

## Academic Lesson Plan of Summer 2022

Department : CSE	Semester : 6th	Name of the teaching faculty: SWARNALATA SAHOO
<b>Subject: Cryptography &amp; Network Security</b>	<b>No.of days/per week class</b>	<b>Semester from : 10th MARCH 2022</b>
		<b>No. of weeks:15 weeks</b>
		<b>Topics to be covered:</b>
<b>1<sup>st</sup> week</b>	<b>1<sup>st</sup></b>	<b>1.1 The need for security</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>1.2 Security approach</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>2<sup>nd</sup> week</b>	<b>1<sup>st</sup></b>	<b>1.3 Principles of security</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>1.4 Types of attacks</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>3<sup>rd</sup> week</b>	<b>1<sup>st</sup></b>	<b>2. Cryptography concepts 2.1 Plain text &amp; Cipher Text</b>
	<b>2<sup>nd</sup></b>	<b>2.2 Substitution techniques</b>
	<b>3<sup>rd</sup></b>	<b>Continue</b>
	<b>4<sup>th</sup></b>	<b>2.3 Transposition techniques</b>
<b>4<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>2.4 Encryption &amp; Decryption</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>2.5 Symmetric &amp; Asymmetric key cryptography</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>5<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>3.1 Symmetric key algorithm types</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>3.2 Overview of Symmetric key cryptography</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>6<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>3.3 Data encryption standards</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>3.5 The RSA algorithm</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>7<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>3.6 Symmetric &amp; Asymmetric key cryptography</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>3.7 Digital signature</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>8<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>4.1 Digital certificates</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>Continue</b>
	<b>4<sup>th</sup></b>	<b>4.2 Private key management</b>
<b>9<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>4.3 PKIX Model</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>4.4 Public key cryptography standards</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>10<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>5.1 Basic concept</b>
	<b>2<sup>nd</sup></b>	<b>5.2 Secure socket layer</b>
	<b>3<sup>rd</sup></b>	<b>Continue</b>
	<b>4<sup>th</sup></b>	<b>5.3 Transport layer security</b>

<b>11<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>5.4 Secure Hyper text transfer protocol(SHTTP)</b>
	<b>2<sup>nd</sup></b>	<b>5.5 Time stamping protocol (TSP)</b>
	<b>3<sup>rd</sup></b>	<b>5.6 Secure electronic transaction (SET)</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>12<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>6.1 Authentication basics</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>6.2 Password</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>13<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>6.3 Authentication Tokens</b>
	<b>2<sup>nd</sup></b>	<b>6.4 Certificate based authentication</b>
	<b>3<sup>rd</sup></b>	<b>Continue</b>
	<b>4<sup>th</sup></b>	<b>6.5 Biometric authentication</b>
<b>14<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Revision</b>
	<b>2<sup>nd</sup></b>	<b>7.1 Brief introduction of TCP/IP</b>
	<b>3<sup>rd</sup></b>	<b>Continue</b>
	<b>4<sup>th</sup></b>	<b>7.2 Firewall</b>
<b>15<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Continue</b>
	<b>2<sup>nd</sup></b>	<b>7.3 IP Security</b>
	<b>3<sup>rd</sup></b>	<b>7.4 Virtual Private Network (VPN)</b>
	<b>4<sup>th</sup></b>	<b>Revision &amp; Semester Question Answer Discussion</b>

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09/03/22  
Signature of Faculty

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