

**School of Computational Intelligence**

**MCA (Cyber Security)**

**Semester I**

<b>Sl. No</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Contact Hrs / Wk</b>	<b>Credits</b>
1.	MCCY 1611	Computer Organization	3	0	0	3	3
2.	MCCY 1612	Mathematical Foundations of Computer Science	3	0	0	3	3
3.	MCCY 1613	Problem Solving and Programming	3	0	2	5	4
4.	MCCY 1614	Statistics and Queuing Theory	3	0	0	3	3
5.	MCCY 1615	Managerial Economics	3	0	0	3	3
6.	MCCY 2611	Computer Game Development and Animation	0	1	2	3	2
7.	MCCY 2612	R Programming Lab	0	1	2	3	2
		<b>TOTAL</b>	<b>15</b>	<b>2</b>	<b>6</b>	<b>23</b>	<b>20</b>

**Semester II**

<b>Sl. No</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Contact Hrs / Wk</b>	<b>Credits</b>
1.	MCCY 1621	Database Systems	3	0	2	5	4
2.	MCCY 1622	Data Structures	3	0	2	5	4
3.	MCCY 1623	Web Technologies	3	0	2	5	4
4.	MCCY 1624	Object Oriented Programming	3	0	2	5	4
5.	MCCY 1625	Management Theory and Practice	3	0	0	3	3
		<b>TOTAL</b>	<b>15</b>	<b>0</b>	<b>8</b>	<b>23</b>	<b>19</b>

### Semester III

Sl. No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	MCCY 1631	Advanced Databases	3	0	2	5	4
2.	MCCY 1632	Advanced Data Structures	2	0	0	2	2
3.	MCCY 1633	Software Engineering Principles	3	0	2	5	4
4.	MCCY 1634	Operating System Concepts	3	0	2	5	4
5.	MCCY 1635	Computer Communications and Network	3	0	2	5	4
6.	MCCY 1636	Artificial Intelligence	3	0	2	5	4
		<b>TOTAL</b>	<b>17</b>	<b>0</b>	<b>10</b>	<b>27</b>	<b>22</b>

### Semester IV

Sl. No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	MCCY 1641	Mobile Applications Development	2	0	2	4	3
2.	MCCY 1642	Software Testing	3	0	2	5	4
3.	MCCY 1643	Algorithm Analysis and Design	3	0	0	3	3
4.	MCCY 1644	Principles of Data Warehousing and Data Mining	3	0	0	3	3
5.	MCCY 1645	Python Programming	2	0	2	4	3
6.	MCCY 2641	Knowledge Engineering Lab	0	0	2	2	1
7.	PECY 164#	PSE I	2	0	2	4	3
8.	PECY 164#	PSE II	2	0	2	4	3
		<b>TOTAL</b>	<b>17</b>	<b>0</b>	<b>12</b>	<b>29</b>	<b>23</b>

Program Specific Electives (PSE) for Semester IV:

Sl. No	Course Code	Course Title
1.	PECY 1641	Essentials of Cyber Security
2.	PECY 1642	Data Encryption
3.	PECY 1643	Steganography and Digital Watermarking
4.	PECY 1644	Information Theory for Cyber Security

**Semester V**

Sl. No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	MCCY 1651	Cryptography and Network Security	3	0	2	5	4
2.	MCCY 1652	Internet of Things	3	0	2	5	4
3.	MCCY 1653	Machine Learning	3	0	2	5	4
4.	MCCY 6651	Seminar & Comprehensive Viva-voce					3
5.	PECY 165#	PSE IV	2	0	2	4	3
6.	PECY 165#	PSE V	2	0	2	4	3
7.	PECY 165#	PSE VI	2	0	2	4	3
		<b>TOTAL</b>	<b>15</b>	<b>0</b>	<b>12</b>	<b>27</b>	<b>24</b>

Program Specific Electives (PSE) for Semester IV:

Sl. No	Course Code	Course Title
1.	PECY 1651	Database Security and Access Control
2.	PECY 1652	Security Assessment and Risk Analysis
3.	PECY 1653	Malware Detection & Mitigation
4.	PECY 1654	Digital Forensics
5.	PECY 1655	No-SQL Databases
6.	PECY 1656	Pattern Recognition & Scene Analysis

### Semester VI

<b>Sl. No</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Contact Hrs / Wk</b>	<b>Credits</b>
1.	MCCY 5661	Dissertation/Internship					12
		<b>TOTAL</b>					<b>22</b>

### Semester-wise Credit Load

<b>Semester</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
I	15	2	6	20
II	15	0	8	19
III	17	0	10	22
IV	17	0	12	23
V	15	0	12	24
VI				12
<b>Total</b>	<b>78</b>	<b>2</b>	<b>48</b>	<b>120</b>