

LNCT University, Bhopal

School of Computer Science and Technology
(SOCST)

Master of Computer Application (AI&ML)

In collaboration with

Samatrix.io

Curriculum and Scheme
CBGS/Grading System

University Core Subjects

S. No.	Subject Code	Subject Name
1.	MAI -104	Soft Skill and Entrepreneurship

Program Electives

S. No.	Subject Code	Subject Name
1.	MAI -304 E-I(1)	Cyber Security & Law
2.	MAI -304 E-I(2)	Compiler Design
3.	MAI -304 E-I(3)	Introduction to Data Science and Big Data
4.	MAI -304 E-I(4)	Internet of Things
5.	MAI -305 E-II(1)	Design and Analysis of Algorithms
6.	MAI -305 E-II(2)	Soft Computing
7.	MAI -305 E-II(3)	Computer Graphics
8.	MAI -305 E-II(4)	Distributed Systems
9.	MAI - 402 E-III(1)	Software Testing and Quality Assurance
10.	MAI - 402 E-III(2)	JAVA Technologies
11.	MAI - 402 E-III(3)	Computer Ethics
12.	MAI - 402 E-III(4)	Blockchain and Crypto Currency
13.	MAI - 403 E-IV(1)	Dot Net Technology
14.	MAI - 403 E-IV(2)	Mobile Computing
15.	MAI - 403 E-IV(3)	Advanced Web Technologies
16.	MAI -403 E-IV(4)	E-commerce & ERP

Programme Core Subjects

S. No.	Subject Code	Subject Name
1.	MAI -101	Principles & Programming in C
2.	MAI -102	Data analysis using Python, Numpy, Pandas, Matplotlib and Seaborn
3.	MAI -103	Computer Architecture
4.	MAI -105	Introduction to AI, Data Science, Ethics and Foundation of Data Analysis
5.	MAI -106	Tools & Methodology of IT World
6.	MAI -201	RDBMS
7.	MAI -202	Object Oriented Methodology in C++
8.	MAI -203	Probabilistic Modeling and Reasoning with Python
9.	MAI -204	Software Engineering Methodologies & UML
10.	MAI -205	R programming for Data Science and Data Analysis
11.	MAI -206	Data Structures
12.	MAI -301	Data Mining and Online Transaction Processing
13.	MAI -302	Neural Network and Deep Learning (Vision and NLP)
14.	MAI -303	Machine Learning and Pattern Recognition
15.	MAI -401	Artificial Intelligence and its Applications

LNCT UNIVERSITY, BHOPAL

Master of Computer Application Scheme of Examination

PROGRAMME: MCA (AI/ML)
BRANCH : CA

wef: July 2022
SEMESTER: I

S. No	Paper Code	Paper Name	Maximum Marks Allotted				Total Marks	Credits Allotted				Total Credits	Remark
			Theory Slot		Practical Slot			L	T	P	J		
			EST	CAT	ESP	CAP							
1	MAI -101	Principles & Programming in C	80	20	-	-	100	3	1	0	-	04	One credit refers to one hour teaching in theory, tutorial, practical and Project. 36 hour workload per week corresponding to LTPJ
2	MAI -102	Data analysis using Python, Numpy, Pandas, Matplotlib and Seaborn	80	20	-	-	100	3	1	0	-	04	
3	MAI -103	Computer Architecture	80	20	-	-	100	3	1	0	-	04	
4	MAI -104	Soft Skill & Entrepreneurship	80	20	-	-	100	3	1	0	-	04	
5	MAI -105	Introduction to AI, Data Science, Ethics and Foundation of Data Analysis	80	20	-	-	100	3	1	0	-	04	
6	MAI -106	Tools & Methodology of IT World	80	20	-	-	100	3	1	0	-	04	
7	MAI -107	Programming Lab in C	-	-	120	80	200	-	-	8	-	08	
8	MAI -108	Operating System Lab	-	-	30	20	50	-	-	2	-	02	
9	MAI -109	Mini Project on Data Analysis using Python	-	-	30	20	50	-	-	-	2	02	
10	*MAI -111	Disaster Management											
Total			480	120	180	120	900	18	6	10	2	36	

MST: Mid Semester Test

CAT: Continuous Assessment Theory

EST: End Semester Theory

ESP: End Semester Practical

CAP: Continuous Assessment Practical

L: Lecture

T: Tutorial

P: Practical

J: Project Work

*MAI-111: Non-Gradable, Necessary to pass the exam to earn the certificate.

