Analysis of Feedback on the syllabus for the academic year 2015-2016 given by Stakeholders

Sr. No.	Stakeholder	Feedback Regarding Curriculum	Action Taken
I	Employers	• Cover Cryptography topic in depth in accordance with Network Security. • Cover triggers in details in database courses.	The given suggestions are incorporated with the syllabus revision applicable from A.Y. 2015-2016 in the MCA programme for the course CA722 : Database Technologies CA729 : Operating System Concepts and Network Technology , refer Annexure I for BOS meeting minutes.
2	Academic Peers	• Use UML to perform analysis and designing in BCA curriculum. • Include Embedded Programming in BCA. • Include Mobile Application Development in BCA.	The given suggestion is incorporated with the new syllabus revision applicable from A.Y. 2016-2017 for the BCA programme, refer Annexure I for BOS meeting minutes.
3	Alumni	• Telecommunication networks should be covered before covering mobile application development.	The given suggestions are incorporated with the syllabus revision applicable from A.Y. 2015-2016 in MCA and MCAL programme for the course CA840 : Mobile Application Technology, refer Annexure I for BOS meeting minutes.
4	Final semester students	• Emphasize on the practical part of excel, word and powerpoint instead of theory.	The given suggestions are incorporated with the syllabus revision applicable from A.Y. 2015-2016 in the MCA programme for the course CA720 : Introduction to Computers , refer Annexure I for BOS meeting minutes.



Analysis of Feedback on the syllabus for the academic year 2015-2016 given by Stakeholders

Sr. No.	Stakeholder	Feedback Regarding Curriculum	Action Taken
I	Employers	• Cover Cryptography topic in depth in accordance with Network Security. • Cover triggers in details in database courses.	The given suggestions are incorporated with the syllabus revision applicable from A.Y. 2015-2016 in the MCA programme for the course CA722 : Database Technologies CA729 : Operating System Concepts and Network Technology
2	Academic Peers	• Using UML to analyze and design in BCA • Include Embedded Programming in BCA. • Include Mobile Application Development in BCA.	The given suggestion is incorporated with the new syllabus revision applicable from A.Y. 2016-2017 for the BCA programme.
3	Alumni	• Telecommunication networks should be covered before covering mobile application development.	The given suggestions are incorporated with the syllabus revision applicable from A.Y. 2015-2016 in MCA and MCAL programme
4	Final semester students	• Emphasize on the practical part of excel, word and powerpoint instead of theory.	The given suggestions are incorporated with the syllabus revision applicable from A.Y. 2015-2016 in the MCA programme for the course CA720 : Introduction to Computers



10th meeting CBCS

Minutes

Tenth joint meeting of the Board of Studies and Faculty Board for Faculty of Computer Science and Applications at CHARUSAT.

Date: 22nd August, 2015

Time: 10:00 a. m.

Venue: Conference Room, CMPICA, CHARUSAT Campus, Changa

The Tenth joint meeting of Board of Studies and Faculty board for Faculty of Computer science and Applications, CHARUSAT was held on 22nd August, 2015 at 10:00 a.m. at Conference room, Smt.Chandaben Mohanbhai Patel Institute of Computer Applications,CHARUSAT,Changa.

Following members were present at the meeting:

1. Dr. Atul Patel, Principal CMPICA,Changa, Chairman FB, Member BOS
2. Dr. Mukesh Patel, Member FB and BOS
3. Dr. Paresh Virparia, H.O.D, G.H.Patel, SP University,V.V.Nagar, Member FB
4. Dr. Darshan Chokshi, Professor, G.H.Patel, SP University,V.V.Nagar, Member FB
5. Mr. Kishore Tarachandani,CEO Dots and Coms,Baroda, Member FB
6. Mr. Dharmendra Patel,Assistant Professor,CMPICA,Changa, Chairman BOS, Member FB
7. Mr. Chirag Patel,Assistant Professor,CMPICA,Changa, Member BOS
8. Mr. Jaimin Undavia,Assistant Professor,CMPICA,Changa, Member FB
9. Ms. Nirali Honest,Assistant Professor,CMPICA,Changa, Member BOS
10. Dr. Aneesh Chinubhai,CTO,PDPU,Gandhainagar,(Invitee)
11. Dr. Sanskruti Patel,Assistant Professor,CMPICA,Changa, (Invitee)
12. Mr. Kanu Patel,Assistant Professor,CMPICA,Changa, (Invitee)

Following members could not attend the meeting due to their other preoccupations:
1. Mr. Pravin Jain, Member BOS, Director Technical, Zensoft Technologies, Vadodara
2. Mr. Rahul Sanghvi, Member FB, CEO, Dexter Consultancy, Ahmedabad
3. Mr. Ashok Patel,Member BOS, Advisor CHARUSAT

Initiation:-

The commencement of the meeting was made by Chairman of BOS by welcoming all the members and expressing gratitude for sparing their valuable time, afterwards a briefing on the agenda of the meeting was discussed.

Agenda, Proceedings & Resolutions:-

Item 10.1: To Approve minutes of 9th joint meeting of BOS and FB.

Proceedings: Chairman of BOS has given brief about 9th joint meeting of BOS and FB to all members and invitees and informed all about the changes incorporated as part of feedback given by Faculty members for First Year Courses of MCA and MCA Lateral programme. Suggestions received from Board Members/Invitees were incorporated in MCA Dual degree syllabus.

Resolutions 10.1

- All members of BOS and FB approved the minutes of 9th joint BOS and FB meeting.

Item 10.2: Discussion and approval of detailed syllabi of courses based on choice based credit grading system in MCA, MCA Lateral and M.Sc.(IT) programmes.

Proceedings: Chairman of BOS has explained the structure of the choice based credit grading system and explained the overview of each course.

The course wise suggestions given by members and invitees are enlisted in Table 1.

Table 1: Suggestions received from Board Members/Invitees

Course Code	Suggestions
MS106/CA716: Fundamentals of Internet	• Unit III title need to be revised. (Explore/Exploit)
MS107/CA717: Fundamentals of Data Communication	• FDDI should be removed from Unit III.
MS311/CA826: Statistical Methods and Optimization Techniques	• Unit VI is very lengthy, hours for the unit needs to be increased. • Sequence of Unit II and III needs to be changed. • Overall syllabus content is lengthy so it should be reduced.
MS312/CA827: Advanced Operating Systems	• Include Real Time operating system concept in the syllabus.
MS313/CA828: Cyber Security Fundamentals	• Prerequisite needs to be corrected. (Basic knowledge of fundamental networking)

Resolutions 10.2

- Passed the resolution to revise the title of Unit III in MS106/CA716: Fundamentals of Internet.
- Passed the resolution to remove FDDI in MS107/CA717: Fundamentals of Data Communication
- Passed the resolution to revise the prerequisite, decrease the content, revise the number of hours for Unit VI and change the sequence of Unit II and III in MS311/ in CA826:Statistical Methods and Optimization Techniques.
- Passed the resolution to include the concept of Real time operating system in MS312/CA827: Advanced Operating Systems.
- Passed the resolution to revise the prerequisite in MS313/CA828: Cyber Security Fundamentals

Note: - Annexure-I is attached for more detail syllabi of courses based on choice based credit grading system electives in M.C.A, M.C.A-Lateral and M.Sc.(IT) programmes.

Item 10.3: To discuss faculty feedback of syllabi of MCA Lateral second year courses and MCA-Dual first year courses.

Proceedings: The chairman of BOS explained the feedback given by faculties who took the course in MCA Dual Semester I and II and in MCA lateral Semester III. The suggestions received from faculty members are enlisted in Table 2.

Table 2: Feedback of MCA Lateral second year and MCA-Dual first year courses.

Course Code	Feedback
CA101: Introduction to Computers	• In Unit V must be allocated 5 hours. • In Unit II content like storage devices and information representation can be added.
CA105: Fundamental Concepts in Programming Language	• Unit III must be allocated 8 hours, Unit V must be allocated 8 hours and Unit VI must be allocated 7 hours.
CA108: Mathematical and Statistical Foundations	• Increase number of hours for Unit III and V . • Add a reference book "Quantitative Aptitude for Competitive Examinations, by R. S. Aggarwal,7th Revised Edition, S. Chad Publishing. • Unit III and VI are relatively lengthy so need to separate from the syllabus if possible. We can differentiate the entire syllabus in two parts one for Computer Oriented Numerical Methods and second for Operation Research. • Mapping among the units is not defined well.
CA910: Open Source Framework	• Add a core book," Rachel McCollin, Tessa Blakeley Silver : Wordpress Theme Development, 3rd Edition, PACKT publishing."
CA911: Data Mining & Analytics	• Unit I needs to shrink by eliminating some multi dimensional data model concepts. • In Unit III Data Discretization need to be more precise and compact. • Hours allocation in Unit IV need to be updated.
CA913: Collaboration Technology	• Unit I is very lengthy, it should be divided in two units, one for Introduction to Collaboration and second for Introduction to Sharepoint. • Content in Unit III and V can be increased considering the development aspect.

Resolutions 10.3

- Passed the resolution according to the given feedbacks the syllabus will be updated.

Note: - Annexure-II is attached for revised syllabus of MCA Lateral semester III courses and MCA-Dual semester I and II courses.

Item 10.4: To discuss the patterns of University Examination Papers

Proceedings: The chairman of BOS has explained the format and content of university papers, and asked for feedback for patterns of questions in university examination.

The suggestions given by members and invitees are as follows:

- Add questions related to practical where they can correlate the concept and show it with example.
- Prepare question bank of critical thinking based questions from each course.

Resolutions 10.4

- Passed the resolution to ask faculty members to prepare a repository of questions that focuses on critical thinking and practical part.

Item 10.5: Result analysis of the academic year 2014-2015 examination

Proceedings: The chairman of BOS discussed the result of examination held in the academic year 2014-2015.

The suggestions from members and invitees are as follows:

- Students of MCA Dual Degree and M.Sc.(IT) first year should be more focused.

Resolutions 10.5

- Passed the resolution to incorporate suggestions for better results.

Note: - Annexure-III is attached for Result Analysis of the academic year 2014-2015examination.

Item 10.6: To Approve panel of examiners for University Examination
Proceedings: The chairman of BOS asked members and invitees for the suggestions for panel of examiners in university examination.

Resolutions 10.6

- Approved the panel of examiners for university examination.

Note: - Annexure-IV is attached for panel of examiners.

Other Item:-

Since, there was no other item to be discussed, the meeting ended with vote of thanks to the Chair.

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ANNEXURE-I

TEACHING AND EXAMINATION SCHEME OF M.C.A, M.C.A-LATERAL AND M.Sc.IT Programme

M.C.A Teaching and Examination Scheme

MCA Semester 1

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA716-719	Elective-I	3	-	3	3	10	20	70	-	-	-	100
CA720	Introduction to Computers	-	3	3	3	-	-	-	15	15	70	100
CA721	Fundamental Concepts in Programming Language	4	3	7	7	10	20	70	15	15	70	200
CA722	Database Technologies	4	3	7	7	10	20	70	15	15	70	200
FI702	Fundamental of Commerce and Business Statistics	4	-	4	4	10	20	70	-	-	-	100
HS701	Advance Critical Thinking and Logic	2	-	2	2	30		70	-	-	-	100
		17	09	26	26	500			300			800

Elective-I

1. CA716-Fundamentals of Internet
2. CA717-Fundamentals of Data Communications
3. CA718-History of Modern Computing
4. CA719-Introduction to Information Technology

MCA Semester 2

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA723-726	Elective-II	3	-	3	3	10	20	70	-	-	-	100
CA727	Introduction to Internet and Web Designing	4	3	7	7	10	20	70	15	15	70	200
CA728	Object Oriented Concepts and Programming	4	3	7	7	10	20	70	15	15	70	200
CA729	Operating System Concepts and Network Technology	4	-	4	4	10	20	70	-	-	-	100
HS702	Academic Writing and Communication Skills	-	2	2	2	-		-	30		70	100
		15	08	23	23	400			300			700

Elective-II

1. CA723-Management Information Systems
2. CA724-Information Technology Service Management
3. CA725-Wireless Communications
4. CA726-Introduction to Enterprise Resource Planning

MCA Semester 3

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA826-CA829	Elective-III	3	-	3	3	10	20	70	-	-	-	100
CA830	Object Oriented Software Engineering	-	2	2	2	-	-	-	15	15	70	100
CA831	Enterprise Computing	4	3	7	7	10	20	70	15	15	70	200
CA832	Visual Programming	3	3	6	6	10	20	70	15	15	70	200
CA833	Web Designing concepts	-	3	3	3	-	-	-	15	15	70	100
CA834	Advanced Database Technologies	4	3	7	7	10	20	70	15	15	70	200
		14	14	28	28	400			500			900

Elective-III

1. CA826-Statistical Methods and Optimization Techniques
2. CA827-Advanced Operating Systems
3. CA828-Cyber Security Fundamentals
4. CA829-Basics of Cloud Computing

MCA Semester 4

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA835-838	Elective-IV	4	3	7	7	10	20	70	15	15	70	200
CA839	Open Source Technology	4	3	7	7	10	20	70	15	15	70	200
CA840	Mobile Application Technology	4	3	7	7	10	20	70	15	15	70	200
CA841	Software Quality Assurance	4	3	7	7	10	20	70	15	15	70	200
		16	12	28	28	400			400			800

Elective-IV

1. CA835-Windows Communication Foundation Framework
2. CA836-Frameworks and Applications
3. CA837-Procurement, Implementation and Management of IT systems
4. CA838-Advanced Network Management and Security

Minutes

Eleventh joint meeting of the Board of Studies and Faculty Board for Faculty of Computer Science and Applications at CHARUSAT.

Date: 14th May, 2016

Time: 10:00 a. m.

Venue: Board Room, CMPICA, CHARUSAT Campus, Changa

The Eleventh joint meeting of Board of Studies and Faculty board for Faculty of Computer Science and Applications, CHARUSAT was held on 14th May, 2016 at 10:00 a.m. at Board room, Smt.Chandaben Mohanbhai Patel Institute of Computer Applications, CHARUSAT, Changa.

Following members were present at the meeting:

1. Dr. Atul Patel, Principal CMPICA,Changa, Chairman FB, Member BOS
2. Dr. Mukesh Patel, Member FB and BOS
3. Dr. Darshan Chokshi, Professor, G.H.Patel, SP University,V.V.Nagar, Member FB
4. Mr. Dharmendra Patel,Associate Professor,CMPICA,Changa, Chairman BOS, Member FB
5. Mr. Jaimin Undavia,Assistant Professor,CMPICA,Changa, Member FB
6. Dr. Aneesh Chinubhai,CTO,PDPU,Gandhainagar,(Invitee)
7. Ms. Ruchi Kansara, Assistant General Manager,Future Group,Ahmedabad(Alumni)(Invitee)
8. Mr.Nishant Joshi,Senior System Analyst,Cybage Software Pvt.Ltd., Gandhiagar (Alumni)(Invitee)
9. Dr. Sanskruti Patel,Assistant Professor,CMPICA,Changa, (Invitee)
10. Dr. Pritpal Singh,Assistant Professor,CMPICA,Changa, (Invitee)

Following members could not attend the meeting due to their other preoccupations:

1. Mr. Pravin Jain, Member BOS, Director Technical, Zensoft Technologies, Vadodara
2. Mr. Rahul Sanghvi, Member FB, CEO, Dexter Consultancy, Ahmedabad
3. Mr. Ashok Patel,Member BOS, Advisor CHARUSAT
4. Dr. Paresh Virparia, H.O.D, G.H.Patel, SP University,V.V.Nagar, Member FB
5. Mr. Kishore Tarachandani,CEO Dots and Coms,Baroda, Member FB
6. Mr. Chirag Patel,Assistant Professor,CMPICA,Changa, Member BOS
7. Ms. Nirali Honest,Assistant Professor,CMPICA,Changa, Member BOS

Initiation:-

The commencement of the meeting was made by Chairman of BOS by welcoming all the members and expressing gratitude for sparing their valuable time, afterwards a briefing on the agenda of the meeting was discussed.

Agenda, Proceedings & Resolutions: -

Item 11.1: To discuss and approve minutes of 10th joint meeting of BOS and FB.

Proceedings: Chairman of BOS has given brief about 10th joint meeting of BOS and FB to all members and invitees and informed them about change in codification of M.Sc.IT semester-III courses. He informed that code will start from MS312 instead of MS311.

Resolutions 11.1

- All members of BOS and FB approved the minutes of 10th joint BOS and FB meeting and suggested changes.

Item 11.2: To discuss and approve detail syllabi of first year courses and teaching and examination scheme of all semesters based on choice based credit system in M.C.A-Dual (BCA+MCA) programme.

Proceedings: Chairman of BOS has explained the structure of the choice based credit system and explained the content of each course.

The course wise suggestions given by members and invitees are enlisted in Table 1.

