting, Question paper Scrutiny and conduct of practical and theory examinations and the same shall be submitted to CoE for the odd semester of the academic year 2025-26.

## Resolution:


**Resolved to approve the panel of examiners for Question paper setting, Question paper Scrutiny and conduct of practical and theory examinations for the odd semester of the academic year 2025-2026.**

**Item 3.8:** *To consider and approve any other item brought forward by the Chairman and the members of the board.*

No other item has been brought forward for discussion

Finally, the Chairman thanked all the members for their cooperation and contribution in enriching the syllabus with active participation in the meeting and sought the same spirit in the future also. The meeting was closed with a formal vote of thanks proposed by Dr. V. Malathi, Assistant Professor, Computer Science with Cyber Security.

**Date: 28.06.2025**

  
(Dr. V. Shobana)  
BoS Chairman / HoD  
Dept. of Computer Science with Cyber Security  
N.G.P. Arts and Science College  
Coimbatore - 641 048.



### Syllabus (New Course)

**Faculty: Computer Science      Board: Computer Science with Cyber Security**  
**Programme: B.Sc. Computer Science with Cyber Security      Semester: V**  
**Course Code/ Name: 234CY1A5CA/ LINUX AND SHELL PROGRAMMING**

Unit	Contents
I	<b>Introduction</b> Introduction – History of UNIX and Linux – System Features – Software Features – Differences between Linux and Other Operating System – hardware requirements - sources of Linux Information Linux Startup and Setup: User accounts – Accessing the Linux system – Linux Commands
II	<b>Linux Shell</b> The command line – Command line Editing - Creating files using the vi editor: Text editors – The vi editor - Managing Documents: Locating files in LINUX – Standard files – Redirection – Filters – Pipes - Ending Processes: ps and kill - The C Shell: Command Line Editing and - C Shell Command Line Editing - C Shell History - The TCSH Shell - TCSH Command Line Completion - TCSH History Editing - TheZ-shell.
III	<b>Linux File Structure</b> Linux file types – File structures – managing Files - Managing Directories – File and Directory operation – File Management Operation: File and Directory permissions
IV	<b>Shell Scripts and Programming</b> Shell Variables – Definition of Variables - Variable values - Strings – Values from Linux commands – Shell Scripts – User Defined commands - Executing Scripts –Script Arguments – Environment Variables and Subshells Variable – Control Structures – Test operations – Conditional Control Structures –Test Expressions – Shell conditions – Shell loops – Simple Programs using shell scripts.
V	<b>Linux Softwares</b> Software Management -Software Package Types - Red Hat Package Manager (RPM) - Debian - Installing Software from Compressed Archives: .tar.gz - Command and Program Directories - Office and Database Applications - Running Microsoft Office on Linux: Cross Over OpenOffice.org - KOffice - KOffice Applications - GNOME Office - Document Viewers - PDAAccess-DatabaseManagement-SQLDatabases(RDMS)-XbaseDatabases-Editors - GNOME Editor: Gedit - K Desktop Editors

#### COURSE FOCUSES ON:

#### COURSE FOCUSES ON

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input type="checkbox"/>	Intellectual Property Rights	<input type="checkbox"/>	Gender Sensitization
<input type="checkbox"/>	Social Awareness/ Environment	<input type="checkbox"/>	Constitutional Rights/ Human Values/ Ethics

### Syllabus (New Course)

**Faculty: Computer Science      Board: Computer Science with Cyber Security**  
**Programme: B.Sc. Computer Science with Cyber Security      Semester: V**  
**Course Code/ Name: 234CY1A5CB / SECURE SOFTWARE ENGINEERING**

Unit	Content
I	<b>Introduction</b> Introduction: Professional software development-Software engineering ethics-Software processes: Software process models-Process activities-The rational unified process
II	<b>Agile software development and Requirements engineering</b> Agile methods-Plan-driven and agile development-Extreme Programming-Agile project management-Scaling agile methods. Requirements Engineering: Functional and non-functional requirements-Requirements specification, validation and management.
III	<b>System modeling</b> Context models-Interaction models: Use case modeling-Sequence diagrams -Structural models: Class Diagrams-Generalization-Aggregation -Behavioral models: Data-driven modeling - Event-driven modeling - Model-driven engineering: Model-driven architecture-Executable UML
IV	<b>Software testing</b> Introduction-Development testing: Unit Testing- Component Testing-System Testing-Test-driven development - Release testing: Requirements-based testing Scenario testing - Performance testing - User testing.
V	<b>Dependability and security</b> Dependability properties-Availability and reliability-Safety-Security-Risk-driven requirements specification-Safety Specification-Security specification.

