# FATIMA COLLEGE (Autonomous), Madurai
## Master of Computer Applications

The board of studies meet for framing the syllabus for MCA was held on 2/3/2019 at 10.30 a.m in the PG Dept. of computer applications

The members of the board were,

1. **Dr. S. KANNAN**
   Professor, Dept. of Computer Applications
   School of Information Technology
   Madurai Kamaraj University
   Madurai

2. **Dr. T. KATHIRVALAVAKUMAR**
   Professor & Head
   Research Dept. of computer science
   VHNSN college
   Virudhunagar

3. **Dr. M. PUSHPARANI**
   Professor & Head
   Dept. of Computer Science
   Mother Teresa women's University
   Research & Extension center
   Madurai

4. **Mr. G. Sahayaraj**
   Principal Software Engineer
   Dell International Services
   Bangalore

5. Ms. A. DIVYASRI
   Project Manager - Android
   Bricksteel Enterprises Infotech Pvt. Ltd.
   Madurai

6. Mrs. E. Helena
   Dean of academic affairs - SF

7. Mrs. B. chandirika

8. Mrs. S. Mary Helan Felista

9. Mrs. R. Smeeta Mary

10. Mrs. S. Jeba Priya

11. Mrs. B. Usha

12. Mrs. S. Selvarani

DIRECTOR

   Dr. S. Raju

Discussions Made & Resolutions Proposed

1. Consent to change the structure of the curriculum to facilitate the inclusion of specialization was obtained. Internship to be included as a new course as a part of the curriculum 19MCA510

2. The paper Compiler Design offered as an elective was proposed to be included as a core paper to facilitate NET/SET exams.

3. This paper was decided to be included in the IV Semester.

4. Internet Programming Using J2EE paper has to be replaced with the paper "Machine Learning", as it is the recent trend in the software industry.

5. J2EE lab offered in the V semester has to be replaced with the lab "Machine Learning Using Python / R".

6. The following speacializations were proposed and acknowledged.

   * Data Science - courses included were
   i) 19MCADS01 - Big Data Analytics  ii) Big Data Security  iii) 19MCADS03
                                          (19MCADS02)
   * Networking  i) 19MCA NW03 - Highspeed N/w
   ii) 19MCANW01 - Cryptography  iii) 19MCANW02 - Wireless Sensor N/w
   * Application Development  i) 19MCAAD03
   ii) 19MCAAD01 - Web.Pgm. Tech  iii) 19MCAAD02 - Internet Pgm frameworks.

7. .NET paper in the V th Semester has to include MVC using ASP.net and C#.

   * Skill Based Lab Papers included
      i) 19MCA306 - Networking Tools
      ii) 19MCA506 - R programming

8. General electives offered are categorized under two themes.

     *. E-business process for enhancing the employability & entrepreneurship.

<u>New courses</u>
i) 19MCAGEO7 - Entrepreneurship Development

     * Research Disciplines for motivating the students towards research.

<u>New courses</u>
i) 19MCAGE21 - Research Methodology ii) 19MCAGE27 - Advanced-DBMS Technique

9. The paper Soft Computing, Digital Image Processing has to be offered under general elective

10. An open online course (MOOC, Swayam, NPTEL,...) was proposed by the department to be included as a part of the curriculum to make it dynamic. The students can opt for any trending course of her interest. This was highly appreciated & acknowledged by the members.

11. A self study paper on IoT was proposed in VI sem.

12. Board members suggested offering value added courses for advanced learners. They could be facilitated to opt for extra courses from the general electives offered, to earn extra credits.