Table 1: Suggestions received from Board Members/Invitees

Course Code	Suggestions
CA 109: Introduction to Information Technology	• Add overview of interrupts and hard disk.
CA 111: Fundamental Concepts of Programming Language	• Add reference book entitled as " The C Programming Language" by Brian W. Kerighan and Dennis M. Ritchie.
CA 115: Management Information System	• Add an overview of ERP in unit-VI.
CA 116: Numerical and Statistical Methods	• Add reference book entitled as "Introductory Methods of Numerical Analysis" by S.S. Sastry
CA 209: Electronics Commerce	• Replace title by Fundamentals of Electronics Commerce
CA 210: Managerial Economics	• Replace title by Introduction to Economics.
CA 211 : Front Page Designing	• Replace title by User Interface Design.
CA 221 : Search Engine Optimization	• Add content on social media marketing strategies and rethink about title.
CA 316: Object Oriented System Analysis and Design	• Replace title by Software Engineering
Elective-VII (Sixth Semester)	• Course content and delivery should be in form of dissertation.

Resolutions 11.2

- Passed the resolution to add the content on interrupts and Hard Disk in CA 109: Introduction to Information Technology.
- Passed the resolution to add the content on ERP in CA 115: Management Information System

- Passed the resolution to add suggested reference books in CA 111: Fundamental Concepts of Programming Language, CA 116: Numerical and Statistical Methods.
- Passed the resolution to change the titles of the courses CA 209: Electronics Commerce, CA 210: Managerial Economics, CA 211: Front Page Designing and CA 316: Object Oriented System Analysis and Design.
- Passed the resolution to revise the title and content of course CA 221 : Search Engine Optimization
- Passed the resolution to revise the course content and delivery of the elective-VIII of final semester.

Note: - Annexure-III is attached for detail syllabi of first year courses and teaching and examination scheme of all semesters based on choice based credit system of M.C.A-Dual(BCA+MCA) programme.

Item 11.3: To discuss and approve detail syllabi of courses decided to offer by Faculty of Computer Science and Applications as university electives to other institutions at postgraduate level.

Proceedings: Chairman of BOS has explained the content of the courses decided to offer by Faculty of Computer Science and Applications as university electives to other institutions in post graduate level.

The suggestion is received to add content on boot strap in the course Internet and Web Designing.

Resolutions 11.3

- Passed the resolution to add the content on bootstrap in the course Internet and Web Designing

Note: - Annexure-IV (A, B, C) is attached for detail syllabi of courses offered in Post Graduate Programmes with university electives.

Item 11.4: To inform about result analysis winter examination of academic year 2015-16

Proceedings: The chairman of BOS discussed the result of winter examination held in the academic year 2015-2016.

Resolutions 11.4

- All BOS and FB members are made aware about results of winter examnation.

Note: - Annexure-V is attached for Result Analysis of the academic year 2015-2016 winter examination

Item 11.5: To discuss the patterns of University Examination Papers

Proceedings: The chairman of BOS has explained the format and content of university papers, and asked for feedback for patterns of questions in university examination.

The suggestion is to give more weight age on practical concepts in question papers.

Resolutions 11.5

- Passed the resolution to ask faculty members to prepare question paper with more emphasize on practical concepts.

Item 11.6: To Approve panel of examiners for University Examination
Proceedings: The chairman of BOS asked members and invitees for the suggestions for panel of examiners in university examination.

Resolutions 11.6

- Approved the panel of examiners for university examination.

Note: - Annexure-VII is attached for panel of examiners.

Item 11.7: To discuss feedback of faculty members over previous semester courses.
Proceedings: The chairman of BOS explained the feedback given by faculties who took the courses in MCA Dual Semester III and IV and in elective courses of first and second semesters of post graduate programmes. The suggestions received from faculty members are enlisted in Table 2.

Table 2: Feedback of MCA-Dual Second year courses and electives courses of first year.

Course Code	Feedback
CA203: Object Oriented Programming using C++	• Remove topics like virtual function and pure virtual function. • Unit-II and Unit-III should be allocated more hours. • Add books of Sourav Sahay and Bjarne Stroustrup
CA205: Data Structures and Algorithms	• Unit-III should be allocated more hours • Add more points of tree and graph
CA207: Multi Paradigm Programming Language	• Unit-VI requires more hours.

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Resolutions 11.7

- Members disagree to remove topics on virtual and pure virtual function from CA 203: Object Oriented Programming using C++. On other feedbacks, they agree and passed the resolution that according to the given feedbacks the syllabus will be updated.

Note: - Annexure-VII is attached for revised syllabus of courses of MCA-Dual(BCA+MCA) semester-III and IV based on faculty feedback.

Other Item:-

Since, there was no other item to be discussed, the meeting ended with vote of thanks to the Chair.

ANNEXURE-III

DETAIL SYLLABI OF FIRST YEAR COURSES AND TEACHING AND EXAMINATION SCHEME OF MCA-DUAL PROGRAMME

TEACHING SCHEME

FOR

MCA Dual (BCA + MCA) PROGRAMME

EFFECTIVE FROM ACADEMIC YEAR 2016-17

Semester-I

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA 109-110	Elective-I	3	-	3	3	10	20	70	-	-	-	100
CA 111	Fundamental Concepts Of Programming Language	4	3	7	7	10	20	70	15	15	70	200
CA 112	Introduction to Computers	4	3	7	7	10	20	70	15	15	70	200
CA 113	Programming the Internet-I	--	3	3	3				15	15	70	100
CA 114	Foundation of Mathematics	3	-	3	3	10	20	70	-	-	-	100
HS 101-106 C	Liberal Arts	-	2	2	2				30		70	100
		14	11	25	25	400			400			800

Elective-I

1. CA109 –Introduction to Information Technology
2. CA110 – Foundation of Computer Organization

Semester-II

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA115-116	Elective-II	3	-	3	3	10	20	70	-	-	-	100
CA 117	Operating System Concepts	4	3	7	7	10	20	70	15	15	70	200
CA 118	Advanced Programming	4	3	7	7	10	20	70	15	15	70	200
CA 119	Data base Fundamentals	4	3	7	7	10	20	70	15	15	70	200
CA 120	Fundamentals of Commerce & Business Process	3	-	3	3	10	20	70	-	-	-	100
HS121 C	English Language & Literature	1	1	2	2	25		25	25		25	100
		19	10	29	29	550			350			900

Elective-II

1. CA 115–Management Information System
2. CA116–Numerical & Statistical Method

Semester-III

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA 209-210	Elective - III	3	-	3	3	10	20	70	-	-	-	100
CA 211-212	Elective – IV	-	3	3	3	-	-	-	15	15	70	100
CA 213	Programming the Internet-II	4	3	7	7	10	20	70	15	15	70	200
CA 214	Object Oriented Programming Using C++	4	3	7	7	10	20	70	15	15	70	200
CA 215	System Analysis and Design	3	-	3	3	10	20	70	-		-	100
HS 122 C	Values and Ethics	2	-	2	2	30		70	-		-	100
	Environmental Science	-	-	2	2	30		70	-		-	100
	University Elective – I **	-	2	2	2	-	-	-	30		70	100
		16	11	29	**29**	600			400			1000

****** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **Introduction to Web Designing** course for others**.**

Elective-III

1. CA 209 – Fundamentals of Electronic Commerce
2. CA 210 – Introduction to Economics

Elective-IV

1. CA 211 – User Interface Design
2. CA 212 - Visual Basic Applications

Semester-IV

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA 216 – 222	Elective - V	4	3	7	7	10	20	70	15	15	70	200
CA 223	Data Structures & Algorithms	4	3	7	7	10	20	70	15	15	70	200
CA 224	Advanced Database System	-	3	3	3	-	-	-	15	15	70	100
CA 225	Fundamentals of Computer Networks	3	-	3	3	10	20	70	-		-	100
HS 123C	Critical Thinking and Logic	2	-	2	2	30		70	-		-	100
	University Elective – II **	-	2	2	2	-	-	-	30		70	100
		13	11	24	**24**	400			400			800

****** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **Programming the Internet** course for others**.**

Elective-V

1. CA 216 -Computer Graphics-I
2. CA 217- Multi Programming Paradigm Language
3. CA 218- System Programming
4. CA 219- Scripting Language
5. CA 220- Basics of Web Designing
6. CA 221- social media marketing strategies
7. CA 222- Multi Media-I

Semester-V

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA 308–313	Elective-VI	4	3	7	7	10	20	70	15	15	70	200
CA 314	Object Oriented Programming Through JAVA	4	3	7	7	10	20	70	15	15	70	200
CA 315	Application development using .NET Framework	4	3	7	7	10	20	70	15	15	70	200
CA 316	Software Engineering	-	3	3	3	-	-	-	15	15	70	100
HS 124 C	Professional Communication	-	2	2	2				30		70	100
		12	14	26	26	300			500			800

Elective-VI

1. CA 308 –Introduction to Open Source Technology
2. CA 309 –Advanced Computer Networks
3. CA 310 –Operation Research
4. CA311–Embedded Programming
5. CA 312-Multimedia –II
6. CA 313-Ruby on Rail Architecture

Semester-VI

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA 317-319	Elective-VII	4	-	4	4	10	20	70	-	-	-	100
CA 320 – 322	Elective-VIII	-	3	3	3	-	-	-	15	15	70	100
CA 323	Minor Project	-	15	15	15	-	-	-	100		300	400
HS 125 C	Society, Governance and International Studies	-	2	2	2	-	-	-	30		70	100
		04	20	24	24	100			600			700

Elective- VII

1. CA 317 –Artificial Intelligence
2. CA318–Cryptography and Network Security
3. CA319–Data Compression Techniques

Elective- VIII

1. CA320–Software Project Management
2. CA321–Basics of Mobile Applications
3. CA322–Computer Graphics-II

Analysis of Feedback on the syllabus for the academic year 2016-2017 given by Stakeholders

Sr. No.	Stakeholder	Feedback Regarding Curriculum	Action Taken
1	Expert from Industry	Aptitude preparation for pre final semester students	Allow 30 minutes of preparation during lab hours. Arrange extra lectures and workshop for preparation. Refer Annexure I for Departmental meetings.
		Basic fundamental concepts should be covered in more detail	Arrangement of extra classes after working hours for preparation of core subjects. Refer Annexure I for Departmental meetings.
		Include advance web designing technologies.	We will arrange the workshop or expert lecture for the techniques. Refer Annexure I for Departmental meetings.
2	Alumni Students	Java,PI,MVC Framework, .NET, Database Technology, Wordpress, SEQA, MPPL and Network related subjects should be covered in more detail.	We will arrange the workshop or expert lecture for the techniques. Refer Annexure I for Departmental meetings.
		Theoretical Subjects like HCI, MIS, IC, FCBP should be covered in less detail.	We have correlated all these subjects with practical aspects.
		Introducing SEO, Ruby on Rails subject in syllabus.	SEO has been included in syllabus of BCA CBCS 2016-17 in semester III as a sub topic in PI course. Ruby on rail architecture subject is introduced in BCA CBCS syllabus w.e.f.2016-17 in semester V as an elective course. Refer Annexure II for Teaching and Learning scheme.
		Include subjects like Computer Graphics, Design Pattern, and AngularJS	The courses have been included in the syllabus of BCA CBCS w.e.f. 2016-17. Refer Annexure II for Teaching and Learning scheme.
		Include subject on Entrepreneur	CHARUSAT has established Entrepreneurship Development and Incubation Cell for motivating and promoting students to become entrepreneurs. Refer Annexure III for EDIC page on university site.
3	Final semester students	More Real Life Examples should be given.	Syllabus is not modified but practical concepts are covered by preparing a case study for every subject.
		Increase number of practical hours.	In the teaching and learning scheme we have incorporated practical credits for some subjects. Refer Annexure II for Teaching and Learning scheme.
		Include advance topics	Arrange workshop and expert lecture for students. Refer Annexure I for Departmental meetings.

4	Expert from Academic	Cover all the topics in depth with their applications like Macro in MS word and Excel, Pivot tables, Scenario, etc. in BCA syllabus. Keep it up to date as per market need. Cyber Security, Ajax framework, Security of WordPress should be covered in more detail	The assignments are designed such a way that they cover the in-depth application of the topics. We continuously take feedback from various stakeholders and try to keep the syllabus up to the mark. The concerned points are delivered in depth by taking more examples and applications of the concept.



Annexure I

Departmental Meetings

MINUTES OF THE TWELTH MEETING (12 of 2016) OF DEPARTMENT

The faculty meeting of CMPICA was held on 30th June, 2016 at 12:40 PM (Board room). The meeting was conducted by Dr. Atul Patel, and following people attended the meeting:

1. Ms Nirali Honest	2. Dr. Sanskruti Patel	3. Mr. Jaimin Undavia
4. Mr. Chirag Patel	5. Ms. Swati Patel	6. Ms. Shreya Banker
7. Ms. Mubina Malik	8. Ms. Trisha Patel	9. Mr. KanubhaiPatel
10. Ms. Dhatri Raval	11. Ms. Hetal Patel	12. Mr. Hardik R. Patel
13. Ms. Sheenal Patel	14. Ms. Nilam Desai	15. Mr. Tushar Mehta
16. Mr. Hardik I.Patel	17. Ms. Rupal Patel	18. Ms. Pooja Parekh
19. Ms.Saumya Patel	20. Mr. Akash Patel	21. Dr. Pritpal Singh
22. Ms. Hetal Desai		

- **Item #1**: Regarding Academic Year 2016- 17:
  - Academic year 2016 - 17 will start from 4th July for BCA –I/III/V, M.Sc.(IT) – I/III, MCAL- III and MCA – V.
  - One week Orientation programme will be organized from 4th July to 9th July for new comers of BCA and M.Sc.(IT). Parents of the new comers students will be invited for the commencement celebration on 4th July, 2016. ○ Total number of students admitted for academic year 2016 – 17 till date are:
    - BCA : 105 (will be divided into 2 division)
    - MCAL : 108
    - M.Sc.(IT) : 39
    - MCA : 10
- **Item #2**: Atul sir informed all the faculty members to utilize the new features added in Mobile App.
- **Item # 3**: Atul sir have motivated faculties to take the responsibility of admission and also added each faculty has to try to take responsibility of atleast 10 admission for the next academic year.
- **Item #4:** For pre-final semester students, allow aptitude and technical preparation session for last 30 minutes of laboratory hours. Arrange extra classes after working hours to prepare students for core and fundamental concepts.

MINUTES OF THE FOURTEEN MEETING (14 of 2016) OF DEPARTMENT

The faculty meeting of CMPICA was held on 26th November 2016 at 12:40 PM (Board room). The meeting was conducted by Dr. Atul Patel, and following people attended the meeting:

1. Dr. Dharmendra Patel
2. Dr. Sanskruti Patel
3. Mr Pranav Vyas
4. Dr. Jaimin Undavia
5. Dr. Chirag Patel
6. Mr. Abhilash Shukla
7. Ms. Swati Patel
8. Mr. Karan Patel
9. Ms. Hema Patel
10. Ms. Rachana Patel
11. Mr. Arpit Trivedi
12. Mr. Mahesh Gadhavi
13. Ms. Shreya Banker
14. Ms. Trisha Patel
15. Mr. Kanubhai Patel
16. Ms. Dhatri Raval
17. Ms. Hetal Patel
18. Mr. Hardik R. Patel
19. Ms. Sheenal Patel
20. Ms. Nilam Desai
21. Mr. Tushar Mehta
22. Mr. Hardik I.Patel
23. Ms. Rupal Patel
24. Ms. Pooja Parekh
25. Ms.Saumya Patel
26. Mr. Akash Patel
27. Dr. Pritpal Singh
28. Ms. Hetal Desai

Item#1: ISRO Chairmen will visit CHARUSAT on 8th December, 2016.

Item#2: Subject Allocation: Subjects were allocated to the faculty members for Academic Year 2016 - 2017 even semester of MCA –II , M.Sc.(IT)-II , MCA Lateral-II, MCA-VI, BCA-II , BCA –IV, BCA -VI.

Branch/ Semester	**Sr. No.**	**Subject Code**	**Subject Name**	**Faculty Name**
MCA Lateral/ II And MCA/IV	1	CA839/CA819	Open Source Technology	Dr. Sanskruti patel Mr. Mahesh Gadhavi
	2	CA840/CA820	Mobile Application Technology	Mr. Nilay Ganatra Ms. Nilam Desai
	3	CA841/CA821	Software Quality Assurance	Dr. Nirali Honest Mr. Arpit Trivedi
	4	CA835/CA822	Windows Communication Foundation Framework	Dr. Chirag Patel
	5	CA836/CA823	Framework And Applications	Mr. Hardik R.Patel Mr. Abhilash Shukla
	1	CA725	Wireless Communications	Mr. Tushar Mehta

MCA/II	2	CA727	Introduction to Internet and Web Designing	Mr. Karan Patel
	3	CA728	Object Oriented Concepts and Programming	Ms. Hema Patel
	4	CA729	Operating System Concepts and Network Technology	Dr. Dharmendra Patel
BCA /II	1	CA115	Management Information System	Ms. Hetal Desai
	2	CA116	Numerical & Statistical Method	Ms. Swati Patel
	3	CA117	Operating System Concepts	Ms. Rupal Patel
	4	CA118	Advanced Programming	Ms. Shreya Banker
	5	CA119	Data base Fundamentals	Dr. Atul Patel Ms. Trisha Patel
	6	CA120	Fundamentals of Commerce & Business Process	MS. Dhatri Raval
BCA/IV	1	CA205	Data Structure & Algorithms	Ms. Rachna Patel
	2	CA206	Computer Networks & Internet	Mr. Akash Patel
	3	CA207	Multi Paradigm Programming Language	Dr. Jaimin Undavia
	4	CA208	Electronic Commerce	Mr. Hardik I.Patel
BCA/VI	1	CA305	Advanced Computer Networks	Mr. Pranav Vyas
	2	CA306	Software Project Management	Ms. Sheenal Patel
M.Sc(IT)/ II	1	MS210	Wireless Communications	Mr. Kanubhai Patel
	2	MS212	Software Engineering and Quality Assurance	Ms. Hetal Patel
	3	MS213	Programming the Internet	Ms. Saumya Patel
	4	MS214	Framework and Application	Ms. Pooja Patel
	5	MS215	Human Computer Interfaces	Mr. Pritpal Singh

Item #2: Discussion of workshops and expert lectures organized during the semester.

