

**Osmania University**

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**Faculty of Informatics**  
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**Two years MCA Program**  
**Master of Computer Applications 2022-23**  
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**Syllabi for Semesters – I and II**  
**With Effect from Academic Year 2022 – 2023**

**Osmania University**  
**Hyderabad**

**SCHEME OF INSTRUCTION**  
**MASTER OF COMPUTER APPLICATIONS (MCA)**  
**SEMESTER- I**

SN o	Course Code	Course Title	Hours/ Week			Scheme of Examination				No of Credits
						Max Marks			Duration (hrs)	
						L	T	P	CIE	
<b>THEORY</b>										
1	PCC101	Discrete Mathematics	4	-	-	30	70	100	3	4
2	PCC102	Data Structures using C	4	-	-	30	70	100	3	4
3	PCC103	Object Oriented Programming using Java	3	1	-	30	70	100	3	4
4	PCC104	Computer Architecture	3		-	30	70	100	3	3
5	PCC105	Probability & Statistics	3	1	-	30	70	100	3	4
6	MGC106	Managerial Economics and Accountancy	3		-	30	70	100	3	3
<b>PRACTICALS</b>										
7	LCC151	Data Structures using C Lab	-	-	3	25	50	75	3	1.5
8	LCC152	Java Programming Lab	-	-	3	25	50	75	3	1.5
9	HSC153	Soft Skills Lab	-	-	2	25	50	75	3	1
			20	2	8	255	570	825	27	26

Abbreviation	Full Form	Abbreviation	Full Form
PCC	Professional Core Course	CIE	Continuous Internal Evaluation
PEC	Professional Elective Course	SEE	Semester End Evaluation
MGC	Management Course	L	Lecture
LCC	Laboratory Core Course	P	Practical

**Note : Each lab should be made with 30 students for batch**

**SCHEME OF INSTRUCTION**  
**MASTER OF COMPUTER APPLICATIONS (MCA)**  
**SEMESTER – II**

SNo	Course Code	Course Title	Hours/ Week			Scheme of Examination				No of Credits
			L	T	P	Max Marks		Duration (hrs)	Cr	
THEORY			L	T	P	CIE	SEE	Total Marks	SEE	Cr
1	PCC 201	Operating Systems	4		-	30	70	100	3	4
2	PCC 202	Database Management System	4	-	-	30	70	100	3	4
3	PCC 203	Design and Analysis of Algorithms	3	1	-	30	70	100	3	4
4 *	PCC 204	Data Engineering with Python	4	-	-	30	70	100	3	4
5	PCC 205	Machine Learning	3	-	-	30	70	100	3	3
6	MGC 206	Operations Research	3		-	30	70	100	3	3
PRACTICALS										
7	LCC 251	Operating Systems Lab	-	-	3	25	50	75	3	1.5
8 *	LCC 252	Data Engineering with Python	-	-	3	25	50	75	3	1.5
9	LCC 253	Database Management Systems Lab	-	-	3	25	50	75	3	1.5
10	SIP 321	Summer Internship/ Mini Project*	-	-	-	-	-		-	-
			21	1	9	255	570	825	27	26.5

\***Summer Internship/ Mini Project** : After second semester, the students are expected to do summer internship/ Mini Project and Its grade will be credited in the third semester memo after evaluation.

Abbreviation	Full Form	Abb	Full Form
PCC	Professional Core Course	CIE	Continuous Internal Evaluation
PEC	Professional Elective Course	SEE	Semester End Evaluation
HSC	Humanities and Social Science Course	L	Lecture
LCC	Laboratory Core Course	P	Practical

**Note : Each lab should be made with 30 students for batch**

**SCHEME OF INSTRUCTION**  
**MASTER OF COMPUTER APPLICATIONS (MCA)**  
**SEMESTER- III**

SNo	Course Code	Course Title	Hours/ Week			Scheme of Examination			No of Credits
						Max Marks		Duration (hrs)	
<b>THEORY</b>			<b>L</b>	<b>T</b>	<b>P</b>	<b>CIE</b>	<b>SEE</b>	<b>SEE</b>	<b>Cr</b>
1	PCC301	Software Engineering	4	-	-	30	70	3	4
2	PCC302	Computer Networks	4	-	-	30	70	3	4
3	PCC303	Data Science	3	1	-	30	70	3	4
4	PCC304	Web Technologies	3		-	30	70	3	3
5	PEC**	Professional Elective–I	3	-	-	30	70	3	3
6	PEC**	Professional Elective–II	3	-	-	30	70	3	3
<b>PRACTICALS</b>									
7	LCC351	Computer Networks Lab	-	-	3	25	50	3	1.5
8	LCC352	Software Engineering Lab	-	-	3	25	50	3	1.5
9	LCC353	Data science Lab	-	-	3	25	50	3	1.5
10	SIP321	Summer Internship/ Mini Project	-	-	-	50		-	2
			<b>20</b>	<b>1</b>	<b>9</b>	<b>305</b>	<b>570</b>	<b>27</b>	<b>27.5</b>

<b>Professional Electives</b>	<b>Course Code-PEC**</b>	<b>Professional Elective -1</b>	
	PEC311	Information Security	
	PEC312	Distributed Systems	
	PEC313	Internet of Things	
	PEC314	Information Retrieval System	
<b>Professional Electives</b>	<b>Course Code-PEC**</b>	<b>Professional Elective – II</b>	
	PEC321	Network Security	
	PEC322	Software Quality Testing	
	PEC323	Image Processing	
	PEC324	Natural Language Processing	
<b>Abbreviation</b>	<b>Full Form</b>	<b>Abbreviation</b>	<b>Full Form</b>
PCC	Professional Core Course	CIE	Continuous Internal Evaluation
PEC	Professional Elective Course	SEE	Semester End Evaluation
MGC	Management Course	L	Lecture
LCC	Laboratory Core Course	P	Practical