### COURSE FOCUSES ON

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input type="checkbox"/>	Intellectual Property Rights	<input type="checkbox"/>	Gender Sensitization
<input type="checkbox"/>	Social Awareness/ Environment	<input type="checkbox"/>	Constitutional Rights/ Human Values/ Ethics

### Syllabus (New Course)

**Faculty: Computer Science**

**Board: Computer Science with Cyber Security**

**Programme: B.Sc. Computer Science with Cyber Security**

**Semester: V**

**Course Code/ Name: 234CY1A5CC / MACHINE LEARNING IN CYBER SECURITY**

Unit	Content
<b>I</b>	<b>Introduction to Artificial Intelligence and Machine Learning</b> Introduction to AI: Definition- Branches -Applications- Current Trends- Basics of Machine learning in Cyber Security: Data in Machine Learning- Machine learning Algorithm Types - Machine Learning Architecture- Hands on Machine Learning: Python Packages
<b>II</b>	<b>Time Series Analysis and Ensemble Modelling</b> Time Series Analysis- Classes of Time Series Models- Time Series Decomposition- Time Series Analysis in Cyber Security: Trends and Seasonal Spikes- Predicting DDoS Attacks-Ensemble Learning Methods: Types- Cyber Security with ensemble techniques- Detecting Cyber Attacks.
<b>III</b>	<b>Legitimate and Lousy URL</b> Abnormalities in URL- Detecting malicious pages- Detecting malicious URLs: Logistic regression- Support Vector Machine- Multiclass Classification- Characteristics of Completely Automated Public Turing test to tell Computers and Humans Apart (CAPTCHA)- Using AI to crack CAPTCHA
<b>IV</b>	<b>Spam Email Spoofing and Network Anomaly Detection</b> Spam Email Types- Spam Detection-Network Anomaly Detection using k means: Stages of Network Attack- Windows event Logs- Data Modeling- k means algorithm. Case Study: Spam and Network Anomaly Detection in a Financial Institution.
<b>V</b>	<b>Context Based Malicious Event Detection</b> Adware- Bots- Bugs- Ransomware- Rootkit-Spyware- Trojan Horses- Viruses- Worms- Malicious data injection within Databases and Wireless Sensors- Malicious URL Detection with Decision Trees. Case Study: Detecting Ransomware and Rootkit Attacks Using Machine Learning.

#### COURSE FOCUSES ON

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input checked="" type="checkbox"/>	Intellectual Property Rights	<input type="checkbox"/>	Gender Sensitization
<input type="checkbox"/>	Social Awareness/ Environment	<input type="checkbox"/>	Constitutional Rights/ Human Values/ Ethics



**Syllabus (New Course)**

**Faculty: Computer Science      Board: Computer Science with Cyber Security**  
**Programme: B.Sc. Computer Science with Cyber Security      Semester: V**  
**Course Code/ Name: 234CY1A5CP / LINUX AND SHELL PROGRAMMING**

S.No.	Contents
1	Use uname, lsb_release, and cat /etc/os-release to find details about the Linux system. Create a practice folder and try basic commands.
2	Open and edit a file using: nano, vi, or gedit.
3	Create a bash script and practice basic programs.
4	Creating Files using vi Editor.
5	Write a bash script to copy all .txt files from one directory to another and log the time it ran.
6	Write a Script to i. Print CPU info, memory, disk usage, and IP address. ii. List all logged-in users and their login times.
7	Linux shell script to implement conditional statements
8	Linux shell script to implement looping statements.
9	Linux Shell script to design a Menu-Driven Calculator.
10	Launch LibreOffice and practice create documents
11	Run Microsoft Office using PlayOnLinux
12	Create and query an SQLite database