- Workshop on "Developing Interview Skills" was organized on 14-07-2016 by Mr. Vijay Makwana, Ms. Krishna Parikh, Mr. Gaurav Thakkar, Mr. Kaushik Trivedi, Asst. Professor, CHARUSAT.
- Expert Session on "Career Counseling" was organized on 22-07-2016 by Mr. Divyang Purohit,TPO,CHARUSAT.
- Expert Session on "Software Project Management" was organized on 03-08-2016 by Mr. Kishor Tarachandani, CEO, DotsNComs, Vadodara.
- Expert Session on "Web Designing Concepts" was organized on 23-09-2016 by Ms. Dhruva Bhayani, Team Lead, Dot's and Com's, Vadodara.

- Expert Session on "System Analysis and Design" was organized on 29-09-2016 by "Mr. Pratik Munshi, Professor, Ahmadabad University, Ahmedabad.
- Workshop on "Communication Skills and Self Confidence" was organized on 05-10-2016 by Mr.Jagadish Sasala, Corporate Trainer and Motivational Speaker, Getwings Technologies Pvt. Ltd, Hyderabad.
- Expert Session on "Search Engine Optimization" was organized on 06-10-2016 by Dr. Sohil Pandya,Assistant Professor, MCA Department,SVIT, Vasad.

MINUTES OF THE THIRD MEETING (03 of 2017) OF DEPARTMENT

The faculty meeting of CMPICA was held on 18th April, 2017 at 2:30 PM (Board room). The meeting was conducted by Dr. Atul Patel, and following people attended the meeting:

1. Dr. Dharmendra Patel	2. Dr. Nirali Honest	3. Dr. Sanskruti Patel
4. Dr. Pranav Vyas	5. Dr. Jaimin Undavia	6. Dr.. Chirag Patel
7. Mr. Abhilash Shukla	8. Ms. Swati Patel	9. Mr. Karan Patel
10. Ms. Hema Patel	11. Mr. Arpit Trivedi	12. Ms. Shreya Banker.
13. Ms. Trisha Patel	14. Mr. KanubhaiPatel	15. Ms. Dhatri Raval
16. Ms. Hetal Patel	17. Mr. Hardik R. Patel	18. Ms. Sheenal Patel
19. Ms. Nilam Desai	20. Mr. Tushar Mehta	21. Mr. Hardik I.Patel
22. Ms. Rupal Patel	23. Ms. Pooja Parekh	24. Ms.Saumya Patel
25. Mr. Akash Patel	26. Dr. Pritpal Singh	27. Mr. Alok Patel
28. Ms. Hetal Desai		

Item #1: Atul Sir informed the faculties to strictly follow the guidelines related to publication of papers in the reputed journals and conference.

Item #2: Discuss the expert sessions organized during the semester.

- Expert Session on "Network Security" was organized on 31-01-2017 by "Dr. Prashant Pittalia,Associate Professor, G H Patel P G Department of Computer Science and Technology,Sardar Patel University, V. V. Nagar.
- Expert Session on "Object Oriented Programming with PHP" was organized on 17-03-2017 by Mr. Vidhyadhar Yagnik, Unisite India Pvt. Ltd., Ahmedabad.
- Expert Session on "Software Testing using Open Source Tools for Desktop and Mobile based" Applications was organized on 31-03-2017 by Mr. Dhaval Chavda, QA Lead, HighQ Solutions, Ahmedabad.
- Expert Session on "Fingerprints, Non invasive and Most Reliable Biometrics for Human Identification- A Review on Conventional and Contemporary Techniques" was organized on 04-04-2017 by "Dr. Rajesh Babu,Assistant Professor, Institute of Forensic Science (IFS), Gandhinagar.
- Expert Session on "Life Skills" was organized on 06-04-2017 by Mr. Jitendra Khimani, Art of Living, Vadodara.

Annexure II

TEACHING SCHEME

FOR

BCA PROGRAMME

EFFECTIVE FROM

ACADEMIC YEAR 2016-17

Semester-I

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA 109110	Elective-I	3	-	3	3	10	20	70	-	-	-	100
CA 111	Fundamental Concepts Of Programming Language	4	3	7	7	10	20	70	15	15	70	200
CA 112	Introduction to Computers	4	3	7	7	10	20	70	15	15	70	200
CA 113	Programming the Internet-I	--	3	3	3				15	15	70	100
CA 114	Foundation of Mathematics	3	-	3	3	10	20	70	-	-	-	100
HS 101 106 C	Liberal Arts	-	2	2	2				30		70	100
		14	11	25	25	400			400			800

Elective-I

1. CA109 –Introduction to Information Technology
2. CA110 – Foundation of Computer Organization

Semester-II

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA115-116	Elective-II	3	-	3	3	10	20	70	-	-	-	100
CA 117	Operating System Concepts	4	3	7	7	10	20	70	15	15	70	200
CA 118	Advanced Programming	4	3	7	7	10	20	70	15	15	70	200
CA 119	Data base Fundamentals	4	3	7	7	10	20	70	15	15	70	200
CA 120	Fundamentals of Commerce & Business Process	3	-	3	3	10	20	70	-	-	-	100
HS121 C	English Language & Literature	1	1	2	2	25		25	25		25	100
		19	10	29	29	550			350			900

Elective-II

1. CA 115–Management Information System
2. CA116–Numerical & Statistical Method

Semester-III

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Tot al		Internal		Exter nal	Internal		Exter nal	
						Case Study	Tests		Term work	Tests		
CA 209210	Elective - III	3	-	3	3	10	20	70	-	-	-	100
CA 211212	Elective – IV	-	3	3	3	-	-	-	15	15	70	100
CA 213	Programming the Internet-II	4	3	7	7	10	20	70	15	15	70	200
CA 214	Object Oriented Programming Using C++	4	3	7	7	10	20	70	15	15	70	200
CA 215	System Analysis and Design	3	-	3	3	10	20	70	-		-	100
HS 122 C	Values and Ethics	2	-	2	2	30		70	-		-	100
	Environmental Science	-	-	2	2	30		70	-		-	100
	University Elective – I **	-	2	2	2	-	-	-	30		70	100
		16	11	29	**29**	600			400			1000

****** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **Introduction to Web Designing** course for others**.**

Elective-III

1. CA 209 – Fundamentals of Electronic Commerce
2. CA 210 – Introduction to Economics

Elective-IV

1. CA 211 – User Interface Design
2. CA 212 - Visual Basic Applications

Semester-IV

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Tot al
		Theory	Pract	Tot al		rnal		Exter nal	Internal		Exter nal	
						Case Study	Tests		Term work	Tests		
CA 216 – 220	Elective - V	4	3	7	7	10	20	70	15	15	70	200

CA 221	Data Structures & Algorithms	4	3	7	7	10	20	70	15	15	70	200
CA 222	Advanced Database System	-	3	3	3	-	-	-	15	15	70	100
CA 223	Fundamentals of Computer Networks	3	-	3	3	10	20	70	-		-	100
HS 123	Critical Thinking and Logic	2	-	2	2	30		70	-		-	100
	University Elective – II **	2	-	2	2	30		70				100
		15	09	24	24	500			300			800

****** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **Programming the Internet** course for others**.**

Elective-V

1. CA 216 -Computer Graphics
2. CA 217- Multi Programming Paradigm Language
3. CA 218- System Programming
4. CA 219- Scripting Language
5. CA 220- Basics of Web Designing

Semester-V

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA 308– 313	Elective-VI	4	3	7	7	10	20	70	15	15	70	200
CA 314	Object Oriented Programming Through JAVA	4	3	7	7	10	20	70	15	15	70	200
CA 315	Application development using .NET Framework	4	3	7	7	10	20	70	15	15	70	200
CA 316	Software Engineering	-	3	3	3	-	-	-	15	15	70	100
HS 124 C	Professional Communication	-	2	2	2				30		70	100
		12	14	26	26	300			500			800

Elective-VI

1. CA 308 –Introduction to Open Source Technology
2. CA 309 –Advanced Computer Networks
3. CA 310 –Operation Research

4. CA311–Embedded Programming
5. CA 312-Multimedia –II
6. CA 313-Ruby on Rail Architecture

Semester-VI

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA 317 -319	Elective-VII	4	-	4	4	10	20	70	-	-	-	100
CA 320 – 322	Elective-VIII	-	3	3	3	-	-	-	15	15	70	100
CA 323	Minor Project	-	15	15	15	-	-	-	100		300	400
HS 125 C	Society, Governance and International Studies	-	2	2	2	-	-	-	30		70	100
		04	20	24	24	100			600			700

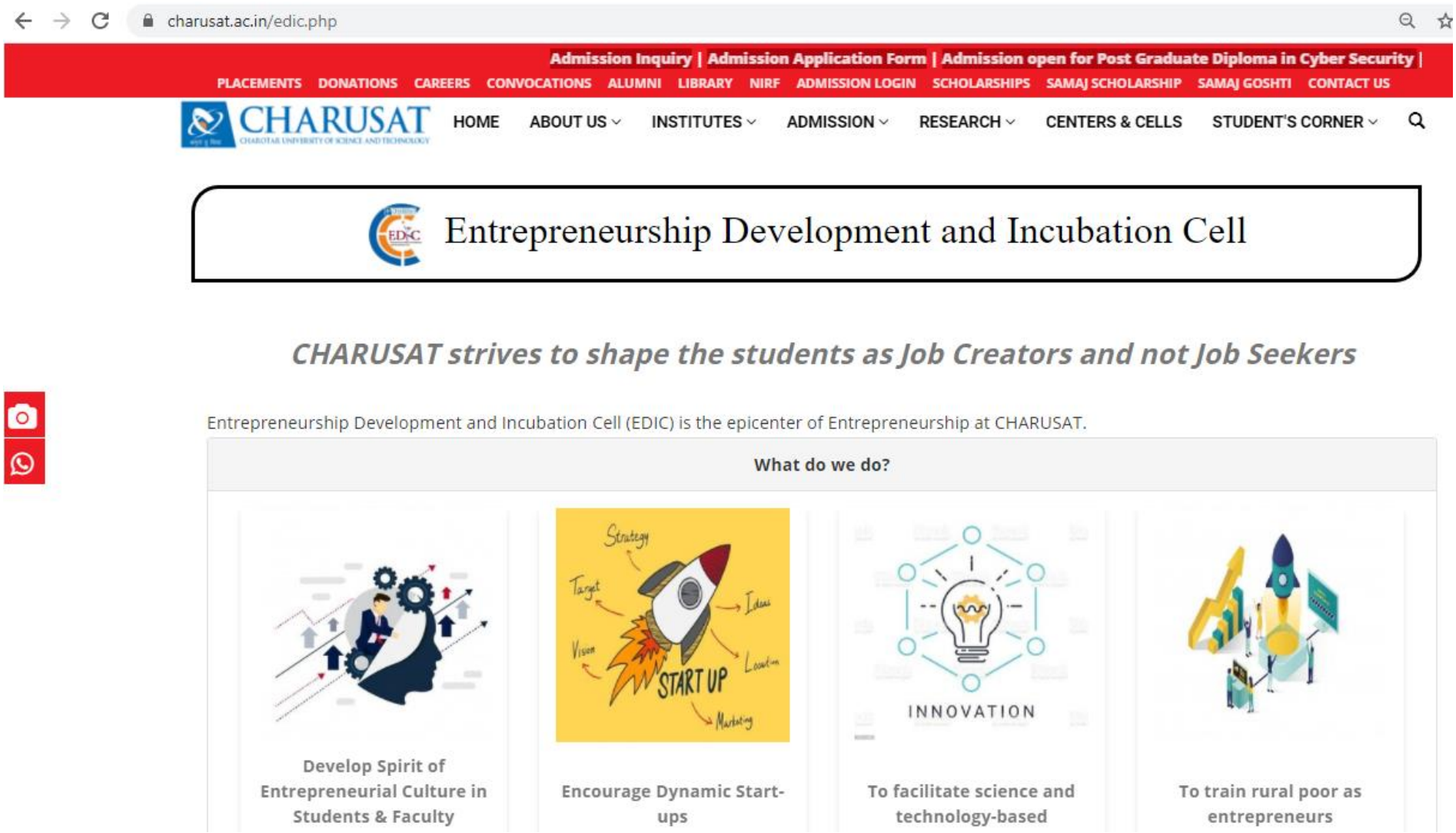
Elective- VII

1. CA 317 –Artificial Intelligence
2. CA318–Cryptography and Network Security
3. CA319–Data Compression Techniques

Elective- VIII

1. CA320–Software Project Management
2. CA321–Basics of Mobile Applications
3. CA322–Computer Graphics-II

Annexure III EDIC page on the website



Analysis of Feedback on the syllabus for the academic year 2017-2018 given by Stakeholders

Sr. No.	Stakeholder	Feedback Regarding Curriculum	Action Taken
1	Expert from Industry	Aptitude preparation for pre final semester students	Allow 30 minutes of preparation during lab hours. Arrange extra lectures and workshop for preparation. Refer Annexure I for Departmental meetings.
		Basic fundamental concepts should be covered in more detail	Arrangement of extra classes after working hours for preparation of core subjects. Refer Annexure I for Departmental meetings.
		Include advance designing technologies like Node JS, Angular JS, React.	We will arrange the workshop or expert lecture for the techniques. Refer Annexure I for Departmental meetings.
2	Employers	Focus on core languages and frameworks supported and used in project development.	Languages and frameworks are covered in syllabus. Refer Annexure III for Teaching and Learning scheme.
3.	Academic Peers	Cover core courses in detail.	The assignments are designed such a way that they cover the in depth application of the courses.
		Cyber Security, Ajax framework, Security in WordPress should be covered in more detail	The concerned points are delivered in depth by taking more examples and applications of the concept.
4	Faculty members	CA111: Fundamental Concepts of Programming Language • Unit V is very lengthy so extra hours should be added.	No changes made as it is practical course, faculty can take more hours during practical session. Faculty can demonstrate program during lab hours. Refer Annexure II for BOS meeting.
		CA115: Management Information Systems • As students have no background of any information system and commercial software used in the market, it is difficult for them to relate the theoretical aspects discussed regarding Knowledge Management System and Executive Support System. These two units can be combined to give introductory concepts of both and more stress can be given to transaction processing systems and management information systems, which can be found around them and they can relate better.	The course content is changed according to the feedback Refer Annexure II for BOS meeting.
		CA116 : Numerical and Statistical Methods • Unit V & VI need more hours and that can be adjusted with Unit-I and Il	Hours are changed according to feedback. Refer Annexure II for BOS meeting.

		CA117 : Operating System Concepts Units- IV, V and VI are totally focusing on practical aspects which can be taught during practical sessions parallel with demonstrations, so it is a scope to add more theoretical concepts. The unit - 111 should be allotted more time as it covers scheduling algorithms.	Content of memory management and I/O management added according to the feedback. Refer Annexure II for BOS meeting.
		CA 118 : Advanced Programming • Unit IV is very short, so some more content can be added. • The sequence of Unit-V and VI needs to be changed	Content of preprocessor directives such as ,#ifdef,#ifndef,#if,#else,#elif,# endif added according to the feedback. Sequence of units V and VI is changed. Refer Annexure II for BOS meeting.
		CA119 : Database Fundamentals • Unit-II is very short. It doesn't require 08 Hours. If possible, add Generalization and Specialization concept in Unit-ll.	The course content is changed according to the feedback Refer Annexure II for BOS meeting.
5	Alumni	Java, PI, MVC Framework, .NET, Database Technology, WordPress, SQA, MPPL and network related subjects should be covered in more detail.	Extra topics other than syllabus are covered by organizing expert sessions and workshops Refer Annexure II for BOS meeting.
		Cover the communication skills subjects in depth.	It is offered as part of Humanities courses. Refer Annexure III for Teaching and Learning scheme.
		Introduce IOT as it is the era of it.	We have included Embedded Programming in the syllabus of BCA w.e.f. from the A.Y. 2016-2017. Refer Annexure III for Teaching and Learning scheme.
		Cover the Computer Graphics courses.	We have included it in the syllabus of BCA. Refer Annexure III for Teaching and Learning scheme.
6	Parents	Include Foreign Language in the Syllabus.	It is offered by the Humanites courses (Language French.) Refer Annexure II for BOS meeting.
		Include latest technologies and trends.	Various lectures and workshops are organized to cover the areas a art from the syllabus. Refer Annexure I for Departmental meetings.
		Include group work and teamwork as part of curricular activities.	We have included case study based approach so students can work in group or individually, as well as in Project work they can work in team or individual. Refer Annexure III for Teaching and Learning scheme.

