

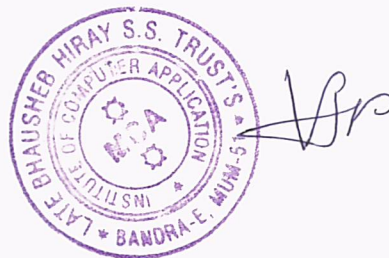


LATE BHAUSAHEB HIRAY S. S. TRUST'S INSTITUTE OF COMPUTER APPLICATION

ISO 9001:2015 CERTIFIED

S. No. 341, Next to New English School, Govt. Colony, Bandra (East), Mumbai 400 051.
Tel. 91-22-2657 0986 / 892 Telefax : 91-22-2657 3181 Website : www.hiray.edu.in E-mail : director@hiray.org.in

2.6.2: Attainment of POs and COs are evaluated.





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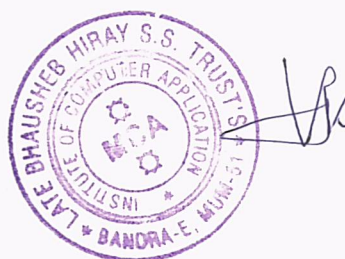
CO-PO Attainment

Steps to be followed to calculate CO-PO attainment:

- 1) Define COs for a course and check their quality.
- 2) Define CO-PO mapping matrix on a scale 1, 2 or 3.
- 3) Align COs with Internal exam, Continuous Assessment and External exam.
- 4) Prepare CO alignment sheet and decide grade scale as follows.

% of CO attainment	$\geq 70\%$	$\geq 50\% \& < 70\%$	$\geq 45\% \& < 50\%$	$< 45\%$
CO attainment level	3	2	1	0

- 5) Calculate COs as per the above rule on the basis of Internal and External Assessment.





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CO-PO Attainment

Course: MCA22 - Artificial Intelligence And Machine Learning

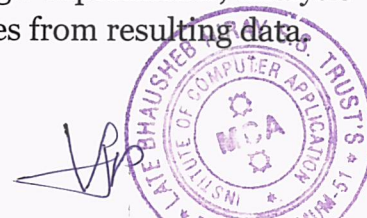
Course Code	Course Name	Teaching Scheme			Credits Assigned		
MCA22	Artificial Intelligence And Machine Learning	Contact Hours					
		Theory	Tutorial	Theory	Tutorial	Total	
		3	--	3	--	3	
		Examination Scheme					
		Theory			Term Work	End Sem Exam	Total
		CA	Test	AVG			
		20	20	20	--	80	100

Step -1

- CO1: Interpret Artificial Intelligence concepts intelligence concepts
- CO2: Apply Artificial intelligence techniques for problem solving
- CO3: Analyze the fundamentals of machine learning, the learning algorithms and the paradigms of supervised and un-supervised learning
- CO4: Identify methods to improve machine learning results for better predictive performance

Program Outcomes

- 1) **Computational Knowledge:** Apply knowledge of Computer Science and Application, fundamentals and specialization and mathematics for computing and finding solution of complex coding problems.
- 2) **Problem Analysis:** Identify, formulate, research literature and analyze computer oriented problems to achieve substantiated conclusions using principles of Mathematics and Computer Science.
- 3) **Design / Development of Solutions:** Design and evaluate solutions for complex problems and design system components, processes to meet the specifications with appropriate considerations for any specific need on societal and environmental aspects.
- 4) **Conduct investigations of Complex Computing Problems:** Use Research based knowledge including skills of design experiments, analysis and interpretation of data, to provide valid inferences from resulting data.



- 5) **Modern Tools usage:** To create, select and apply efficiently the contemporary IT tools to complex algorithm, simulation activities with an understanding of the limitations.
- 6) **Professional Ethics:** Understand, apply ethical principles and commit to professional ethics and cyber regulations and norms of professional computer practices.
- 7) **Life-long learning:** An ability, to recognize the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.
- 8) **Project management and finance:** An ability to use the modern Computer Application and Engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multi-disciplinary environments.
- 9) **Communication Efficacy:** Communicate effectively with computing community and society about complex problems by being able to present technical information in oral and written reports.
- 10) **Societal and environmental concern:** Understand and assess societal, environmental and cultural aspects with local and global context and the subsequent responsibilities relevant to professional computing practice.
- 11) **Individual and Team work:** Function effectively both as a team leader and team member in multidisciplinary environments to demonstrate computing and management skills.
- 12) **Innovation and Entrepreneurship:** Identify a timely opportunity and using innovation to pursue that opportunity to create value and wealth for betterment of the individual and society at large.

