

Smt. Chandabhen Mohanbhai Patel Institute of Computer Applications

Employers Feedback Analysis on Curriculum for Academic Year 2018-2019

Employers Detail

Sr. No.	Name	Name of Organization	Designation	Contact No
1.	Yash Parikh	Helios Solutions	Senior Software Engineer	8780415864
2.	Devanshi D. Desai	Arth I - Soft	Game Developer	9662642349
3.	Dhruvil Upadhyay	Loadstone	QA-Group Leader	9909518741
4.	Kandarp Pathak	Castleton Pvt. Ltd.	Sr. software developer	9727246545
5.	Vishal Ashtaputre	Capgemini America Inc	Solution Architect	52033324668

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Page 1 of 8 & TECHNOLOGY
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Faculty of Computer Science and Applications - CHARUSAT

According to Expert below listed points are the best part of Syllabus:

- Programming languages
- Testing
- Database
- Software Engineering

According to Expert below listed subject need more focus:

- Aptitude preparation for pre final semester students.
- Basic fundamental concepts should be covered in more detail.
- Include building of responsive sites.
- Python

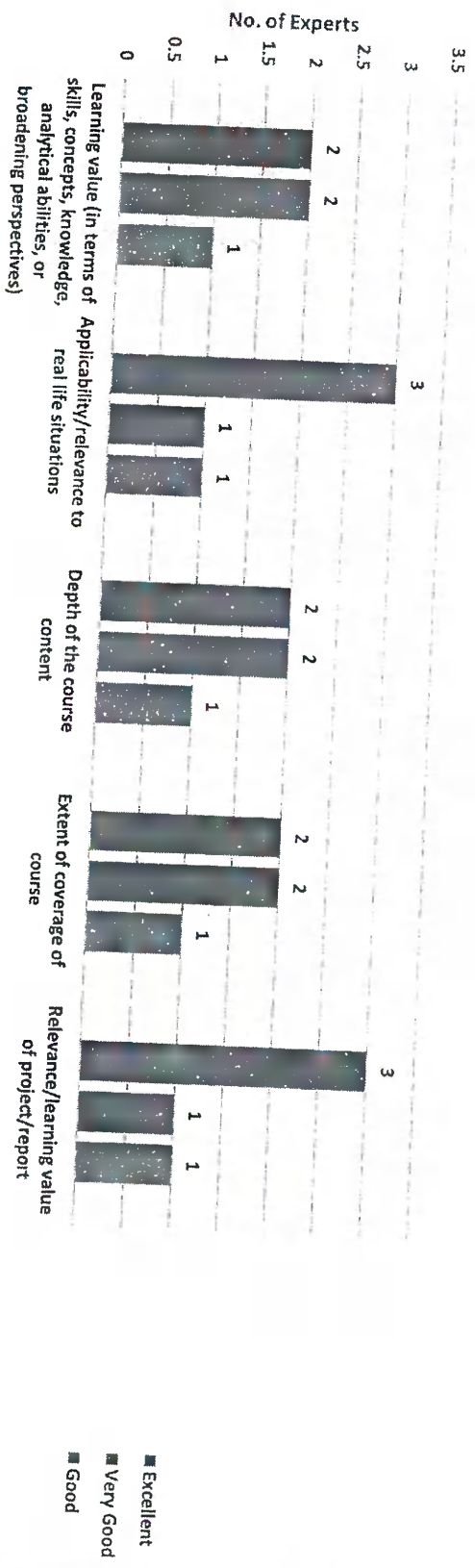
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Programme Wise Feedback Analysis

Employers Feedback on M.Sc.(IT) Curriculum

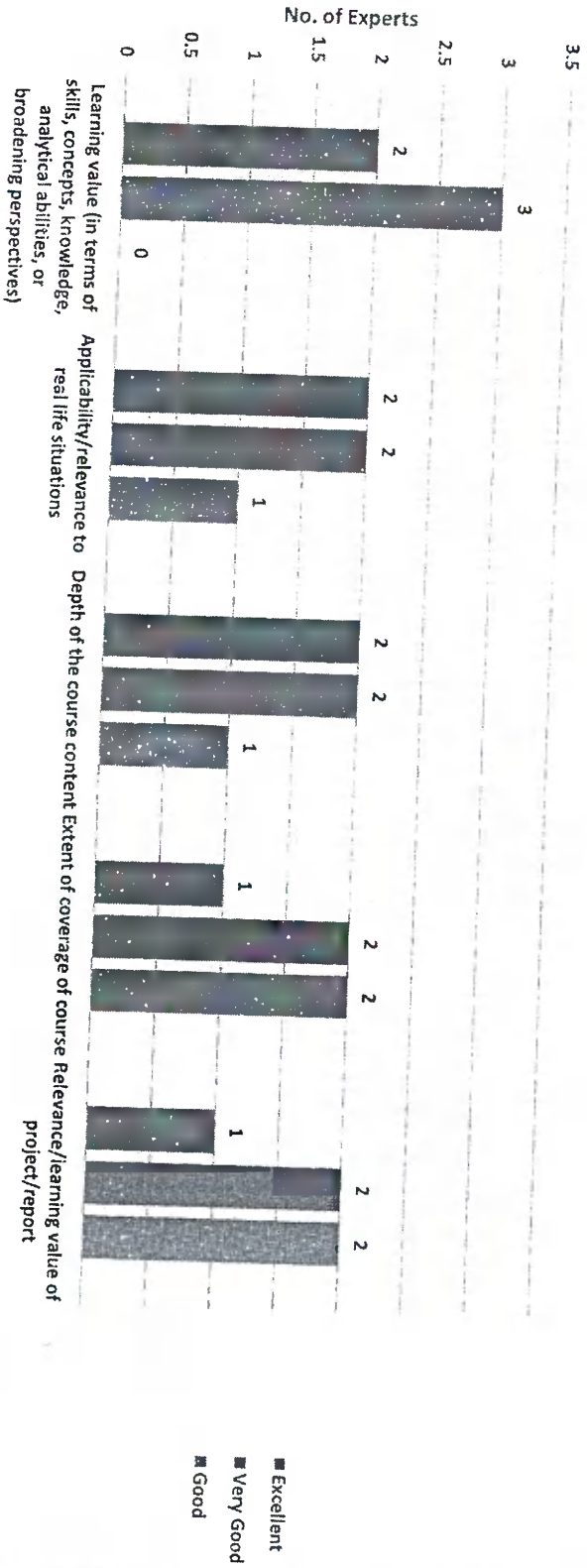


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Employers Feedback on MCA Lateral Curriculum