7	Final semester students	Include advance designing technologies like Node JS, Angular JS and React.	We will arrange of the workshop or expert lecture for the techniques. Refer Annexure I for Departmental meetings.



Annexure I

Departmental meetings

MINUTES OF THE FOURTH MEETING (04 of 2017) OF DEPARTMENT

The faculty meeting of CMPICA was held on 22nd July, 2017 at 2:30 PM (Board room). The meeting was conducted by Dr. Atul Patel, and following people attended the meeting:

Dr. Dharmendra Patel	Dr. Nirali Honest	Dr. Sanskruti Patel
Mr Pranav Vyas	Dr. Jaimin Undavia	Dr. Chirag Patel
Mr. Nilay Ganatra	Mr. Abhilash Shukla	Ms. Swati Patel
Mr. Karan Patel	Ms. Hema Patel	Ms. Rachana Patel
Mr. Arpit Trivedi	Mr. Mahesh Gadhavi	Ms. Nita Lokwani
Ms. Shreya Banker	Ms. Mubina Malik	Ms. Trisha Patel
Mr. Kanubhai Patel	Ms. Dhatri Raval	Ms. Hetal Patel
Mr. Hardik R. Patel	Ms. Sheenal Patel	Ms. Nilam Desai
Mr. Tushar Mehta	Mr. Hardik I.Patel	Ms. Rupal Patel
Ms. Mansi Shanishwara	Ms. Pooja Parekh	Ms.Saumya Patel
Mr. Akash Patel	Dr. Pritpal Singh	

Item #1: Atul sir informed total number of students enrolled in current academic year as below.

Branch	**Total no. of student Enrollment**
BCA	130
B.Sc.(IT)	90
MCAL	139
M.Sc.(IT)	30
Total	**389**

Item#2: Discussion on academic session regularity.

Item#3: To expand the research area every first Saturday of a month Dr. Pritpal sir will talk on research for 20 to 30 min. Also sir added developed system in CMPICA should be demonstrated to all faculty.

Item#4: For pre-final semester students, allow aptitude and technical preparation session for last 30 minutes of laboratory hours. Arrange extra classes after working hours to prepare students for core and fundamental concepts.

MINUTES OF THE ELEVENTH MEETING (11 of 2017) OF DEPARTMENT

The faculty meeting of CMPICA was held on 27th December ,2017 at 3:30 PM (Board Room). The meeting was conducted by Dr. Atul Patel, and following people attended the meeting:

1. Dr. Dharmendra Patel
2. Dr. Nirali Honest
3. Dr. Sanskruti Patel
4. Dr. Jaimin Undavia
5. Dr. Chirag Patel
6. Mr. Nilay Ganatra
7. Mr. Abhilash Shukla
8. Ms. Swati Patel
9. Mr. Karan Patel
10. Mr. Arpit Trivedi
11. Ms. Shreya Banker.
12. Ms. Mubina Malik
13. Ms. Hetal Patel
14. Mr. Kanubhai Patel
15. Ms. Dhatri Raval
16. Mr. Hardik R. Patel
17. Ms. Sheenal Patel
18. Ms. Nilam Desai
19. Mr. Hardik I.Patel
20. Ms. Pooja Parekh
21. Ms. Saumya Patel
22. Dr. Pritpal Singh

Item #1: Atul sir focused some of the point that faculty must take care:

- Regularity of students must be there after 15th of January. So All the counsellor have to analyse the attandance
- Faculty must adjust theire work load before taking leave.
- Due to the unavailability of Rachana mam, Hardik I Patel sir will be given the responsibility for time table.
- Faculty should take care during the practical examination and marks entry in egovernance
- All the faculty member have to analyse the result once it comes.

Item #2: Discussion of workshops and expert lectures organized during the semester.

- Expert Session on "Responsive Website Design using Bootstrap, PHP Mysql" was conducted on 05-10-2017,by Mr. Krunal Panchal, Mr. Sagar Patel, Groovy The web firm, 414-415, Center Square, Santram Road, Nadiad, Gujarat 387001
- Workshop on "Communication Skills and Personality Development" was conducted on 28-07-2017 to 29-07-2017 by Mr. Harshit Mantri, Owner, Sumeru Academy Nadiad.
- Workshop on "Company Etiquette" was conducted on 04-08-2017 by Mr. Suchit Patel, HR Helios Solu., Baroda
- Expert session on “Career Counselling” was conducted on 04-09-2017 by Mr. Divyang Purohit, TPO, CHARUSAT.

Annexure II

BOS meeting minutes

Annexure-II
Minutes

Fourteenth joint meeting of the Board of Studies and Faculty Board for Faculty of Computer Science and Applications at CHARUSAT.

Date: 12th August, 2017

Time: 10:00 a. m.

Venue: Board Room, CMPICA, CHARUSAT Campus, Changa

The Fourteenth joint meeting of Board of Studies and Faculty board for Faculty of Computer science and Applications, CHARUSAT was held on 12th August, 2017 at 10:00 a.m. at Board room, Smt.Chandaben Mohanbhai Patel Institute of Computer Applications, CHARUSAT, Changa.

Following members were present at the meeting:

1. Dr. Dharmendra Patel,Associate Professor,CMPICA,Changa, Chairman BOS, Member FB
2. Dr. Atul Patel, Principal CMPICA,Changa, Chairman FB, Member BOS
3. Dr. Darshan Chokshi, Professor, G.H.Patel, SP University,V.V.Nagar, Member FB
4. Dr. Paresh Virparia, H.O.D, G.H.Patel, SP University,V.V.Nagar, Member FB
5. Mr. Kishore Tarachandani,CEO Dots and Coms,Baroda, Member FB
6. Mr.Nishant Joshi,Senior System Analyst,Cybage Software Pvt.Ltd., Gandhiagar (Alumni)(Invitee)
7. Dr. Nirali Honest,Assistant Professor,CMPICA,Changa, Member BOS
8. Dr. Jaimin Undavia,Assistant Professor,CMPICA,Changa, Member FB
9. Dr. Sanskruti Patel,Assistant Professor,CMPICA,Changa, (Invitee)
10. Dr. Chirag Patel,Assistant Professor,CMPICA,Changa, Member BOS
11. Mr. Kanubhai Patel, Assistant Professor,CMPICA,Changa, (Invitee)
12. Dr. Pritpal Singh,Assistant Professor,CMPICA,Changa, (Invitee)

Following members could not attend the meeting due to their other preoccupations:
1. Dr. Mukesh Patel, Member FB and BOS
2. Mr. Pravin Jain, Member BOS, Director Technical, Zensoft Technologies, Vadodara
3. Mr. Rahul Sanghvi, Member FB, CEO, Dexter Consultancy, Ahmedabad
4. Mr. Ashok Patel,Member BOS, Advisor CHARUSAT

Initiation:-

The commencement of the meeting was made by Chairman of BOS by welcoming all the members and expressing gratitude for sparing their valuable time, afterwards a briefing on the agenda of the meeting was discussed.

Agenda, Proceedings & Resolutions:-

Item 14.1: To discuss and approve minutes of 13th joint meeting of BOS and FB.

Proceedings: Chairman of BOS has given brief about 13th joint meeting of BOS and FB to all members and invitees and informed them about the confirmation of the minutes.

Resolutions 14.1

- All members of BOS and FB approved the minutes of 13th joint BOS and FB meeting.

Item 14.2: To discuss and approve detail syllabi of third year courses of BCA programme.

Proceedings: Chairman of BOS explained the content of each course.

The course wise suggestions given by members and invitees are enlisted in Table 1.

Table 1: Suggestions received from Board Members/Invitees for BCA Semester V and VI courses

Course Code	Suggestions
CA 309: Advanced Computer Network	• Add the concept of static vs dynamic routing algorithms. Focus on dynamic algorithms like link state, distance vector algorithm, etc. Basically on broad categories of dynamic algorithms
CA 311: Multimedia	• In unit V add animation using CSS3 and CSS3 frameworks instead of using Adobe Flash.
CA 317: Cryptography and Network Security	• Add the concept of Digital Signature and concept of Firewall.
CA 320: Basics of Mobile Applications	• Add the introduction to Hybrid mobile application frameworks like Phonegap, Ionic , etc.
CA 321: Computer Graphics – II	• Add the Difference between Raster graphics and Vector graphics, in terms of size, and how it can be edited using Photoshop for raster image and Illustrator for vector image.

Resolutions 14.2

- Passed the resolution to add concept of static vs dynamic routing algorithms, basically add the topic of dynamic algorithms.
- Passed the resolution to add animation using CSS3 and CSS3 frameworks in unit V.
- Passed the resolution to add the concept of Digital Signature and concept of Firewall.
- Passed the resolution to add the introduction to Hybrid mobile application frameworks.
- Passed the resolution to add the concept of Raster and Vector graphics.

Note: - Annexure-III is attached for detail syllabi of third year courses of BCA programme.

Item 14.3: To discuss and approve detail syllabi of second year courses of B.Sc.(IT) programme.

Proceedings: : Chairman of BOS explained the content of each course.

The course wise suggestions given by members and invitees are enlisted in Table 2.

Table 2: Suggestions received from Board Members/Invitees for B.Sc.(IT) Semester III and IV courses

Course Code	Suggestions
CA 501: Programming the Internet	• Change the content in a unit – VI replace dreamviewer with any other open source editors, (for example sublime text). Add the concept of web development toolbar.
CA 502 : Fundamentals of Computer networks	• Change the title of unit IV, to the Data Link Layer instead of Issues in Data Link Layer, change the title of unit V to Network Layer Design instead of Issues in Network Layer Design. In unit V, remove the content Optimality principle and shortest path routing.
CA 511: Foundation of Data Science	• Add the introduction to data in terms of an image instead of data in terms of digits. (An emerging area in terms of searching and managing data), introduce libraries to handle real time data, like d3.js, or r-library.

Resolutions 14.3

- Passed the resolution to change the content in a unit – VI replace dreamviewer with any other open source editors.
- Passed the resolution to change the title of unit IV and unit V and the content Optimality principle and shortest path routing.
- Passed the resolution to add the introduction to data in terms of an image instead of data in terms of digits.

Note: - Annexure-IV is attached for detail syllabi of second year B.Sc.(IT) courses.

Item 14.4: To discuss and approve the feedback given by faculty members over previous semester courses of BCA programme.

Proceedings: Chairman of BOS explained the content of each course.

The course wise suggestions given by members and invitees are enlisted in Table 1.

Table 3: Faculty feedback on courses of BCA programme and related suggestions

Course Code	Feedback From Faculty Member	Suggestions by Members and Invitees
CA 111 : Fundamental Concepts of Programming Language	• Unit V is very lengthy to extra hours should be added.	• As it is practical course, faculty can take more hours during practical session.Faculty can demonstrate program during lab hours.
CA115 : Management Information Systems	• As students have no background of any information system and commercial software used in the market, it is difficult for them to relate the	• Change the content according to the feedback.

	theoretical aspects discussed regarding Knowledge Management System and Executive Support System. These two units can be combined to give introductory concepts of both and more stress can be given to transaction processing systems and management information systems, which can be found around them and they can relate better.	
CA116 : Numerical and Statistical Methods	• Unit V & VI need more hours and that can be adjusted with Unit-I and II	• Adjust hours according to faculty feedback
CA117 : Operating System Concepts	• Units- IV, V and VI are totally focusing on practical aspects which can be taught during practical sessions parallelly with demonstrations, so it is a scope to add more theoretical concepts. • The unit - III should be allotted more time as it covers scheduling algorithms.	• Add memory management and I/O management in Syllabus
CA 118 : Advanced Programming	• Unit IV is very short, so some more content can be added. • The sequence of Unit-V and VI needs to be changed	• Add other preprocessor directives such as ,#ifdef,#ifndef,#if,#else,#elif,#endif • Change the sequence of units V and VI
CA 119 : Database Fundamentals	• Unit-II is very short. It doesn't require 08 Hours. • If possible add Generalization and Specialization concept in Unit-II.	• Add the suggested topics

Resolutions 14.4

- Passed the resolution to apply the suggested changes in the courses of the BCA programme.

Note: - Annexure-V is attached for revised syllabus of courses of BCA based on faculty feedback.

Item 14.5 : To inform about result analysis of summer examination of academic year 2016-17

Proceedings: The chairman of BOS discussed the result of summer examination held during the academic year 2016-2017.

Resolutions 14.5

- All BOS and FB members are made aware about results of summer examination.

Note: - Annexure-VI is attached for Result Analysis of the academic year 2016-2017 summer examination

Item 14.6: To discuss the patterns of University Examination Papers

Proceedings: The chairman of BOS has explained the format and content of university papers, and asked for feedback for patterns of questions in university examination.

The suggestion is to give more weight age on comprehensive questions and some ideal questions that reflect the important aspects of a course should always be included in the question paper.

Resolutions 14.6

- Passed the resolution to ask faculty members to prepare question paper with suggested guidance.

Item 14.7: To Approve panel of examiners for University Examination
Proceedings: The chairman of BOS asked members and invitees for the suggestions for panel of examiners in university examination.

Resolutions 14.7

- Approved the panel of examiners for university examination.

Note: - Annexure-VII is attached for panel of examiners.

Item 14.8: To approve the research scholar synopsis

Proceedings : The chairman of BOS circulated the synopsis of research scholar and asked for any suggestions, and softcopy of the synopsis will be circulated to all the members and the members have to suggest any changes (if applicable) within 10 days from the receipt of mail.

Resolutions13.10

- The synopsis was approved.

Note: -Annexure-VIII is attached for the information about research scholar.

Other Item:-

Since, there was no other item to be discussed, the meeting ended with vote of thanks to the Chair.

SMT. CHANDABEN MOHANBHAI PATEL INSTITUTE OF COMPUTER APPLICATIONS
CMPICA
CHANGA

ANNEXURE-V

MODIFIED SYLLABUS OF BCA BASED ON FACULTY FEEDBACK

CA115:Management Information System
(100 Marks)

Contact Hours: 03

Objective: The objective of this course is to provide significance of information systems in management of organizations and various business processes effectively and efficiently.

Pre-requisite: None.

Methodology & Pedagogy: During the Theory sessions, illustrations of working real time information system will be demonstrated. Industrial visits will be arranged in order to demonstrate actual functioning of such systems. Students will be required to carry out a case study of such system.

Learning Outcomes: Student will learn to analyze and facilitate strategic and operational activities in the organization. The student shall study how organizations evaluate, design, implement, manage, and utilize systems to generate information to improve efficiency and effectiveness of decision making.

Outline of the Course:

Unit No.	Title of the Unit	Minimum Number of Hours
		Theory
1.	Introduction to Information System	05
2.	Transaction Processing Systems	07
3.	Management Information System	06
4.	Decision Support System	06
5.	Knowledge Management & Executive Support Systems	07
6.	Introduction To ERP and Technology	05

Total Hours (Theory): 36

Total: 36

Detailed Syllabus:

Unit - I: Introduction to Information System Hours:05

Data & Information, What is a system, Types of Systems, Types of information, Quality of Information, What is an Information System, Functions of Information System,

CA 116: Numerical and Statistical Methods (100 Marks)

Contact Hours: 03

Objective: To acquaint the students with the Numerical and Statistical techniques required for solving certain Real world problems. At the end of the course the students should be able to tackle moderate size real world problems using appropriate techniques.

Pre-requisite: Foundation of Mathematics

Methodology & Pedagogy: During Theory lectures illustrations of certain real world problems requiring Numerical computations will be explained. Numerical and Statistical methods will be introduced as tools for solving such problems also be emphasized

Outline of the Course:

Unit No.	Title of the Unit	Minimum Number of Hours
		Theory
1	Basic Statistics Methods	06
2	Basic of Probability	05
3	Probability Distribution	05
4	Solutions of Non-linear Equation	06
5	Solution of Simultaneous Linear Equation	07
6	Interpolation and Numerical Integration	07

Total Hours (Theory): 36

Total: 36

Detailed Syllabus:

Unit-I: Basic Statistics Methods Hours: 06

Basic vocabulary of statistics. Measure of central tendency: Mean Median and Mode for group and ungroup data, Measure of dispersion: Range, Mean Deviation, Variance and Standard Deviation for group and ungroup data.

CA 117: Operating Systems Concepts
(200 Marks)

Contact Hours: 07

Objective: The objective of this course is to provide working knowledge of operating systems which is crucial in effective operation and use of one's computer system. Also, to make students understand multi-user concepts, use of system editors, basic UNIX commands, and develop their ability to write script files.

Pre-requisite: None.

Methodology & Pedagogy: In order to achieve the course objectives, students will first be introduced to the basic operating system concepts and basic functions. During practical sessions, the students will be required to use DOS and UNIX commands to understand the system properties and to write script files.

Learning Outcomes: Upon Successful completion of the course, student will learn basic fundamental concepts of operating system and basic DOS and UNIX commands. Students also get familiar with a various operating Systems and its usage, Students will learn How to create and Write Batch Files and Shell script using editors.