13. Mobile Application Development lab has to include hybrid development frameworks like ionic/React.

14. Detailed Syllabus, Text books & Reference books for all the courses of all VI semesters were discussed in detail.

1. Dr. S. Kannan      *Sd/ 2/3/19*

2. Dr. T. Kathirvalavakumar      *Sd/ 2/3/19*

3. Dr. M. Pushparani      *Sd/ 2/3/19*

4. Mr. G. Sahayaraj      *G. Sahay*

5. Ms. A. Divyasri      *A. Divyasri*

6. Mrs. E. Helena      *helpah*

7. Mrs. B. Chandirika      *B. C*

8. Mrs. S. Mary Helan Felista      *S. Helan*

9. Mrs. R. Smeeta Mary      *Smeeta*

10. Mrs. S. Jebapriya      *Sd/*

11. Mrs. B. Usha      *Usha. B*

12. Mrs. S. Selvarani      *Selvarani*

DIRECTOR

Dr. S. Raju      *Sd/ 02/03/19*

# FATIMA COLLEGE (AUTONOMOUS), MADURAI
## MASTER OF COMPUTER APPLICATIONS

The Board of studies meet for framing the syllabus for MCA was held on 28/2/2020 at 9.30 a.m in the PG Department of Computer Applications.

The members of the Board were

1. Dr. S. KANNAN
   Professor
   Department of Computer Applications
   School of Information Technology
   Madurai Kamaraj University
   Madurai

   *S Kannan 28/2/20*

2. Dr. G. CHANDRASEKARAN
   Senior Professor & Director
   Department of MCA
   MEPCO SCHLENK Engineering College.
   Sivakasi

   *28/2/2020*

3. Dr. M. PUSHPARANI
   Professor & Head
   Department of Computer Science
   Mother Teresa Women's University
   Research & Extension Centre
   Madurai

   *28/2/2020*

4. Mr. G. SAHAYARAJ
   Principal Software Engineer
   Dell International Services
   Bangalore

5. MS. R. G. SOBITHA
   Operation Manager
   Business Development
   Bricksteel Enterpoises Infotech Pvt. Ltd.
   Madurai

6. MS. A. Mable Jasmine Shobha
   Dean of Academic Affairs

7. Dr. D. Jeyamala , Director

8. Mrs. S. Mary Helan Felista

9. Mrs. R. Smeeta Mary

10. Mrs. S. Jeba Priya

11. Mrs. B. Usha

12. Mrs. P. Nancy Vincentina Mary

13. Ms. K. Laxmisri

# Action Taken Report on Board of Studies 2019

Based on the resolutions proposed in the board meeting 2019, the following modifications were made in the syllabus.

Suggestion Facilitate to offer specializations in the programme.

1. Specialization electives on the following domains were introduced in the curriculum.
   a) Data Science
   b) Networking
   c) Application Development

Suggestion Include Compiler Design Course in the core to crack NET/SET

2. A course on "Compiler Design" with code 19MCA401 was included in the IV semester

Suggestion Include the course Machine Learning as it is the recent trend.

3. A course on "Machine Learning Using Python" with code 19MCA502 was offered in the V$^{th}$ semester.

Suggestion Use MVC frameworks in the course web application development

4. A course on "Web Application Development" with code 19MCA503 was redesigned to include MVC frameworks.

Suggestion Include a self study course on Internet of Things

5. A self study course on "Internet of Things" with code 19MCA602 was included in the VI semester

Suggestion Open online courses to be facilitated

6. Students are mandated to opt for an open online course (MOOC, NPTEL, Microsoft/Oracle Certification etc..) once in a year.

## Minutes

After the conduct of the board meet, following were the discussions made & Resolutions Proposed.

1. Action taken report on the previous board was submitted.

2. Credits of either 1 or 2 has to be assigned based on the duration of the MOOC course.

3. Remedial programme document should include the impact factor.

4. Peer group activities in the extension activity should be recorded.

5. Value added courses exclusively for MCA students should be offered and the corresponding impact factor to be recorded.

6. Programme Requisites of the value added courses to be detailed.

7. List of companies for project should be from metropolitan cities.

8. Agile software development should include an overview of tools like HitLab & YML. Roles of agile & scrum to be detailed.

