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## **Post Graduates Schema (For batch 2025 onwards)**

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**M. Tech. (Computer Science and Engineering)  
M. Tech. (Information and Cyber Security)  
(Department of Computer Science and Engineering)**

**M. Tech. (Information Technology)  
M. Tech. (Wireless Networks and Computing)  
(Department of Information Technology)**

**M. Tech. (IC Design and Technology)  
M. Tech. (Autonomous Systems and Machine Intelligence)  
(Department of Electrical and Electronics Engineering)**

**M.S. (Artificial Intelligence and Data Science)  
(Department of Engineering Science)**

**Master of Business Administration  
(Department of Management Studies)**

**Dual Degree (M.Tech. and PhD)**

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**ATAL BIHARI VAJPAYEE-  
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY AND MANAGEMENT,  
GWALIOR (MADHYA PRADESH)  
(AN INSTITUTE OF NATIONAL IMPORTANCE, MINISTRY OF EDUCATION, GOVT. OF INDIA)**

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**Schema**  
**M. Tech.**  
**(Information and Cyber Security)**



**Department of Computer Science and Engineering**



**ABV-Indian Institute of Information  
Technology & Management, Gwalior**

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# SCHEMA

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**Name of the program: M. Tech. (Information and Cyber Security)**

**(Credits: 75)**

**Name of the Department: Computer Science and Engineering**

| SEMESTER-I |              |                                         |                      |           |
|------------|--------------|-----------------------------------------|----------------------|-----------|
| S. No.     | Subject Code | Title of the course                     | L-T-P                | Credits   |
| 1.         | CS-601       | Cloud Computing                         | 3-0-0                | 3         |
| 2.         | CS-602       | Fundamentals of Cryptography            | 3-0-0                | 3         |
| 3.         | CS-603       | Machine Learning Techniques             | 3-0-2                | 4         |
| 4.         | CS-604       | Advanced Data Structures and Algorithms | 3-0-2                | 4         |
| 5.         | CS-605       | Cyber Laws and Information Crime        | 3-0-0                | 3         |
| 6.         | CS-6XX       | Elective-I                              | 3-0-0                | 3         |
|            |              |                                         | <b>Total credits</b> | <b>20</b> |

| SEMESTER-II |              |                                         |                      |           |
|-------------|--------------|-----------------------------------------|----------------------|-----------|
| S. No.      | Subject code | Title of the course                     | L-T-P                | Credits   |
| 1.          | CS-612       | Advanced Computer Networks and Security | 3-0-0                | 3         |
| 2.          | CS-613       | Cyber Forensics: Tools and Techniques   | 3-0-2                | 4         |
| 3.          | CS-614       | Information Privacy and Security        | 3-0-0                | 3         |
| 4.          | CS-615       | Engineering Research Methodology        | 2-1-0                | 3         |
| 5.          | CS-6XX       | Elective-II                             | 3-0-0                | 3         |
| 6.          | CS-6XX       | Elective-III/MOOC                       | 3-0-0                | 3         |
|             |              |                                         | <b>Total credits</b> | <b>19</b> |

EXIT AFTER YEAR-1: Post Graduate Diploma in Information and Cyber Security

| SEMESTER-III |              |                               |                      |           |
|--------------|--------------|-------------------------------|----------------------|-----------|
| S. No.       | Subject code | Title of the course           | L-T-P                | Credits   |
| 1            | CS-6XX       | Elective-IV/MOOC              | 3-0-0                | 3         |
| 2            | CS-698       | M. Tech Dissertation Part - I | 0-0-30               | 15        |
|              |              |                               | <b>Total credits</b> | <b>18</b> |

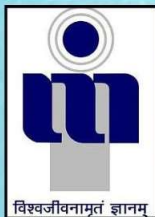
| SEMESTER-IV |              |                                |                      |           |
|-------------|--------------|--------------------------------|----------------------|-----------|
| S. No.      | Subject Code | Title of the course            | L-T-P                | Credits   |
| 1           | CS-699       | M. Tech Dissertation Part – II | 0-0-36               | 18        |
|             |              |                                | <b>Total credits</b> | <b>18</b> |

| SEMESTER-I | SEMESTER-II | SEMESTER-III | SEMESTER-IV | TOTAL CREDITS |
|------------|-------------|--------------|-------------|---------------|
| 20         | 19          | 18           | 18          | 75            |

## **Electives Courses**

| <b>Electives Category: Information and Cyber Security</b> |                      |                                           |              |
|-----------------------------------------------------------|----------------------|-------------------------------------------|--------------|
| <b>S.No.</b>                                              | <b>Subject Codes</b> | <b>Title of Courses</b>                   | <b>L-T-P</b> |
| 1.                                                        | CS-621               | Wireless & Mobile Security                | 3-0-0        |
| 2.                                                        | CS-622               | Intrusion Detection and Prevention        | 3-0-0        |
| 3.                                                        | CS-623               | Web application and Cloud Security        | 3-0-0        |
| 4.                                                        | CS-624               | Malware Analysis                          | 3-0-0        |
| 5.                                                        | CS-625               | Authentication and Access Control         | 3-0-0        |
| 6.                                                        | CS-626               | Digital Watermarking and Steganalysis     | 3-0-0        |
| 7.                                                        | CS-627               | IoT Protocols and Security                | 3-0-0        |
| 8.                                                        | CS-628               | Data Privacy in Social Networks           | 3-0-0        |
| 9.                                                        | CS-629               | Blockchain Technology                     | 3-0-0        |
| 10.                                                       | CS-630               | Software System Design                    | 3-0-0        |
| 11.                                                       | CS-631               | Modern Cryptography                       | 3-0-0        |
| 12.                                                       | CS-632               | Database Security                         | 3-0-0        |
| 13.                                                       | CS-633               | Hardware Security                         | 3-0-0        |
| 14.                                                       | CS-634               | Operating Systems Security                | 3-0-0        |
| 15.                                                       | CS-635               | Fault Tolerant System                     | 3-0-0        |
| 16.                                                       | CS-636               | Quantum Cryptography                      | 3-0-0        |
| 17.                                                       | CS-637               | Big Data and Cyber fraud analysis         | 3-0-0        |
| 18.                                                       | CS-638               | Secure System Engineering                 | 3-0-0        |
| 19.                                                       | CS-639               | Formal Verification of Security Protocols | 3-0-0        |
| 20.                                                       | CS-640               | Digital Forensics                         | 3-0-0        |
| 21.                                                       | CS-641               | Natural Language Processing               | 3-0-0        |
| 22.                                                       | CS-642               | Information Retrieval                     | 3-0-0        |
| 23.                                                       | CS-643               | Recommender Systems                       | 3-0-0        |
| 24.                                                       | CS-644               | Reinforcement Learning                    | 3-0-0        |
| 25.                                                       | CS-645               | Fair, Accountable, Transparent AI         | 3-0-0        |
| 26.                                                       | CS-646               | Machine Learning System Optimization      | 3-0-0        |
| 27.                                                       | CS-647               | Pattern Recognition                       | 3-0-0        |
| 28.                                                       | CS-648               | Deep Learning Techniques                  | 3-0-0        |
| 29.                                                       | CS-649               | Modelling and Simulation                  | 3-0-0        |

\*Department electives may be added or deleted with the approval of a departmental recommendation by the DoAA.



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