Outline of the Course:

Unit No.	Title of the Unit	Minimum Number of Hours	
		Theory	Practical
1.	Basic Concepts and Usage of OS	06	36
2.	Process Management	08	
3.	CPU Scheduling	08	
4.	Memory management and I/O Management	10	
5.	Operating System Commands, Editors and Filters	08	
6.	Shell Programming	08	

Total Hours (Theory): 48

Total Hours (Lab): 36

Total: 84

CA 118: Advanced Programming
(200 Marks)

Contact Hours: 07

Objective: The main aim of the course is to enhance the knowledge of basic C programming concepts with the advanced programming concepts like pointers, structures, files and so on to the students. With this course, students would be able to understand the use of pointers in C programming, also they will be able to create their own user-defined data types. Developing applications in C that performs input/output on files.To understand the implementations of basic linear data structures like linked list, stack, queue.

Pre-requisite: Fundamental Concepts Of Programming Language

Methodology &Pedagogy: During theory lectures the emphasis will be given on theoretical concepts of structure, pointers and file management. During practical sessions the concepts learned in theory lectures will be implemented in depth by considering real life systems by using file management.

Learning Outcomes: At the end of the course a student will be able to know many of the useful and advanced features of the C language, and be able to produce a program using professional programming techniques.
Students would be able to understand and apply the pointers, memory allocation techniques and use of files for dealing with variety of problems. Students would also be able to implement various data structures.

Outline of the Course:

Unit No.	Title of the Unit	Minimum Number of Hours	
		Theory	Practical
1	Pointers	10	36
2	Structure, Union, and Enumerated Data Types	10	
3	Files	8	
4	Preprocessor Directives	6	
5	Stacks and Queues	6	
6	Linked Lists	8	

Total Hours (Theory): 48

Total Hours (Lab): 36

Total: 84

CA119: Database Fundamentals
(200 Marks)

Contact Hours: 07

Objective: The main aim of the course is to introduce database fundamentals to the students. With this course we shall demonstrate database development activities and prepare students for proficiency in developing database for commercial applications.

Pre-requisite: Basic knowledge of working with computer.

Methodology & Pedagogy: During the theory lectures, concepts for data storage will be discussed. Also DBMS and RDBMS concepts will be discussed in depth. The database applications used in the real world will be discussed with necessary examples. During the laboratory hours students will implement the concepts that are discussed during lecture.

Learning Outcomes: At the end of the course, the students will be able to understand the fundamentals of database development and management. Upon successful completion of the course, the students will also be able to design and create database, define queries for database management and data retrieval. Students shall be able to learn and apply the basic database concepts in real world applications.

Outline of the Course:

Unit No.	Title of the Unit	Minimum Number of Hours	
		Theory	Practical
1	Introduction to Database System	04	36
2	Data Modeling using Entity Relationship Model	08	
3	Relational Data Modeling	08	
4	Database Design Methodology	08	
5	Schema Definition, Constraints, Queries	10	
6	Advanced Query Processing	10	

Total Hours (Theory): 48

Total Hours (Lab): 36

Total: 84

Annexure III

Teaching and Learning Scheme

Teaching and Examination Scheme (MCA Lateral Programme)
Effective from Year 2017-18

Semester-I

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA826-CA829	Elective-I	3	-	3	3	10	20	70	-	-	-	100
CA830	Object Oriented Software Engineering	-	2	2	2	-	-	-	15	15	70	100
CA831.01	Enterprise Computing	3	3	6	6	10	20	70	15	15	70	200
CA832	Visual Programming	3	3	6	6	10	20	70	15	15	70	200
CA833	Web Designing concepts	-	3	3	3	-	-	-	15	15	70	100
CA834.01	Advanced Database Technologies	3	3	6	6	10	20	70	15	15	70	200
HS703.01 C	Languages (French)	-	2	2	2	-		-	30		70	100
HS701 C	Advance Critical Thinking and Logic	2	-	2	2	30		70	-	-	-	100
HS704 C	Academic Speaking	-	2	2	2	-		-	30		70	100
	University Elective-I **	2	-	2	2	30		70				100
		16#	14#	30#	30	600			500			1100

Marks and credits will vary based on the selection of the Humanities courses by the students, however total credits and marks will be 30 and 1100 respectively.

****** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **CA730 Internet and Web Designing** course for others**.**

Elective-I

1. CA826- Statistical Methods and Optimization Techniques
2. CA827-Advanced Operating Systems
3. CA828-Cyber Security Fundamentals
4. CA829-Basics of Cloud Computing

University Elective-I

No	Course Code	Course Name	Department/Faculty
1	MA771	Reliability and Risk Analysis	Mathematics
2	EE 781	Optimization Techniques	Engineering
3	ME781	Occupational Health and Safety	Engineering
4	CE 772	Research Methodology	Engineering
5	PT795	Health & Physical Activity	Physiotherapy
6	NR 751	Women's Health	Nursing
7	RD701	Introduction to Analytical Techniques	Applied Science
8	RD702	Introduction to Nanoscience& Technology	Applied Science
9	MB650	Creative Leadership	Faculty of Management Studies
10	PH825	Community Pharmacy Ownership	Pharmacy

Teaching and Examination Scheme (MCA Lateral Programme)
Effective from Year 2017-18

Semester-II

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA835-838	Elective-II	4	3	7	7	10	20	70	15	15	70	200
CA839.01	Open Source Technology	3	3	6	6	10	20	70	15	15	70	200
CA840.01	Mobile Application Technology	3	3	6	6	10	20	70	15	15	70	200
CA841	Software Quality Assurance	4	3	7	7	10	20	70	15	15	70	200
HS705 C	Academic Writing	-	2	2	2	-	-	-	30		70	100
	University Elective-II **	2	-	2	2	30		70				100
		16	14	30	30	500			500			1000

****** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **Mobile Application Development** course for others**.**

Elective-II

1. CA835-Windows Communication Foundation Framework
2. CA836-Frameworks and Applications
3. CA837-Procurement, Implementation and Management of IT Systems
4. CA838-Advanced Network Management and Security

University Elective-II

No	Course Code	Course Name	Department/Faculty
1	EE782	Energy Audit and Management	Engineering
2	CE771	Project Management	Engineering
3	IT771	Cyber Security and Laws	Engineering
4	PT796	Fitness & Nutrition	Physiotherapy
5	NR 752	Epidemiology and Community Health	Nursing
6	OC733	Introduction to Polymer Science	Applied Science
7	MB651	Software based Statistical Analysis	Management
8	PH826	Intellectual Property Rights	Pharmacy
9	MA772	Design of Experiments	Mathematics

Teaching and Examination Scheme (MCA Lateral Programme)
Effective from Year 2017-18

Semester-III

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA918-921	Elective-III	4	3	7	7	10	20	70	15	15	70	200
CA922	Open Source Frameworks	4	3	7	7	10	20	70	15	15	70	200
CA923	Data Mining and Analytics	4	3	7	7	10	20	70	15	15	70	200
CA924	Mini Project	-	6	6	6	-	-	-	30		70	100
		12	15	27	27	300			400			700

Elective-III

1. CA918- Collaboration Technologies (ONLY for students who have completed Windows Communication Foundation Framework offered in Elective Set I)
2. CA919-Web Technologies (ONLY for students who have completed Frameworks and Applications offered in Elective Set I)
3. CA920-Advance Management Information System
4. CA921-Intrusion Detection and Computer Forensics

Teaching and Examination Scheme (MCA Lateral Programme)
Effective from Year 2017-18

Semester-IV

Course Code	Course Title	Teaching Scheme			Credit	Internal	End Semester Examination		Total
		Contact Hours				Continuous Evaluation	Report	Presentation & Viva	
		Inst.	Industry	Total					
CA925	Project Work	2	28	30	30	200	200	400	800

TEACHING SCHEME
FOR

BCA PROGRAMME
(1ST, 2ND& 3RDYEAR)

EFFECTIVE FROM
ACADEMIC YEAR 2016-17

Teaching and Examination Scheme (BCA Programme)
Effective from Year 2016-17

Semester-V

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA308–313	Elective-VI	4	3	7	7	10	20	70	15	15	70	200
CA314	Object Oriented Programming Through JAVA	4	3	7	7	10	20	70	15	15	70	200
CA315	Application development using .NET Framework	4	3	7	7	10	20	70	15	15	70	200
CA316	Software Engineering	-	3	3	3	-	-	-	15	15	70	100
HS124 C	Professional Communication	-	2	2	2				30		70	100
		12	14	26	26	300			500			800

Elective-VI

1. CA308 –Introduction to Open Source Technology
2. CA309 –Advanced Computer Networks
3. CA310 –Operation Research
4. CA311–Embedded Programming
5. CA312-Multi Media
6. CA313-Ruby on Rail Architecture

Semester-VI

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA317-319	Elective-VII	4	-	4	4	10	20	70	-	-	-	100
CA320 – 322	Elective-VIII	-	3	3	3	-	-	-	15	15	70	100
CA323	Minor Project	-	15	15	15	-	-	-	100		300	400
HS125 C	Society, Governance and International Studies	-	2	2	2	-	-	-	30		70	100
		04	20	24	24	100			600			700

Elective- VII

1. CA317 –Artificial Intelligence
2. CA318–Cryptography and Network Security
3. CA319–Data Compression Techniques

Elective- VIII

1. CA320–Software Project Management
2. CA321–Basics of Mobile Applications
3. CA322–Computer Graphics-II

Analysis of Feedback on the syllabus for the academic year 2018-2019 given by Stakeholders

Sr. No.	Stakeholder	Feedback Regarding Curriculum	Action Taken
1	Expert from Industry	Aptitude preparation for pre final semester students	Allow 30 minutes of preparation during lab hours. Arrange extra lectures and workshop for preparation. Refer Annexure I for Departmental meetings.
		• Basic fundamental concepts should be covered in more detail	Arrangement of extra classes after working hours, for preparation of core subjects. Refer Annexure I for Departmental meetings.
		Include building of responsive sites.	We have included the topic in the syllabus w.e.f AY 2019-2020. Refer Annexure II for BOS meeting minutes.
2	Employers	Focus on core languages and different forms of programming.	Code optimization with correct concept application and selection is practiced with different courses.
		Focus on php framework and its use with XML.	Laravel framework will be covered with the new syllabus w.e.f AY 2019-2020. PDO and responsive web application development using AJAX and PHP will be covered with the new syllabus w.e.f AY 2019-2020. Refer Annexure II for BOS meeting minutes.
		Focus on python programming and its frameworks.	Python programming is already there in the syllabus and with the new syllabus we have introduced Django framework w.e.f AY 2019-2020. Refer Annexure II for BOS meeting minutes.
3.	Academic Peers	Focus on Front end designing	The syllabus of Masters is reformed to include JavaScript frameworks w.e.f 2019-2020. In Bachelors it is incorporated in the syllabus effective from AY 2016-2017 for BCA and AY 2017-2018 for B.Sc.(1T). Refer Annexure III for Teaching and Learning Scheme.
		Include some courses where research component is focused	The syllabus includes courses like Artificial Intelligence, Data Science, Embedded Programming, Data Mining and Analytics, Python programming, etc. Refer Annexure III for Teaching and Learning Scheme.
4	Faculty members	No Suggestions	

5	Alumni	Mobile Application Development using cross platform and multiple OS	We have include in the new syllabus of MCS and M.Sc.(1T) to be implemented from Academic Year 2019-2020. Refer Annexure II for Teaching and Learning Scheme.
		Include frameworks of php in syllabus	We have include in the new syllabus of MCA and M.Sc.(1T) to be implemented from Academic Year 2019-2020. Refer Annexure II for Teaching and Learning Scheme.
6	Parents	Include extra lectures for the existing courses in which students don't understand	Students are asked to solve the queries on one to one basis with the respective faculty conducting course in case of more students faculty arranges extra lecture, to solve doubts or repeat the topic in the regular sessions.
		Include more practical courses	Topics other than syllabus are covered through workshop and expert lectures. Refer Annexure I for Departmental meetings.
7	Final semester students	Add advanced topics in MCA and M.Sc.(1T) syllabus	We have redesigned the syllabus to include advanced topics. Refer Annexure II for Teaching and Learning Scheme.



Annexure I

Departmental minutes of meeting

MINUTES OF THE FIFTH MEETING (05 of 2018) OF DEPARTMENT

The faculty meeting of CMPICA was held on 2nd July ,2018 at 3:00 PM (Board Room). The meeting was conducted by Dr. Atul Patel, and following people attended the meeting:

1. Dr. Dharmendra Patel
2. Dr. Nirali Honest
3. Dr. Sanskruti Patel
4. Dr. Pranav Vyas
5. Dr. Jaimin Undavia
6. Dr. Chirag Patel
7. Mr. Abhilash Shukla
8. Ms. Swati Patel
9. Ms. Rachana Patel
10. Mr. Arpit Trivedi
11. Ms. Shreya Banker.
12. Ms. Mubina Malik
13. Mr. Kanubhai Patel
14. Ms. Dhatri Raval
15. Ms. Hetal Patel
16. Mr. Hardik R. Patel
17. Ms. Sheenal Patel
18. Ms. Nilam Desai
19. Mr. Tushar Mehta
20. Mr. Hardik I.Patel
21. Ms. Rupal Patel
22. Ms. Pooja Parekh
23. Dr. Pritpal Singh
24. Ms. Hetal Desai
25. Ms. Saumya Patel
26. Mr. Alok Patel

Item #1: Atul sir asked to fill the vacation slots.

Item #2: Admission Process Activity: Sir discussed the admission process and number of admission done till date.

- MCAL: 112
- B.Sc.(IT) – 101
- M.Sc.(IT) – 22
- BCA – 113

Item#3: Atul sir had informed faculties to start the placement process for the 1st semester of MCAL students.

Item#4: AI and Deep Learning workshop will organize during 7-9 July,2018.

Item#5: For pre-final semester students, allow aptitude and technical preparation session for last 30 minutes of laboratory hours. Arrange extra classes after working hours to prepare students for core and fundamental concepts.

MINUTES OF THE EIGHTH MEETING (08 of 2018) OF DEPARTMENT

The faculty meeting of CMPICA was held on 1st November,2018 at 3:15 PM (Board Room). The meeting was conducted by Dr. Atul Patel, and following people attended the meeting:

1. Dr. Dharmendra Patel
2. Dr. Nirali Honest
3. Dr. Sanskruti Patel
4. Dr. Jaimin Undavia
5. Dr. Chirag Patel
6. Mr. Nilay Ganatra
7. Mr. Abhilash Shukla
8. Ms. Swati Patel
9. Ms. Rachana Patel
10. Mr. Arpit Trivedi
11. Ms. Shreya Banker.
12. Ms. Mubina Malik
13. Mr. Kanubhai Patel
14. Ms. Dhatri Raval
15. Ms. Hetal Patel
16. Mr. Hardik R. Patel
17. Ms. Sheenal Patel
18. Ms. Nilam Desai
19. Mr. Tushar Mehta
20. Mr. Hardik I.Patel
21. Ms. Rupal Patel
22. Ms. Pooja Parekh
23. Dr. Pritpal Singh
24. Ms. Hetal Desai
25. Mr. Alok Patel
26. Mr. Krishna kant
27. Dr. Nilay Vaidya
28. Ms. Mittal Desai

Item #1: According to the discussion in Examination Reform Committee Meeting faculty have to conduct Online exam and Open book exam for both theory as well as practical. They suggest to apply new pedagogy for examination. Sir asked suggestion for theory open book exam, some of the faculties discussed and concluded to apply open book theory exam in certain subjects like System Analysis and Design, Advance Database Technology and Advance Java. It is also, instructed by grace mark analysis committee per subjects there will be maximum 10 marks grace for the student.

Item#2: Atul sir discussed some of the general points:

- According to the management there will be discussion session on every Saturday for faculties to encourage research area work. Also sir has informed to start discussion from next upcoming Saturday and Ph.D. Scholar will discuss their research work.
- Faculties have to published at least 2 research paper in a year.
- Minimum 10 expert sessions to be conducted in a year for post graduate and under graduate students.
- Institute wise there will be best teacher award.
- Management is looking for inter department collaborative projects.
- Faculties can extend the industrial training days

Item#3: Regarding AAA Observation: There should be more number of participation of faculties outside the university and evaluation system need to be changed.

Item#4 : Following expert sessions were organized,

- Expert Session on "Change Detection and Version Management for Software Projects" was conducted on 12-10-2018 by Ms. Ruchi Kansara, Associate Principal Engineer at Future Group, Ahmedabad.
- Expert Session on "Introduction to Java Framework Struts2" was conducted on 12-10-2018 by Ms. Ruchi Kansara, Associate Principal Engineer at Future Group, Ahmedabad.

Annexure II

BOS meeting

Smt. ChandabenMohanbhai Patel Institute of Computer Applications

Sixteenth joint meeting of the Board of Studies and Faculty Board for Faculty of Computer Science and Applications at CHARUSAT.

Date: 25th August, 2018
Time: 10:30 a. m.
Venue: Board Room, CMPICA, CHARUSAT Campus, Changa

The Sixteenth joint meeting of Board of Studies and Faculty board for Faculty of Computer Science and Applications, CHARUSAT was held on 25th August, 2018 at 10:30 a.m. at Board room, Smt. Chandaben Mohanbhai Patel Institute of Computer Applications, CHARUSAT, Changa.

