



SHRI GNANAMBICA DEGREE COLLEGE

(AUTONOMOUS)
(Affiliated to S.V. University)



DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS

PROGRAM OUTCOMES (POs) Bachelor of Science in Cyber Security (B.Sc CbS)

Introduction

The Bachelor of Science in Cyber Security (B.Sc CbS) program is designed to provide students with strong theoretical and practical foundations in computer security, network security, ethical hacking, digital forensics, cyber law, cloud security, malware analysis, and secure software practices. The program aims to develop technical competence, analytical thinking, ethical responsibility, communication skills, and interdisciplinary understanding required for protecting digital systems and information in modern computing environments.

PROGRAM OUTCOMES (POs)

After successful completion of the B.Sc CbS program, graduates will be able to:

PO1 – Cyber Security and Computing Knowledge

Apply knowledge of computer science fundamentals, networking, operating systems, cybersecurity principles, cryptography, and secure computing practices for protecting digital systems and information.

PO2 – Problem Solving and Security Analysis

Identify, analyze, and develop solutions for security vulnerabilities, cyber threats, malware activities, and network attacks using appropriate security methodologies and analytical techniques.

PO3 – Ethical Hacking and Secure System Development

Design, implement, test, and maintain secure software systems, web applications, and network infrastructures using ethical hacking practices and secure development methodologies.

PO4 – Modern Security Tools and Technologies

Use modern cybersecurity tools, penetration testing frameworks, digital forensic techniques, cloud security platforms, and incident response technologies effectively in professional practice.

PO5 – Cyber Defense and Risk Management

Apply cybersecurity concepts, security policies, risk assessment techniques, digital investigation methods, and defensive strategies for safeguarding information systems and digital assets.

PO6 – Professional Ethics and Legal Awareness
Demonstrate professional ethics, cyber ethics, legal awareness, leadership qualities, teamwork, and social responsibility in cybersecurity practices and digital environments.

PO7 – Communication and Interpersonal Skills
Communicate effectively through oral, written, and digital modes and function efficiently as an individual and as a team member in multidisciplinary and professional environments.

PO8 – Lifelong Learning and Adaptability
Develop self-learning ability, critical thinking, adaptability, and continuous learning skills to cope with rapidly evolving cyber threats, technologies, and professional challenges.

PO9 – Interdisciplinary and Scientific Knowledge
Integrate knowledge from multidisciplinary and minor courses such as mathematics, statistics, electronics, law, finance, and social sciences for holistic understanding and cybersecurity problem solving.

CO-PO Mapping Methodology

The Course Outcomes (COs) of individual courses are mapped with the relevant Program Outcomes (POs) using the following scale:

Mapping Level	Description
3	High Correlation
2	Moderate Correlation
1	Low Correlation
-	No Correlation

Assessment and Attainment

The attainment of Program Outcomes is measured through:

- Internal Assessment Tests
- Semester End Examinations
- Laboratory Performance
- Assignments and Seminars
- Ethical Hacking and Security Activities
- Mini Projects and Major Projects
- Viva-Voce Examinations
- Participation in Technical Events, Workshops, and Cyber Security Activities

The attainment levels are evaluated periodically for continuous improvement of curriculum delivery and academic quality enhancement.

Conclusion

The Program Outcomes of B.Sc CbS aim to prepare graduates with strong technical knowledge in cybersecurity, ethical values, analytical abilities, communication skills, and interdisciplinary competence required for careers in cyber defense, ethical hacking, digital forensics, network security, higher education, research, and entrepreneurship.

The Program Outcomes are approved in BOS and Ratified in Academic Council.

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