MAHENDRA ENGINEERING COLLEGE

(An Autonomous Institution, Affiliated to Anna University Chennai | NAAC

Accredited with 'A' Grade & NBA Tier-I (WA) UG: CSE, ECE, EEE)

Namakkal-637 503, Tamilnadu

DEPARTMENT OF COMPUTER APPLICATIONS
(MCA)

10th Board of Studies Meeting – Minutes

06.05.2023

DEPARTMENT OF COMPUTER APPLICATIONS (M.C.A.)

<u>**MINUTES OF BOARD OF STUDIES MEETING**</u>

Date: 06.05.2023

The **10th Board of Studies meeting** for **M.C.A.** was held on 06.05.2023 from 11:00 a.m. in Board Room of Mahendra Engineering College.

<u>**Agenda of the Meeting**</u>:

(i)   To review and confirm the Minutes of Previous BoS meeting.

(ii)   To review and approve the Curriculum Structure for Regulations - 2022 – M.C.A. Two years programme (1 to 4 Semesters) as per AICTE Model Curriculum and syllabi.

(iii)   Revision / amendment if any, in the Curriculum / Syllabi of Regulations – 2022 PG programme - keeping in view the Vision / Mission of the College and Department, PEOs, POs and interest of the stakeholders and National requirements.

(iv)   Suggestions for names of Panel members for appointment of examiners.

(v)   Academic, Co-curricular and Extra-curricular activities and Credit allotment for various activities like NPTEL online courses, Industrial Training and Industry Co-Teaching courses, etc.

(vi)   Any other point with the permission of the Chairperson.

The following Board of Studies members were present:

1. **Dr. R. Jayakumar,** Head of the Department, Department of Computer Applications, Mahendra Engineering College - **BoS Chairperson.**

2. **Dr. B. Vinoth Kumar,** Associate Professor, Department of Information Technology, PSG College of Technology, Coimbatore - **Anna University Nominee**

3. **Dr. B. Surendiran,** Associate Professor, Department of Computer Science and Engineering, National Institute of Technology (NIT) , Puducherry - **Subject Expert**

4. **Mr. M. Murali** , Senior Program Manager, TechMahindra, Hyderabad - **Industry Expert**

5. **Dr. M. Kannan,** Professor and Head of Computer Science and Engineering – **Academic Expert**

6. **Dr. S. Kandasamy,** Professor, Department of Mathematics, Mahendra Engineering College – **Allied Department Subject Expert**

7. **Dr. C. Senthil Kumar,** Associate Professor, Department of Computer Applications, Mahendra Engineering College, Namakkal – **Senior Faculty Member**

8. **Dr. K. Prakash,** Assistant Professor, Department of Computer Applications, Mahendra Engineering College – **Faculty Member**

9. **Ms. A. Sankari Devi,** Assistant Professor, Department of Computer Applications, Mahendra Engineering College – **Faculty Member**

10. **Dr. K. Sasirekha,** Research Associate, Department of Computer Science, Periyar University, Salem – **MCA Alumni**

11. **Mr. S. Sabareesan,** Second Year Student, Department of Computer Applications, Mahendra Engineering College – **Student Member**

The BoS Chairperson Dr. R. Jayakumar, Head of the Department of Computer Applications, welcomed the members of the Board of Studies of Computer Applications for the meeting.

The academic matters are discussed and the following recommendations and suggestions are made for the approval by the Academic Council.

1. The minutes of last BoS meeting held on 25th April 2022 were reviewed and confirmed.

2. The Chairperson made a brief presentation on the Curriculum of Regulations - 2022 for MCA Programme for the students of M.C.A. joining from the academic year 2022 – 2023. The presentation also featured the comparison of the proposed curriculum for MCA R2022 with that of the existing revised curriculum of MCA (2 Years) of the Regulations 2019.

3. Curriculum and Syllabus (I to IV Semesters) of Regulations 2022 with Choice Based Credit System were reviewed and discussed.