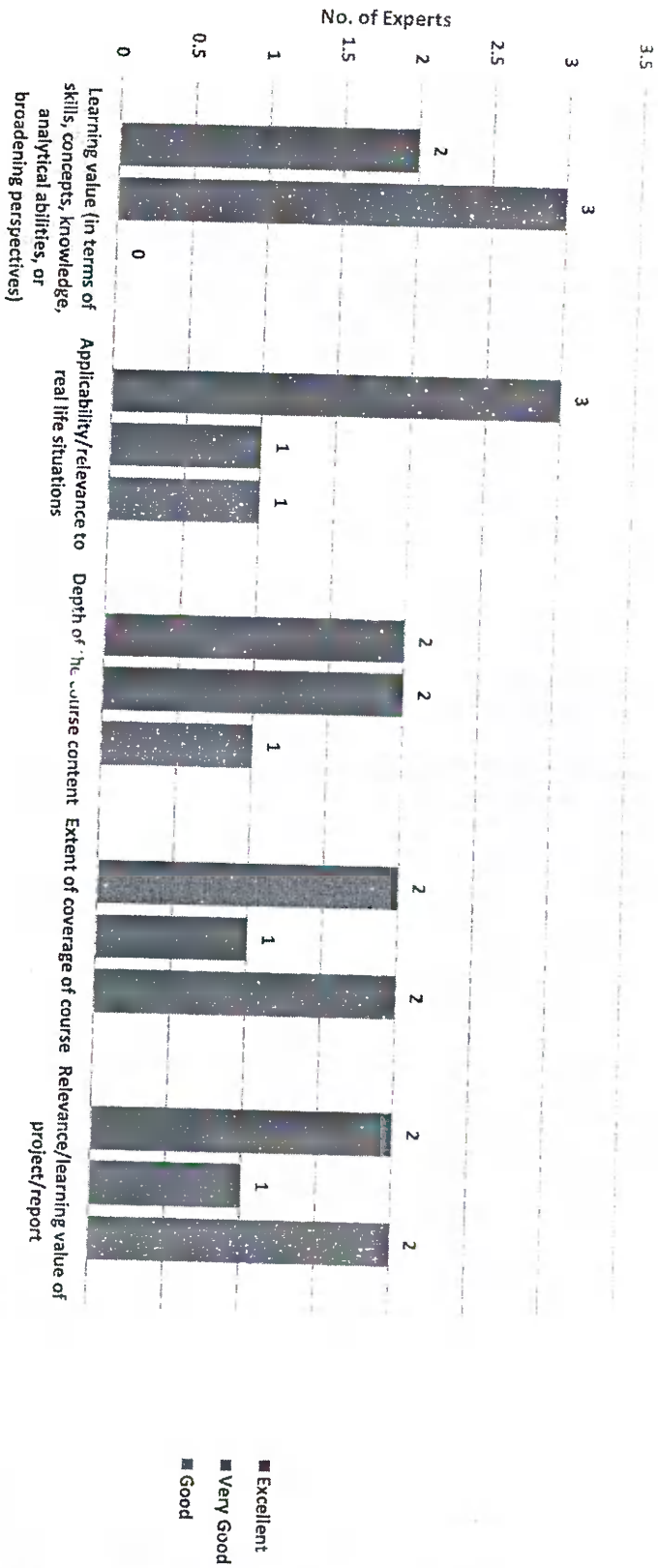
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 Page 4 of 4
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Employers Feedback on MCA Curriculum



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Academic Expert Feedback Analysis on Curriculum for Academic Year 2018-2019

Academic Expert Detail

Sr. No.	Name	Name of Organization	Designation	Contact No
1.	Arpita Shah	CE dept. CSPIT, Changa	Assistant Professor	9825651555
2.	Vivek Dave	Parul University, Vadodara	Assistant Professor	8128313699
3.	Sheshang Degadwala	Sigma Institute of Engineering, Vadodara	Associate Professor	9898421385
4.	Pinal Shah	IT dept. CSPIT, Changa	Assistant Professor	9913009416
5.	Raina Gaharwar	G.H.Patel,VVNagar	Assistant Professor	8866363708

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According to Expert below listed points are the best part of Syllabus:

- The content of syllabus is very good.
- Elective courses offered are good.
- Introduction of Data Science is very relevant
- Syllabus is based on Industry requirements
- Latest Subjects.
- It covers the latest framework with overall web development cycle.

According to Expert below listed subject need more focus:

- Core subjects should be given importance.
- Focus on Front end designing
- Include some courses where research component is focused
- Programming subjects can be covered with real world problems.
- Cover mobile application development on multiple platforms.
- Cover php frameworks in detail

