



**AKKAMAHADEVI WOMEN'S UNIVERSITY, VIJAYAPURA.**  
**PROCEEDINGS OF THE MEETING OF BOS (PG) IN COMPUTER SCIENCE**

Proceedings of the meeting of Board of Studies (PG) in Computer Science held on  
27-08-2017 at 11.00 am in Akkamahadevi Women's University, Vijayapura.

**Members:**

- |   |          |  |
|---|----------|--|
| 1) Dr. Aziz Makandar<br>Professor<br>Dept. of Computer Science,<br>KSWU, Vijayapura.                    | Chairman |  |
| 2) Dr. Ramesh K<br>Associate Professor<br>P. G. Centre, KSWU, Sindhanur.                                | Member   |  |
| 3) Mrs. Sheetalrani R. Kawale<br>Assistant Professor<br>Dept. of Computer Science,<br>KSWU, Vijayapura. | Member   |  |
| 4) Prof. Suresha<br>Dept. of Computer Science,<br>Mysore University, Bangalore.                         | Member   |  |

**Resolutions:**

1. The Board prepared the panel of paper setters/examiners for the PhD/MPhil, M.Sc., M.C.A., P.G.D.C.A, and Certificate Courses for the academic year 2017-18 and resolved to approve the same (the list enclosed). Further, the board resolved that the paper setters/examiners in the cross-disciplinary courses shall be drawn from the panel of examiners approved by the board of concerned subjects.
2. The board approved the eligibility for M.Sc. Course as follows.  
(a) B.Sc. with Computer Science/Information Science/ Information Technology as one of the optional subject (b) B.Sc. with Mathematics (c) B.Sc. (Computer Science/Information Science) (d) Bachelor of Computer Science or Computer Application (B.Sc./BCA) (e) Bachelor of Information Science or Information Technology (B.I.Sc./BIT) (f) B.E./B.Tech (All branches)
3. The board adopted the new regulation (CBCS) and prepared the revised syllabus of M.Sc. and M.C.A. course in conformance with CBCS frame work for 2018-19 and onwards and approved the same.
4. The board approved to continue the existing syllabus with small modifications (M.Sc., M.C.A and P.G.D.C.A) for the year 2017-18.
5. The board approved to continue the existing syllabus of M.Phil and Ph.D Course Work.



1.1.2  
**AKKAMAHADEVI WOMEN'S UNIVERSITY, VIJAYAPURA.**  
**PROCEEDINGS OF THE MEETING OF BOS (PG) IN COMPUTER SCIENCE**


Proceedings of the meeting of Board of Studies (PG) in Computer Science held on 27-05-2018 at 11.00 am in Akkamahadevi Women's University, Vijayapura.


**Members:**


- |  |          |
|--|----------|
| 1) Prof. Aziz Makandar<br>Professor, Dept. of Computer Science,<br>AWU, Vijayapura.                  | Chairman |
| 2) Dr. Ramesh K<br>Associate Professor, Dept. of Computer Science,<br>AWU, Vijayapura.               | Member   |
| 3) Mrs. Sheetalrani R. Kawale<br>Assistant Professor, Dept. of Computer Science,<br>AWU, Vijayapura. | Member   |
| 4) Prof. Hanumanthappa M<br>Dept. of Computer Science,<br>Bangalore University, Bangalore 56.        | Member   |

**Solutions:**

1. The board adopted the new regulation (CBCS) and prepared the revised syllabus of M.Sc. and P.G.D.C.A. course in conformance with CBCS frame work for 2018-19 and onwards and approved the same.
2. B.Sc. with Computer Science/Information Science/ Information Technology as one of the optional subject (b) B.Sc. with Mathematics (c) B.Sc. (Computer Science/Information Science) (d) Bachelor of Computer Science or Computer Application (B.Sc./BCA) (e) Bachelor of Information Science or Information Technology (B.I.Sc./BIT) (f) B.E./B.Tech (All branches)
3. The board approved continue the existing syllabus of MCA Course.
4. The Board prepared the panel of paper setters/examiners for the PhD/MPhil, M.Sc., M.C.A., P.G.D.C.A. and certificate courses for the academic year 2018-19 and resolved to approve the same (the list enclosed). Further, the board resolved that the paper setters/examiners in the cross-disciplinary courses shall be drawn from the panel of examiners approved by the board of concerned subjects.
5. The board approved to continue the existing syllabus of M.Phil and Ph.D Course Work.

