



**APJ ABDUL KALAM TECHNOLOGICAL  
UNIVERSITY**

**Curriculum  
for  
Master of Computer Applications (MCA)  
2016**

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY  
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# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

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**MASTER OF COMPUTER APPLICATIONS (INTEGRATED)**

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**CURRICULUM – SEMESTERS I to X**

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**Year : 2016**

**No. of credits : 211**

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## SEMESTER 1

Course No	Master of Computer Applications (Integrated) Course	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
		L	T	P					
INMCA101	English	3	1	-	40	60	100	4	A
INMCA103	Mathematical Foundations of Computer Science	3	1	-	40	60	100	4	B
INMCA105	Introduction to Digital Systems and Logic Design	3	1	-	40	60	100	4	C
INMCA107	Introduction to Computers and PC hardware	3	1	-	40	60	100	4	D
INMCA109	Fundamentals of Accountancy	3	1	-	40	60	100	4	E
INMCA131	Office Automation Lab	-	-	6	100		100	1	S
INMCA133	PC hardware Lab	-	-	4	100		100	1	T
TOTAL		15	5	10	400	300	700	22	

## SEMESTER 2

Course No	Master of Computer Applications (Integrated) Course	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
		L	T	P					
INMCA102	Technical Communication	3	1	-	40	60	100	4	A
INMCA104	Introduction to Discrete Mathematics	3	1	-	40	60	100	4	B
INMCA106	Computer Organization	3	1	-	40	60	100	4	C
INMCA108	Problem Solving and Structured Programming	3	1	-	40	60	100	4	D
INMCA112	Personality Development and Soft Skills	3	1	-	40	60	100	4	E
INMCA132	Problem Solving and Structured Programming Lab	-	-	6	100		100	1	S
INMCA134	Technical Communication Lab	-	-	4	100		100	1	T
TOTAL		15	5	10	400	300	700	22	

## SEMESTER 3

Course No	Master of Computer Applications (Integrated) Course	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
		L	T	P					
INMCA201	Principles of Programming	3	1	-	40	60	100	4	A
INMCA203	Probability and Statistics	3	1	-	40	60	100	4	B
INMCA204	Introduction to Object Oriented Programming	3	1	-	40	60	100	4	C
INMCA206	Accounting and Financial Management	3	1	-	40	60	100	4	D
INMCA208	Introduction to Data Structures	3	1	-	40	60	100	4	E
INMCA231	Basic Data Structures Lab	-	-	6	100		100	1	S
INMCA233	Basic Object Oriented Programming Lab	-	-	4	100		100	1	T
TOTAL		15	5	10	400	300	700	22	

## SEMESTER 4

Course No	Master of Computer Applications (Integrated)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
		L	T	P					
INMCA202	Introduction to Visual Programming	3	1	-	40	60	100	4	A
INMCA204	Applied Statistics	3	1	-	40	60	100	4	B
INMCA206	Introduction to Operating Systems	3	1	-	40	60	100	4	C
INMCA208	Elements of Business Management	3	1	-	40	60	100	4	D
INMCA212	Internet Concepts and Web Design	3	1	-	40	60	100	4	E
INMCA232	Visual Programming Lab	-	-	4	100		100	1	S
INMCA234	Statistics Lab	-	-	4	100		100	1	T
TOTAL		15	5	10	400	300	700	22	

## SEMESTER 5

Course No	Master of Computer Applications (Integrated)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
		L	T	P					
INMCA301	Mathematics for Computer Applications	3	1	-	40	60	100	4	A
INMCA303	Introduction to E-Commerce	3	1	-	40	60	100	4	B
INMCA305	Introduction to RDBMS and SQL	3	1	-	40	60	100	4	C
INMCA307	IT Infrastructure Management	3	1	-	40	60	100	4	D
INMCA309	Introduction to Operations Research	4	-	-	40	60	100	4	E
INMCA331	RDBMS Lab	-	-	4	100		100	1	S
INMCA333	Scripting Lab	-	-	6	100		100	1	T
TOTAL		16	4	10	400	300	700	22	