Step-2

MAPPING OF COURSE OUTCOMES TO PROGRAM OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	0	0	0	0	0	0	0	0	0	1
CO2	3	3	2	3	0	1	1	0	0	2	0	1
CO3	3	3	0	2	0	0	0	0	0	0	0	1
CO4	3	3	2	2	0	1	1	0	0	2	0	1
Target	3	3	2	2.333333		1	1			2		1

General guideline for CO-PO mapping: If CO is able to map for more than **70%** (or impact of CO is **High**) of PO assign 3, for mapping of 45% -70%(impact of CO is **Moderate**), else 1 (impact of CO is **Low**)

High=3, Moderate=2, Low=1



**Late Bhausaheb Hiray S.S. Trust's Institute of Computer Application
Bandra East**

Internal Evaluation Assessment Sheet

Step -3

	Programme			MCA	Semester:	II	Batch:	2021-2023	A.Y:	2021-2022					
	Subject			AIML	Faculty Name:	Asst. Prof. Rashmita Pradhan									
	Date:				Faculty Sign										
	Sr. No	Name Of the Student	University Exam		Attainment	CT					CA				
Marks Scored			CO1	Attainm		CO2	Attainment	CO3	Attainm	CO4	Attainment				
Out of 80												% out of 80	10	1	10
1	DANISH HANIF ANWARE	A			0	0	0	0	0	10	1	10	1	20	10
2	BANKAR OMKAR SANJAY	36	45	1	8	1	3	0	11	6	1	5	0	11	11
3	BARANWAL SHREYAS ANAND	39	48.75	1	7	1	7	1	14	7	1	7	1	14	14
4	CHORGE SAYLI SUBHASH	70	87.5	1	10	1	7	1	17	10	1	7	1	17	17
5	CHOUDHARI PRATHAMESH RAKESH	39	48.75	1	0	0	0	0	0	10	1	10	1	20	10
6	DURGESH CHAUBEY	53	66.25	1	8	1	8	1	16	10	1	8	1	18	17
7	GAIKWAD VRUSHAB SUNIL	42	52.5	1	0	0	0	0	0	10	1	10	1	20	10
8	GAWALI SAURABH BHAUSAHEB	37	46.25	1	9	1	10	1	19	10	1	10	1	20	19.5
9	GUND NAGESH SANTOSH	37	46.25	1	10	1	9	1	19	9	1	10	1	19	19
10	GUPTA ISHA SHIVCHANDRA	41	51.25	1	10	1	10	1	20	10	1	10	1	20	20
11	GUPTA SANSKAAR LALJI	39	48.75	1	7	1	6	1	13	5	0	6	1	11	12
12	JHA ASHUTOSH NRIPATI	37	46.25	1	10	1	7	1	17	7	1	10	1	17	17
13	JOSHI ABHISHEK ANKUSH	36	45	1	9	1	9	1	18	9	1	9	1	18	18
14	KAMERKAR RITIK SHEKHAR	55	68.75	1	10	1	9	1	19	10	1	9	1	19	19
15	LOKHANDE NILAM NAGESH	50	62.5	1	7	1	7	1	14	7	1	7	1	14	14