  
Ramesh K  
Member

  
Mrs. Sheetalrani R. Kawale  
Member

  
Prof. Hanumanthappa M  
Member

  
Prof. Aziz Makandar  
Chairman



Professor,  
Meetings and Gov  
Have Elective n  
and also as  
This is jr  
w

The proceedings of the meeting of BoS in Computer Science (PG) held through circulation (18-12-2018 to 26-12-2018).

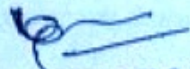
The members communicated:

1. Dr. Aziz Makandar
2. Dr. Ramesh K.
3. Dr. Doreswamy
4. Dr. Hanumantappa

Chairman  
Member  
"  
"

### Resolution

1. The Chairman appraised through e-mail about the decision of the Academic Council Meeting held on 01-12-2018 to revise the MCA Syllabus w.e.f. 2018-19 following the new regulations under CBCS scheme. Accordingly, new syllabus for MCA I and II semesters as per new CBCS regulations was prepared and approved by the members through circulation to be effective from academic year 2018-19 and onwards. The member resolved to forward the same to Registrar, Akkamahadevi Women's University, for further necessary action.

  
**CHAIRPERSON**  
**BOS (UG/PG)**  
Dept. of Computer Science  
Akkamahadevi Women's University,  
VIJAYAPURA-586108.



1-1-2

Proceedings of the meeting of Board of Studies (PG) in Computer Science held on  
21-04-2019 at 11.00 am in the Department of Computer Science, Karnataka State  
Akkamahadevi Women's University, Vijayapura.

**Members present:**

- |   |          |
|---|----------|
| 1) Prof. Aziz Makandar<br>Professor, Dept. of Computer Science,<br>KSAWU, Vijayapura.                 | Chairman |
| 2) Dr. Sheetalrani R. Kawale<br>Assistant Professor, Dept. of Computer Science,<br>AWU, Vijayapura.   | Member   |
| 3) Prof. Hanumanthappa M<br>Professor, Dept. of Computer Science,<br>Bangalore University, Bangalore. | Member   |

**Resolutions:**

1. In continuation of the previous BoS (PG) meeting through circulation dated: 10-04-2019, the board prepared the syllabus of MCA III, IV, V, and VI semesters as per CBCS and resolved to accept and submit it to Registrar, KSAWU, Vijayapura for approval w.e.f. 2019-20 and onwards.
2. The board prepared the M.Sc. (Computer Science) III and IV semester syllabus as per CBCS scheme and resolved to accept and submit the same to the Registrar, KSAWU, Vijayapura for approval w.e.f. 2019-20 and onwards.
3. The Board prepared the panel of examiners for the Ph.D/M.Phil, M.Sc., M.C.A., P.G.D.C.A, and certificate courses for the academic year 2019-20 and resolved to approve the same. Further, the board resolved that the paper setters/examiners in the cross-disciplinary courses shall be drawn from the panel of examiners approved by the board of concerned subjects.
4. The board noted the proceedings of the meeting held under chairmanship of Registrar dated 27-03-2019. As per the resolution 05 of the proceedings the board prepared the new syllabus of M.Phil and Ph.D Course Work. Further, the board resolved to accept the same and forward it to the Registrar, KSAWU, Vijayapura for approval w.e.f. 2018-19 and onwards.
5. The board scrutinized the question papers of M.C.A and M.Sc. (Computer Science) exams, 2018-19 and found correct.