## SEMESTER 6

Course No	Master of Computer Applications (Integrated)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
		L	T	P					
INMCA302	Introduction to Software Engineering	3	1	-	40	60	100	4	A
INMCA304	Numerical Methods	3	1	-	40	60	100	4	B
INMCA306	Computational Sustainability	3	1	-	40	60	100	4	C
INMCA308	Open Source Platforms	3	1	-	40	60	100	4	D
INMCA312	Advanced Object Oriented Programming	3	1	-	40	60	100	4	E
INMCA332	Advanced Object Oriented Programming Lab	-	-	6	100		100	1	S
INMCA334	Open Source Platforms Lab	-	-	4	100		100	1	T
TOTAL		15	5	10	400	300	700	22	

## SEMESTER 7

	Master of Computer Applications (Integrated)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA201	Computer Networks	3	1	-	40	60	100	4	A
RLMCA203	Software Engineering	3	1	-	40	60	100	4	B
RLMCA205	Database Management Systems	3	1	-	40	60	100	4	C
RLMCA207	Design and Analysis of Algorithms	3	1	-	40	60	100	4	D
RLMCA209	Web Programming	3	1	-	40	60	100	4	E
RLMCA231	Database Lab	-		4	100		100	1	S
RLMCA233	Web Programming Lab	-		4	100		100	1	T
	TOTAL	15	5	8	400	300	700	22	

## SEMESTER 8

	Master of Computer Applications (Integrated)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA202	Application Development and Maintenance	3	1	-	40	60	100	4	A
RLMCA204	Big Data Technologies	3	1	-	40	60	100	4	B
RLMCA206	Mobile Computing	3	1	-	40	60	100	4	C
RLMCA208	Introduction to Machine Learning	3	1	-	40	60	100	4	D
RLMCA2--	Elective I	3	1	-	40	60	100	4	E
RLMCA232	System Design Lab	-		4	100		100	1	S
RLMCA234	Mobile Application Development Lab	-		4	100		100	1	T
	TOTAL	15	5	8	400	300	700	22	

ELECTIVE-I	
RLMCA262	Functional Programming
RLMCA264	Design and Analysis of Parallel Algorithms
RLMCA266	Advanced Database Systems
RLMCA268	Computational Science
RLMCA272	Advanced Java Programming
RLMCA274	Business Intelligence and its Applications

## SEMESTER 9

	Master of Computer Applications (Integrated)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA301	Web Data Mining	3	1	-	40	60	100	4	A
RLMCA303	E-Commerce	3	-	-	40	60	100	3	B
RLMCA305	Cryptography and Cyber Security	3	1	-	40	60	100	4	C
RLMCA3- -	Elective II	3	1	-	40	60	100	4	D
RLMCA3- -	Elective III	3	1	-	40	60	100	4	E
RLMCA341	Seminar	-	-	2	50	-	50	2	S
RLMCA351	Mini Project	-	-	8	150	-	150	2	T
	TOTAL	15	4	10	400	300	700	23	

ELECTIVE-II		ELECTIVE-III	
RLMCA361	Compiler Construction	RLMCA381	Cloud Computing
RLMCA363	IPR and Cyber Law	RLMCA383	Human Computer Interaction
RLMCA365	Cyber Forensics	RLMCA385	Bioinformatics
RLMCA367	Internet of Things	RLMCA387	Computer Graphics
RLMCA369	Python Programming	RLMCA389	Parallel and Distributed Computing
RLMCA371	Social Network Analysis	RLMCA391	Artificial Intelligence

## SEMESTER 10

	Master of Computer Applications (Integrated)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA352	Project and Viva Voce			30	70	30	100	12	S
		Total			70	30	100	12	
		Cumulative Total					6400	211	



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# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

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**MASTER OF COMPUTER APPLICATIONS (REGULAR)**

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**CURRICULUM – SEMESTERS I to VI**