4. The credits assigned to each course in Semester-wise of Curriculum of Regulations 2022 were reviewed and it is decided to have the Total Credits for MCA Programme as 82.

5. It is suggested that the list of courses to have for Professional Electives for each semester should be from all domains such as Computing, Communication, Networking and Testing.

6. The Anna University Nominee suggested giving more importance to the courses like Mobile Application Development, Machine Learning and Big Data Analytics for the benefit of students to get better employment in IT industries.

7. The Academic Expert suggested adding Quantum Computing and Data Analytics as elective courses in second year. It was agreed by all members.

8. The Industry Expert suggested having Natural Language Programming as a Program Elective course in IV Semester. It was agreed by all members.

9. The introduction of the course Research Methodology and IPR in I Semester was approved by all the members.

10. Curriculum and Syllabus of Bridge courses for the non-computer science background students are discussed and approved.

11. The Vision, Mission, PEOs and POs of the MCA Programme are discussed. Also the credit allotment for NPTEL and other online courses were discussed.

The Board approved the proposed Curriculum and Syllabus for the MCA Programme. It was resolved to incorporate all the suggestions in the Curriculum and Syllabus, and submit it to the Academic Council for approval.

Finally, **Dr. C. Senthil Kumar,** thanked all the members for their valuable suggestions and support for the successful conduct of the BOS meeting.

Prepared by   Approved by

(Dr. C. Senthil Kumar)   **(Dr. R. Jayakumar)**
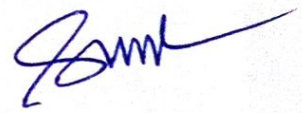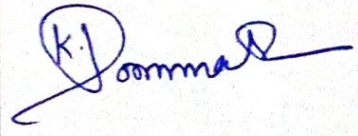
Member – BoS   Chairperson - BoS

Department of Computer Application   Department of Computer Applications

Principal

Mahendra Engineering College

Members Present :

S.No.	Name With full correct postal address	BOS Designation	Signature
INTERNAL MEMBERS			
1.	**Dr. R. Jayakumar ,** Professor and Head, Department of Computer Applications, Mahendra Engineering College, Namakkal	Chairperson	
2.	**Dr. M. Kannan,** Professor and Head, Department of Computer Science and Engineering, Mahendra Engineering College, Namakkal	Academic Expert	
3.	**Dr. S. Kandasamy ,** Professor, Department of Mathematics, Mahendra Engineering College, Namakkal .	Member (Allied Department Academic Expert)	
4.	**Dr. C. Senthil Kumar ,** Associate Professor, Department of Computer Applications, Mahendra Engineering College, Namakkal .	Member (Senior Faculty)	
5.	**Dr. K. Prakash,** Assistant Professor, Department of Computer Applications, Mahendra Engineering College, Namakkal.	Member (Senior Faculty)	

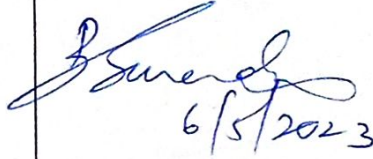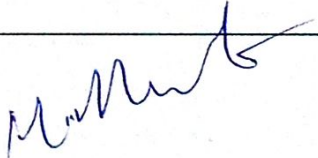| 6.	**Ms. A. Sankari Devi** Assistant Professor, Department of Computer Applications, Mahendra Engineering College, Namakkal.	Member (Senior Faculty)	
7.	**Mr. S. Sabareesan,** Second Year Student, Department of Computer Applications, Mahendra Engineering College, Namakkal.	Second Year Student	
	EXTERNAL MEMBERS		
8.	**Dr. B. Vinoth Kumar,** Associate Professor, Department of Information Technology, PSG College of Technology, Coimbatore.	Anna University Nominee	B. Vink 6/5/23
9.	**Dr. B. Surendiran,** Associate Professor, Department of Computer Science and Engineering, National Institute of Technology (NIT), Puducherry.	Subject Expert	6/5/2023
10.	**Mr. M. Murali ,** Senior Program Manager, TechMahindra, Hyderabad	Industry Expert	
11.	**Dr. K. Sasirekha,** Project Fellow, Department of Computer Science, Periyar University, Salem.	MCA Alumni	