LNCT UNIVERSITY, BHOPAL

Master of Computer Application Scheme of Examination

PROGRAMME: MCA (AI/ML)
BRANCH : CA

wef: July 2022
SEMESTER: II

S. No	Paper Code	Paper Name	Maximum Marks Allotted					Total Marks	Credits Allotted				Total Credits	Remark
			Theory Slot		Practical Slot		L		T	P	J			
			EST	CAT	ESP	CAP								
1	MAI -201	RDBMS	80	20	-	-	100	3	1	0	-	04	One credit refers to one hour teaching in theory, tutorial, practical and project. 36 hour workload per week corresponding to LTPJ	
2	MAI -202	Object Oriented Methodology in C++	80	20	-	-	100	3	1	0	-	04		
3	MAI -203	Probabilistic Modelling and Reasoning with Python	80	20	-	-	100	3	1	0	-	04		
4	MAI -204	Software Engineering Methodologies and UML	80	20	-	-	100	3	1	0	-	04		
5	MAI -205	R programming for Data Science and Data Analysis	80	20	-	-	100	3	1	0	-	04		
6	MAI -206	Data Structure	80	20	-	-	100	3	1	0	-	04		
7	MAI -207	Programming Lab in C++	-	-	120	80	200	-	-	8	-	08		
8	MAI -208	RDBMS Lab	-	-	30	20	50	-	-	2	-	02		
9	MAI -209	Mini Project in R programming	-	-	30	20	50	-	-	-	2	02		
Total			480	120	180	120	900	18	6	10	2	36		

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EST: End Semester Theory

ESP: End Semester Practical

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L: Lecture

T: Tutorial

P: Practical

J: Project Work

LNCT UNIVERSITY, BHOPAL

Master of Computer Application Scheme of Examination

PROGRAMME: MCA (AI/ML)
BRANCH : CA

wef: July 2022
SEMESTER: III

S. No	Paper Code	Paper Name	Maximum Marks Allotted					Total Marks	Credits Allotted				Total Credits	Remark
			Theory Slot		Practical Slot		L		T	P	J			
			EST	CAT	ESP	CAP								
1	MAI -301	Data Mining and Online Transaction Processing	80	20	-	-	100	3	1	0	-	04	One credit refers to one hour teaching in theory, tutorial, practical and Project : 30 hour workload per week corresponding to LTPJ	
2	MAI -302	Neural Network and Deep Learning (Vision and NLP)	80	20	-	-	100	3	1	0	-	04		
3	MAI -303	Machine Learning and Pattern Recognition	80	20	-	-	100	3	1	0	-	04		
4	MAI -304	Elective – I	80	20	-	-	100	3	1	0	-	04		
5	MAI -305	Elective – II	80	20	-	-	100	3	1	0	-	04		
6	MAI -306	Minor Project on NLP	-	-	120	80	200	-	-	-	8	08		
7	MAI -307	Elective – I Lab	-	-	30	20	50	-	-	2	-	02		
Total			400	100	150	100	750	15	5	2	8	30		

Elective – I

1. Cyber Security & Law
2. Compiler Design
3. Introduction to Data Science and Big Data
4. Internet of Things

Elective – II

1. Design and Analysis of Algorithms
2. Soft Computing
3. Computer Graphics
4. Distributed Systems

MST: Mid Semester Test

ESP: End Semester Practical

T: Tutorial

CAT: Continuous Assessment Theory

CAP: Continuous Assessment Practical

P: Practical

EST: End Semester Theory

L: Lecture

J: Project Work

LNCT UNIVERSITY, BHOPAL

Master of Computer Application Scheme of Examination

PROGRAMME: MCA (AI/ML)
BRANCH : CA

wef: July 2022
SEMESTER: IV

S. No	Paper Code	Paper Name	Maximum Marks Allotted					Total Marks	Credits Allotted				Total Credits	Remark
			Theory Slot		Practical Slot		L		T	P	J			
			EST	CAT	ESP	CAP								
1	MAI-401	Artificial Intelligence and its Applications	80	20	-	-	100	3	1	0	-	04	One credit refers to one hour teaching in theory, tutorial, practical and Project : 36 hour workload per week corresponding to LTPJ	
2	MAI-402	Elective – III	80	20	-	-	100	3	1	0	-	04		
3	MAI-403	Elective – IV	80	20	-	-	100	3	1	0	-	04		
4	MAI-404	Major Project – I (Based on Computer Application)	-	-	200	100	300	-	-	0	12	12		
5	MAI-405	Major Project – II (Based on AI Application)	-	-	200	100	300	-	-	0	12	12		
Total			240	60	400	200	900	9	3	0	24	36		

Elective – III

1. Software Testing & Quality Assurance
2. JAVA Technologies
3. Computer Ethics
4. Blockchain and Crypto Currency

Elective – IV

1. Dot Net Technology
2. Mobile Computing
3. Advance Web Technologies
4. E-Commerce & ERP

MST: Mid Semester Test

ESP: End Semester Practical

T: Tutorial

CAT: Continuous Assessment Theory

CAP: Continuous Assessment Practical

P: Practical

EST: End Semester Theory

L: Lecture

J: Project Work