  
Dr. Sheetalrani R. Kawale  
Member

  
Prof. Hanumanthappa  
Member

  
Prof. Aziz Makandar  
Chariman



ಸಂಖ್ಯೆ: ಅಮವಿ/ವಿಜಯಪುರ/ಗಣಕ ವಿಜ್ಞಾನ/2020-21/

ದಿನಾಂಕ: 08-06-2020

Comp Sc. BOS-  
1.1.2

**BoS(PG) IN COMPUTER SCIENCE**

Proceedings of the meeting of BoS(PG) in Computer Science held through circulation  
from 03-6-2020 to 08-06-2020.

**The members present**

1. Dr. G. G. Rajput	Chairman	
2. Dr. Aziz Makandar	Member	
3. Dr. P. S. Hiremath	External Member	
4. Dr. Shashirekha	External Member	
5. Dr. Savakar D. J.	External Member	

**Resolutions:**

1. The members reviewed the existing CBCS syllabus of MSc(Comp.Sc) for corrections. The members prepared the revised syllabus of the paper 2.6.1. Advanced Operating System Concepts. The members approved the syllabus with inclusion of course objectives and course outcomes as per NAAC criteria.
2. The members prepared and approved the panel of examiners in Computer Science for the academic year 2020-21.
3. The members noted the M.Phil/PhD course work paper: Research and Publication Ethics of 2 credits recommended by UGC and resolved to approve the same.
4. The board scrutinized the previous semester (odd sem.) of MSc(Comp. Sc.) and MCA courses question papers and found correct.

(Dr. G. G. Rajput)  
**CHAIRPERSON**  
Chairman, BoS(PG) in  
BOS (UG/PG)  
Computer Science

Dept. of Computer Science  
Akkamahadevi Women's University,  
VIJAYAPURA-586108.



ಸಂಖ್ಯೆ: ಅಮವಿ/ವಿಜಯಪುರ/ಗಣಕ ವಿಜ್ಞಾನ/2020-21/



ದಿನಾಂಕ: 16-09-2020

BoS CS (PG) 1.1.2.

BoS(PG) IN COMPUTER SCIENCE

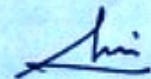
Proceedings of the meeting of BoS(PG) in Computer Science held through circulation from 01-09-2020 to 11-09-2020 and 14-09-2020 to 16-09-2020.

The members present

1. Dr. G. G. Rajput	Chairman	
2. Dr. Aziz Makandar	Member	 16/9/2020
3. Dr. P. S. Hiremath	External Member	(approval through Email)
4. Dr. Shashirekha	External Member	(approval through Email)
5. Dr. Savakar D. J.	External Member	(approval through Email)

Resolutions:

1. The board resolved to follow the existing KSAWUV CBCS regulations of PG programmes (KSWUV/PME/2014-15/2858 dated 13-01-2015 regulation No. 3a-35) for MCA two year programme (I to IV semesters) wef 202-21 (AICTE APH 2020-21) since provision for MCA programme under CBCS has been made in the regulation.
2. The board prepared and approved the MCA two year programme structure and scheme of the syllabus w.e.f. 2020-21 and onwards based on KSAWUV CBCS regulations for PG programmes. The board, during second circulation, approved the First year syllabus of MCA two year programme and resolved to forward the same to the Registrar for further necessary action.

  
(Dr. G. G. Rajput)  
Chairman, BoS(PG) in  
Computer Science

Encl.: MCA syllabus w.e.f 2020-21 and onwards



**KARNATAKA STATE AKKAMAHADEVI WOMEN'S UNIVERSITY, VIJAYAPURA.  
BOS (PG) IN COMPUTER SCIENCE 2021-22**

**PROCEEDINGS OF THE MEETING OF BOS (PG) IN COMPUTER SCIENCE FOR  
THE ACADEMIC YEAR 2021-22**

Proceedings of the meeting of the Board of Studies (PG) in Computer Science held on 01-10-2021 at 11.00 am in the Dept. of Computer Science, Jnana Shakti Campus, Toravi, KSAWU, Vijayapura.

