

**BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK**  
**DEPARTMENT OF INFORMATION TECHNOLOGY**  
**LESSON PLAN**

|                        |                                                                                   |                                |                                                                                  |
|------------------------|-----------------------------------------------------------------------------------|--------------------------------|----------------------------------------------------------------------------------|
| <b>Discipline: CSE</b> | <b>Semester: 6th</b>                                                              |                                | <b>Name of the Teaching Faculty: BISWABANDITA MOHANTY (PTGF)</b>                 |
| <b>Subject: CNS</b>    | <b>No. Of Days/per week class allotted: 4 periods per week Mon, Tue, Wed, Thu</b> | <b>No. Of Period available</b> | <b>From Date: 16-01-2024 To Date: 26-04-2024</b><br><b>No. Of Weeks: 15weeks</b> |
| <b>Week</b>            | <b>Class Date</b>                                                                 | <b>1</b>                       | <b>Topics to be covered</b>                                                      |
| 1st                    | 16.01.2024                                                                        | 1                              | Syllabus discussion                                                              |
|                        | 17.01.2024                                                                        | 1                              | 1.1. Possible attacks on Computers<br>INTRODUCTION                               |
|                        | 18.01.2024                                                                        | 1                              | 1.1. Possible attacks on Computers<br>INTRODUCTION                               |
| 2nd                    | 22.01.2024                                                                        | 1                              | 1.1 The need for security                                                        |
|                        | 24.01.2024                                                                        | 1                              | 1.1 The need for security                                                        |
|                        | 25.01.2024                                                                        | 1                              | 1.2 Security approach                                                            |
| 3rd                    | 29.01.2024                                                                        | 1                              | 1.3 Principles of security.                                                      |
|                        | 30.01.2024                                                                        | 1                              | 1.4 Types of attacks                                                             |
|                        | 31.01.2024                                                                        | 1                              | 1.4 Types of attacks                                                             |
|                        | 01.02.2024                                                                        | 1                              | <b>2. Cryptography Concepts</b><br>2.1 Plain text & Cipher Text                  |
| 4th                    | 05.02.2024                                                                        | 1                              | 2.2 Substitution techniques                                                      |
|                        | 06.02.2024                                                                        | 1                              | 2.2 Substitution techniques                                                      |
|                        | 07.02.2024                                                                        | 1                              | 2.2 Substitution techniques                                                      |
|                        | 08.02.2024                                                                        | 1                              | 2.3 Transposition techniques                                                     |
| 5th                    | 12.02.2024                                                                        | 1                              | 2.3 Transposition techniques                                                     |
|                        | 13.02.2024                                                                        | 1                              | 2.4 Encryption & Decryption                                                      |

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|------|------------|---|------------------------------------------------------------------------------------------|
|      | 15.02.2024 |   | 2.5 Symmetric & Asymmetric key Cryptography                                              |
| 6th  | 19.02.2024 | 1 | 2.5 Symmetric & Asymmetric key Cryptography                                              |
|      | 20.02.2024 | 1 | <b>CLASS TEST1</b>                                                                       |
|      | 21.02.2024 | 1 | <b>3.Symmetric &amp; Asymmetric key algorithms</b><br>3.1 Symmetric key algorithm types  |
|      | 22.02.2024 | 1 | 3.1 Symmetric key algorithm types                                                        |
| 7th  | 26.02.2024 | 1 | 3.2 Overview of Symmetric key cryptography                                               |
|      | 27.02.2024 | 1 | 3.2 Overview of Symmetric key cryptography                                               |
|      | 28.02.2024 | 1 | 3.3 Data encryption standards                                                            |
|      | 29.02.2024 | 1 | 3.3 Data encryption standards                                                            |
| 8th  | 04.03.2024 | 1 | 3.4 Over view of Asymmetric key cryptography                                             |
|      | 06.03.2024 | 1 | 3.4 Over view of Asymmetric key cryptography                                             |
|      | 07.03.2024 | 1 | 3.5 The RSA algorithm                                                                    |
| 9th  | 11.03.2024 | 1 | 3.6 Symmetric & Asymmetric key cryptography                                              |
|      | 12.03.2024 | 1 | 3.6 Symmetric & Asymmetric key cryptography                                              |
|      | 13.03.2024 | 1 | 3.7 Digital signature                                                                    |
|      | 14.03.2024 | 1 | <b>Class Test 1</b>                                                                      |
| 10th | 18.03.2024 | 1 | <b>4.Digital certificate &amp; Public key infrastructure</b><br>4.1 Digital certificates |
|      | 19.03.2024 | 1 | 4.2 Private key management                                                               |
|      | 20.03.2024 | 1 | 4.3 PKIX Model                                                                           |
|      | 21.03.2024 | 1 | 4.3 PKIX Model                                                                           |
| 11th | 27.03.2024 | 1 | 4.4 Public key cryptography standards                                                    |
|      | 28.03.2024 | 1 | <b>5.Internet security protocols</b><br>5.1 Basic concept<br>5.2 Secure socket layer     |
|      | 02.04.2024 | 1 | <b>Internal Test</b>                                                                     |
|      | 03.04.2024 | 1 | <b>Internal Test</b>                                                                     |
|      | 04.04.2024 | 1 | 5.3 Transport layer security                                                             |

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|------|------------|---|-----------------------------------------------------------------------------|
| 13th | 08.04.2024 | 1 | 5.4 Secure Hyper text transfer protocol(SHTTP)                              |
|      | 09.04.2024 | 1 | 5.5 Time stamping protocol (TSP)<br>5.6 Secure electronic transaction (SET) |
|      | 10.04.2024 | 1 | <b>Assignment 2 Cum Doubt Clearing</b>                                      |
| 14th | 15.04.2024 | 1 | <b>6.User authentication</b><br>6.1 Authentication basics<br>6.2 Password   |
|      | 16.04.2024 | 1 | 6.3 Authentication Tokens                                                   |
|      | 18.04.2024 | 1 | 6.4 Certificate based authentication                                        |
|      | 22.04.2024 | 1 | 6.5 Biometric authentication                                                |
|      | 23.04.2024 | 1 | <b>7.Network Security &amp; VPN</b><br>7.1 Brief introduction of TCP/IP     |
|      | 24.04.2024 | 1 | 7.2 Firewall                                                                |
|      | 25.04.2024 | 1 | 7.3 IP Security<br>7.4 Virtual Private Network (VPN)                        |