16	PANTOJI SAIRAJ RAMESH	20	25	0	0	0	0	0	0	10	1	10	1	20	10
17	PATEL HETA RAMESHBHAI	40	50	1	10	1	10	1	20	10	1	10	1	20	20
18	PATIL BHAGYASHREE MANGESH MAYURI	43	53.75	1	8	1	8	1	16	6	1	0	0	6	11
19	SALOKHE MAYUR RAJARAM	37	46.25	1	7	1	3	0	10	7	1	7	1	14	12
20	ARFATUL SHAIKH	24	30	0	10	1	7	1	17	10	1	7	1	17	17
21	SHAIKH SUVAID SALIM	41	51.25	1	9	1	9	1	18	9	1	9	1	18	18
22	SHAIKH ZIKRA RIYAZ	42	52.5	1	10	1	9	1	19	10	1	9	1	19	19
23	ANISHA RAJENDRA SHARMA	36	45	1	7	1	7	1	14	7	1	7	1	14	14
24	SHIPRA AMNA MD ASIF	38	47.5	1	10	1	10	1	20	10	1	10	1	20	20
25	THORAVE SAGAR SAMBHAJI	40	50	1	7	1	6	1	13	4	0	3	0	7	10
26	WALKUNDE PRADNYA DNYANDEO	22	27.5	0	7	1	1	0	8	10	1	10	1	20	14
27	KENNY VIBHA SANJAY	36	45	1	6	1	6	1	12	8	1	8	1	16	14
28	NIKAM VISHAL UTTAM	36	45	1	8	1	7	1	15	8	1	7	1	15	15
29	PARAB SAHIL LAHU	45	56.25	1	7	1	7	1	14	7	1	7	1	14	14
30	PHADATARE TULSHI SANJAY	43	53.75	1	8	1	8	1	16	8	1	8	1	16	16
31	YADAV SURAJ RAMAVADH	44	55	1	10	1	10	1	20	10	1	10	1	20	20
32	SAWE OMKAR VIVEK	40	50	1	5	0	3	0	8	6	1	6	1	12	10
33	SHIRODKAR SHUBHAM ASHOK	36	45	1	8	1	7	1	15	8	1	7	1	15	15
34	THAKARE SANKET VILAS	37	46.25	1	6	1	4	0	10	4	0	6	1	10	10
35	YADAV ANAND RAMKARAN	24	30	0	10	1	7	1	17	10	1	7	1	17	17
36	YADAV ANKIT INDRESH	37	46.25	1	8	1	8	1	16	0	0	6	1	6	11
37	NEHA VINSON	50	62.5	1	10	1	10	1	20	10	1	10	1	20	20
38	UTTAM CHAND	49	61.25	1	7	1	7	1	14	9	1	9	1	18	16
39	SAKHAWIA KALEEM FAROGH	47	58.75	1	7	1	6	1	13	7	1	6	1	13	13
40	ADAPAN KEERTHIKA KRISHNAN	25	31.25	0	8	1	1	0	9	8	1	7	1	15	12
41	ANSARI MOHD AVAISH MOHD YUNUS	37	46.25	1	7	1	7	1	14	4	0	6	1	10	12
42	ANSARI SAIFUDDIN MOHD ISRAEEL	38	47.5	1	6	1	5	0	11	6	1	5	0	11	11
43	APARADH MANALI VIJAY	55	68.75	1	7	1	7	1	14	7	1	7	1	14	14
44	BANDAGAR JEJERAM SHRIRANG	24	30	0	7	1	5	0	12	8	1	8	1	16	14
45	BHAGAT SALIL RAVINDRA	66	82.5	1	9	1	8	1	17	9	1	8	1	17	17
46	BHALERAO SIMRAN SANJAY	40	50	1	5	0	5	0	10	6	1	6	1	12	11