**The PG BoS Members Present:**

01) Prof. Aziz Makandar	Chairman
02) Prof. Ramesh K	Member
03) Prof. P. S. Hiremath	Member
04) Prof. Dayanand G. Savakar	Member

**Resolutions:**

1. The board reviewed and approved existing M.Sc. Course Syllabus for the academic year 2021-22 onwards.
2. The board reviewed and approved existing M.C.A. Course (Three years course) I to VI Semester Syllabus for the academic year 2021-22 onwards.
3. The board prepared and approved M.C.A. Course (Two years course) III and IV Semester Syllabus for the academic year 2021-22 onwards.
4. The board prepared and approved M.Phil and Ph.D Course Work Syllabus for the academic year 2021-22 onwards.
5. The board prepared and approved the syllabus of (01) P. G. Diploma in Artificial Intelligence (AI) and Machine Learning (ML) (01 Year, Two Semester) and (02) Certificate Course in Artificial Intelligence (AI) (06 Months, One Semester).
6. The board prepared and approved the Model Question papers for M.Sc., M.C.A., MPhil, Ph.D, P. G. Diploma and Certificate courses for the academic year 2021-22 onwards.

7. The board prepared and revised the panel of examiners in PG, MPhil, Ph.D, P. G. Diploma in Computer Application, P. G. Diploma in Artificial Intelligence (AI) and Machine Learning (ML), Certificate Course in Artificial Intelligence (AI) and Certificate Course in Internet of Things (IoT) and Certificate Course in Office Automation for the academic year 2021-22 and resolved to approve the same.
8. The board resolved to approve the final Synopsis of Mrs. Daneshwari Mulimani, Ph.D Part Time Research Scholar.

  
Prof. Dayanand G. Savakar  
Member

  
Prof. P. S. Hiremath  
Member

7  
  
Prof. Ramesh K  
Member

  
Prof. Aziz Makandar  
Chairman (PG BoS)







ಸಂಖ್ಯೆ: ಅಮವಿ/ವಿಜಯಪುರ/ಗಣಕ ವಿಜ್ಞಾನ/2020-21/

ದಿನಾಂಕ: 16-09-2020

### BoS(PG) IN COMPUTER SCIENCE

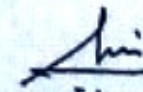
Proceedings of the meeting of BoS(PG) in Computer Science held through circulation from 01-09-2020 to 11-09-2020 and 14-09-2020 to 16-09-2020.

The members present

1. Dr. G. G. Rajput	Chairman	
2. Dr. Aziz Makandar	Member	 16/9/2020
3. Dr. P. S. Hiremath	External Member	(approval through Email)
4. Dr. Shashirekha	External Member	(approval through Email)
5. Dr. Savakar D. J.	External Member	(approval through Email)

Resolutions:

1. The board resolved to follow the existing KSAWUV CBCS regulations of PG programmes (KSWUV/PME/2014-15/2858 dated 13-01-2015 regulation No. 3a-35) for MCA two year programme (I to IV semesters) wef 202-21 (AICTE APH 2020-21) since provision for MCA programme under CBCS has been made in the regulation.
2. The board prepared and approved the MCA two year programme structure and scheme of the syllabus w.e.f. 2020-21 and onwards based on KSAWUV CBCS regulations for PG programmes. The board, during second circulation, approved the First year syllabus of MCA two year programme and resolved to forward the same to the Registrar for further necessary action.