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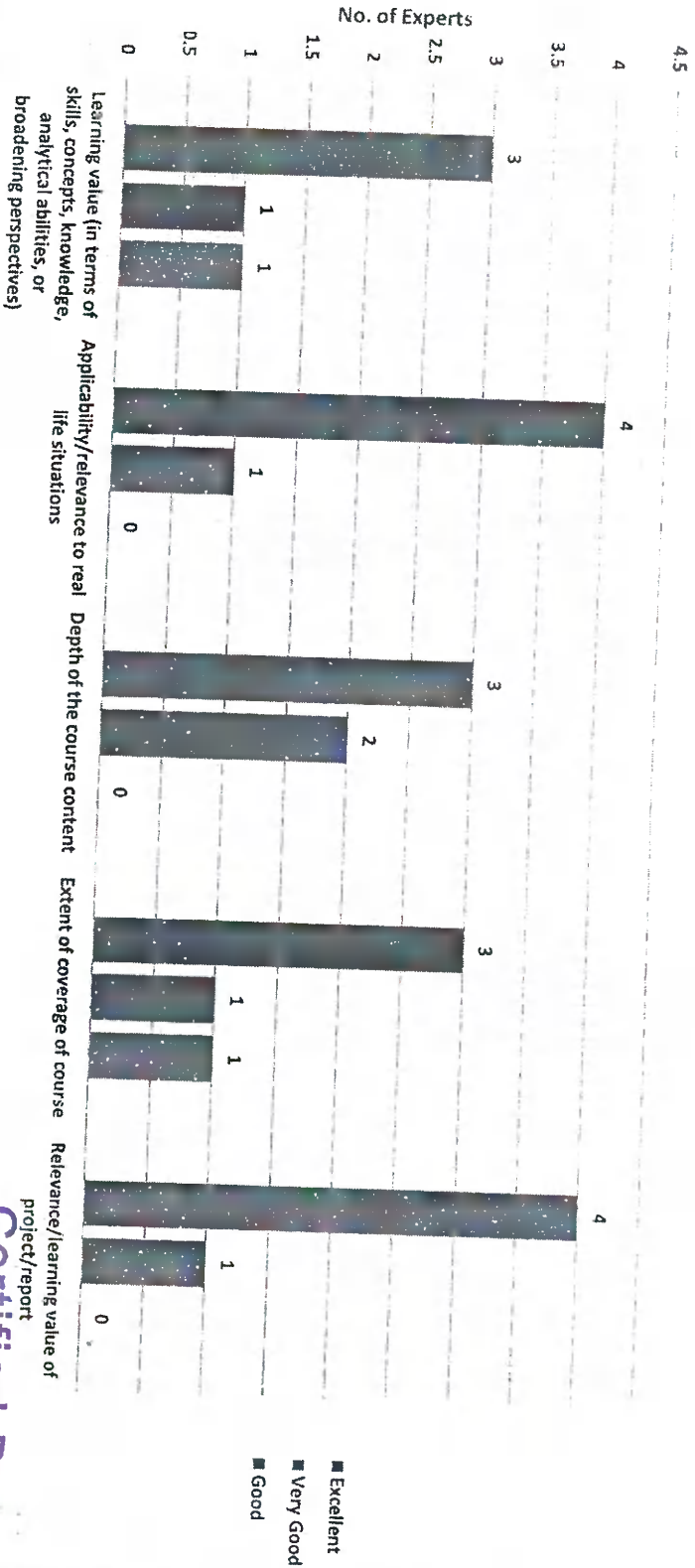
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Programme Wise Feedback Analysis

Academic Experts Feedback on BCA Curriculum



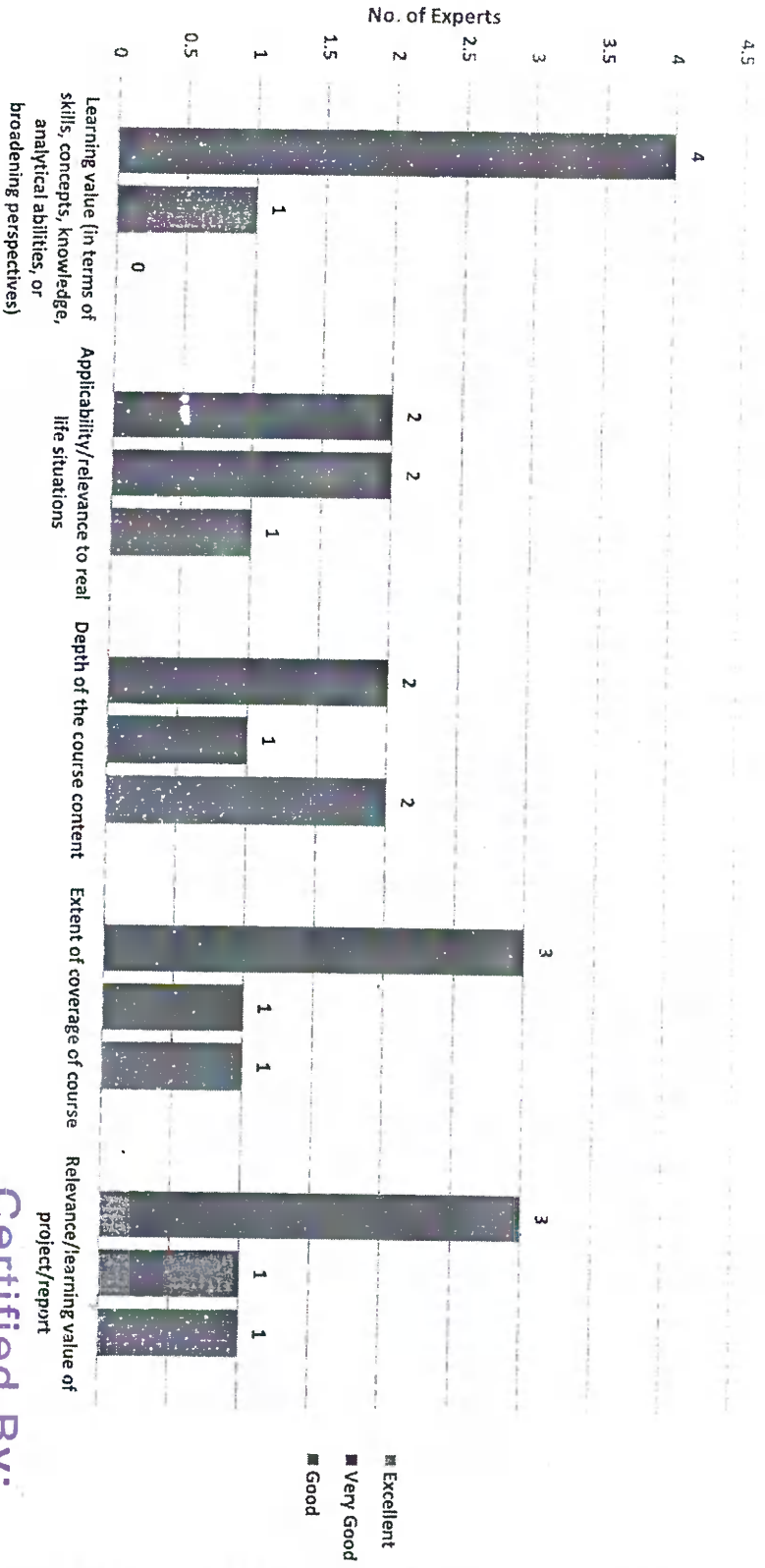
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Academic Experts Feedback on M.Sc.(IT) Curriculum



