



# Yogoda Satsanga Mahavidyalaya

JAGANNATHPUR, DHURWA, RANCHI – 834004

Email address: [ysmranchi4@gmail.com](mailto:ysmranchi4@gmail.com)

(NAAC Accredited, Grade: B++, CGPA: 2.89)

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## COURSE PLAN

<b>NAME OF THE DEPARTMENT:</b>	<b>BCA/IT</b>
<b>NAME OF THE FACULTY:</b>	<b>Priyanka Kumari</b>
<b>ACADEMIC SESSION:</b>	<b>2023-24</b>
<b>YEAR:</b>	<b>2024</b>
<b>PROGRAMME:</b>	<b>BCA/IT</b>
<b>SEMESTER:</b>	<b>V</b>
<b>COURSE TYPE:</b>	<b>IT</b>
<b>COURSE NAME:</b>	<b>INFORMATION SECURITY AND CYBER LAW</b>
<b>COURSE CODE:</b>	<b>DSE1</b>
<b>TOTAL CREDIT:</b>	<b>6</b>



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## PROGRAMME OUTCOMES (PO):

**PO1: Scientific & Computational Knowledge:** - Apply the information on scientific & computational ideas, software engineering and innovation basics.

**PO2: Problem Analysis, Design & Implementation:** - Identify, formulate and analyze real world problem. Design solution for Software, Hardware & Networking problems and implementation using Software & Network tools.

**PO3: Modern tool usage:** - Ability to select modern computing tools, skills and techniques necessary for innovative software solutions.

**PO4: Project Management:** -Comprehend Software Engineering and Technology standards and apply these to prepare own project and system as a part and pioneer in a group.

**PO5: Career Development & Entrepreneurship:** Classify opportunities, private enterprise dream and use of original thoughts to build worth and means for the betterment of the human being and the world.

**PO6: Communication:** Communicate effectively on computational & information Technology activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**PO7: Ethics:** Ability to apply and commit professional Ethics, cyber regulations & control on software piracy in a global economic environment.

**PO8: Preparing students for future aspects:** Building and improving their creativity, social awareness, and general knowledge.

**PO9: Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological changes.

## PROGRAMME SPECIFIC OUTCOMES (PSO):

**PSO1:** An ability to apply technical comprehension in varied areas of Computer Applications and experience a conducive environment in cultivating skills for thriving career and higher studies.

**PSO2:** Understand the concept of Programing logic, Web designing logic, Signal processing, Image processing, Mobile Applications, Multimedia Media.

**PSO3:** Develop competencies in various disciplines of technologies such as Server-side Web applications, computer networking, software engineering, database concepts and programming



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## A. COURSE OUTCOMES (COs):

- CO1:** Learn Security, Attacks, Computer Criminals, Security Services, Security Mechanisms.
- CO2:** Understand and implement Substitution ciphers, Transpositions Cipher, Confusion, diffusion, Symmetric, Asymmetric Encryption. DES Modes of DES, Uses of Encryption, Hash function, key exchange, Digital Signatures, Digital Certificates.
- CO3:** Generate and apply Secure programs, Non malicious Program errors, Malicious codes virus, Trap doors, Salami attacks, Covert channels, Control against program.
- CO4:** Applying Protection in OS: Memory and Address Protection, Access control, File Protection, User Authentication.
- CO5:** Understand Requirements, Reliability, Integrity, Sensitive data, Inference, Multilevel Security.
- CO6:** Learn and Control threats in Networks, Security Controls, firewalls, Intrusion detection systems, Secure e-mails
- CO7:** Implement and analysis Security Planning, Risk Analysis, Organizational Security Policy, Physical Security. Ethical issues in Security: Protecting Programs and data. Information and law.
- CO8:** Learn Scope of the IT Act, Legal recognition of Electronic records and Digital Signature, use of electronic records and digital signature in government and its agencies.
- CO9:** Need and Power of certifying Authority, Appointment, Function of Controller, who can be a certifying Authority? Digital signature certifications, Generation, Suspension and Revocation of Digital signature certificate.
- CO10:** Understand the Concept of Domain names, New concepts in trademark Jurisprudence, Cyber-squatting, Reverse Hijacking, Jurisdiction in Trademark dispute.
- CO11:** Establishment and Composition of Appellate tribunal, Powers of Adjudicating officer to Award Compensation, Powers of Adjudicating officer to Impose Penalty.
- CO12:** Tampering with computer source document(S-65), Hacking with Computer system(S-66), Publishing of information which is Obscene in Electronic forms(S-67), Offences- Breach of Confidentiality and Privacy(S-72), Offences- Related to Digital signature certificate (S-73 and S-74)



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## COURSE TEACHING AND LEARNING ACTIVITIES