9. Live recording of project presentations to be made.

10. The course "Programming with Java" to include

the RMI component. (19MCA303)

11. The content of the course "wireless sensor Networks" and "Cloud computing" were redesigned based on the student feedback. (19MCANW02 & 19MCAGE26)

12. The content of the course "Programming in Python" is changed to facilitate easy learning. (19MCA403)

13. The course "Web Application Development" to be renamed as Enterprise Application Development and it includes frameworks like MVC, Hibernate and DJANGO. (19MCA503)

14. A course for advanced learners is to be introduced in the $V^{th}$ semester. The course to be introduced is "Human Computer Interaction"

15. List of examiners for Lab, Project & comprehensive viva-voce were discussed.

16. MOU's to be proposed were discussed.

1. Dr. S. Kannan                    SRannay 28/2/20
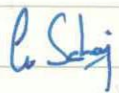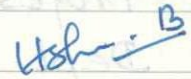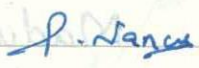
2. Dr. G. Chandrasekaran            ⟨dbⳡ 28/2/2020

3. Dr. M. Pushparani                           28/2/2020

4. Mr. G. Sahayaraj

5. Mrs. R. G. Sobitha

6. Ms. A. Mable Jasmine shobha

7. Dr. D. JeyaMala

8. Mrs. S. Mary Helan Felista

9. Mrs. R. Smeeta Mary

10. Mrs. S. Jebapriya

11. Mrs. B. Usha

12. Mrs. P. Nancy Vincentina Mary

13. Ms. K. Laxmisri

# FATIMA COLLEGE (AUTONOMOUS), MADURAI
## MASTER OF COMPUTER APPLICATIONS

The Board of studies meet for framing the syllabus for MCA was held on 7/8/2020 at 10 a.m in the online mode through Google Meet. The link for the meet is as follows:

meet.google.com/ixk-ktug-pwa

The members of the Board were

1. **University Nominee**
   Dr. S. KANNAN
   Professor
   Dept. of Computer Applications
   School of Information Technology
   Madurai Kamaraj University
   Madurai

2. **Academic Expert**
   Dr. G. CHANDRASEKARAN
   Senior Professor & Director
   Department of MCA
   MEPCO Schlenk Engineering College
   Sivakasi

3. **Academic Expert**
   Dr. M. Pushparani
   Professor & Head
   Department of Computer Science
   Mother Teresa University
   Research & Extn. Center, Madurai

4. <u>Industry Expert</u>
   Mr. S. Manikumar
   Senior Software Developer
   Ericsson, Chennai

5. <u>Alumna</u>
   Ms. R. G. Sobitha
   Operation Manager
   Business Development
   Bricksteel Enterprises Infotech Pvt. Ltd.
   Madurai

6. <u>Academic Dean</u>
   Ms. A. Mable Jasmine Shobha     A. Mable Jasmine Shobha.
   Dean of Academic Affairs
   Fatima College, Madurai

7. Dr. D. Jeya Mala, Director

8. Mrs. S. Mary Helan Felista

9. Mrs. R. Smeeta Mary

10. Mrs. S. Jeba Priya

11. Mrs. B. Usha

12. Mrs. S. Selvarani

13. Mrs. P. Nancy Vincentina Mary

## Action Taken Report on Board of studies, FEB 2020

Based on the resolutions proposed in the board meeting held on 28/2/2020, the following changes were implemented.

* The content of the following courses were redesigned to facilitate better learning

  → 19MCANW02 = Wireless Sensor Networks
  → 19MCAGE26 - Cloud Computing
  → 19MCA403 - Programming in Python

* 19MCA503
  The course Web Application Development was reframed as "Enterprise Application Development." It includes framework like MVC, SPRING, STRUTS, HIBERNATE & DJANGO

* 19MCAAL01
  A course on "Human Computer Interaction" is offered for advanced learners.

AICTE declared MCA as two year programme from the current academic year. The courses for the 2 year MCA programme was presented in the board meeting by the respective course designers. The courses and the suggestions given by the board members are as follows:

## SEMESTER I

1. 20MCA101 - Mathematical Foundation of Computer Science
   The course was presented by the faculty and got approved by the members of the board.

2. 20MCA102 - Software Engineering
   The board members suggested to include the recent software engineering frameworks in Unit V

3. 20MCA103 - Operating System
   Suggestions to remove security concepts in Unit V and include Advanced Operating System concepts in place of it was made by one of the board members and others acknowledged it.

4. 20MCA104 - Programming in Python
   A discussion arose on having this course in the first semester and finally the board members approved.