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**Year : 2016**

**No. of credits : 123**

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## SEMESTER 1

	Master of Computer Applications (Regular)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA101	Problem Solving and Computer Programming	3	1		40	60	100	4	A
RLMCA103	Discrete Mathematics	3	1	-	40	60	100	4	B
RLMCA105	Applied Probability and Statistics	3	1	-	40	60	100	4	C
RLMCA107	Principles of Management	3	1	-	40	60	100	4	D
RLMCA109	Digital Fundamentals	3	1	-	40	60	100	4	E
RLMCA131	Programming Lab	-		4	100		100	1	S
RLMCA133	Applied Statistics Lab	-		4	100		100	1	T
	<b>TOTAL</b>	<b>15</b>	<b>5</b>	<b>8</b>	<b>400</b>	<b>300</b>	<b>700</b>	<b>22</b>	

## SEMESTER 2

	Master of Computer Applications (Regular)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA102	Object Oriented Programming	3	1	-	40	60	100	4	A
RLMCA104	Data Structures	3	1	-	40	60	100	4	B
RLMCA106	Operating Systems	3	1	-	40	60	100	4	C
RLMCA108	Operations Research	3	1	-	40	60	100	4	D
RLMCA112	Computer Organization and Architecture	3	1	-	40	60	100	4	E
RLMCA132	Object Oriented Programming Lab	-		4	100		100	1	S
RLMCA134	Data Structures Lab	-		4	100		100	1	T
	<b>TOTAL</b>	<b>15</b>	<b>5</b>	<b>8</b>	<b>400</b>	<b>300</b>	<b>700</b>	<b>22</b>	

## SEMESTER 3

	Master of Computer Applications (Regular)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA201	Computer Networks	3	1	-	40	60	100	4	A
RLMCA203	Software Engineering	3	1	-	40	60	100	4	B
RLMCA205	Database Management Systems	3	1	-	40	60	100	4	C
RLMCA207	Design and Analysis of Algorithms	3	1	-	40	60	100	4	D
RLMCA209	Web Programming	3	1	-	40	60	100	4	E
RLMCA231	Database Lab	-		4	100		100	1	S
RLMCA233	Web Programming Lab	-		4	100		100	1	T
	<b>TOTAL</b>	<b>15</b>	<b>5</b>	<b>8</b>	<b>400</b>	<b>300</b>	<b>700</b>	<b>22</b>	



## SEMESTER 4

	Master of Computer Applications (Regular)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA202	Application Development and Maintenance	3	1	-	40	60	100	4	A
RLMCA204	Big Data Technologies	3	1	-	40	60	100	4	B
RLMCA206	Mobile Computing	3	1	-	40	60	100	4	C
RLMCA208	Introduction to Machine Learning	3	1	-	40	60	100	4	D
RLMCA2--	Elective I	3	1	-	40	60	100	4	E
RLMCA232	System Design Lab	-		4	100		100	1	S
RLMCA234	Mobile Application Development Lab	-		4	100		100	1	T
	TOTAL	15	5	8	400	300	700	22	

ELECTIVE-I	
RLMCA262	Functional Programming
RLMCA264	Design and Analysis of Parallel Algorithms
RLMCA266	Advanced Database Systems
RLMCA268	Computational Science
RLMCA272	Advanced Java Programming
RLMCA274	Business Intelligence and its Applications

## SEMESTER 5

	Master of Computer Applications (Regular)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA301	Web Data Mining	3	1	-	40	60	100	4	A
RLMCA303	E-Commerce	3	-	-	40	60	100	3	B
RLMCA305	Cryptography and Cyber Security	3	1	-	40	60	100	4	C
RLMCA3- -	Elective II	3	1	-	40	60	100	4	D
RLMCA3- -	Elective III	3	1	-	40	60	100	4	E
RLMCA341	Seminar	-	-	2	50	-	50	2	S
RLMCA351	Mini Project	-	-	8	150	-	150	2	T
	TOTAL	15	4	10	400	300	700	23	

