

# HALDIA INSTITUTE OF TECHNOLOGY

(AN AUTONOMOUS INSTITUTION UNDER MAULANAABULKALAMAZADUNIVERSITY OF TECHNOLOGY, WEST BENGAL)

## Master of Computer Applications

### Course Structure for MCA

#### Semester I:

Category	Theory		Periods / Week			Total	Credits
	Paper Code	Paper Name	L	T	P		
Compulsory Subjects	MCA C101	Data Structure	3	1	0	4	4
	MCA C102	Computer Organization & Architecture	3	1	0	4	4
	MCA C103	Software Engineering & TQM	3	1	0	4	4
	MCA M104	Mathematics-I	3	1	0	4	4
	MCA 105	Computer Programming with Java	3	1	0	4	4
<b>Total of Theory</b>						<b>20</b>	<b>20</b>
<b>Practical</b>							
	MCA C195	Java Programming Lab			4	4	2
	MCA C191	Data Structure Lab. Using C			4	4	2
<b>Total of Practical</b>						<b>8</b>	<b>4</b>
Industry Orientation Course	MCAS01	Introduction to Python language			3	3	2
<b>Total hours / week and Total Credits</b>						<b>31</b>	<b>26</b>

Bridge Course : **1. Introduction to Computing. 2. Office tools and Communicating English.**

**Semester II:**

Category	Theory		Periods / Week			Total	Credits
	Paper Code	Paper Name	L	T	P		
Compulsory Subjects	MCA C201	DBMS	3	1	0	4	4
	MCA C202	Operating Systems	3	1	0	4	4
	MCA C203	Data Communication & Computer Network	3	1	0	4	4
	MCA C204	Artificial Intelligence and its Applications	3	1	0	4	4
	MCA M205	Mathematics-II	3	1	0	4	4
<b>Total of Theory</b>						<b>20</b>	<b>20</b>
<b>Practical</b>							
	MCA C291	DBMS Lab.			4	4	2
	MCA C294	AI Lab.			4	4	2
<b>Total of Practical</b>						<b>8</b>	<b>4</b>
Industry Orientation Course	MCAS02	Advance Java			3	3	2
<b>Total hours / week and Total Credits</b>						<b>31</b>	<b>26</b>

**Semester III:**

Category	Theory		Periods / Week			Total	Credits
	Paper Code	Paper Name	L	T	P		
Compulsory Subjects	MCA C301	Introduction to Machine Learning	3	1	0	4	4
	MCA C302	Organizational Behavior	3	1	0	4	4
	MCA C303	Web Technology	3	1	0	4	4
	MCA C304	IoT and its applications	3	1	0	4	4
	MCA E305A/B	Elective 1	3	1	0	4	4
<b>Total of Theory</b>						<b>20</b>	<b>20</b>
<b>Practical</b>							
	MCA C391	Machine Learning Lab.			4	4	2
	MCA C393	Web Technology Lab.			4	4	2
<b>Total of Practical</b>						<b>8</b>	<b>4</b>
Industry Orientation Course	MCAS03	Introduction to R Language			3	3	2
<b>Total hours / week and Total Credits</b>						<b>31</b>	<b>26</b>

Elective No.	Course Code	Course Name
1	MCA E305A	Cyber Security
	MCA E305B	Data, Web and Text Mining

**Semester IV:**

Category	Theory		Periods / Week			Total	Credits
	Paper Code	Paper Name	L	T	P		
Compulsory Subjects	MCA C401	Data Analytics	3	1	0	4	4
	MCA E402A/B	Elective 2	3	1	0	4	4
<b>Total of Theory</b>						<b>8</b>	<b>8</b>
<b>Practical</b>							
	MCA C491	Data Analytics Lab. Using R			4	4	2
	MCA E492A/B	Elective 2 Lab			4	4	2
<b>Total of Practical</b>						<b>8</b>	<b>4</b>
		Major Project					<b>20</b>
<b>Total hours / week and Total Credits</b>							<b>32</b>

Elective No.	Course Code	Course Name
2	MCA E402A	Android System and its Applications
	MCA E402B	Cloud Computing
2	MCA E492A	Android Applications Lab.
	MCA E492B	Cloud Computing Lab.

**Total Credit : 110**

**NPTEL Free Course on : 1. Modern Application Development 2. Introduction to Blockchain Technology and Applications 3. Ethical Hacking**