Following members were present at the meeting:

1. Dr. Dharmendra Patel,Associate Professor,CMPICA,Changa, Chairman BOS, Member FB
2. Dr. Atul Patel, Principal CMPICA,Changa, Chairman FB, Member BOS
3. Dr. Darshan Chokshi, Professor, G.H.Patel, SP University,V.V.Nagar, Member FB
4. Mr. Pravin Jain, Member BOS, Director Technical, Zensoft Technologies, Vadodara
5. Mr. Kishore Tarachandani, CEO Dots and Coms,Baroda, Member FB
6. Mr. Nishant Joshi, Technical Architect ,Cybage Software Pvt.Ltd., Gandhiagar (Alumni)(Invitee)
7. Ms. Ruchi Kansara, Assistant General Manager,Future Group,Ahmedabad(Alumni)(Invitee)
8. Dr. Nirali Honest,Assistant Professor,CMPICA,Changa, Member BOS
9. Dr. Jaimin Undavia,Assistant Professor,CMPICA,Changa, Member FB
10. Dr. Sanskruti Patel,Assistant Professor,CMPICA,Changa, (Invitee)
11. Dr. Chirag Patel,Assistant Professor,CMPICA,Changa, Member BOS
12. Dr. Pranav Vyas, Assistant Professor,CMPICA,Changa, (Invitee)
13. Dr. Pritpal Singh,Assistant Professor,CMPICA,Changa, (Invitee)

Following members could not attend the meeting due to their other preoccupations:

1. Dr. Mukesh Patel, Member FB and BOS
2. Dr. Paresh Virparia, H.O.D, G.H.Patel, SP University,V.V.Nagar, Member FB
3. Mr. Rahul Sanghvi, CEO, Dexter Consultancy, Ahmedabad , Member FB
4. Mr. Ashok Patel, Advisor CHARUSAT , Member BOS
5. Dr. Aneesh Chinubhai, CTO,PDPU,Gandhainagar,(Invitee)
6. Dr. Kanubhai Patel, Assistant Professor, CMPICA, Changa, (Invitee)
7. Dr. Hetal Patel, Assistant Professor,CMPICA,Changa, (Invitee)

Initiation:-

The commencement of the meeting was made by Chairman of BOS by welcoming all the members and expressing gratitude for sparing their valuable time, afterwards a briefing on the agenda of the meeting was discussed.

Agenda, Proceedings & Resolutions: -

Item 16.1: To discuss and approve Minutes of 15th joint meeting of the BOS and FB.

Proceedings: Chairman of BOS has given brief about 15th joint meeting of BOS and FB to all members and invitees and asked them for suggestions or modifications if any.

Resolutions 16.1

Since there were no any suggestions or modifications, all members of BOS and FB approved the minutes of 15th joint BOS and FB meeting.

Item 16.2: To discuss and approve teaching and examination schemes of MCA and M.Sc.(IT) Programmes.

Proceedings: Chairman of BOS has given brief about the teaching and examination schemes of MCA and M.Sc.(IT) Programmes. The chairman of BOS also ask the suggestions regarding the PEO's and PO's and course titles.

Re

Resolutions 16.2

Since there were no any suggestions or modifications, all members of BOS and FB approved the the PEO's and PO's and teaching and examination schemes of MCA and M.Sc.(IT) Programmes.

Note : Annexure III is attached for the teaching and examination schemes of MCA, Annexure IV is attached for the teaching and examination schemes of M.Sc.(IT) programme.

Item 16.3: To discuss and approve detail syllabi of first year courses of MCA and M.Sc.(IT) programmes.

Proceedings: Chairman of BOS explained the content of each course.

The course wise suggestions given by members and invitees are enlisted in Table 1.

MCA Semester- I courses	
Course Code / Course Name	**Suggestions**
Visual Programming	□ Update the version of .Net to the latest version in the core book. (Kogent Solutions Inc.: ASP.Net 3.5 Black book, Dreamtech press, 2009.)

Advanced Database Technologies	• Add introduction to Big Data concepts. • Remove parallel and distributed database.
Software Engineering Paradigms	□ Core book 2 and 3 are of same author, keep the latest book. (2. Roger S. Pressman: Software engineering – A Practitioner's Approach, 7th Edition, ISBN: 978-007126782-3, McGraw-Hill Publication. 3. Roger S. Pressman: Software engineering – A Practitioner's Approach, 5th Edition, ISBN: 0-07-118458-9, McGraw-Hill Publication.)
Data Center Technology	• The content of the course is related to cloud computing, so change the title of course to cloud computing. • In unit – III instead of Google Apps use Google cloud.
Cyber Security and Computer Forensics	□ Core books need to be updated to include the latest version and year.
Internetworking with TCP/IP Protocol Suite	• In unit – III add the point to cover the distance vector and link state routing algorithms. • In unit – VI add the point to cover introduction to cryptography and SSL.
Advanced Operating Systems	□ In unit – VI change the Symbian OS and add IOS and android as core OS, add one more layer to show how to create a custom OS.
MCA Semester - II courses	
Course Code / Course Name	**Suggestions**
Web Application Development using Open Source Technology	• In unit – II add a topic to cover HTTP 2. • In unit – VI add a topic to cover web sockets.
Responsive Web Designing Using Framework	• In week 7-8 add a topic to cover MVVM instead of MVC architecture. • Add introduction to React JS and Vue JS. • Update the edition of books.
Mobile Application Technology : Android Platform	□ Add a topic to cover Introduction to Mobile Application Development Ecosystems and An Introduction to Hybrid Platform Mobile Application Development.
Mobile Application Development : iOS Platform	• Add a topic to cover Introduction to Mobile Application Development Ecosystems and An Introduction to Hybrid Platform Mobile Application Development. • The apple guidelines for releasing an ios app should be
	covered and followed while developing the mobile app.
HTTP Web Service for Enterprise Application	□ In unit – V add a topic to cover key mechanism using encryption for security issues.

Frameworks and Applications	• Add a topic to cover Spring Boot basics. • Remove the first reference book. (Rod Johnson: J2EE Design and Development, ISBN: 9780764543852.)
M.Sc.(IT) Semester - I courses	
Course Code / Course Name	**Suggestions**
Fundamentals of Computer Networks	Remove topics of token bus, token ring and add newer IEEE standards
Operating System Concepts	Add a topic to cover introduction to CPU scheduling algorithms.
Multi Paradigm Scripting using Python - I	Add a topic to cover python 2.x and python 3.x.
M.Sc.(IT) Semester - II courses	
Course Code / Course Name	**Suggestions**
Multi Paradigm Scripting using Python - II	Add a book for python having details of PHI publication and MIT press.

Other general suggestions to include topics in various courses :

- Cover Agile software development approach practically using professional development.
- Cover change management to introduce, GitHub, DevOps, etc.
- Cover node JS and webpack.
- Cover Wearable devices and IOT concepts.
- Cover Mocha, Chai JS, Java Management Extensions (JMX).

Resolutions 16.3

It is resolved to add the suggested points in the courses of MCA Lateral and M.Sc.(IT) as below,

- Update the version of .Net to the latest version in the core book in the course Visual Programming.
- Add introduction to Big Data concepts and Remove parallel and distributed database in the course Advanced Database Technologies.
- Update Core book 2 and 3 are of same author, keep the latest book in the course Software Engineering Paradigms.
- Change the title of course Data Center Technology to cloud computing. Update unit – III content instead of Google Apps use Google cloud.
- Update core books to include the latest version and year in the course Cyber Security and Computer Forensics.

- Update unit – III add the point to cover the distance vector and link state routing algorithms and unit – VI add the point to cover introduction to cryptography and SSL in the course Internetworking with TCP/IP Protocol Suite.
- Update unit – VI change the Symbian OS and add IOS and android as core OS, add one more layer to show how to create a custom OS in the course Advanced Operating Systems.
- Update unit – II add a topic to cover HTTP 2 and in unit – VI add a topic to cover web sockets in the course Web Application Development using Open Source Technology.
- Update week 7-8, add a topic to cover MVVM instead of MVC architecture. Add introduction to React JS and Vue JS, Update the edition of books in the course Responsive Web Designing Using Framework.
- Add a topic to cover Introduction to Mobile Application Development Ecosystems and An Introduction to Hybrid Platform Mobile Application Development in the course Mobile Application Technology: Android Platform and Mobile Application Development: iOS Platform
- Follow the apple guidelines for releasing an ios app while developing the mobile app in the course Mobile Application Development: iOS Platform.
- Update unit – V add a topic to cover key mechanism using encryption for security issues in the course HTTP Web Service for Enterprise Application.
- Add a topic to cover Spring Boot basics and Remove the first reference book in the course Frameworks and Applications.
- Remove the topics token bus, token ring and add new standards of IEEE in fundamentals of Computer Networks.
- Add a topic to cover introduction to CPU scheduling algorithms in the course Operating System Concepts.
- Add a topic to cover python 2.x and python 3.x. in the course Multi Paradigm Scripting using Python - I
- Add a book for python having details of PHI publication and MIT press in the course Multi Paradigm Scripting using Python – II.

To cover the general suggestions workshops and STTP will be arranged.
Refer Annexure III and IV for MCA and M.Sc.(IT) programme first year courses.

Note : Annexure III is attached for detail syllabi of MCA, Annexure IV is attached for detail syllabi of M.Sc.(IT) programme.

Item 16.4: To discuss the result analysis for the summer examination (2017-18)

Proceedings: Chairman of BOS discussed the result analysis for the summer examination (201718). The courses having more number of backlogs were discussed.

Resolutions 16.4

The result was found satisfactory.

Item 16.5: To approve the panel of examiners for examination of academic year 2018-19.

Proceedings: Chairman of BOS displayed the list of internal and external examiners for all the programmes.

Resolutions 16.5
The members and invitees approved the list of examiners.

Item 16.6: Any other item with permission of chair, if any.
Proceedings: Chairman of BOS asked for the feasibility to start PGDCA programme with specialization in Gaming.

Resolutions 16.6
The members and invitees suggested to study market scope and decide to start for PGDCA programme or certification course for gamming. The members and invitees suggested to circulate softcopy of reports in the meeting to save paper.

Since, there was no other item to be discussed, the meeting ended with vote of thanks to the Chair.

SMT. CHANDABEN MOHANBHAI PATEL INSTITUTE OF COMPUTER APPLICATIONS
CMPICA
CHANGA

Annexure-III

Program Educational Objectives(PEOs) , Program Objective(POs) and Program Structure of M.C.A Programme

Semester I

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			T
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA843	Enterprise Computing using Java EE	3	3	6	6	10	20	70	15	15	70	
CA844	Visual Programming	3	3	6	6	10	20	70	15	15	70	
CA845	Advanced Database Technologies	3	3	6	6	10	20	70	15	15	70	
CA846	Software Engineering Paradigms	3	-	3	3	10	20	70	-	-	-	
CA847-CA850	Elective-I	3	-	3	3	10	20	70	-	-	-	
HS703.01C	Languages (French)	-	2	2	2	-		-	30		70	
HS704C	Academic Speaking	-	2	2	2	-		-	30		70	
	University Elective-I **	-	2	2	2	-	-	-	30		70	
		15	13	28	28	500			500			1

** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **Internet and Web Designing** course for others.

Elective-I

1. CA847 Cloud Computing
2. CA848 Cyber Security and Computer Forensics
3. CA849 Internetworking with TCP/IP Protocol Suite
4. CA850 Advanced Operating Systems

University Elective-I

No	Course Code	Course Name	Department/Faculty
1	MA771.01	Reliability and Risk Analysis	Mathematics
2	EE781.01	Optimization Techniques	Engineering
3	ME781.01	Occupational Health & Safety	Engineering
4	CE772.01	Research Methodology	Engineering
5	PT795.01	Health & Physical Activity	Physiotherapy
6	NR755	First Aid & Life Support	Nursing
7	RD701.01	Introduction to Analytical Techniques	Applied Science
8	RD702.01	Introduction to Nanoscience and Technology	Applied Science
9	MB650	Creative Leadership	Management
10	PH891	Community Pharmacy Ownership	Pharmacy
11	PD261	Astrophysics, Space and Cosmos-1	Applied Science

Semester II

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA851	Web Application Development using Open Source Technology	3	3	6	6	10	20	70	15	15	70	200
CA852	Software Quality Assurance	3	3	6	6	10	20	70	15	15	70	200
CA853	Responsive Web Designing Using Framework	-	2	2	2	-	-	-	15	15	70	100
CA854-CA855	**Elective II**	3	3	6	6	10	20	70	15	15	70	200
CA856-CA858	**Elective-III**	3	3	6	6	10	20	70	15	15	70	200
HS705 C	Academic Writing	-	2	2	2	-	-	-	30		70	100
	University Elective-II **	-	2	2	2	-	-	-	30		70	100
		12	18	30	30	400			700			1100

** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **Mobile Application Development** course for others.

Elective-II

1. CA854 Mobile Application Technology – Android Platform
2. CA855 Mobile Application Development-iOS Platform

Elective-III

1. CA856 HTTP Web Service for Enterprise Application
2. CA857 Framework and Applications
3. CA858 Multi Paradigm Scripting using Python

University Elective-II

No	Course Code	Course Name	Department/Faculty
1	EE782.01	Energy Audit and Management	Engineering
2	CE771.01	Project Management	Engineering
3	IT771.01	Cyber Security and Laws	Engineering
4	PT796.01	Fitness & Nutrition	Physiotherapy
5	NR752.01	Epidemiology and Community Health	Nursing
6	OC733.01	Introduction to Polymer Science	Applied Science
7	MB651	Software based Statistical Analysis	Management
8	PH892	Intellectual Property Rights	Pharmacy
9	MA772.01	Design of Experiments	Mathematics

Semester III

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA926	Open Source Frameworks	3	3	6	6	10	20	70	15	15	70	200
CA927	Data Analytics	3	3	6	6	10	20	70	15	15	70	200
CA928-CA931	Elective-IV	3	-	3	3	10	20	70	-	-	-	100
CA932	**Mini Project**	-	15	15	15	-	-	-	100		200	300
		9	21	30	30	300			500			800

Elective-IV

1. CA928 Artificial Intelligence
2. CA929 Digital Image Processing
3. CA930 Compiler Construction
4. CA931 Analysis and Design of Algorithms

Semester IV

Objective

- To undertake a project in the area of computer science/ application and may be carried out by identifying research or system oriented application problem in any one of business/ service computerized organization or information technology organization.

Outcome

- Students can able to develop ability to apply theoretical and practical tools/techniques to solve any real life problems

Course Code	Course Title	Teaching Scheme			Credit	Internal	End Semester Examination		Total
		Contact Hours				Continuous Evaluation	Report	Presentation & Viva	
		Inst.	Industry	Total					
CA933	Project Work	2	28	30	30	200	200	400	800

Annexure-IV

Program Educational Objectives(PEOs), Program Objective(Pos) and Program Structure of M.Sc.(IT) Programme

Semester I

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			To
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
MS114	Software Engineering Paradigms	3	-	3	3	10	20	70	-	-	-	10
MS115	Framework And Application using .NET	3	3	6	6	10	20	70	15	15	70	20
MS116	Multi Paradigm Scripting using Python - I	3	3	6	6	10	20	70	15	15	70	20
MS117	Database Technologies	3	3	6	6	10	20	70	15	15	70	20
MS118-MS119	Elective-I	3	-	3	3	10	20	70	-	-	-	10
HS141.02 C HS105.02 C	Foreign Languages (French/German/Spanish/Chinese) Academic Speaking and Presentation Skills	-	2	2	2	-	-	-	30		70	10
	University Elective-I **	-	2	2	2	-	-	-	30		70	10
		15	13	28	28	500			500			10

** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **CA730 Internet and Web Designing** course for others.

Elective-I

1. MS118Fundamentals of Computer Networks
2. MS119 Operating System Concepts

University Elective-I

No	Course Code	Course Name	Department/Faculty
1	MA771.01	Reliability and Risk Analysis	Mathematics
2	EE781.01	Optimization Techniques	Engineering
3	ME781.01	Occupational Health & Safety	Engineering
4	CE772.01	Research Methodology	Engineering
5	PT795.01	Health& Physical Activity	Physiotherapy
6	NR755	First Aid & Life Support	Nursing
7	RD701.01	Introduction to Analytical Techniques	Applied Science
8	RD702.01	Introduction to Nanoscience and Technology	Applied Science
9	MB650	Creative Leadership	Management
10	PH891	Community Pharmacy Ownership	Pharmacy
11	PD261	Astrophysics, Space and Cosmos-1	Applied Science

Semester II

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
MS217	Web Development using Open Source Technology	3	3	6	6	10	20	70	15	15	70	200
MS218	Software Testing	3	3	6	6	10	20	70	15	15	70	200
MS219	Object Oriented Programming using Java	3	3	6	6	10	20	70	15	15	70	200
MS220-MS222	Elective II	3	3	6	6	10	20	70	15	15	70	200
HS106.02 C	Academic Writing	-	2	2	2	-	-	-	30		70	100
	University Elective-II **	-	2	2	2	-	-	-	30		70	100
		12	16	28	28	400			600			1000

** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **CA842 Mobile Application Development** course for others.

Elective-II

1. MS220 HTTP Web Service for Enterprise Application
2. MS221 Multi Paradigm Scripting using Python - II
3. MS222 Game Development - I

University Elective-II

No	Course Code	Course Name	Department/Faculty
1	EE782.01	Energy Audit and Management	Engineering
2	CE771.01	Project Management	Engineering
3	PT796.01	Fitness & Nutrition	Physiotherapy
4	NR752.01	Epidemiology and Community Health	Nursing
5	OC733.01	Introduction to Polymer Science	Applied Science
6	MB651	Software based Statistical Analysis	Management
7	PH892	Intellectual Property Rights	Pharmacy
8	MA772.01	Design of Experiments	Mathematics
9	PD262	Astrophysics, Space and Cosmos-2	Applied Science

Semester III

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
MS320	Open Source Frameworks	3	3	6	6	10	20	70	15	15	70	200
MS321	Advanced Java	3	3	6	6	10	20	70	15	15	70	200
MS322	JavaScript Frameworks	-	3	3	3	-	-	-	15	15	70	100
MS323	Mobile Application technology	3	3	6	6	10	20	70	15	15	70	200
MS324-MS327	**Elective-III**	3	3	6	6	10	20	70	15	15	70	200
CL144C	Environmental Sciences	-	2	2	2	-		-	30		70	100
		12	17	29	29	400			600			1000

Elective-III

1. MS324 Game Development-II
2. MS325 Data Analytics
3. MS326 Ruby on rails
4. MS327 Internetworking with TCP/IP

Semester 4

Objective

- To undertake a project in the area of computer science/ application and may be carried out by identifying research or system oriented application problem in any one of business/ service computerized organization or information technology organization.