47	BHARGUDE SIDDHESH SUBHASH	36	45	1	7	1	7	1	14	8	1	8	1	16	15
48	BHARTE ATHARVA DHANANJAY	0	0	0	9	1	9	1	18	10	1	10	1	20	19
49	RATHOD BHAVIN BHARAT	36	45	1	7	1	7	1	14	0	0	6	1	6	10
50	BHIDE RADHIKA SANTOSH	40	50	1	10	1	9	1	19	10	1	9	1	19	19
51	CHAUDHARI DEVYANI DINKAR	36	45	1	9	1	10	1	19	10	1	9	1	19	19
52	CHAVAN DIPTI TIRTHARAM	49	61.25	1	10	1	10	1	20	10	1	10	1	20	20
53	CHHABRIA NITIN ASHOKLAL	42	52.5	1	7	1	1	0	8	8	1	8	1	16	12
54	AFTAB SADAT CHOUGLE	36	45	1	6	1	6	1	12	6	1	6	1	12	12
55	DAS MAHESH MADANLAL	36	45	1	7	1	7	1	14	9	1	9	1	18	16
56	DESHNEHARE KAUSTUBH CHANDRAKANT	36	45	1	5	0	4	0	9	6	1	3	0	9	9
57	HRISHIKESH MANGESH GAIKWAD	0	0	0	5	0	5	0	10	2	0	6	1	8	9
58	GHAG HRITIKA HEMANT	36	45	1	10	1	10	1	20	10	1	10	1	20	20
59	GHATULE ASHITOSH SOMNATH	46	57.5	1	9	1	9	1	18	8	1	8	1	16	17
60	GHIGE PRAJAKTA ASHOK	57	71.25	1	9	1	8	1	17	9	1	8	1	17	17
61	HRITIK PANDURANG GOPALE	64	80	1	8	1	8	1	16	10	1	10	1	20	18
62	MADHU GIRISH GORAKH	64	80	1	10	1	10	1	20	10	1	10	1	20	20
63	GUNDLA AKSHARA RAJKUMAR	10	12.5	0	9	1	9	1	18	8	1	8	1	16	17
64	GUPTA MAHESH BECHANRAM	27	33.75	0	10	1	8	1	18	10	1	8	1	18	18
65	OMKAR SANJAY GURAV	18	22.5	0	2	0	6	1	8	6	1	6	1	12	10
67	HIRANANDANI GIRISH RAJESH	54	67.5	1	8	1	7	1	15	8	1	7	1	15	15
68	INGLE LALITA ANIL	37	46.25	1	10	1	10	1	20	10	1	10	1	20	20
69	JADHAV ANIKET ANANT	36	45	1	10	1	8	1	18	10	1	8	1	18	18
70	JADHAV GAUTAM DIGAMBAR	6	7.5	0	6	1	5	0	11	6	1	5	0	11	11
71	JASSAL ROBIN RAJ KUMAR	58	72.5	1	9	1	9	1	18	9	1	9	1	18	18
72	HARSHALI DINESH JOSHI	52	65	1	10	1	10	1	20	10	1	10	1	20	20
73	KADAM SHUBHAM SAMBHAJI	62	77.5	1	8	1	7	1	15	8	1	7	1	15	15
74	KAHAR SUNILKUMAR CHHOTELAL	30	37.5	0	7	1	7	1	14	7	1	7	1	14	14
75	KAMBLE AKSHAY MOHAN	46	57.5	1	9	1	9	1	18	9	1	9	1	18	18
76	KAMBLE ANIKET TRIMBAK	40	50	1	10	1	10	1	20	10	1	10	1	20	20
77	ROSHAN RAMKISAN KAMBLE	38	47.5	1	7	1	6	1	13	7	1	6	1	13	13
78	KARANGUTKAR AMOGH AMOL	30	37.5	0	9	1	9	1	18	9	1	9	1	18	18
79	KHAN SHIRAJ SOHAIL JAINAB	28	35	0	6	1	4	0	10	6	1	4	0	10	10
80	KHOT ANISH SUSHANT	43	53.75	1	10	1	10	1	20	10	1	10	1	20	20
81	ABHISHEK KUMAR	40	50	1	4	0	6	1	10	4	0	6	1	10	10
82	LALE PRIYANK SUNIL	41	51.25	1	8	1	8	1	16	8	1	8	1	16	16
83	LOHKARE PRIYA GHANSHAM	26	32.5	0	8	1	7	1	15	8	1	7	1	15	15
84	MAKHIJA TARUN RAKESH	47	58.75	1	6	1	5	0	11	6	1	5	0	11	11
85	MANDAVKAR YOGESH KRISHNA	43	53.75	1	10	1	10	1	20	10	1	10	1	20	20
86	MANGNANI HITEN CHANDERLAL	45	56.25	1	6	1	4	0	10	6	1	4	0	10	10
87	MHATRE SAUJANYA PRADEEP	22	27.5	0	9	1	8	1	17	9	1	8	1	17	17
88	MISHRA DEEPAK SHIVPRASAD	47	58.75	1	9	1	8	1	17	9	1	8	1	17	17
89	MUKRI ADNAN ABDULLATIF	36	45	1	7	1	7	1	14	7	1	7	1	14	14
90	NAIK POOJA PRAVIN	52	65	1	8	1	8	1	16	8	1	8	1	16	16
91	NAIK TEJAS MAHESH	36	45	1	6	1	4	0	10	6	1	4	0	10	10
92	NARA MOHIT RAJU	45	56.25	1	8	1	8	1	16	8	1	8	1	16	16
93	ANKITPAL	38	47.5	1	9	1	9	1	18	9	1	9	1	18	18
94	PANDIT SHYAM SAHEBRAO TAI	36	45	1	8	1	8	1	16	8	1	8	1	16	16
95	PARAB SAYALI SANJAY	27	33.75	0	10	1	8	1	18	10	1	8	1	18	18
96	PATEL JIGAR BHAVESHKUMAR	31	38.75	0	10	1	10	1	20	10	1	10	1	20	20
97	PATHARE KANCHAN SAMBHAJI	40	50	1	9	1	9	1	18	9	1	9	1	18	18
98	PATIL ROHIT KISHORE	24	30	0	0	0	0	0	0	10	1	10	1	20	10
99	PATYANE PURVA VIJAY	47	58.75	1	10	1	7	1	17	10	1	7	1	17	17
100	PAWAR PRATHAMESH RAVINDRA	12	15	0	10	1	7	1	17	10	1	7	1	17	17
101	RAHATE VAISHNAVI VIJAY	50	62.5	1	7	1	7	1	14	7	1	5	0	12	13
102	RANE RAJENDRA DNYANDEV	42	52.5	1	10	1	9	1	19	10	1	9	1	19	19
103	RANE RUSHIKESH NHANU	39	48.75	1	9	1	8	1	17	9	1	8	1	17	17