  
(Dr. G. G. Rajput)  
Chairman, BoS(PG) in  
Computer Science

Encl.: MCA syllabus w.e.f 2020-21 and onwards



Proceedings of the meeting of Board of Studies (PG) in Computer Science held on  
21 -04-2019 at 11.00 am in the Department of Computer Science, Karnataka State  
Akkamahadevi Women's University, Vijayapura.

**Members present:**

- |   |          |
|---|----------|
| 1) Prof. Aziz Makandar<br>Professor, Dept. of Computer Science,<br>KSAWU, Vijayapura.                 | Chairman |
| 2) Dr. Sheetalrani R. Kawale<br>Assistant Professor, Dept. of Computer Science,<br>AWU, Vijayapura.   | Member   |
| 3) Prof. Hanumanthappa M<br>Professor, Dept. of Computer Science,<br>Bangalore University, Bangalore. | Member   |

**Resolutions:**

1. In continuation of the previous BoS (PG) meeting through circulation dated: 10-04-2019, the board prepared the syllabus of MCA III, IV, V, and VI semesters as per CBCS and resolved to accept and submit it to Registrar, KSAWU, Vijayapura for approval w.e.f. 2019-20 and onwards.
2. The board prepared the M.Sc. (Computer Science) III and IV semester syllabus as per CBCS scheme and resolved to accept and submit the same to the Registrar, KSAWU, Vijayapura for approval w.e.f. 2019-20 and onwards.
3. The Board prepared the panel of examiners for the Ph.D/M.Phil, M.Sc., M.C.A., P.G.D.C.A, and certificate courses for the academic year 2019-20 and resolved to approve the same. Further, the board resolved that the paper setters/examiners in the cross-disciplinary courses shall be drawn from the panel of examiners approved by the board of concerned subjects.
4. The board noted the proceedings of the meeting held under chairmanship of Registrar dated 29-03-2019. As per the resolution 05 of the proceedings the board prepared the new syllabus of M.Phil and Ph.D Course Work. Further, the board resolved to accept the same and forward it to the Registrar, KSAWU, Vijayapura for approval w.e.f. 2018-19 and onwards.
5. The board scrutinized the question papers of M.C.A and M.Sc. (Computer Science) exams, 2018-19 and found correct.

  
Dr. Sheetalrani R. Kawale  
Member

  
Prof. Hanumanthappa  
Member

  
Prof. Aziz Makandar  
Chairman

**DEPARTMENT OF COMPUTER SCIENCE**

**NEW SYLLABUS OF  
M.Sc.(Comp. Sc.)**

**As per CBCS regulations  
w.e.f. 2018-19 and onwards**

**Approved in BoS In Computer Science (PG)  
dated 20-04-2019**

Scheme of MSc(Comp. Sc.) programme, w.e.f. 2018-19 under CBCS

MSc(Comp. Sc.) I Semester syllabus under CBCS (w.e.f. 2018-19 and onwards)												
Course Code	Subject Title	Credits			Teaching Scheme Hrs/week			Continuous Assessment		Examination		Total Marks
		L	T	P	Lecture	Tutorial	Practical	C1	C2	Exam Duration (Hrs)	Semester End examination C3 Theory/ Practical	
1HCT-CS-1.1	Discrete Mathematical Structures	4	0	0	4	--	--	15	15	3	70	100
1HCT-CS-1.2	Digital Logic and Computer Design	4	0	0	4	--	--	15	15	3	70	100
1HCT-CS-1.3	Data Structure using C++	4	0	0	4	--	--	15	15	3	70	100
1HCL-CS-1.4	Practical-I: Data Structure Using CPP Lab	0	1	3	--	1	6	15	15	3	70	100
1HCL-CS-1.5	Practical-II: Digital Logic Lab	0	1	3	--	1	6	15	15	3	70	100
1SCT-CS-1.6	<b>Elective (any one)</b> 1.6.1. UNIX and Shell Programming 1.6.2. Computer Oriented Numerical Methods	4	0	0	3	1	--	15	15	3	70	100
1OE-CS-1.7	<b>Open Elective</b> Offered by Dept. of Women's Studies	4	0	0	4	--	--	15	15	3	70	100
<b>Total</b>		<b>20</b>	<b>02</b>	<b>06</b>								<b>700</b>