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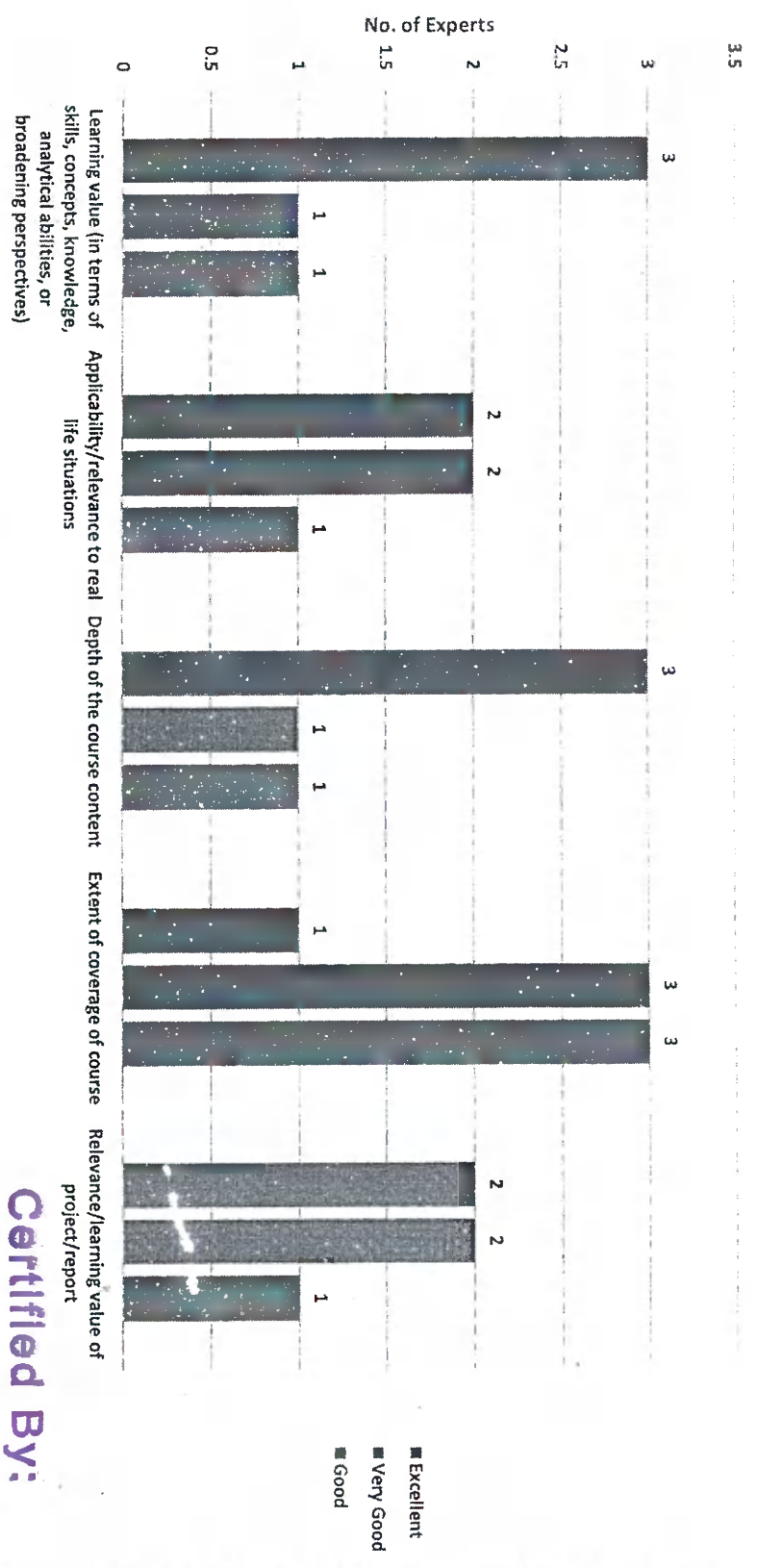
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Academic Experts Feedback on MCA Curriculum



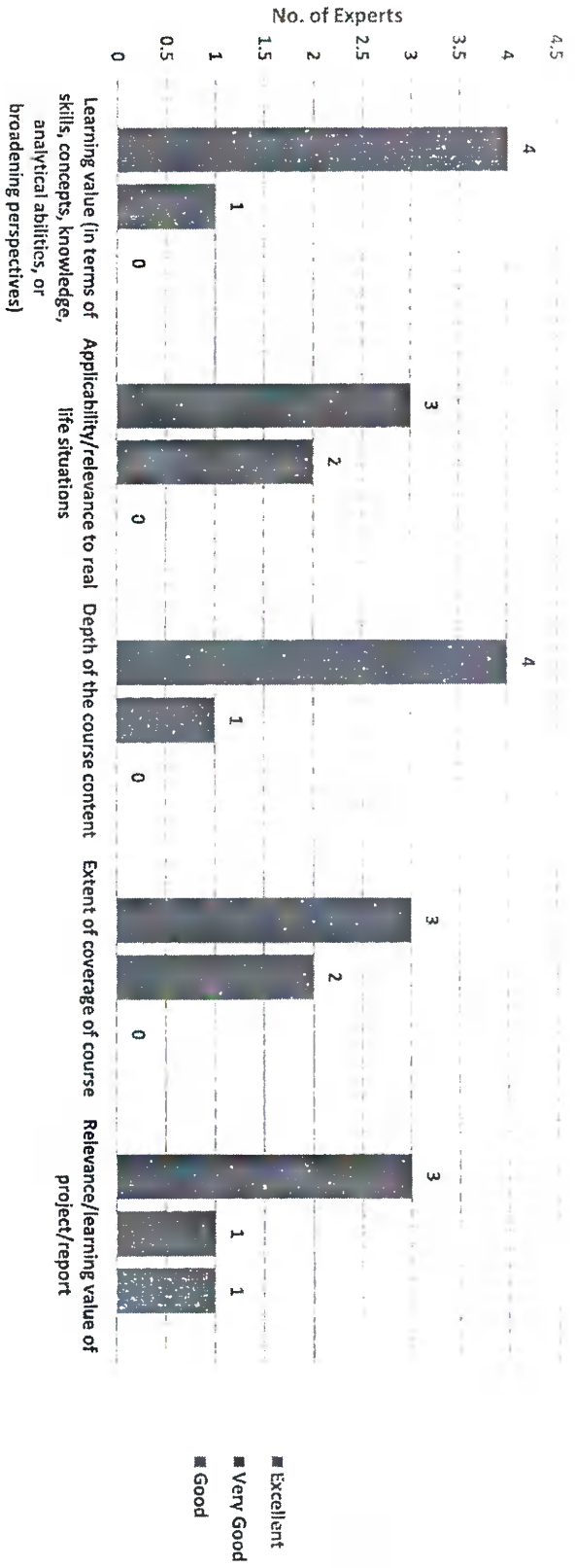
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Academic Experts Feedback on B.Sc.(IT) Curriculum