**Syllabus (New Course)**

**Faculty: Computer Science**

**Board: Computer Science with Cyber Security**

**Programme: B.Sc. Computer Science with Cyber Security**

**Semester: V**

**Course Code/ Name: 234CY1A5CQ / MACHINE LEARNING IN CYBER SECURITY**

<b>S.No.</b>	<b>Contents</b>
1	Implementing Basic Machine Learning Model for Intrusion Detection
2	MongoDB with Python: Storing and Retrieving Cybersecurity Logs.
3	Time Series Analysis for Cybersecurity: Detecting Anomalous Traffic Patterns.
4	Predicting DDoS Attacks Using Time Series Forecasting.
5	Cybersecurity Threat Detection Using Ensemble Learning
6	Malicious URL Detection using Logistic Regression and Decision trees.
7	Detecting Malicious URLs Using Support Vector Machine (SVM).
8	Cracking CAPTCHA Using AI and Image Processing
9	Spam Email Detection Using Naïve Bayes Classifier.
10	Ransomware and Rootkit Detection Using Machine Learning.
11	Windows Event Log Analysis for Security Threat Detection.
12	Detecting Malicious Data Injection in Wireless Sensor Networks.

**Syllabus (New Course)**

**Faculty: Computer Science      Board: Computer Science with Cyber Security**  
**Programme: B.Sc. Computer Science with Cyber Security      Semester: V**  
**Course Code/ Name: 234CY1A5SP / DIGITAL FORENSICS ANALYSIS**

<b>S.No.</b>	<b>Contents</b>
1	Creating a Case in Autopsy.
2	Adding and Ingesting a Disk Image.
3	File and Metadata Analysis.
4	Keyword Search: Search for specific terms across data.
5	Extracting and Analyzing Email Headers.
6	Extract Browser History and analyze user browsing behavior.
7	Recovering Deleted Files.
8	Create and export forensic reports.
9	Timeline Analysis with the ingested image.
10	USB Device Detection and identify usage of external storage devices.
11	Email Artifact Analysis and Correlating Artifacts Across Sources.
12	Registry and OS Artifacts.

### Syllabus (New Course)

**Faculty: Computer Science**

**Board: Computer Science with Cyber Security**

**Programme: B.Sc. Computer Science with Cyber Security**

**Semester: V**

**Course Code/ Name: 234CY1A5DA / NETWORK SECURITY AND CRYPTOGRAPHY**

Unit	Content
I	<b>Introduction</b> Computer Security: Introduction –Need for security – Security approaches - Principles of Security –Types of attacks. Cryptography Techniques: Basic terms- Plain text and Cipher text –Substitution techniques – Transposition techniques – Encryption and decryption – Symmetric and Asymmetric key cryptography.
II	<b>Symmetric Key Algorithms and AES</b> Symmetric Key Algorithms and AES: Introduction - Algorithm Types and modes – An overview of Symmetric key Cryptography – Data Encryption Standard (DES) – Blowfish – Advanced Encryption Standard (AES). Asymmetric Key Algorithms: Digital Signature and RSA: Introduction – Brief history of Asymmetric Key cryptography – An Overview of Asymmetric Cryptography - The RSA algorithm – Symmetric and Symmetric Cryptography together – Digital Signatures.
III	<b>Public Key Infrastructure</b> Public Key Infrastructure (PKI): Introduction– Private key Management- the PKIX Model – Public key Cryptography standards – XML, PKI and Security –Internet Security Protocols: Introduction – Basic Concepts – Secure Socket Layer – (SSL) – Transport Layer Security (TLS) –3D secure Protocol – Electronic Money - Email Security
IV	<b>User Authentication and Kerberos</b> User Authentication and Kerberos: Introduction – Authentication basics - Passwords – Authentication Tokens– biometric authentication – Kerberos – Key distribution centre – Security Handshake Pitfalls. Cryptography in JAVA, .NET, and Operating System: Introduction – Cryptographic Solution using JAVA – Cryptographic Solutions using Microsoft .NET Framework – Cryptographic Toolkits – Security and Operating Systems – Database Security.
V	<b>Network Security Firewalls and Virtual Private Networks</b> Network Security Firewalls and Virtual Private Networks (VPN): Introduction – Brief introduction to TCP/IP – Fire Walls-Types of firewall-Firewall Configuration-Limitation of Firewall – IP security-IPSec Overview-IPSec Key Management – Virtual Private networks (VPN) – Intrusion.