\* HCT: Hard core theory HCL: Hard core lab. SCT: Soft core theory, OE: Open elective

MSc(Comp. Sc.) II Semester syllabus under CBCS (w.e.f. 2018-19 and onwards)													
Course Code	Subject Title	Credits			Teaching Scheme Hrs/week			Continuous Assessment		Examination			Total Marks
		L	T	P	Lecture	Tutorial	Practical	C1	C2	Exam. Duration (Hrs)	Semester End examination C3	Theory/ Practical	
1HCT-CS-2.1	Advanced Computer Networks	4	0	0	4	--	--	15	15	3	70	100	
1HCT-CS-2.2	Relational Database Management Systems (RDBMS)	4	0	0	4	--	--	15	15	3	70	100	
1HCT-CS-2.3	Design and Analysis of Algorithms	4	0	0	4	--	--	15	15	3	70	100	
1HCL-CS-2.4	Practical-I: RDBMS Lab	0	1	3	--	1	6	15	15	3	70	100	
1HCL-CS-2.5	Practical-II: Design and Analysis of Algorithms Lab	0	1	3	--	1	6	15	15	3	70	100	
1SCT-CS-2.6	<b>Elective (any one)</b> 2.6.1. Advanced Operating System Concepts 2.6.2. Systems Analysis and Design.	4	0	0	4	--	--	15	15	3	70	100	
1OE-CS-2.7	<b>Open Elective</b> Offered by Dept. of Women's Studies	4	0	0	4	--	--	15	15	3	70	100	
<b>Total</b>		<b>20</b>	<b>02</b>	<b>06</b>								<b>700</b>	

\* HCT: Hard core theory HCL: Hard core lab. SCT: Soft core theory, OE: Open elective

MSc(Comp. Sc.) III Semester syllabus under CBCS (w.e.f. 2019-20 and onwards)													
Course Code	Subject Title	Credits			Teaching Scheme Hrs/week			Continuous Assessment		Examination			Total Marks
		L	T	P	Lecture	Tutorial	Practical	C1	C2	Exam. Duration (Hrs)	Semester End examination C3	Theory/ Practical	
2HCT-CS-3.1	Software Engineering	4	0	0	4	--	--	15	15	3	70	100	
2HCT-CS-3.2	Programming in JAVA	4	0	0	4	--	--	15	15	3	70	100	
2HCL-CS-3.3	Data Mining	4	0	0	4	--	--	15	15	3	70	100	
2HCL-CS-3.4	Practical-I: JAVA and Data Mining using Weka/R Lab	0	0	4	--	--	8	15	15	3	70	100	
2SCT-CS-3.5	<b>Elective (any one)</b> 3.5.1. Theory of Computation 3.5.2. System Software 3.5.3. Computer Organization and Architecture	4	0	0	4	--	--	15	15	3	70	100	
2OE-CS-3.6	<b>Open Elective</b> Computer Concepts and Office Automation	4	0	0	4	--	--	15	15	3	70	100	
<b>Total</b>		<b>20</b>	<b>0</b>	<b>4</b>								<b>500</b>	

\* HCT: Hard core theory HCL: Hard core lab. SCT: Soft core theory, OE: Open elective

