



TULSIRAMJI GAIKWAD-PATIL College of Engineering and Technology

Wardha Road, Nagpur-441108

Accredited with NAAC A+ Grade

Approved by AICTE, New Delhi, Govt. of Maharashtra

(An Autonomous Institution Affiliated to RTM Nagpur University)



Department of CSE (Data Science)

B. Tech VII Semester in CSE (Data Science)

Course Name: BDS4703 Cryptography and Network Security - Lab

BDSXX19 Course Outcomes	
After the completion of this course, students will be able to-	
BDS4703.1	Implement classical encryption algorithms like Caesar and Vigenère ciphers to understand the foundational principles of cryptography.
BDS4703.2	Apply modern symmetric and asymmetric encryption techniques such as DES, AES, RSA, and ElGamal for secure data transmission.
BDS4703.3	Analyze and compare different AES modes of operation by visualizing encryption differences on sample plaintexts.
BDS4703.4	Demonstrate the creation and verification of digital signatures and secure message authentication using tools like OpenSSL and HMAC.
BDS4703.5	Utilize PGP for secure email communication and analyze SSL/TLS traffic using tools like Wireshark to understand secure communication protocols.