### A. PEDAGOGY

- i. Whiteboard ✓
- ii. Flipped Class ✓
- iii. PPT ✓

### B. COURSE COMPLETION PLAN

UNIT	NO. OF LECTURES		TEST	QUIZ	ASSIGNMENT
	THEORY	PRACTICAL/TUTORIAL			
1	6	2	✓		✓
2	12	3	✓		✓
3	18	2	✓		✓
4	15	5	✓		✓
5	4	3	✓		✓
6	12	2	✓		✓
7	6	1	✓		✓
8	4	1	✓		✓

### B. COURSE DELIVERY PLAN:

UNIT	TOPIC/SUBTOPIC	LECTURE REQUIRED (Theory & Practical)	CO ADDRESSED	ASSIGNMENT/TEST/ QUIZ
1	Security, Attacks, Computer Criminals, Security Services, Security Mechanisms.	6+6	CO1	✓
2	Substitution ciphers, Transpositions Cipher, Confusion, diffusion, Symmetric, Asymmetric Encryption. DES Modes of DES, Uses of Encryption, Hash function, key exchange, Digital Signatures, Digital Certificates.	7+7	CO2	✓
3	Secure programs, Non malicious Program errors, Malicious codes virus, Trap doors, Salami attacks, Covert channels, Control against program	5+5	CO3	✓
4	Protection in OS: Memory and Address Protection, Access control, File Protection, User Authentication.	5+5	CO4	✓



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5	Requirements, Reliability, Integrity, Sensitive data, Inference, Multilevel Security.	6+6	CO5	√
6	Threats in Networks, Security Controls, firewalls, Intrusion detection systems, Secure e-mails	5+5	CO6	√
7	Security Planning, Risk Analysis, Organizational Security Policy, Physical Security. Ethical issues in Security: Protecting Programs and data. Information and law.	6+6	CO7	√
8	Scope of the IT Act, Legal recognition of Electronic records and Digital Signature, use of electronic records and digital signature in government and its agencies.	4+4	CO8	√
9	Need and Power of certifying Authority, Appointment, Function of Controller, who can be a certifying Authority? Digital signature certifications, Generation, Suspension and Revocation of Digital signature certificate.	4+4	CO9	√
10	Concept of Domain names, New concepts in trademark Jurisprudence, Cyber-squatting, ReverseHijacking, Jurisdiction in Trademark dispute.	4+4	CO10	√
11	Establishment and Composition of Appellate tribunal, Powers of Adjudicating officer to Award Compensation, Powers of Adjudicating officer to Impose Penalty.	5+5	CO11	√
12	Tampering with computer source document(S-65), Hacking with Computer system(S-66), Publishing of information	3+3	CO12	√



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which is Obscene in Electronic forms(S-67), Offences-Breach of Confidentiality and Privacy(S-72), Offences- Related to Digital signature certificate(S-73 and S-74)			
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## C. COURSE OUTCOME ASSESSMENT PLAN

### a. DIRECT ASSESSMENT

(Please tick the appropriate column)

COURSE OUTCOME	ASSESSMENT				REMARKS
	QUIZ	TEST	MID SEMESTER	END SEMESTER	
CO1		√	√		
CO2		√	√		
CO3		√	√		
CO4		√	√		
CO5		√	√		
CO6		√	√		
CO7		√	√		
CO8		√	√		
CO9		√	√		

## SUGGESTED READINGS

### b. TEXT BOOKS

- Computer Forensics: Principles and Practices by Linda Volonino, Reynaldo Anzaldúa and Jana Godwin -Pearson Prentice-Hall 2007.Reed Chris, "Computer Law", Third Edition 1996
- "The Information technology Act, 2000- Bare Act- Professional Book Publishers, New Delhi."
- Prasad T.V.R. Satya, "Law Relating to Information Technology (Cyber Laws)" 1st edition 2001: - Asia Law House.
- Hacker's Challenge Series - Mike Schiffman



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## c. REFERENCE BOOKS

- C. P. Pfleeger, S. L. Pfleeger; Security in Computing, Prentice Hall of India, 2006
- W. Stallings; Network Security Essentials: Applications and Standards, 4/E, 2010

## d. VIDEO RESOURCE

- <https://www.youtube.com/watch?v=KtuCsBLJXk8>
- <https://www.youtube.com/watch?v=RHbGCLc2yCk>
- [https://onlinecourses.nptel.ac.in/noc23\\_cs127/preview](https://onlinecourses.nptel.ac.in/noc23_cs127/preview)
- <https://www.youtube.com/watch?v=FeNyZA-e54E>

## e. WEB RESOURCES

- <https://www.javatpoint.com/cyber-security-tutorial>
- [https://www.tutorialspoint.com/information\\_security\\_cyber\\_law/index.htm](https://www.tutorialspoint.com/information_security_cyber_law/index.htm)
- <https://www.w3schools.com/cybersecurity/>
- <https://www.geeksforgeeks.org/cyber-security-tutorial/>