M.Sc.(Comp. Sc.) IV Semester syllabus under CBCS (w.e.f. 2019-20 and onwards)												
Course Code	Subject Title	Credits			Teaching Scheme Hrs/week			Continuous Assessment		Examination		Total Marks
		L	T	P	Lecture	Tutorial	Practical	C1	C2	Semester End examination C3	Theory/ Practical	
2HCT-CS-4.1	Web Technology	4	0	0	4	--	--	15	15	3	70	100
2HCT-CS-4.2	Practical-I: Web Programming Lab	0	1	3	--	--	6	15	15	3	70	100
2HCL-CS-4.3	Practical-II: Project Work	0	1	3	--	--	6	15	15	3	70	100
2SCT-CS-4.4	<b>Elective (any one)</b> 4.4.1. Big Data Analytics 4.4.2. Cloud Computing 4.4.3. Embedded Systems	4	0	0	4	--	--	15	15	3	70	100
2OE-CS-4.5	<b>Open Elective</b> 1. Statistical Methods Using R 2. Information Technology	4	0	0	4	--	--	15	15	3	70	100
<b>Total</b>		<b>12</b>	<b>2</b>	<b>6</b>								<b>500</b>

\* HCT: Hard core theory HCL: Hard core lab. SCT: Soft core theory, OE: Open elective



ಕರ್ನಾಟಕ ರಾಜ್ಯ ಅಕ್ಕಮಹಾದೇವಿ ಮಹಿಳಾ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ವಿಜಯಪುರ  
(ಹಿಂದಿನ ಪದನಾಮ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಹಿಳಾ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ವಿಜಯಪುರ)

Karnataka state Akkamahadevi Women's University, Vijayapura  
(Formerly known as "Karnataka State Women's University, Vijayapura")

## DEPARTMENT OF COMPUTER SCIENCE

Scheme of Teaching and Examinations and Syllabus of

# Master of Computer Applications (MCA) (Two Year Programme)

As per CBCS regulations  
w.e.f. 2020-21 and onwards

Approved in BoS In Computer Science (PG) dated 16-09-2020



## Scheme of Master of Computer Applications (MCA) programme, w.e.f. 2020-21 (CBCS regulations)

MCA I Semester (CBCS regulations) (w.e.f. 2020-21 and onwards)										
Course Code	Subject Title	Credits	Teaching Scheme Hrs/week			Continuous Assessment	Examination			Total Marks
			Lecture	Tutorial	Practical		Exam. Duration (Hrs)	Theory/ Practical		
18MCAHC1.1	Data Structures	3:0:1	3	--	2	30	3	70	100	
18MCAHC1.2	Operating System Principles with UNIX	3:0:1	3	--	2	30	3	70	100	
18MCAHC1.3	Computer Networks	3:0:1	3	--	2	30	3	70	100	
18MCAHC1.4	Discrete Mathematical Structures	3:1:0	3	2	--	30	3	70	100	
18MCABC1.5	Web technologies-I	0:0:2	-	-	4	30	3	70	100	
18MCASC1.6	Any One 1)Probability and Statistical Methods 2) Numerical Methods 3) Optimization Techniques 4) Linear Algebra	3:1:0	3	2	--	30	3	70	100	
18MCABC1.7	Fundamentals of Programming**	0:0:0	2	--	2	30	3	70	100	
18MCAOE1.8	Open Elective Offered by Dept. of Women's Studies	4:0:0	4	--	--	30	3	70	100	
<b>Total</b>		<b>26</b>				210		490	<b>700</b>	

\* HCT: Hard core theory HCP: Hard core Practical SCT: Soft core theory, OE: Open elective, BC: Bridge course

\*\*Noncredit course, student has to obtain eligibility both in CA and SEE

\*\*The BRIDGE COURSE 18MCABC1.7 entitled Fundamentals of Programming is a Non-Credit course for only B.Sc. / B.A. / B.Com with Mathematics at 10 + 2 Level or Graduation level.