5. Lab courses that are offered in this semester were presented and approved by the members. They are as follows:

→ 20MCA105 - Lab I - Python Programming
→ 20MCA106 - Lab II - RDBMS
→ 20MCA107 - Skill Based Lab I - Linux

6 Soft skill → 20 MCA 108 - Soft skills I - Professional Communication

## SEMESTER II

1. 20MCA201 - Data structures and Algorithms
A discussion on the various computer algorithms included in the course were discussed and approved by the board members.

2. 20MCA202 - Web Technologies
Industry Expert insisted on implementing real time application development which is actually done in the corresponding course on lab and hence the course got approved.

3. 20MCA203 - Programming in Java
Board members asserted the importance of including the course on Core Java in the programme and appreciated for the same.

4. Lab courses that are offered in this semester were presented and approved by the members. They are as follows:

→ 20MCA204 - Lab III - Web Technologies
→ 20 MCA205 - Lab IV - Java Programming
→ 20 MCA206 - Skill Based Lab II - R Programming

5. Soft skill → 20 MCA 207 - Soft Skills II - Aptitude Training

# SEMESTER III

1. 20MCA301 - Internship & Mini Project
   The board members enquired on the duration of the internship. It was clarified that Internship and a corresponding mini project has to be completed in the summer vacation for which the minimal time duration is 1 month.

2. 20MCA302 - Software Quality & Testing
   This new course was presented to the members and was approved by them.

3. 20MCA303 - Mobile Application Development
   Members suggested to curtail the theory concept and include more of application development towards practical implementation of mobile apps.

4. 20MCA304 - Enterprise Application Development
   The course was highly appreciated by the industrial expert and suggestions were given to create real time projects in the corresponding course on lab.

5. Lab courses that are offered in this semester were presented and approved by the members. They are as follows:
   → 20MCA304 - Lab V - Mobile Application Development
   → 20MCA305 - Lab VI - Enterprise Application Development
   → 20MCA306 - Skill Based Lab III - CASE Tools

# SEMESTER IV

1. **20MCA401 — UIX Design Programming - Lab VII**
   This course focus on modern technologues for interactive web application development and one such kind was appreciated and approved by the members.

2. **20MCA402 — Project**
   Since the students are expected to do one major core and one specialization elective courses in this semester, the tenure of the project was discussed and finalized as 2 months (60 days)

## ELECTIVES

→ The Programme offers specialization and General Electives

→ Specialization Electives are offered under the titles
   * Data Analytics
   * Distributed System Security
   * AI & Machine Learning

→ 6 courses on each title is offered under Specialization Electives

→ 12 courses are offered under General Electives

→ The members suggested to include appropriate software tools in the Unit V of the elective courses so that practical knowledge of the courses

could be imparted to the students.

## GENERAL ELECTIVES

The following courses are offered as General Electives from Semester I till Semester III. Board members approved the courses since these courses were scruitinized and approved in the board meet conducted in February, 2020.

→ 20MCAGE01    Office Automation tools
→ 20MCAGE02    Financial Management & Accounting
→ 20MCAGE03    Organizational Behaviour
→ 20MCAGE04    E- Commerce
→ 20MCAGE05    Ethics in Computing
→ 20MCAGE06    Resource Management Techniques
→ 20MCAGE07    Entrepreneurship Development
→ 20MCAGE08    Wireless Sensor Networks
→ 20MCAGE09    Research Methodology
→ 20MCAGE10    Digital Image Processing
→ 20MCAGE11    Cloud Computing
→ 20MCAGE12    Agile Software Engineering

## SPECIALIZATION ELECTIVES

The board members approved the following specialization elective courses offered under three titles.

