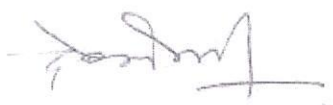


<b>Part A Introduction</b>			
<b>Program: Degree</b>		<b>Class :</b>	<b>Year: III</b>
		<b>Session: 2023-24</b>	
<b>Subject: BCA</b>			
1	Course Code	S3-BCAC2G	
2	Course Title	<b>Cyber Security</b>	
3	Course Type (Core Course/ Discipline Specific Elective/Elective/Generic Elective/Vocational/.....)	<i>Elective</i>	
4	Pre-requisite (if any)		
5	Course Learning outcomes (CLO)	<b>On successful completion of this course, the students will be able to:</b> <ol style="list-style-type: none"> <li>1. Identify the key components of cyber security network architecture.</li> <li>2. Employ, design and implement appropriate security technologies and policies to protect computers and digital information</li> <li>3. Analyze threats and risks within context of the cyber security architecture.</li> <li>4. Apply cyber security architecture principles.</li> <li>5. Gain familiarity with prevalent network and distributed system attacks.</li> </ol>	
6	Credit Value	<b>6</b>	
7	Total Marks	Max. Marks: 30 + 70	Min. Passing Marks:35
<b>Part B- Content of the Course</b>			
<b>Total No. of Lectures- 90 Tutorials-Practical ( in hours per week):4-0-0</b>			
<b>L-T-P:</b>			
Unit	Topics	No. of Lectures (1 Hour Each)	
I	Cyber Security : Introduction, Need for security, Basics of Cryptography : Plain text and Cipher Text, Substitution techniques, Caesar Cipher, Mono-alphabetic Cipher, Polygram, Polyalphabetic Substitution, Playfair, Hill Cipher, Transposition Cipher.	<b>18</b>	
II	Encryption and Decryption ,Symmetric Key Algorithms and AES: Brief history of Asymmetric Key Cryptography, Overview of Asymmetric Key Cryptography, RSA algorithm. Overview of Symmetric key Cryptography, Data Encryption Standard (DES)	<b>18</b>	
III	Network Security, Types of Attacks, Firewalls and Virtual Private Networks: Brief Introduction to TCP/IP, Firewalls, Virtual Private Networks (VPN), Secure Socket Layer (SSL), Transport Layer Security (TLS), Secure Hyper Text Transfer Protocol (SHTTP), Time Stamping Protocol (TSP), Secure Electronic Transaction (SET), Secure Sockets Layer (SSL), E-mail Security	<b>18</b>	
IV	Introduction to information systems, Types of information Systems, Development of Information	<b>18</b>	

  
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	Systems, Need for Information security, Threats to Information Systems, Information Assurance, Cyber Security and Security Risk Analysis	
V	Security Policies, Why Policies should be developed, WWW policies, Email Security policies, Policy Review Process-Corporate policies-Sample Security Policies, Publishing and Notification Requirement of the Policies. Information Security Standards-ISO, IT Act, Copyright Act, Patent Law, IPR	18

**Keywords/Tags:**

### Part C-Learning Resources

#### Text Books, Reference Books, Other resources

**Suggested Readings:**

1. Bernard Menezes, "Network Security and Cryptography", CEGAGE Learning , ISBN-10:81-315-1349-1, ISBN-13: 978-81-315-1349-1, 2014.
2. Charles Pfleeger, "Security in Computing", Prentice Hall, 4 th Edition, ISBN-10: 0132390779, ISBN-13: 978-0132390774, 2006.
3. Ulysess Black, "Internet Security Protocols: Protecting IP Traffic", Prentice Hall PTR; 1st edition, ISBN-10: 0130142492, ISBN-13: 978-0130142498, 2000.
4. William Stallings, "Cryptography and Network Security", Pearson Education, 6th Edition, ISBN 10: 0133354695, 2013.
5. Jonathan Rosenoer, "Cyber Law: The law of the Internet", Springer-Verlag, 1997.
6. Mark F Grady, Fransesco Parisi, "The Law and Economics of Cyber Security", Cambridge University Press, 2006.
6. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें।

**Suggestive digital platforms/ web links**

1. [https://onlinecourses.swayam2.ac.in/nou19\\_cs08/preview](https://onlinecourses.swayam2.ac.in/nou19_cs08/preview)
2. [https://onlinecourses.swayam2.ac.in/cec20\\_cs15/preview](https://onlinecourses.swayam2.ac.in/cec20_cs15/preview)
3. <https://nptel.ac.in/courses/106106129>
4. <https://nptel.ac.in/courses/106105031>
5. <https://nptel.ac.in/courses/106106199>

**Suggested equivalent online courses:**

1. <https://www.simplilearn.com/cyber-security/certification>
2. <https://study.torontosom.ca/cybersecurity/diploma>
3. [https://aws.amazon.com/securitycourses/by\\_aws\\_experts](https://aws.amazon.com/securitycourses/by_aws_experts)
4. <https://www.udemy.com/topic/cyber-security/>

### Part D-Assessment and Evaluation

**Suggested Continuous Evaluation Methods:**

Maximum Marks : 100

Continuous Comprehensive Evaluation (CCE) : 30 Marks University Exam (UE):70 Marks

<b>Internal Assessment :</b> Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	30
<b>External Assessment :</b> University Exam Section Time : 03.00 Hours	<b>Section(A) :</b> Very Short Questions <b>Section (B) :</b> Short Questions <b>Section (C) :</b> Long Questions	70

**Any remarks/ suggestions:**

*[Handwritten Signature]*  
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