Outcome

- Students can able to develop ability to apply theoretical and practical tools/techniques to solve any real life problems

SEMESTER-IV

Course Code	Course Title	Teaching Scheme				Internal	End Semester Examination		Total
		Contact Hours			Credit	Continuous Evaluation	Report	Presentation & Viva	
		Inst.	Industry	Total					
MS402	Dissertation/Project Work	2	28	30	30	200	200	400	800

Annexure III

Teaching and Learning Scheme

Annexure-III

Teaching and Examination Scheme for BCA Programme

Effective from Academic Year 2016-17

Teaching and Examination Scheme (BCA Programme)

Semester-I

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA109-110	Elective-I	3	-	3	3	10	20	70	-	-	-	100
CA111	Fundamental Concepts Of Programming Language	4	3	7	7	10	20	70	15	15	70	200
CA112	Introduction to Computers	4	3	7	7	10	20	70	15	15	70	200
CA113	Programming the Internet-I	-	3	3	3	-	-	-	15	15	70	100
CA114	Foundation of Mathematics	3	-	3	3	10	20	70	-	-	-	100
HS 101 -106 C	Liberal Arts	-	2	2	2	-		-	30		70	100
		14	11	25	25	400			400			800

Elective-I

1. CA109 –Introduction to Information Technology
2. CA110 – Foundation of Computer Organization

Teaching and Examination Scheme (BCA Programme)

Semester-II

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA115-116	Elective-II	3	-	3	3	10	20	70	-	-	-	100
CA117	Operating System Concepts	4	3	7	7	10	20	70	15	15	70	200
CA118	Advanced Programming	4	3	7	7	10	20	70	15	15	70	200
CA119	Database Fundamentals	4	3	7	7	10	20	70	15	15	70	200
CA120	Fundamentals of Commerce & Business Process	3	-	3	3	10	20	70	-	-	-	100
HS121C	English Language & Literature	-	2	2	2	30		70	-		-	100
		18	11	29	29	600			300			900

Elective-II

1. CA115–Management Information System
2. CA116–Numerical & Statistical Method

Teaching and Examination Scheme (BCA Programme)

Semester-III

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA209-210	Elective - III	3	-	3	3	10	20	70	-	-	-	100
CA211-212	Elective – IV	-	3	3	3	-	-	-	15	15	70	100
CA213	Programming the Internet-II	4	3	7	7	10	20	70	15	15	70	200
CA214	Object Oriented Programming Using C++	4	3	7	7	10	20	70	15	15	70	200
CA215	System Analysis and Design	3	-	3	3	10	20	70	-		-	100
HS122 C	Values and Ethics	2	-	2	2	30		70	-		-	100
CL142	Environmental Sciences	2	-	2	2	30		70	-		-	100
	University Elective – I **	-	2	2	2	-	-	-	30		70	100
		18	11	29	**29**	600			400			1000

****** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **Introduction to Web Designing** course for others**.**

Elective-III

1. CA209 – Fundamentals of Electronic Commerce
2. CA210 – Introduction to Economics

Elective-IV

1. CA211 – User Interface Design
2. CA212 - Visual Basic Applications

University Elective – I

EC281: Introduction to MATLAB Programming
CE281: Art of Programming
CL281: Environmental Sustainability and Climate Change
EE281: Electrical Engineering Materials
IT281:ICT Resources and Multimedia
ME281: Engineering Drawings
PH233: Fundamentals of Packaging
PD260:Basic Laboratory Techniques
NR251: First Aid & Life Support
PT191:Health Promotion and Fitness
CA224: Introduction to Web Designing
BM231:Banking and Insurance

Teaching and Examination Scheme (BCA Programme)

Semester-IV

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA216 – 220	Elective - V	4	3	7	7	10	20	70	15	15	70	200
CA221	Data Structures & Algorithms	4	3	7	7	10	20	70	15	15	70	200
CA222	Advanced Database System	-	3	3	3	-	-	-	15	15	70	100
CA223	Fundamentals of Computer Networks	3	-	3	3	10	20	70	-		-	100
HS123 C	Critical Thinking and Logic	2	-	2	2	-		-	30		70	100
	University Elective – II **	-	2	2	2	-	-	-	30		70	100
		13	11	24	**24**	300			500			800

****** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **Programming the Internet course** for others**.**

Elective-V

1. CA216 -Computer Graphics
2. CA217- Multi Paradigm Programming Language
3. CA218- System Programming
4. CA219- Scripting Language
5. CA220- Basics of Web Designing

University Elective - II

EC282: Prototyping Electronics with Aurdino
CE282: Web Designing
CL282: Basics of Environmental Impact Assessment
EE282: Electrical Power Utilization
IT282:Internet Technology and Web Design
ME282: Material Science
PH238: Cosmetics in daily life
NR261: Life Style Diseases & Management
PT192:Occupational Health & Ergonomics
CA225: Programming the Internet
BM241:Health Care Management

Teaching and Examination Scheme (BCA Programme)

Semester-V

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA308–313	Elective-VI	4	3	7	7	10	20	70	15	15	70	200
CA314	Object Oriented Programming Through JAVA	4	3	7	7	10	20	70	15	15	70	200
CA315	Application development using .NET Framework	4	3	7	7	10	20	70	15	15	70	200
CA316	Software Engineering	-	3	3	3	-	-	-	15	15	70	100
HS 124C	Professional Communication	-	2	2	2				30		70	100
		12	14	26	26	300			500			800

Elective-VI

1. CA308 –Introduction to Open Source Technology
2. CA309 –Advanced Computer Networks
3. CA310 –Operation Research
4. CA311–Embedded Programming
5. CA312-Multi Media
6. CA313-Ruby on Rail Architecture

Teaching and Examination Scheme (BCA Programme)

Semester-VI

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA317-319	Elective-VII	4	-	4	4	10	20	70	-	-	-	100
CA320 – 322	Elective-VIII	-	3	3	3	-	-	-	15	15	70	100
CA323	Minor Project	-	15	15	15	-	-	-	100		300	400
HS 125C	Society, Governance and International Studies	-	2	2	2	- -		-	30		70	100
		04	20	24	24	100			600			700

Elective- VII

1. CA317 –Artificial Intelligence
2. CA318–Cryptography and Network Security
3. CA319–Data Compression Techniques

Elective- VIII

1. CA320–Software Project Management
2. CA321–Basics of Mobile Applications
3. CA322–Computer Graphics-II

ANNEXURE-IV

TEACHING AND EXAMINATION SCHEME

FOR

B.Sc.(IT)

PROGRAMME

EFFECTIVE FROM

ACADEMIC YEAR 2016-17

Programme	Total Credits
B.Sc.(IT)	153

Semester-I

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA401	Introduction to Computers	-	3	3	3	-	-	-	10	20	70	100
CA402	Introduction to Programming in C	4	3	7	7	10	20	70	15	15	70	200
CA403	Information Technology and Digital Electronics	4	-	4	4	10	20	70	-	-	-	100
CA404	Web Fundamentals	3	-	3	3	10	20	70	-	-	-	100
CA405	Foundation of Mathematics	3	-	3	3	10	20	70	-	-	-	100
HS101-106 C	Liberal Arts	2	-	2	2	30		70	-		-	100
		16	06	22	22	500			200			700

Semester-II

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Pract	Total		Case Study	Tests		Term work	Tests		
CA406	Operating System Concepts	4	3	7	7	10	20	70	15	15	70	200
CA407	Advanced Programming in C	-	3	3	3	-	-	-	15	15	70	100
CA408	Database Fundamentals	4	3	7	7	10	20	70	15	15	70	200
CA409	Computer Oriented Numerical Methods	3	-	3	3	10	20	70	-	-	-	100
CA410	Fundaments of Commerce and Business Processes	3	-	3	3	10	20	70	-		-	100
HS121 C	English Language and Literature	1	1	2	2	25		25	25		25	100
		15	10	25	25	450			350			800

Semester-III

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
						Internal		External	Internal		External	
		Theory	Practical	Total		Case Study	Tests		Term work	Tests		
CA501	Programming the Internet	4	3	7	7	10	20	70	15	15	70	200
CA502	Fundamentals of Computer Networks	3	-	3	3	10	20	70	-	-	-	100
CA503	Object Oriented Programming Using C++	4	3	7	7	10	20	70	15	15	70	200
CA504	E-Commerce	3	-	3	3	10	20	70	-		-	100
CA505	System Analysis and Design	3	-	3	3	10	20	70	-		-	100
HS122C	Values and Ethics	2	-	2	2	30		70	-		-	100
	University Elective-I **	2		2	2	30+70=100 *						100
		19 #	08 #	27	27	600 #			300 #			900

** CMPICA has decided to offer **CA 224 Introduction to Web Designing** course for the students of other institutions. CMPICA students will opt any university elective offered by different institutions of the university.

Marks and credits will vary based on the selection of the university elective course by the students, however total credits and marks will be 27 and 900 respectively.

***** Examaination Scheme (Theory/Practical) is based on the choice of the course. However ,internal waightage is 30 and external waightage is 70.

University Electives

EC281: Introduction to MATLAB Programming
CE281: Art of Programming
CL281: Environmental Sustainability and Climate Change
EE281: Electrical Engineering Materials
IT281:ICT Resources and Multimedia
ME281: Engineering Drawings
PH233: Fundamentals of Packaging
PD260:Basic Laboratory Techniques
NR251: First Aid & Life Support
PT191:Health Promotion and Fitness
CA224: Introduction to Web Designing
BM231:Banking and Insurance

Semester-IV

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA506	Data Structures & Algorithms	4	3	7	7	10	20	70	15	15	70	200
CA507	Advanced Database System	-	3	3	3	-	-	-	15	15	70	100
CA508-512	Elective - I	4	3	7	7	10	20	70	15	15	70	200
CA513	Management Information System	3	-	3	3	10	20	70	-		-	100
HS123C	Critical Thinking and Logic	2	-	2	2	30		70	-		-	100
CL142	Environmental Science	2	-	2	2	30		70	-		-	100
	University Elective-I I**	2		2		30+70=100 *						100
		15 #	11 #	26	26	500 #			400 #			900

** CMPICA has decided to offer **CA 225 Programming the Interrnet** course for the students of other institutions. CMPICA students will opt any university elective offered by different institutions of the university.

Marks and credits will vary based on the selection of the university elective course by the students, however total credits and marks will be 26 and 900 respectively.

***** Examaination Scheme (Theory/Practical) is based on the choice of the course. However, internal waightage is 30 and external waightage is 70.

Elective-I

1. CA508 Graphics Designing
2. CA509 Open Source Technology
3. CA510 Multi Paradigm Scripting
4. CA511 Foundation of Data Science
5. CA512 Fundamentals of Embedded Programming

University Electives

EC282: Prototyping Electronics with Aurdino
CE282: Web Designing
CL282: Basics of Environmental Impact Assessment
EE282: Electrical Power Utilization
IT282:Internet Technology and Web Design
ME282: Material Science
PH238: Cosmetics in daily life
NR261: Life Syle Diseases & Management
PT192:Occupational Health & Ergonomics
CA225: Programming the Internet
BM241:Health Care Management

Semester-V

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA601	Object Oriented Programming Through JAVA	4	3	7	7	10	20	70	15	15	70	200
CA602	Application development using .NET Framework	4	3	7	7	10	20	70	15	15	70	200
CA603-607	Elective - II	4	3	7	7	10	20	70	15	15	70	200
CA608	Object Oriented System Analysis and Design	-	3	3	3	-	-	-	30		70	100
HS124C	Professional Communication	-	2	2	2	-	-	-	30		70	100
		12	14	26	26	300			500			800

Elective-II

1. CA603 Fundamentals of Multi-Media
2. CA604 Open Source Framework - I
3. CA605 Scripting Framework - I
4. CA606 Advanced Data Science
5. CA607 Embedded Programming Using Arduino

Semester-VI

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA609	Minor Project	-	12	12	12	-	-	-	50	50	200	300
CA610	Mobile Application Development	4	3	7	7	10	20	70	15	15	70	200
CA611-615	Elective - III	3	3	6	6	10	20	70	15	15	70	200
HS125C	Society, Governance and International Studies	1	1	2	2	25		25	25		25	100
		08	19	27	27	250			550			800

Elective-III

1. CA611 Advanced Multi-Media
2. CA612 Open Source Framework - II
3. CA613 Scripting Framework - II
4. CA614 Data Mining & Analytics
5. CA615 Embedded Programming Using Raspberry Pi

Analysis of Feedback on the syllabus for the academic year 2019-2020 given by Stakeholders

Sr. No.	Stakeholder	Feedback Regarding Curriculum	Action Taken
1	Expert from Industry	Aptitude preparation for pre final semester students	Allow 30 minutes of preparation during lab hours. Arrange extra lectures and workshop for preparation. Refer Annexure I for Departmental meetings.
		Challenging assignments should be given	Assignments are designed carefully and students are motivated to take NPTEL courses and solve their assignments. Refer Annexure II for NPTEL courses.
2	Employers	• Focus on core courses	All the programmes cover in detail core courses.
3.	Academic Peers	Focus on courses where research component is focused	The syllabus includes courses like Artificial Intelligence, Data Science, Embedded Programming, Data Mining and Analytics, Python programming, etc. and few final semester students pursue projects on research based areas. Refer Annexure III for Teaching and Learning Scheme.
4	Faculty members	No Suggestions	
5	Alumni	Include addition of latest topics wherever applicable in the courses	Topics other than syllabus are covered through workshop and expert lectures. Refer Annexure I for Departmental meetings.
6	Final semester students	Introduction of more frameworks should be given.	We will arrange workshops and practical hands-on for extra topics. Refer Annexure I for Departmental meetings.



Annexure I

Departmental meeting minutes

MINUTES OF THE THIRTEEN MEETING (13 of 2019) OF DEPARTMENT

The faculty meeting of CMPICA was held on 27th July,2019 at 2:10 PM (Board Room). The meeting was conducted by Dr. Atul Patel and following people attended the meeting:

1. Dr. Dharmendra Patel
2. Dr. Nirali Honest
3. Dr. Sanskruti Patel
4. Dr. Chirag Patel
5. Mr. Nilay Ganatra
6. Ms. Rachana Patel
7. Mr. Arpit Trivedi
8. Ms. Shreya Banker.
9. Ms. Mubina Malik
10. Mr. Kanubhai Patel
11. Ms. Dhatri Raval
12. Ms. Hetal Patel
13. Mr. Tushar Mehta
14. Mr. Hardik I.Patel
15. Ms. Rupal Patel
16. Ms. Pooja Parekh
17. Mr. Krishna kant
18. Dr. Nilay Vaidya
19. Ms. Mittal Desai
20. Mr. Dip Patel
21. Ms. Rajvi Yadav
22. Mr. Bhargav Vyas
23. Mr. Parthiv Patel

Item #1: Discussion on NAAC criteria points: Atul sir discussed about the previous NAAC points, current expected points in each criteria and the criteria on which improvement is needed. In the next cycle of NAAC visit at least we need to maintain previous point that is 3.11.

- Criteria I: There is no action plan is needed because it is managing by the management. Faculty have to understand PoS and CoS and also discuss the same with the students. Mapping of PoS and Cos is required in each subject.
- Some of the points were discussed by the faculty such as Extra value added skills, Institutional entrepreneur development workshops for students, Students internal competition – Hackthon, 2nd and 4th Saturday can utilize for the internal course competitions to enhance the skills in students.
- Criteria II: Some of the points were discussed in which action plan is needed.
    - Slow and Fast learner:
    - Swayam and NPTEL registration for faculty as well as students.
    - Internal and External exam will be paperless for the 1st semester students.
    - Online student's satisfaction survey can be taken
- Criteria III: Major action plan is needed in criteria III where faculties are involved. Below is the list on which faculty have to focus for research and consultancy.
    - Number of publication: faculty have to publish at least two paper in a year
    - Consultancy services
    - Project Funded : faculty members have to try for major and minor project
    - Recognition.

Item#2: For pre-final semester students, allow aptitude and technical preparation session for last 30 minutes of laboratory hours. Arrange extra classes after working hours to prepare students for core and fundamental concepts.