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Alumni Feedback Analysis on Curriculum for Academic Year 2018-2019

Alumni Detail

Sr. No.	Name	Name of Organization	Designation	Contact No
1.	Harsh Trivedi	Open Xcell	Sr Android Developer	9924237090
2.	Maitri J. Kamdar	Devlon Infotech	QA	9427339595
3.	Nikisha Patel	E-Infochips	Software Engineer	9537698364
4.	Rushabh Shah	Biztech	Software Engineer	9429148623
5.	Subham Shah	Incarnal ICT	Web Developer	9428883052
6.	Desai Devanshi Dipak	technuts	Cocoa Developer	8690271559
7.	Oza Devanshu Amitbhai	Eirfochips - an arrow electronics	DevOps engineer	9067129230
8.	Dodla Namam Prakashkumar	Squad Technology Pvt. Ltd	Software Tester QA	9723885271
9.	Dave Hitarth Rakeshkumar	Percept infotech	Web Developer	7405893171
10.	Vatsal Gadhia	Rishabh Software	Software Engineer & WordPress Lead	9662517074
11.	Aniruddh Jadeja	Techno Infonet/AniruddhSinh	Php Developer (Laravel & Codeigniter)	9033915456
12.	Neel Kayasth	Lodestone Software Services Pvt.LTD	Software QA Engineer	9033610464
13.	Maulik Kanani	Sublime datassystems	Web developer	9726415075
14.	Devang Rana	Optimize IT Systems	Junior Software Developer	7600389600
15.	Mayur Thakkar	Cygnat Infotech	Software Engineer	8980282620
16.	Gautam Kakadiya	Tecksky Technology	Senior PHP Developer	9428854599
17.	Dhaval Panchal	TinyERP Pvt.Ltd (ODOO)	Application Engineer	9426664553
18.	Brijesh Patel	Wipro Technologies Ltd	Project Engineer	9638882576
19.	Sunny Macwan	Miracle cloud technology	Sr. Android developer	9033314490
20.	Jaimin Patel	Flexiware solutions pvt ltd	Senior software developer	9574777510

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According to Alumni below listed points are the best part of Syllabus:

• Object oriented programming is very important
• System analysis and design is very important
• Mathematical and Statistical courses are very good
• Python is very helpful as it provides very good libraries.
• Advance java is very helpful.
• Every course is covered in good depth.
• Web Designing is important.
• Mobile Application development is very useful.
• Database course is very useful.
• All the courses offer very good coverage of concepts.

According to Alumni below listed subject need more focus:

- Include frameworks of php in syllabus
- Software Engineering and Quality Assurance, and Software Quality Assurance.
- Mobile Application Development using cross platform and multiple OS.
- Network related subject should be covered in more detail.
- Pl and javascript, css, advanced framework.
- Dot Net, java, and php
- VP, MVC should be cover in depth.
- PHP
- ASP.NET – VP
- Focus on Communication skills development
- Networking.

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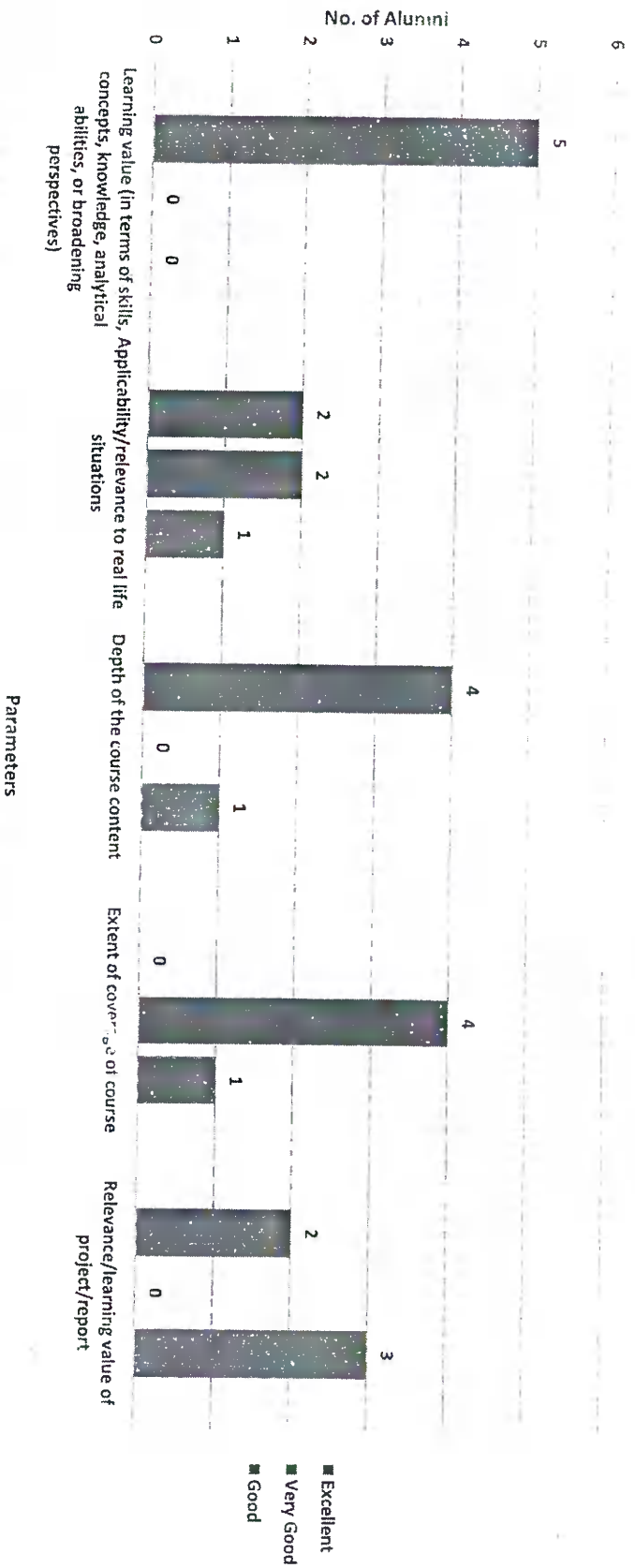
Page 2 of 2
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Programme Wise Feedback Analysis