Dr. R. Jayakumar
Chairperson – BoS

Principal
Mahendra Engineering Collge

DEPARTMENT OF COMPUTER APPLICATIONS (MCA)

Percentage of Changes / Revision in Syllabus – Regulations 2022 as compared to R 2019
Academic Year - 2022-2023

Name of the Programme: M.C.A. – MASTER OF COMPUTER APPLICATIONS

S.No.	Semester	Course Code	Course Name	Lecture	Tutorial	Practical	Credits	Category	Course Type	Changes in Contents (No. of Hrs.) (X)	Total No. of Hrs (Y)	Changes/ Revision (%) = (X*100/Y)
1	I	22MCA11101	Applied Probability and Statistics for Computer Science	3	1	0	4	BS	T	45	45	100
2	I	22MCA12102	Advanced Data Structures and Algorithms	3	0	0	3	PC	T	13	45	29
3	I	22MCA12103	Object Oriented Software Engineering	3	0	0	3	PC	T	23	45	51
4	I	22MCA12104	Python Programming	3	0	0	3	PC	T	21	45	47
5	I	22MCA16105	Research Methodology and IPR	3	0	0	3	RM	T	45	45	100

S.No	Sem	Course Code	Course Title	L	T	P	C	Category				
6	I	22MCA22106	Advanced Data Structures and Algorithms Laboratory	0	0	3	2	PC	L	4	13	30
7	I	22MCA22107	Python Programming Laboratory	0	0	3	2	PC	L	1	13	8
8	I	22MCA24108	Communication Skills Laboratory	0	0	3	2	EEC	L	12	12	100
9	II	22MCA12201	Full Stack Web Development	3	0	0	3	PC	T	45	45	100
10	II	22MCA12202	Advanced Database Technology	3	0	0	3	PC	T	35	45	78
11	II	22MCA12203	Cloud Computing Technologies	3	0	0	3	PC	T	13	45	29
12	II	22MCA12204	Big Data Analytics	3	0	0	3	PC	T	13	45	29
13	II		Professional Elective I	3	0	0	3	PE	T	-	45	-
14	II	22MCA22206	Full Stack Web Development Laboratory	0	0	3	2	PC	L	10	10	100
15	II	22MCA22207	Advanced Database Technology Laboratory	0	0	3	2	PC	L	5	9	55
16	II	22MCA22208	Data Analytics Laboratory	0	0	3	2	PC	L	-	8	-
17	III	22MCA12301	Mobile Application Development	3	0	0	3	PC	T	45	45	100
18	III	22MCA12302	Artificial Intelligence and Machine Learning	3	0	0	3	PC	T	9	45	20
19	III	22MCA12303	Internet of Things	3	0	0	3	PC	T	7	45	15
20	III	22MCA12304	Cyber Security	3	0	0	3	PC	T	45	45	100

S.No	Semester	Course Code	Course Name	L	T	P	C					
21	III		Professional Elective - II	3	0	0	3	PE	T	-	45	-
22	III	22MCA22306	Mobile Application Development Laboratory	0	0	3	2	PC	L	8	8	100
23	III	22MCA22307	Machine Learning Laboratory	0	0	3	2	PC	L	2	12	17
24	III	22MCA24308	Mini Project Work	0	0	3	2	EEC	P	-	-	-
25	IV		Professional Elective - III	3	0	0	3	PE	T	-	45	-
26	IV		Open Elective - I	3	0	0	3	OE	T	-	45	-
27	IV	22MCA24401	Project Work	0	0	24	12	EEC	P	-	-	-
			Total Number of Credits				**82**					

Changes / Revision in Theory course (%)		61.37
Changes / Revision in Laboratory course (%)		49.41

Semester	I	II	III				Total
Change/Revision in contents (No. of Hours) (X)	164	121	116				401
Total No. of Hours (Y)	263	207	200				670
Changes/Revision (%) = $(X*100/Y)$	62.36	58.45	58				59.85 %

HOD/MCA

10/05/...