# I DATA ANALYTICS

| S.No | Semester | Course Code | Course Title |
|---|---|---|---|
| 1. | II | 20MCADA01 | Data Mining Techniques |
| 2. | II | 20MCADA02 | Data Analytics & Visualization – Using Spreadsheets |
| 3. | III | 20MCADA03 | Big Data Analytics |
| 4. | III | 20MCADA04 | Data Analytic Tools & Techniques |
| 5. | IV | 20MCADA05 | Business Analytics Using R |
| 6. | IV | 20MCADA06 | Big Data Security |

# II DISTRIBUTED SYSTEM SECURITY

| S.No. | Semester | Course Code | Course Title |
|---|---|---|---|
| 1. | II | 20MCADS01 | Data Communication & Networks |
| 2. | II | 20MCADS02 | Wireless Communication & – Security |
| 3. | III | 20MCADS03 | Cryptography & Network Security |
| 4. | III | 20MCADS04 | Cyber Forensics |
| 5. | IV | 20MCADS05 | Cloud Security |
| 6. | IV | 20MCADS06 | High Speed Networks |

## III AI & MACHINE LEARNING

| S.No. | Semester | Course Code | Course Title |
|-------|----------|-------------|--------------|
| 1. | II | 20MCAAM01 | Artificial Intelligence & - Expert System |
| 2. | II | 20MCAAM02 | Soft Computing |
| 3. | III | 20MCAAM03 | Machine Learning |
| 4. | III | 20MCAAM04 | Neural Networks |
| 5. | IV | 20MCAAM05 | Human Computer Interaction |
| 6. | IV | 20MCAAM06 | Deep Learning |

## ADD ON COURSES

→ Courses on soft skills are offered as add on courses from semester I till semester III
→ MOOC/SWAYAM/NPTEL courses are mandated for every year of study.

## COURSE FOR ADVANCED LEARNERS

→ Course on "Internet of Things" is offered as a self study course for advanced learners which would earn them extra credits. This was highly appreciated and approved by the board members.

## GENERAL SUGGESTIONS

→ Academic experts insisted on offering a Bridge Course on the basic concepts of computer applications to the I year students whose UG degree is not based on computers

→ Industry Expert & Alumna insisted on the focus of the entire programme towards real time projects & internship.

1. Dr. D. Jeyamala, Director

2. Mrs. S. Mary Helan Felista

3. Mrs. R. Smeeta Mary

4. Mrs. S. Jeba Priya

5. Mrs. B. Usha

6. Mrs. S. Selvarani

7. Mrs. P. Nancy Vincentina Mary

Academic Dean
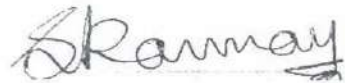Ms. A. Mable Jasmine Shobha - A Mable Jasmine Shobha
A. G. White Sahaya Mary

## LETTER OF DECLARATION

I, Dr. S.KANNAN, hereby declare that, I had attended the Board of Studies Meeting for the Upgradation of Syllabus on August7[th], 2020in the PG Department of Computer Applications, Fatima College(Autonomous), Madurai-18.

Place : Madurai

Date : 7.8.2020

Signature

## LETTER OF DECLARATION

I, Dr. G.CHANDRASEKARAN, hereby declare that, I had attended the Board of Studies Meeting for the Upgradation of Syllabus on August 7$^{th}$, 2020 in the PG Department of Computer Applications, Fatima College(Autonomous), Madurai-18.

Place : Madurai

Date : 7.8.2020                                                              Signature

## LETTER OF DECLARATION

I, Dr. M.PUSHPARANI, hereby declare that, I had attended the Board of Studies Meeting for the Upgradation of Syllabus on August 7$^{th}$, 2020 in the PG Department of Computer Applications, Fatima College(Autonomous), Madurai-18.

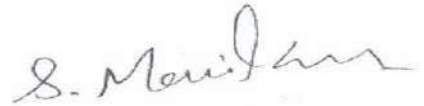Place : Madurai

Date : 7.8.2020

Signature

## LETTER OF DECLARATION

I, Mr. S.MANIKUMAR, hereby declare that, I had attended the Board of Studies Meeting for the

Upgradation of Syllabus on August $7^{th}$, 2020 in the PG Department of Computer Applications,

Fatima College(Autonomous), Madurai-18.

Place : Madurai

Date : 7.8.2020                                                                            Signature

LETTER OF DECLARATION

I, Mrs. G. SOBITHA, hereby declare that, I had attended the Board of Studies Meeting for the Upgradation of Syllabus on August 7<sup>th</sup>, 2020 in the PG Department of Computer Applications, Fatima College(Autonomous), Madurai-18.

Place : Madurai

Date : 7.8.2020                                                                                    Signature