

**NATIONAL INSTITUTE OF TECHNOLOGY, JAMSHEDPUR**  
**DEPARTMENT OF COMPUTER APPLICATIONS**  
**M.Tech. (Full Time) in**  
**Information Systems Security Engineering (ISSE)**  
**(Four Semester Course)**

**Course Structure**

**FIRST SEMESTER**

<b>Sl.No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L-T-P</b>	<b>Credits</b>
1	CA4101	Information Security	3-2-0	4
2	CA4102	Cryptographic Foundation	3-2-0	4
3	CA4103	Design of Computer Network	3-2-0	4
4	CA4104	Algorithms	3-2-0	4
5	CA4105	Elective	3-2-0	4
Total Credits				20

**SECOND SEMESTER**

<b>Sl.No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L-T-P</b>	<b>Credits</b>
1	CA4201	Database Security	3-2-0	4
2	CA4202	Network Security	3-2-0	4
3	CA4203	Software Security Engineering	3-2-0	4
4	CA4204	Cyber Laws and Security	3-2-0	4
5	CA4205	Elective	3-2-0	4
Total Credits				20

### THIRD SEMESTER

Sl.No.	Course Code	Course Title	L-T-P	Credits
1	CA4301	Dissertation – I		16
2	CA4302	Seminar		4
Total Credits				20

### FOURTH SEMESTER

Sl.No.	Course Code	Course Title	L-T-P	Credits
1	CA4401	Dissertation – II		20
Total Credits				20

**List of Electives**

Sl. No.	Course Code	Course Title	L-T-P	Credits
1	CAG7231	Digital Watermarking and Steganography	3-0-2	4
2	CAG7232	Information Theory and Coding	3-0-2	4
3	CAG7233	Information Security Standards	3-0-2	4
4	CAG7234	Intrusion Detection and Prevention Systems	3-0-2	4
5	CAG7235	Cyber Crime Investigations and Digital Forensics	3-0-2	4
6	CAG7236	Trusted and Secure Computing	3-0-2	4
7	CAG7237	Biometric Security Systems	3-0-2	4
8	CAG7238	Security Issues in Cloud Computing	3-0-2	4
9	CAG7239	Mobile and Cellular Network Security	3-0-2	4
10	CAG7240	Information Systems Audit	3-0-2	4
11	CAG7241	Software Reliability Engineering	3-0-2	4
12	CAG7242	Soft Computing	3-0-2	4
13	CAG7243	Neural Networks	3-0-2	4
14	CAG7244	Fuzzy Logic	3-0-2	4
15	CAG7245	Machine Learning	3-0-2	4
16	CAG7246	E-Commerce	3-0-2	4
17	CAG7247	Evolutionary Computation	3-0-2	4