#### COURSE FOCUSES ON

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input type="checkbox"/>	Intellectual Property Rights	<input type="checkbox"/>	Gender Sensitization
<input type="checkbox"/>	Social Awareness/ Environment	<input type="checkbox"/>	Constitutional Rights/ Human Values/ Ethics

### Syllabus (New Course)

**Faculty: Computer Science**

**Board: Computer Science with Cyber Security**

**Programme: B.Sc. Computer Science with Cyber Security**

**Semester: V**

**Course Code/ Name: 234CY1A5DB / CYBERCRIME INVESTIGATION AND DIGITAL FORENSICS**

Unit	Content
<b>I</b>	<b>Cyber Crime Introduction</b> Introduction-Cyber Crime and Information Security- Classifications of Cybercrimes- Cyber Crime: The Legal Perspective- Cyber Crimes: An Indian Perspective- A Global Perspective on Cyber Crime.
<b>II</b>	<b>Cyber Offenses</b> Cyber offenses: Attack by Criminals-Social Engineering-Cyber Stalking- Cyber Café and Cyber Crimes-Botnets- Attack Vector- Cloud Computing.
<b>III</b>	<b>Cyber Crime: Mobile and Wireless Devices</b> Introduction- Proliferation of Mobile and Wireless Devices- Trends in Mobility- Credit Card Frauds- Registry Settings for Mobile devices- Authentication Service Security- Attacks on Mobiles- Mobile Devices Security Implications for organizations and Security Issues in Mobile Devices.
<b>IV</b>	<b>Computer Forensics</b> Introduction -Background of Cyber Forensics-Need for Computer Forensics- Cyber Forensic and Digital Evidence- Forensics Analysis of Email- Digital Forensics Life Cycle- Network Forensics- Computer Forensics Investigation Approaches.
<b>V</b>	<b>Forensics of Handheld devices</b> Computer Forensics for OSI Model- Forensics and Social Networking Sites- Forensics in Handheld Devices: Cell Phone Working characteristics- Handheld Devices and Digital Forensics- Tool Kits for Handheld Device Forensics. Case Study: Confidential Data Theft Through Forensics Investigation.

#### COURSE FOCUSES ON

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input type="checkbox"/>	Intellectual Property Rights	<input type="checkbox"/>	Gender Sensitization
<input type="checkbox"/>	Social Awareness/ Environment	<input type="checkbox"/>	Constitutional Rights/ Human Values/ Ethics

### Syllabus (New Course)

**Faculty: Computer Science      Board: Computer Science with Cyber Security**  
**Programme: B.Sc. Computer Science with Cyber Security      Semester: V**  
**Course Code/ Name: 234CY1A5DC / DATA WAREHOUSING AND MINING**

Unit	Content
<b>I</b>	<b>Introduction to Datawarehouse</b> The Need for an Operational Data Store (ODS)- Operational Data Store: Types- Architecture- Advantages-Data Warehouse: History- Definition- Architecture-Benefits- Data Marts-Comparative Study of Data Warehouse with OLTP and ODS.
<b>II</b>	<b>Data Warehouse Schema and Online Analytical Processing</b> Introduction to Data Warehouse Schema- Star Schema-Snowflake Schema-Fact Constellation Schema-Online Analytical Processing (OLAP): Introduction- Representation of Multi-dimensional Data-Types of OLAP Servers-OLAP Operations.
<b>III</b>	<b>Introduction to Data Mining</b> Introduction- Importance of Data Mining- Data Mining functionalities-Classification- Data Mining Task Primitives- Issues in Data Mining- Data Preprocessing: Data Cleaning- Data Integration and Transformation- Data Reduction- Data Discretization and Concept Hierarchy Generation.
<b>IV</b>	<b>Association Rule Mining and Classification</b> Market Basket Analysis-Frequent Item sets, Closed Item sets, and Association Rules- Frequent Pattern Mining-Frequent Itemset Mining Methods-Classification by Decision Tree Induction-Bayesian Classification-Rule-Based Classification.
<b>V</b>	<b>Clustering</b> Cluster Analysis-Types of Data in Cluster Analysis-Partitioning Methods Hierarchical Methods-Density-Based Methods.