VP

104	RATHOD JAY HARIKRISHANA	30	37.5	0	7	1	7	1	14	7	1	7	1	14	14
105	RAUT SRUSHTI VASANT	43	53.75	1	6	1	4	0	10	6	1	4	0	10	10
106	REDKAR MAYURESH BHARAT BHAGYASHRE	37	46.25	1	9	1	9	1	18	9	1	9	1	18	18
107	PAYAL TEKCHAND REWATKAR	38	47.5	1	10	1	9	1	19	10	1	9	1	19	19
108	ROKADE PRASAD NAGNATH	36	45	1	10	1	9	1	19	10	1	9	1	19	19
109	DEEPIKA ROOPRAI	47	58.75	1	9	1	8	1	17	7	1	8	1	15	16
110	RUPANI ABBASALI HAIDERALI	A	AB	AB	0	0	0	0	0	10	1	10	1	20	10
111	SARKAR VISHWESH HEMANT	36	45	1	8	1	7	1	15	8	1	7	1	15	15
112	SATAJI SWANAND JANARDAN	29	36.25	0	7	1	7	1	14	7	1	7	1	14	14
113	SAWANT ADITYA SANTOSH	36	45	1	8	1	7	1	15	8	1	7	1	15	15
114	SAWANT CHANDAN SAKHARAM	30	37.5	0	10	1	10	1	20	10	1	10	1	20	20
115	SHAH YOGESH MINBAHADUR	45	56.25	1	8	1	8	1	16	8	1	8	1	16	16
116	SHAIKH MOHAMMED SHAUKAT	22	27.5	0	4	0	6	1	10	4	0	6	1	10	10
117	SHAIKH SAQLAIN ABDUL HAMEED	25	31.25	0	6	1	4	0	10	8	1	6	1	14	12
118	SHARMA ANNUKUMARI NAVRATANLAL	44	55	1	9	1	9	1	18	9	1	9	1	18	18
119	SHEIKH IRSHADHASAN GULABKABI	40	50	1	8	1	7	1	15	8	1	7	1	15	15
120	SIDDIQUI MOHD ZAID AZAM	9	11.25	0	0	0	0	0	0	10	1	10	1	20	10
121	SINGH ANKITA DHANANJAY	41	51.25	1	8	1	8	1	16	8	1	8	1	16	16
122	SINGH ARCHANA TEJBAHADUR	38	47.5	1	9	1	10	1	19	9	1	10	1	19	19
123	SINGH SACHIN KUMAR SANTOSH	36	45	1	6	1	4	0	10	6	1	4	0	10	10
124	RITIKA KHANDU SONAWANE	42	52.5	1	9	1	9	1	18	9	1	9	1	18	18
125	TADGE AKSHATA SUBHASH	40	50	1	8	1	7	1	15	8	1	7	1	15	15
126	TALEKAR SALONI SUHAS SHRADDHA	52	65	1	10	1	10	1	20	10	1	10	1	20	20
127	TIRMALE CHETAN PRAKASH	11	13.75	0	6	1	4	0	10	6	1	4	0	10	10
128	TIWARI ANKITKUMAR RAMJI KUMAR	41	51.25	1	4	0	6	1	10	4	0	6	1	10	10
129	VAIBHAV CHANDRASEN VAIDYA	44	55	1	7	1	6	1	13	7	1	6	1	13	13
130	VEERAVALLI MOHANSAI YEDUKONDALU PA	53	66.25	1	8	1	8	1	16	8	1	8	1	16	16
131	VISHWAKARMA KRISHNA KUMAR HARISHA	20	25	0	6	1	0	0	6	7	1	7	1	14	10
132	WADHWANI MANISH RAMESH	48	60	1	9	1	8	1	17	9	1	8	1	17	17
133	YADAV SHAILESH RAMBACHAN	42	52.5	1	10	1	9	1	19	10	1	9	1	19	19
134	YADAV SIDDHANT ACHCHHELAL	45	56.25	1	10	1	9	1	19	10	1	9	1	19	19
135	KEDAR SHALIKRAM YELE	18	22.5	0	6	1	4	0	10	6	1	4	0	10	10
136	ZARIWALA FAHAD SIRAZ	36	45	1	8	1	8	1	16	8	1	8	1	16	16
137	SHUBHAM SURYAKANT ZENDEKAR	36	45	1	1	0	1	0	2	9	1	9	1	18	10
				104	121				105					126	121