MINUTES OF THE TWENTIETH MEETING (20 of 2019) OF DEPARTMENT

The faculty meeting of CMPICA was held on 20th December,2019 at 3:45 PM (Board Room). The meeting was conducted by Dr. Atul Patel and following people attended the meeting:

1. Dr. Sanskruti Patel
2. Dr. Pranav Vyas
3. Dr. Jaimin Undavia
4. Dr. Chirag Patel
5. Mr. Nilay Ganatra
6. Ms. Swati Patel
7. Ms. Rachana Patel
8. Mr. Arpit Trivedi
9. Ms. Mubina Malik
10. Mr. Kanubhai Patel
11. Ms. Dhatri Raval
12. Ms. Hetal Patel
13. Ms. Nilam Desai
14. Mr. Tushar Mehta
15. Mr. Hardik I.Patel
16. Ms. Pooja Parekh
17. Mr. Krishna kant
18. Dr. Nilay Vaidya
19. Ms. Mittal Desai
20. Mr. Dip Patel
21. Ms. Rajvi Yadav
22. Mr. Bhargav Vyas
23. Mr. Parthiv Patel

Item #1: Regarding the registration for Ignite & Agnitio events: Total registration in Agnitio 2020 is 1012 (686 – on hand + 326 – Expected). Total registration in Ignite 2020 is 377 (364 – Internal + 13 – External). In order to make events successful atul sir instruct faculties to give their effort for ignite registration.

Item#2: Atul sir shared CMPICA awarded for "Best Private Institute in Gujarat for Industry Interface 2019" by the Centre for Education Growth and Research (CEGR), New Delhi, and congratulate all for the same.

Item #3: Two projects of MCAL & B.Sc. (IT) students have been selected for final presentation at 9th Project Innovation Contest 2020 - a satellite event of the International Conference on Distributed Computing and Internet Technologies (ICDCIT) at Kalinga Institute of Industrial Technology(KIIT), Bhubaneswar, Odisha, India.

Item #4: During the semester following workshops are arranged,

- Expert Session on "Fundamentals of Spring Framework" was conducted on 25-09-2019 by Siddharth Shah, Asst.Professor, ADIT Campus, New VV Nagar.
- Workshop on "Designing Responsive Web Layouts" was conducted from 27-09-2019 to 28-09-2019 by Mr. Jagdish Chaudhary, Senior Associate (UI/UX Developer), 1Rivet Solutions, Navsari , Mr. Yash Parikh, Sr. software engineer, Helios Solutions, Vadodara.
- Expert Session on "Multi-threading Programming in Java" was conducted on 30-09-2019 by Dr. Narayan Joshi, DDIT Campus, College Road Nadiad.
- Expert Session on "Web Application Development using Laravel" was conducted on 05-03-2020 by Ms. Krupali V. Desai, Software Engineer (Php/Laravel Developer), MBARC Labs Inc., Operating from Okhlahoma, USA.
- Expert Session on Career Counselling was conducted on 26-07-2019 by Mr. Divyang Purohit, TPO, CHARUSAT.

Annexure II

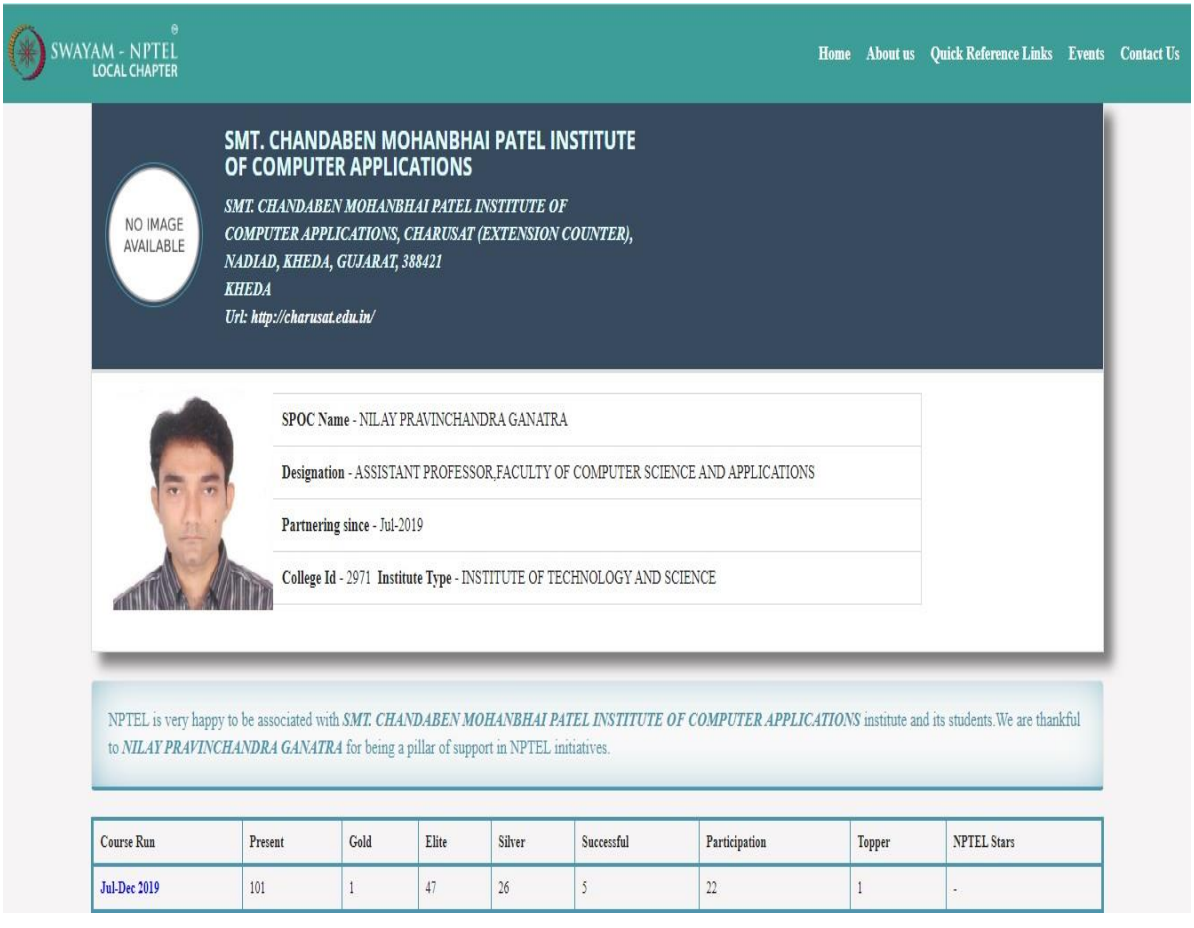
NPTEL Courses

CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY (CHARUSAT)

A note on organized plan/s to cater the contents beyond the scope of Syllabus

To bridge the gap between syllabus & recent trends in the courses following activities are planned:

Swayam- NPTEL Local Chapter



SMT. CHANDABEN MOHANBHAI PATEL INSTITUTE OF COMPUTER APPLICATIONS

Spoc Details | Course Wise | Toppers Details

Course Wise

S.no	Course Name	Present	Gold	Elite	Silver	Success	Participation
1	Programming in C++	3	0	0	1	0	2
2	Introduction to Programming in C	2	0	0	1	0	1
3	Data Base Management System	9	0	7	0	1	1
4	Python for Data Science	3	0	1	0	2	0
5	Cloud Computing	1	0	1	0	0	0
6	Ethical Hacking	1	0	0	1	0	0
7	Programming In Java	82	1	38	23	2	18

Annexure III

Teaching and Learning Scheme MCA and M.Sc.IT

TEACHING SCHEME FOR

MCA PROGRAMME
(1ST & 2ND YEAR)

EFFECTIVE FROM ACADEMIC YEAR 2019-20



Teaching and Examination Scheme (MCA Programme)
Effective from Year 2019-20
Semester-I

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA843	Enterprise Computing using Java EE	3	3	6	6	10	20	70	15	15	70	200
CA844	Visual Programming	3	3	6	6	10	20	70	15	15	70	200
CA845	Advanced Database Technologies	3	3	6	6	10	20	70	15	15	70	200
CA846	Software Engineering Paradigms	3	-	3	3	10	20	70	-	-	-	100
CA847-CA850	Elective-I	3	-	3	3	10	20	70	-	-	-	100
HS703.01C	Languages (French)	-	2	2	2	-		-	30		70	100
HS704 C	Academic Speaking	-	2	2	2	-		-	30		70	100
	University Elective-I **	-	2	2	2	-	-	-	30		70	100
		15	13	28	28	500			500			1000

** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **CA730 Internet and Web Designing** course for others.

Elective-I

1. CA847 Cloud Computing
2. CA848 Cyber Security and Computer Forensics
3. CA849 Internetworking with TCP/IP Protocol Suite
4. CA850 Advanced Operating Systems

University Elective-I

No	Course Code	Course Name	Department/Faculty
1	MA771.01	Reliability and Risk Analysis	Mathematics
2	EE781.01	Optimization Techniques	Engineering
3	ME781.01	Occupational Health & Safety	Engineering
4	CE772.01	Research Methodology	Engineering
5	PT795.01	Health & Physical Activity	Physiotherapy
6	NR755	First Aid & Life Support	Nursing
7	RD701.01	Introduction to Analytical Techniques	Applied Science
8	RD702.01	Introduction to Nanoscience and Technology	Applied Science
9	MB650	Creative Leadership	Management
10	PH891	Community Pharmacy Ownership	Pharmacy
11	PD261	Astrophysics, Space and Cosmos-I	Applied Science

SMT. CHANDABEN MOHANBHAI PATEL INSTITUTE OF COMPUTER APPLICATIONS
CMPICA CHANGA

Teaching and Examination Scheme (MCA Programme)
Effective from Year 2019-20
Semester-II

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA851	Web Application Development using Open Source Technology	3	3	6	6	10	20	70	15	15	70	200
CA852	Software Quality Assurance	3	3	6	6	10	20	70	15	15	70	200
CA853	Responsive Web Designing Using Framework	-	2	2	2	-	-	-	15	15	70	100
CA854-CA855	**Elective II**	3	3	6	6	10	20	70	15	15	70	200
CA856-CA858	**Elective-III**	3	3	6	6	10	20	70	15	15	70	200
HS705 C	Academic Writing	-	2	2	2	-	-	-	30		70	100
	University Elective-II **	-	2	2	2	-	-	-	30		70	100
		12	18	30	30	400			700			1100

** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **CA842 Mobile Application Development** course for others.

Elective-II

1. CA854 Mobile Application Technology – Android Platform
2. CA855 Mobile Application Development-iOS Platform

Elective-III

1. CA856 HTTP Web Service for Enterprise Application
2. CA857 Framework and Applications
3. CA858 Multi Paradigm Scripting using Python

University Elective-II

No	Course Code	Course Name	Department/Faculty
1	EE782.01	Energy Audit and Management	Engineering
2	CE771.01	Project Management	Engineering
3	PT796.01	Fitness & Nutrition	Physiotherapy
4	NR752.01	Epidemiology and Community Health	Nursing
5	OC733.01	Introduction to Polymer Science	Applied Science
6	MB651	Software based Statistical Analysis	Management
7	PH892	Intellectual Property Rights	Pharmacy
8	MA772.01	Design of Experiments	Mathematics
9	PD262	Astrophysics, Space and Cosmos-2	Applied Science



Teaching and Examination Scheme (MCA Programme)
Effective from Year 2019-20
Semester-III

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
CA926	Open Source Frameworks	3	3	6	6	10	20	70	15	15	70	200
CA927	Data Analytics	3	3	6	6	10	20	70	15	15	70	200
CA928-CA931	Elective-IV	3	-	3	3	10	20	70	-	-	-	100
CA932	Mini Project	-	15	15	15	-	-	-	100		200	300
		9	21	30	30	300			500			800

Elective-IV

1. CA928 Artificial Intelligence
2. CA929 Digital Image Processing
3. CA930 Compiler Construction
4. CA931 Analysis and Design of Algorithms

Teaching and Examination Scheme (MCA Programme)
Effective from Year 2019-20
Semester-IV

Course Code	Course Title	Teaching Scheme			Credit	Internal	End Semester Examination		Total
		Contact Hours				Continuous Evaluation	Report	Presentation & Viva	
		Inst.	Industry	Total					
CA933	Project Work	2	28	30	30	200	200	400	800



TEACHING SCHEME

FOR

M.Sc. (IT) PROGRAMME

EFFECTIVE FROM
ACADEMIC YEAR 2019-20

SMT. CHANDABEN MOHANBHAI PATEL INSTITUTE OF COMPUTER APPLICATIONS
CMPICA
CHANGA

SEMESTER-I

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
MS114	Software Engineering Paradigms	3	-	3	3	10	20	70	-	-	-	100
MS115	Framework And Application using .NET	3	3	6	6	10	20	70	15	15	70	200
MS116	Multi Paradigm Scripting using Python - I	3	3	6	6	10	20	70	15	15	70	200
MS117	Database Technologies	3	3	6	6	10	20	70	15	15	70	200
MS118-MS119	**Elective-I**	3	-	3	3	10	20	70	-	-	-	100
HS703.01 C HS704 C	Languages (French) Academic Speaking	-	2	2	2	-	-	-	30		70	100
	University Elective-I **	-	2	2	2	-	-	-	30		70	100
		15	13	28	28	500			500			1000

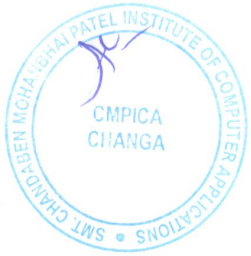
** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **CA730 Internet and Web Designing** course for others.

Elective-I

1. MS118 Fundamentals of Computer Networks
2. MS119 Operating System Concepts

University Elective-I

No	Course Code	Course Name	Department/Faculty
1	MA771.01	Reliability and Risk Analysis	Mathematics
2	EE781.01	Optimization Techniques	Engineering
3	ME781.01	Occupational Health & Safety	Engineering
4	CE772.01	Research Methodology	Engineering
5	PT795.01	Health & Physical Activity	Physiotherapy
6	NR755	First Aid & Life Support	Nursing
7	RD701.01	Introduction to Analytical Techniques	Applied Science
8	RD702.01	Introduction to Nanoscience and Technology	Applied Science
9	MB650	Creative Leadership	Management
10	PH891	Community Pharmacy Ownership	Pharmacy
11	PD261	Astrophysics, Space and Cosmos-1	Applied Science



SEMESTER-II

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
MS217	Web Development using Open Source Technology	3	3	6	6	10	20	70	15	15	70	200
MS218	Software Testing	3	3	6	6	10	20	70	15	15	70	200
MS219	Object Oriented Programming using Java	3	3	6	6	10	20	70	15	15	70	200
MS220-MS222	**Elective II**	3	3	6	6	10	20	70	15	15	70	200
HS705 C	Academic Writing	-	2	2	2	-	-	-	30		70	100
	University Elective-II **	-	2	2	2	-	-	-	30		70	100
		12	16	28	28	400			600			1000

** Student will take any university elective offered by different institutions of university. CMPICA has decided to offer **CA842 Mobile Application Development** course for others.

Elective-II

1. MS220 HTTP Web Service for Enterprise Application
2. MS221 Multi Paradigm Scripting using Python - II
3. MS222 Game Development - I

University Elective-II

No	Course Code	Course Name	Department/Faculty
1	EE782.01	Energy Audit and Management	Engineering
2	CE771.01	Project Management	Engineering
3	PT796.01	Fitness & Nutrition	Physiotherapy
4	NR752.01	Epidemiology and Community Health	Nursing
5	OC733.01	Introduction to Polymer Science	Applied Science
6	MB651	Software based Statistical Analysis	Management
7	PH892	Intellectual Property Rights	Pharmacy
8	MA772.01	Design of Experiments	Mathematics
9	PD262	Astrophysics, Space and Cosmos-2	Applied Science



SEMESTER-III

Course Code	Course Title	Teaching Scheme				Examination Scheme						
		Contact Hours			Credit	Theory			Practical			Total
		Theory	Pract	Total		Internal		External	Internal		External	
						Case Study	Tests		Term work	Tests		
MS320	Open Source Frameworks	3	3	6	6	10	20	70	15	15	70	200
MS321	Advanced Java	3	3	6	6	10	20	70	15	15	70	200
MS322	JavaScript Frameworks	-	3	3	3	-	-	-	15	15	70	100
MS323	Mobile Application technology	3	3	6	6	10	20	70	15	15	70	200
MS324-MS327	**Elective-III**	3	3	6	6	10	20	70	15	15	70	200
CL142 A.01	Environmental Sciences	-	2	2	2	-		-	30		70	100
		12	17	29	29	400			600			1000

Elective-III

1. MS324 Game Development-II
2. MS325 Data Analytics
3. MS326 Ruby on rails
4. MS327 Internetworking with TCP/IP

Teaching and Examination Scheme (M.Sc(IT) Programme)

SEMESTER-IV

Course Code	Course Title	Teaching Scheme			Credit	Internal	End Semester Examination		Total
		Contact Hours				Continuous Evaluation	Report	Presentation & Viva	
		Inst.	Industry	Total					
MS402	Dissertation/Project Work	2	28	30	30	200	200	400	800