#### COURSE FOCUSES ON

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input checked="" type="checkbox"/>	Intellectual Property Rights	<input type="checkbox"/>	Gender Sensitization
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**Syllabus (New Course)**

**Faculty: Computer Science      Board: Computer Science with Cyber Security**

**Programme: B.Sc. Computer Science with Cyber Security      Semester: V**

**Course Code/ Name: 234CY1A5GA / BASICS OF CYBER SECURITY**

<b>Unit</b>	<b>Content</b>
<b>I</b>	<b>Introduction to Information Security and Cybersecurity</b> Information security – Principles: Confidentiality – Integrity and Availability – Policies - Need for an information security policy - Building block of information security policy - Cybersecurity - Definition of cybersecurity - Difference between information security and cybersecurity.
<b>II</b>	<b>Cybercrime</b> Introduction to Cybercrime – Cyberspace – Cybersquatting – Cyberpunk – Cyberwarfare – Prevention of Cybercrime – types of Cybercriminals – Cybercrime against individuals, property – organization.
<b>III</b>	<b>Methods and Tools in Cyber Line</b> Password Cracking – Technique – Prevention measures – Tools – Malwares: - Keyloggers – Types – Spyware – Types – Virus – Types – Worms – Types – Difference between virus and worms- Trojans – Types - Backdoors – Steganography – Types.
<b>IV</b>	<b>Cyberspace and Cyber Law</b> Introduction to e Commerce- Contract Aspects in Cyber Law- Security Aspects of Cyber Law- Intellectual Property Aspect in Cyber Law- Evidence Aspect in Cyber Law- Criminal Aspects in Cyber Law.
<b>V</b>	<b>Phishing and Wireless Network Attacks</b> Phishing – phishing emails – Techniques – e-mail phishing scam – website phishing scams – prevention measures – Identity Theft – Types – Techniques – Prevention measures - Wireless Network Attacks – types – techniques for securing wireless network – Tools for WNA.



# Dr. N.G.P. ARTS AND SCIENCE COLLEGE

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Dr. N.G.P.-Kalapatti Road, Coimbatore-641 048, Tamil Nadu, India  
Website: [www.dnpgpasc.ac.in](http://www.dnpgpasc.ac.in) | Email: [info@dnpgpasc.ac.in](mailto:info@dnpgpasc.ac.in) | Phone: +91-422-2369100

## ATTENDANCE OF THE THIRD BOARD OF STUDIES MEETING

**Faculty:** Faculty of Computer Science



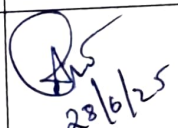
**Board:** Computer Science with Cyber Security

**VENUE :** D1 602

**DATE :** 28.06.2025

**TIME :** 10.00 a.m.




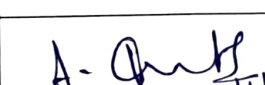
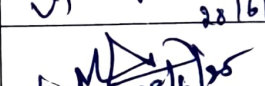
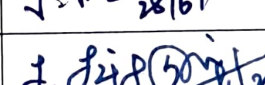
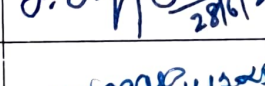
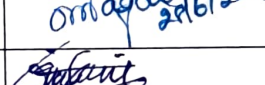
The following members were present for the Board of Studies Meeting

S.NO.	NAME	DESIGNATION	SIGNATURE
1.	Dr. V. Shobana Professor & Head Department of Computer Science with Cyber Security, Dr.N.G.P. Arts and Science College, Coimbatore-641048	Chairman	 28/6/25
2.	Dr. K. Preetha Assistant Professor & Head, Department of Computer Science with Cyber Security, Vellalar College for Women, Erode.	VC Nominee	 28/6/25
3.	Dr. Shina Sheen Professor and Head, Department of Applied Mathematics and Computational Sciences, PSG College of Technology, Coimbatore.	Subject Expert	ABSENT
4.	Dr. Ambili. P.S Associate Professor, School of Computer Science and Applications, Reva University, Bengaluru.	Subject Expert	ABSENT.
5.	Mr. Ajith. M Senior Security Engineer Plume Design Inc. Hyderabad.	Industrial Expert	 28/6/25




## Dr. N.G.P. ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)  
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S.NO.	NAME	DESIGNATION	SIGNATURE
6.	Dr. N. Kuppuchamy Associate Professor & Head	Co-opted Member (Tamil)	
7.	Dr.A.Hazel Verbina Professor & Head (i/c)	Co-opted Member (English)	
8.	Dr. R. Sowrirajan Assistant Professor & Head	Co-opted Member (Mathematics)	
9.	Ms. A. Vinitha Assistant Professor	Member	
10.	Dr. V. Malathi Assistant Professor	Member	
11.	Mr. C. Sasthikumar Assistant Professor	Member	
12.	Ms. M. Nagarani Assistant Professor	Member	
13.	Ms. Mirulashini Thangavelu III B.Sc. CS CY	Student Representative	

Date: 28/06/2025

  
( Dr. V. Shobana)

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