Step - 4

Subject In-Charge



Attainment % >= 70 level=3
50 < Attainment % < 70 level=2
>=45%Attainment<50% level=1
Else 0

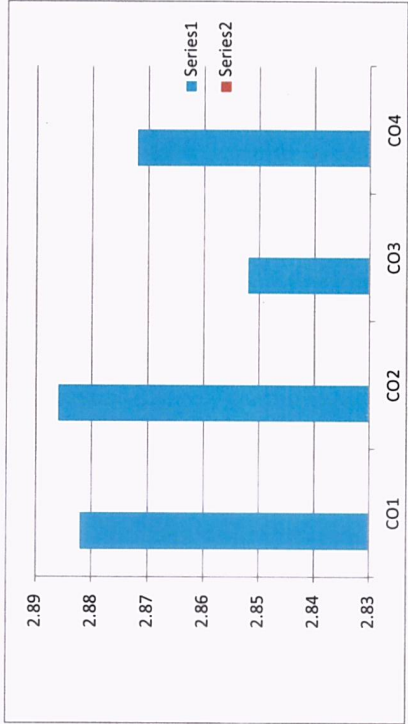
Termwork CO attainment			
COs	No of Students	attainment	attentment % Attainment Level
CO1	136	121	88.97058824 3
CO2	136	105	77.20588235 3
CO3	136	126	92.64705882 3
CO4	136	121	88.97058824 3

University Exam CO attainment			
COs	No of Students	attainment	attentment % Attainment Level
CO1	134	104	77.6119403 3
CO2	134	104	77.6119403 3
CO3	134	104	77.6119403 3
CO4	134	104	77.6119403 3

Total Direct Assessment of AIML Theory			
CO Nam	UA attainment	IA attainment	Total Attainment
CO1	3	3	3
CO2	3	3	3
CO3	3	3	3
CO4	3	3	3

CO Attainment of AIML(Direct+ Indirect Assessment)			
CO Nam	Direct Attainment	Indirect Attainment	Total Attainment
CO1	3	2.41	2.882
CO2	3	2.43	2.886
CO3	3	2.26	2.852
CO4	3	2.36	2.872