'T'- Theory Course, 'L' - Laboratory Course, 'P' - Internship/Project work

MAHENDRA ENGINEERING COLLEGE

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Mahendhirapuri, Mallasamudram, Namakkal Dt. – 637 503.

DEPARTMENT OF COMPUTER APPLICATIONS (MCA)

List of New Courses

Academic Year 2022-2023

S. No.	Semester	Course Code	Course Name	Lecture	Tutorial	Practical	Credits	Category
1	IV	22MCA15406	Quantum Computing	3	0	0	3	PE
2	IV	22MCA13406	Natural Language Programming	3	0	0	3	OE

Convener

Chairperson

Principal

MASTER OF COMPUTER APPLICATIONS (MCA)

CURRICULUM FOR
CHOICE BASED CREDIT SYSTEM [CBCS]

REGULATIONS 2022

DEPARTMENT OF COMPUTER APPLICATIONS (MCA)

MAHENDRA ENGINEERING COLLEGE (AUTONOMOUS)

MALLASAMUDRAM (WEST)

NAMAKKAL – 637 503.

MAHENDRA ENGINEERING COLLEGE (Autonomous)

DEPARTMENT OF COMPUTER APPLICATIONS

Regulation 2022 – Curriculum

I Semester

Sl. No.	Course code	Course Title	L	T	P	C	Category
THEORY							
1	22MCA11101	Applied Probability and Statistics for Computer Science	3	1	0	4	BS
2	22MCA12102	Advanced Data Structures and Algorithms	3	0	0	3	PC
3	22MCA12103	Object Oriented Software Engineering	3	0	0	3	PC
4	22MCA12104	Python Programming	3	0	0	3	PC
5	22MCA16105	Research Methodology and IPR	3	0	0	3	RM
PRACTICAL							
6	22MCA22106	Advanced Data Structures and Algorithms Laboratory	0	0	4	2	PC
7	22MCA22107	Python Programming Laboratory	0	0	4	2	PC
8	22MCA24108	Communication Skills Laboratory	0	0	4	2	EEC
		TOTAL	15	1	12	22	

BOS Chairman

MAHENDRA ENGINEERING COLLEGE (Autonomous)

DEPARTMENT OF COMPUTER APPLICATIONS

Regulation 2022 - Curriculum

II Semester

Sl. No.	Course code	Course Title	L	T	P	C	Category
THEORY							
1	22MCA12201	Full Stack Web Development	3	0	0	3	PC
2	22MCA12202	Advanced Database Technology	3	0	0	3	PC
3	22MCA12203	Cloud Computing Technologies	3	0	0	3	PC
4	22MCA12204	Big Data Analytics	3	0	0	3	PC
5		Professional Elective I	3	0	0	3	PE
PRACTICAL							
6	22MCA22206	Full Stack Web Development Laboratory	0	0	4	2	PC
7	22MCA22207	Advanced Database Technology Laboratory	0	0	4	2	PC
8	22MCA22208	Data Analytics Laboratory	0	0	4	2	PC
		TOTAL	15	0	12	21	

BOS Chairman

MAHENDRA ENGINEERING COLLEGE
(Autonomous)