Alumni Feedback on BCA Curriculum



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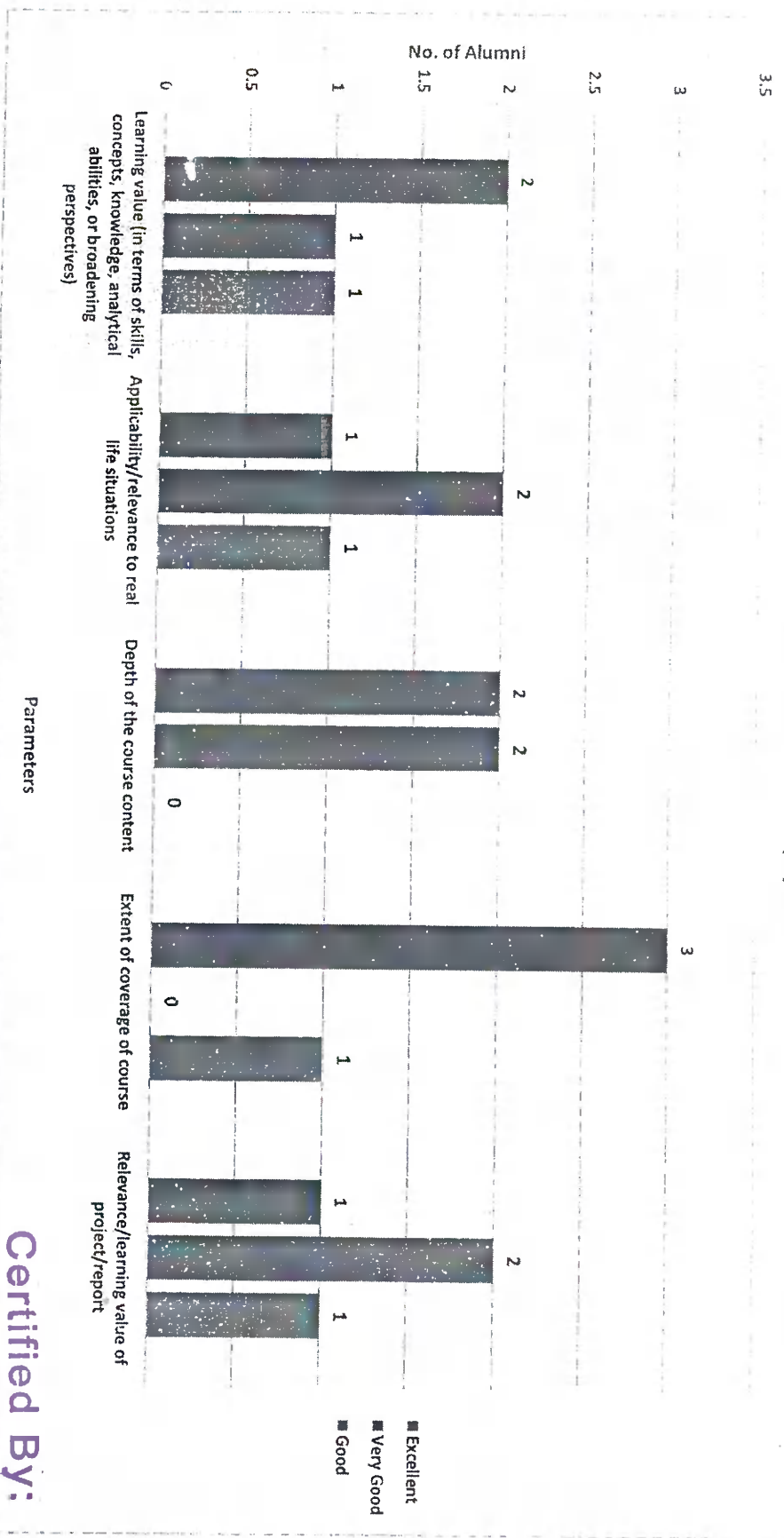
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Alumni Feedback on M.Sc. (IT) Curriculum