ELECTIVE-II		ELECTIVE-III	
RLMCA361	Compiler Construction	RLMCA381	Cloud Computing
RLMCA363	IPR and Cyber Law	RLMCA383	Human Computer Interaction
RLMCA365	Cyber Forensics	RLMCA385	Bioinformatics
RLMCA367	Internet of Things	RLMCA387	Computer Graphics
RLMCA369	Python Programming	RLMCA389	Parallel and Distributed Computing
RLMCA371	Social Network Analysis	RLMCA391	Artificial Intelligence

## SEMESTER 6

	Master of Computer Applications (Regular)	Hours / week			IA marks	ESE Marks	Total	Credits	
Course No	Course	L	T	P					
RLIMCA352	Project and Viva Voce			30	70	30	100	12	
	Cumulative Total						3600	123	



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# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

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**MASTER OF COMPUTER APPLICATIONS  
(LATERAL ENTRY)**

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**CURRICULUM – SEMESTERS I to IV**

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**Year : 2016**

**No. of credits : 79**

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## SEMESTER 1

	Master of Computer Applications (LE)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L							
RLMCA201	Computer Networks	3	1	-	40	60	100	4	A
RLMCA203	Software Engineering	3	1	-	40	60	100	4	B
RLMCA205	Database Management Systems	3	1	-	40	60	100	4	C
RLMCA207	Design and Analysis of Algorithms	3	1	-	40	60	100	4	D
RLMCA209	Web Programming	3	1	-	40	60	100	4	E
RLMCA231	Database Lab	-		4	100		100	1	S
RLMCA233	Web Programming Lab	-		4	100		100	1	T
	TOTAL	15	5	8	400	300	700	22	

## SEMESTER 2

	Master of Computer Applications (LE)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA202	Application Development and Maintenance	3	1	-	40	60	100	4	A
RLMCA204	Big Data Technologies	3	1	-	40	60	100	4	B
RLMCA206	Mobile Computing	3	1	-	40	60	100	4	C
RLMCA208	Introduction to Machine Learning	3	1	-	40	60	100	4	D
RLMCA2- -	Elective I	3	1	-	40	60	100	4	E
RLMCA232	System Design Lab	-		4	100		100	1	S
RLMCA234	Mobile Application Development Lab	-		4	100		100	1	T
	TOTAL	15	5	8	400	300	700	22	

### ELECTIVE-I

RLMCA262	Functional Programming
RLMCA264	Design and Analysis of Parallel Algorithms
RLMCA266	Advanced Database Systems
RLMCA268	Computational Science
RLMCA272	Advanced Java Programming
RLMCA274	Business Intelligence and its Applications

### SEMESTER 3

	Master of Computer Applications (LE)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam
Course No	Course	L	T	P					slot
RLMCA301	Web Data Mining	3	1	-	40	60	100	4	A
RLMCA303	E-Commerce	3	-	-	40	60	100	3	B
RLMCA305	Cryptography and Cyber Security	3	1	-	40	60	100	4	C
RLMCA3- -	Elective II	3	1	-	40	60	100	4	D
RLMCA3- -	Elective III	3	1	-	40	60	100	4	E
RLMCA341	Seminar	-	-	2	50	-	50	2	S
RLMCA351	Mini Project	-	-	8	150	-	150	2	T
	TOTAL	15	4	10	400	300	700	23	

ELECTIVE-II		ELECTIVE-III	
RLMCA361	Compiler Construction	RLMCA381	Cloud Computing
RLMCA363	IPR and Cyber Law	RLMCA383	Human Computer Interaction
RLMCA365	Cyber Forensics	RLMCA385	Bioinformatics
RLMCA367	Internet of Things	RLMCA387	Computer Graphics
RLMCA369	Python Programming	RLMCA389	Parallel and Distributed Computing
RLMCA371	Social Network Analysis	RLMCA391	Artificial Intelligence

### SEMESTER 4

	Master of Computer Applications (LE)	Hours / week			IA marks	ESE Marks	Total	Credits	Exam slot
Course No	Course	L	T	P					
RLMCA352	Project and Viva Voce			30	70	30	100	12	S
	TOTAL				70	30	100	12	
	CUMULATIVE TOTAL					2200		79	