Step - 5





LATE BHAUSAHEB HIRAY S. S. TRUST'S INSTITUTE OF COMPUTER APPLICATION

ISO 9001:2015 CERTIFIED

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Programme : MCA	Total PO attainment									Batch : 2021-2023		
	Program Outcomes											
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
MCA11 Mathematical Foundation for Computer Science 1	2.677	2.484	1.91	2.486	1.27	-	1.911	1.908	-		1.195	1.912
MCA12 Advanced Java	2.282	1.9	2.061	1.901	1.43	0.953	1.427	1.906		1.43	1.332	1.666
MCA13 Advanced Database Management System	1.911	2.231	1.274	1.915	1.911			1.43			0.956	0.96
MCA14 Software Project Management	2.867	2.395	2.867	1.909		2.875		2.395		2.875	2.875	2.867
MCAL11 Data Structures Lab with C and / C++	1.666	2.141	1.905	1.904	0.95		1.584	0.951		0.95	0.949	1.424
MCAL12 Advanced Java LAB	1.898	1.898	2.056	1.899	1.421	0.948	1.423	1.903		1.421	1.327	1.661
MCAL13 Advanced Database Management System LAB	1.816	2.192	2.012	1.728	2.009			1.428			0.955	1.546
MCAL14 Web Technologies	2.371	1.902	2.613		2.534	2.218	0.949	2.534	0.95		1.901	0.951
MCAP11 Mini Project – 1 A	1.3847	1.15	1.611	1.555	1.209	1.034	0.691	1.209	1.384	1.384	1.384	1.21
MCA21 Mathematical Foundation for Computer Science 2	2.396	2.155	1.916	1.677	1.919	0.958		2.157		1.916	0.958	1.596
MCA22 Artificial Intelligence and Machine Learning	1.51	1.51	1.01	1.17		0.49	0.49			1.01		0.49
MCA23 Information Security	1.8916		1.6598	1.898	2.133	2.843	0.944	0.95	1.422	1.263		0.945
MCAE24 Elective - 1	2.178	1.817	2.178	1.447		2.174		1.817		2.174	2.174	2.178
MCAE25 Elective - 2	1.18	1.89	1.89	1.574	2.596	1.419		0.947	0.943	0.947	1.894	1.256
MCAL21 Artificial Intelligence and Machine Learning Lab	2.486	2.486	2.718	2.718	0.904	1.358	0.908	0.904		0.904	0.906	1.13
MCAL22 Soft Skill Development Lab				1.915		1.599	0.961	1.936	2.883		2.244	1.915
MCAE23 Elective 1 Lab	2.144	2.54	2.54	1.905	1.905	0.953	1.271	1.906	0.953	1.271	1.588	1.588
MCAL24 Skill based Lab Course AWT Lab	1.19	1.902	1.902	1.664	0.954	0.951	0.951	0.951			0.954	0.954
MCAL25 Skill based Lab Course User Interface Lab	0.948	1.869	2.622	1.869	2.533	1.6			0.934			
MCAL26 Skill based Lab Course Networking with Linux Lab	2.568	2.244	1.906	2.149	2.149			0.934			1.91	1.91
MCAP21 Mini Project 1-B	1.6513	1.4176	2.05	2.08	1.543	1.434	0.8913	1.543	1.917	1.9173	1.9175	1.61
MCA31 Big Data Analytics and Visualization	1.079	1.447	1.604	1.079	1.663	0.736	1.191	0.733			0.895	1.157
MCA32 Distributed System and Cloud Computing	1.622	1.862	1.862	0.921	1.809	1.809	0.931	1.809		0.904	0.904	0.904
MCAE33 Elective - 3	1.3505	1.6545	1.733	1	1.736	1.2725	1.061	1.271		0.904	0.8995	
MCAE34 Elective - 4	0.898	1.444	1.085	1.444	1.8	1.432	1.071	0.712		2.166		1.0714
MCAL31 Big Data Analytics and Visualization Lab	1.8666	1.2444	0.9333	1.4	2.5		0.9333			0.933	0.933	1.867
MCAL32 Distributed System and Cloud Computing Lab	1.106	1.479	1.479	1.229	1.226	1.466		1.466		1.466	1.466	1.466
MCAE33 Elective 3 Lab	1.1	1.76	1.76	1.76	2.346	1.76	0.88			1.76		0.88
MCAL34 Skill based Lab Mobile Computing Lab	1.75	2	2		2	2	1				1	1
MCAL35 Software Testing Quality Assurance Lab	0.7333	1.1093	1.1081	1.2291	1.9688	1.2945						
MCAP31 Mini Project: 2 A	1.6513	1.5064	2.0562	1.8223	1.4763	1.3013	0.8247	1.4723	1.384	1.384	1.4731	1.41



MCAI41 Internship	2.3929	2.1517	2.2327	2.1516	2.8709	2.1064	1.4363	1.6734	1.914	1.7243	1.4348	1.9161
MCAR42 Research Paper	1.3483	1.92	1.9231	1.9206	1.209	1.923			0.953	1.6123	1.6847	0.9532
MCAS44 Institute Social Responsibility*								1		3	3	
Direct PO Attainment	1.7473	1.8614	1.8899	1.72	1.7922	1.5151	1.0786	1.4758	1.422	1.5355	1.4682	1.4131
Indirect PO Attainment	2.27	2.326	2.365	2.23	2.25	2.326	2.4	2.19	2.346	2.288	2.461	2.288
PO Attainment	1.852	1.954	1.985	1.822	1.884	1.677	1.343	1.619	1.61	1.686	1.667	1.588

PO Attainment = Direct PO attainment * 0.8 + Indirect PO attainment * 0.2

Indirect PO Attainment calculated from Graduate Survey



[Signature]
Director