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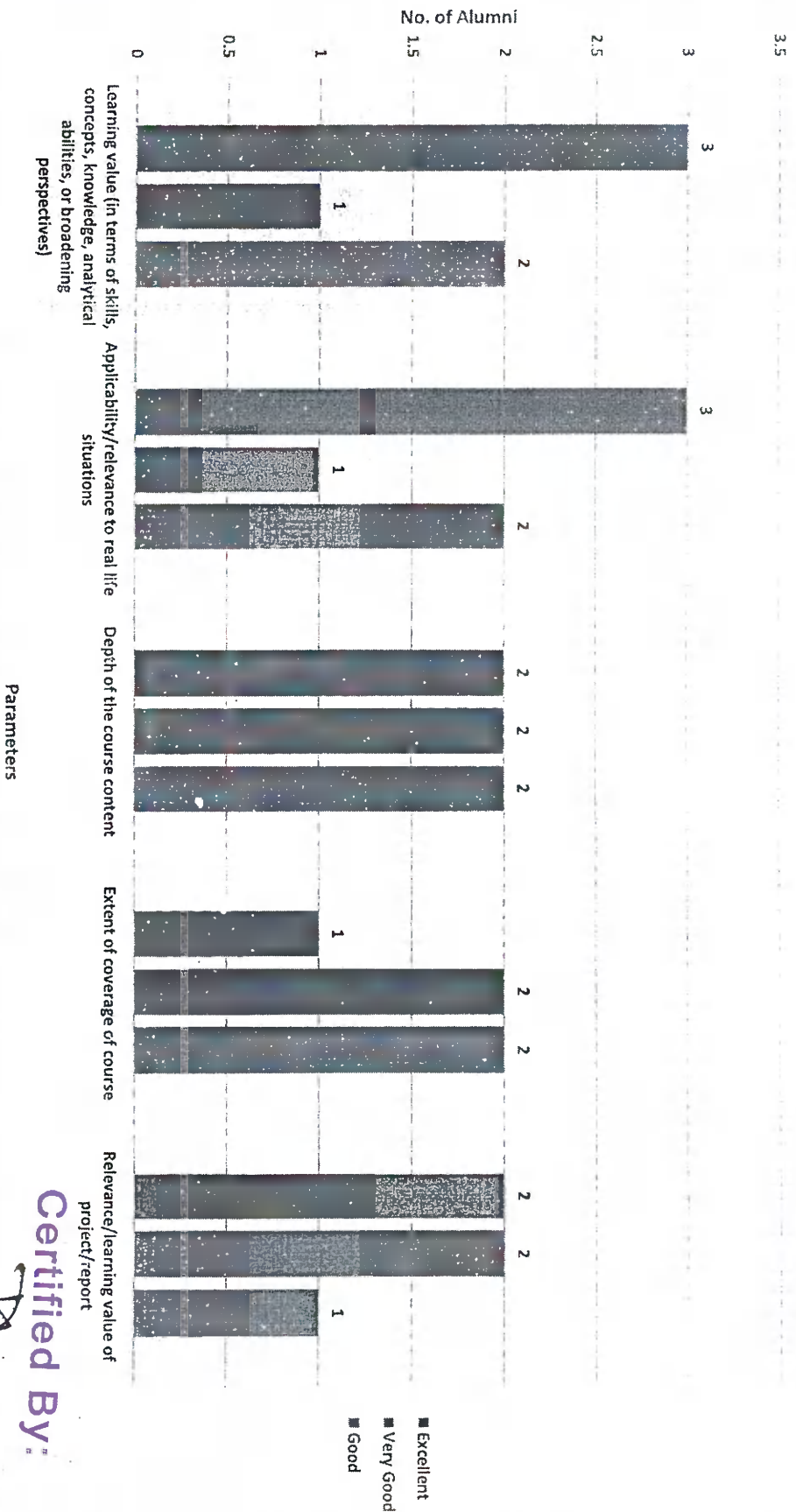
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Alumni Feedback on MCA Curriculum



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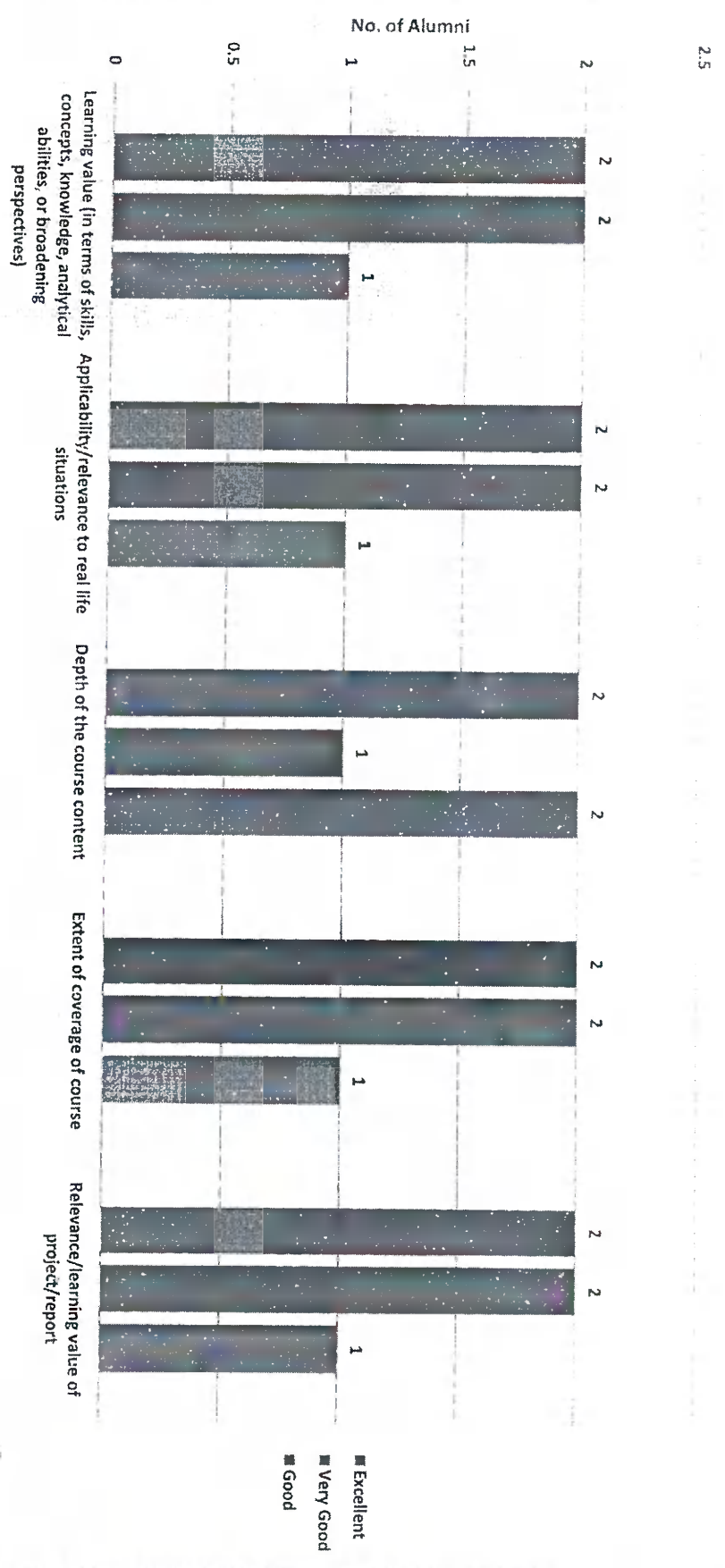
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Page 4
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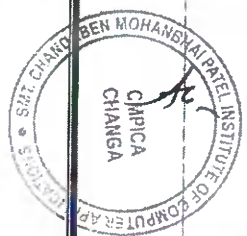
Alumni Feedback on MCA - Lateral Curriculum



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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.
		<ul style="list-style-type: none"> 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.(IT). 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	

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5	Alumni	Mobile Application Development using cross platform and multiple OS	We have include in the new syllabus of MCS and M.Sc.(IT) 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.(IT) 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.(IT) syllabus	We have redesigned the syllabus to include advanced topics. Refer Annexure II for Teaching and Learning Scheme.