DEPARTMENT OF COMPUTER APPLICATIONS
Regulation 2022 - Curriculum

FS 68172

III Semester

Sl. No.	Course code	Course Title	L	T	P	C	Category
THEORY							
1	22MCA12301	Mobile Application Development	3	0	0	3	PC
2	22MCA12302	Artificial Intelligence and Machine Learning	3	0	0	3	PC
3	22MCA12303	Internet of Things	3	0	0	3	PC
4	22MCA12304	Cyber Security	3	0	0	3	PC
5		Professional Elective - II	3	0	0	3	PE
PRACTICAL							
6	22MCA22306	Mobile Application Development Laboratory	0	0	4	2	PC
7	22MCA22307	Machine Learning Laboratory	0	0	4	2	PC
8	22MCA24308	Mini Project Work	0	0	4	2	EEC
		TOTAL	15	0	12	21	

BOS Chairman

MAHENDRA ENGINEERING COLLEGE
(Autonomous)

DEPARTMENT OF COMPUTER APPLICATIONS

Regulation 2022 - Curriculum

IV Semester

Sl. No.	Course code	Course Title	L	T	P	C	Category
		THEORY					
1		Professional Elective - III	3	0	0	3	PE
2		Open Elective - I	3	0	0	3	OE
		PRACTICAL					
3	22MCA24401	Project Work	0	0	24	12	EEC
		TOTAL	6	0	24	18	

TOTAL CREDITS: 82

BOS Chairman

MAHENDRA ENGINEERING COLLEGE (Autonomous)

DEPARTMENT OF COMPUTER APPLICATIONS

FS 68172

Regulation 2022 - Curriculum

Professional Elective - I (II Semester)

Sl. No.	Course code	Course Title	L	T	P	C	Category
		THEORY					
1	22MCA13201	Advanced Java Programming	3	0	0	3	PE
2	22MCA13202	Digital Image Processing	3	0	0	3	PE
3	22MCA13203	E-Learning Technologies	3	0	0	3	PE
4	22MCA13204	Network Programming and Security	3	0	0	3	PE
5	22MCA13205	Information Retrieval Techniques	3	0	0	3	PE

BOS Chairman

Regulation 2022 - Curriculum

Professional Elective - II (III Semester)

Sl. No.	Course code	Course Title	L	T	P	C	Category
		THEORY					
1	22MCA13301	Social Network Analytics	3	0	0	3	PE
2	22MCA13302	Data Warehousing and Data Mining	3	0	0	3	PE
3	22MCA13303	Software Project Management	3	0	0	3	PE
4	22MCA13304	Agile Methodologies	3	0	0	3	PE
5	22MCA13305	Wireless Networking	3	0	0	3	PE

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MAHENDRA ENGINEERING COLLEGE (Autonomous)

DEPARTMENT OF COMPUTER APPLICATIONS

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Regulation 2022 - Curriculum

Professional Elective - III (IV Semester)

Sl. No.	Course code	Course Title	L	T	P	C	Category
		THEORY					
1	22MCA13401	C# and .Net Programming	3	0	0	3	PE
2	22MCA13402	Professional Ethics in IT	3	0	0	3	PE
3	22MCA13403	Software Quality and Testing	3	0	0	3	PE
4	22MCA13404	Block Chain Technologies	3	0	0	3	PE
5	22MCA13405	Soft Computing Techniques	3	0	0	3	PE
6	22MCA13406	Natural Language Processing	3	0	0	3	PE

BOS Chairman

MAHENDRA ENGINEERING COLLEGE
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DEPARTMENT OF COMPUTER APPLICATIONS

Regulation 2022 - Curriculum

Open Elective - I (IV Semester)

Sl. No.	Course code	Course Title	L	T	P	C	Category
		THEORY					
1	22MCA15401	Applied Operations Research	3	0	0	3	OE
2	22MCA15402	Digital Marketing	3	0	0	3	OE
3	22MCA15403	Organizational Behavior	3	0	0	3	OE
4	22MCA15404	Digital Forensics	3	0	0	3	OE
5	22MCA15405	Enterprise Resource Planning	3	0	0	3	OE
6	22MCA15406	Quantum Computing	3	0	0	3	OE

BOS Chairman