MCA II Semester (new regulations under CBCS) (w.e.f. 2020-21 and onwards)									
Course Code	Subject Title	Credits	Teaching Scheme Hrs/week			Continuous Assessment	Semester End examination		Total Marks
			Lecture	Tutorial	Practical		Exam. Duration (Hrs)	Theory/ Practical	
18MCAHC2.1	Programming with Java	2:0:2	2	--	4	30	3	70	100
18MCAHC2.2	Algorithms analysis	3:1:0	3	2	0	30	3	70	100
18MCAHC2.3	Database Management System	3:0:1	3	--	2	30	3	70	100
18MCASC2.4	Artificial Intelligence	3:0:1	3	--	2	30	3	70	100
18MCASC2.5	Python programming	0:0:2	--	--	4	30	3	70	100
18MCASC2.6	Any one of the following a) Computer Graphics b) Cryptography and Network Security c) System Software d) Computer Architecture	3:1:0	3	2	--	30	3	70	100
18MCAOE27	<b>Open Elective</b> Offered by Dept. of Women's Studies	4:0:0	4	--	--	30	3	70	100
<b>Total</b>						210		490	<b>700</b>

\* HCT: Hard core theory HCP: Hard core Practical SCT: Soft core theory, OE: Open elective

MCA III Semester (new regulations under CBCS) (w.e.f. 2021-22 and onwards)										
Course Code	Subject Title	Credits	Teaching Scheme Hrs/week			Continuous Assessment	Examination			Total Marks
			Lecture	Tutorial	Practical		Semester End examination Exam. Duration (Hrs)	Theory/ Practical	C3	
18MCAHC3.1	Software Engineering concepts	3:1:0	3	2	--	30	3	70	100	
18MCAHC3.2	Web Technologies-II	3:0:1	3	--	2	30	3	70	100	
18MCAHC3.3	IOT	3:0:1	3	--	2	30	3	70	100	
18MCAHC3.4	Data Analytics using Python	3:0:1	3	--	2	30	3	70	100	
18MCASC3.5	Any One of the following a) Mobile Computing b) Machine Learning c) Cloud Computing d) Data Mining and Data Warehousing	3:0:1	3	--	2	30	3	70	100	
18MCAHCP3.6	Practical-VI: Mini Project with IoT/Web Technology/Data Analytics.	0:0:2	--	--	4	30	3	70	100	
18MCAOE3.7	Open Elective (for other departments) Web Design	4:0:0	4	--	--	30	3	70	100	
<b>Total</b>		<b>26</b>				210		490	<b>700</b>	

\* HCT: Hard core theory HCP: Hard core Practical SCT: Soft core theory, OE: Open elective

MCA IV Semester (new regulations under CBCS) (w.e.f. 2021-22 and onwards)										
Course Code	Subject Title	Credits	Teaching Scheme			Continuous Assessment/ Seminar	Examination			Total Marks
			Lecture (online classes)	Tutorial	Practical		Semester Exam. Duration (Hrs)	Theory/ Practical/	C3	
18MCAHCT6.1	Research Methodology	02	02	--	--	30	03	70		100
18MCAHCT6.2	Internship	02	--	--	--	--	--	100		100
18MCAHCT6.3	PROJECT WORK*	12	--	--	--	100	03	200		300
<b>Total</b>		<b>16</b>	--	--	--	130		370		<b>500</b>

\* SEE comprises of Project report evaluation, presentation, and viva-voce in the ratio 50:25:25

All the students have to undergo compulsory Internship i.e. MOOCs certification (SWAYAM/NPTEL/COURSERA) of minimum 4/5 weeks duration during III/IV semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. The MOOCs credits shall be included in IV semester score card.

**PROJECT WORK - Instructions:**

- It is a full time project to be taken up either in the Industry/Institute or in an R&D organization.
- The duration of the project is entire semester.
- Student has to carry out literature study pertaining to her project work which shall be assessed during CA and semester end Presentation.
- The student has to carry out the project work under the supervision of internal Guide(in the Department) and External Guide(Industry/Research Organization)
- The student shall submit the two copies of project work documentation to the department at the end of the semester.

**Semester Credits Practicals in Hrs**

MCA I	26	12
MCA II	26	12
MCA III	26	12
MCA IV	16	12

**Total Credits: 94**