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Annexure I
Departmental minutes of meeting

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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.

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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,

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- 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.

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Annexure II
BOS meeting

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Smt. Chandaben Mohanbhai 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, PDP, Gandhinagar, (Invitee)
6. Dr. Kanubhai Patel, Assistant Professor, CMPICA, Changa, (Invitee)
7. Dr. Hetal Patel, Assistant Professor, CMPICA, Changa, (Invitee)

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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	<input type="checkbox"/> 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.)

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Advanced Database Technologies	<ul style="list-style-type: none"> • Add introduction to Big Data concepts. • Remove parallel and distributed database.
Software Engineering Paradigms	<input type="checkbox"/> 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	<ul style="list-style-type: none"> • 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	<input type="checkbox"/> Core books need to be updated to include the latest version and year.
Internetworking with TCP/IP Protocol Suite	<ul style="list-style-type: none"> • 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	<input type="checkbox"/> 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<input type="checkbox"/> 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	<ul style="list-style-type: none"> • 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	<input type="checkbox"/> In unit – V add a topic to cover key mechanism using encryption for security issues.

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Frameworks and Applications	<ul style="list-style-type: none"> • 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	<input type="checkbox"/> Remove topics of token bus, token ring and add newer IEEE standards
Operating System Concepts	<input type="checkbox"/> Add a topic to cover introduction to CPU scheduling algorithms.
Multi Paradigm Scripting using Python - I	<input type="checkbox"/> 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	<input type="checkbox"/> 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.

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- 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.

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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.

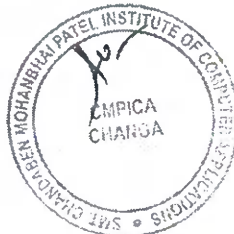
Item 16.6: Any other item with permission of chair, if any.

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 gaming. 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.



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Annexure-III

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

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Semester I

Course Code	Course Title	Teaching Scheme				Examination Scheme						T
		Contact Hours			Cred it	Theory			Practical			
		Theory	Pract	Total		Internal		Exter nal	Internal		Exter nal	
						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	-	-	-	
HS703.01 C	Languages (French)	-	2	2	2	-	-	-	30		70	
HS704 C	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

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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	
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

- CA854 Mobile Application Technology – Android Platform
- CA855 Mobile Application Development-iOS Platform

Elective-III

- CA856 HTTP Web Service for Enterprise Application
- CA857 Framework and Applications
- 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

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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 Continuous Evaluation	End Semester Examination		Total
		Contact Hours			Report			Presentation & Viva		
		Inst.	Industry	Total						
CA933	Project Work	2	28	30	30	200	200	400	800	

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Annexure-IV

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

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Semester I

Course Code	Course Title	Teaching Scheme				Examination Scheme							Total
		Contact Hours			Credit	Theory			Practical				
		Theory	Pract	Total		Internal	External	Internal	External				
										Case Study	Tests	Term work	
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. 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-I	Applied Science

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Semester II

Course Code	Course Title	Teaching Scheme				Examination Scheme						Total
		Contact Hours			Credit	Theory			Practical			
		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

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Semester III

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

Annexure III

Teaching and Learning Scheme

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Annexure-III

Teaching and
Examination Scheme
for BCA Programme
Effective from
Academic Year 2016-17

Smt. Chandaben Mohanbhai Patel Institute of Computer Applications

Teaching and Examination Scheme (BCA Programme)

Semester-I

Course Code	Course Title	Teaching Scheme				Examination Scheme						Total
		Contact Hours			Credit	Theory			Practical			
		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						Total
		Contact Hours			Credit	Theory			Practical			
		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

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**Teaching and Examination Scheme (BCA Programme)
Semester-III**

Course Code	Course Title	Teaching Scheme				Examination Scheme						Total
		Contact Hours			Credit	Theory			Practical			
		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

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Teaching and Examination Scheme (BCA Programme)

Semester-IV

Course Code	Course Title	Teaching Scheme				Examination Scheme						Total
		Contact Hours			Credit	Theory			Practical			
		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

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Teaching and Examination Scheme (BCA Programme)

Semester-V

Course Code	Course Title	Teaching Scheme				Examination Scheme						Total
		Contact Hours			Credit	Theory			Practical			
		Theory	Pract	Total		Internal		External	Internal		External	
						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

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**Teaching and Examination Scheme (BCA Programme)
Semester-VI**

Course Code	Course Title	Teaching Scheme				Examination Scheme						Total
		Contact Hours			Credit	Theory			Practical			
		Theory	Pract	Total		Internal		External	Internal		External	
						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

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ANNEXURE-IV

**TEACHING AND EXAMINATION
SCHEME**

FOR

B.Sc.(IT)

PROGRAMME

EFFECTIVE FROM

ACADEMIC YEAR 2016-17

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Programme	Total Credits
B.Sc.(IT)	153

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Smt. Chandaben Mohanbhai Patel Institute of Computer Applications

Semester-I

Course Code	Course Title	Teaching Scheme				Examination Scheme						Total
		Contact Hours			Credit	Theory			Practical			
		Theory	Pract	Total		Internal		External	Internal		External	
						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						Total
		Contact Hours			Credit	Theory			Practical			
		Theory	Pract	Total		Internal		External	Internal		External	
						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	Fundamentals 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

Smt. Chandaben Mohanbhai Patel Institute of Computer Applications

Semester-III

Course Code	Course Title	Teaching Scheme				Examination Scheme						Total
		Contact Hours			Credit	Theory			Practical			
		Theory	Pract	Total		Internal		External	Internal		External	
						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.

* Examination 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

Certified By:


REGISTRAR
 CHAROTAR UNIVERSITY OF
 SCIENCE & TECHNOLOGY
 CHANGA - 388421, TA. PETLAD, DI. ANAND

Semester-IV

Course Code	Course Title	Teaching Scheme				Examination Scheme						Total
		Contact Hours			Credit	Theory			Practical			
		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 Internet** 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.

* Examination 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						Total
		Contact Hours			Credit	Theory			Practical			
		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		Exter nal	Internal			Exter nal
						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