

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC Accredited by NAAC with 'A' Grade, Accredited by NBA New Horizon Knowledge Park, Ring Road, Bellandur Post, Bengaluru 560 103

Department of Computer Science and Engineering SELF ASSESSMENT REPORT (SAR)

Submitted to



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SELF ASSESSMENT REPORT (SAR) FORMAT

UNDERGRADUATE ENGINEERING PROGRAMS (TIER-I)

FIRST TIME ACCREDITATION

NBCC Place, 4th Floor East Tower, BhishamPitamah Marg, PragatiVihar New Delhi 110003 P: +91(11)24360620-22, 24360654 Fax: +91(11) 24360682 E-mail: membersecretary@nbaind.org Website: www.nbaind.org (January, 2016)

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PART A: Institutional Information

1. Name and Address of the Institution:

New Horizon College of Engineering, Ring Road, Kadubisanahalli, Bellandur Post, Near Marathalli Bangalore 560103

2. Name and Address of the Affiliating University:

Visvesvaraya Technological University

Jnana Sangama, VTU Main Rd,

Machhe, Belgaum, Karnataka 590018

3. Year of establishment of the Institution:2001

4. Type of the Institution:

Institute of National Importance	
University	
Deemed University	
Autonomous	
Any other (Please specify)	

Note:

- 1. In case of Autonomous and Deemed University, mention the year of grant of status by the authority.
- 2. In case of University Constituent Institution, please indicate the academic autonomy status of the Institution as defined in 12th Plan guidelines of UGC. Institute should apply for Tier 1 only when fully academically autonomous.



5. Ownership Status:

Central Government	
State Government	
Government Aided	
Self - financing	\square
Trust	\square
Society	
Society Section 25 Company	
2	

Provide Details:



Name of the Institution(s)	Year of Establishment	Programs of Study	Location
New Horizon Public School	1982	Pre-primary to Standard 10	100 Feet Rd, HAL 2nd Stage, Indiranagar, Bengaluru, Karnataka 560008
New Horizon Pre-University	1982	1st PU and 2nd PU	3rd A Cross, 2nd A Main Rd, East of NGEF Layout, Kasturi Nagar, Bengaluru, Karnataka 560043
New Horizon College of Education	1980	Bachelor of Education	100 Feet Rd, HAL 2nd Stage, Indiranagar, Bengaluru, Karnataka 560008
New Horizon College Marathalli	1998	BBA, BCom, BCA	Ring Rd, near Marathalli, Kaverappa Layout, Kadabeesanahalli, Bengaluru, Karnataka 560103
New Horizon College Kasturinagar	1998	BBA, BCom, BCA	3rd A Cross, 2nd A Main Rd, East of NGEF Layout, Kasturi Nagar, Bengaluru, Karnataka 560043

6. Other Academic Institutions of the Trust/Society/Company etc., if any:

Table A.6



7. Details of all the programs being offered by the institution under consideration:

S. No	Program Name	Program Applied level	Year of Start	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation Status*	From	То	Program for consideration	Program for duration
	Computer Science and Engineeri ng	UG	2001	2001	60	Yes	180	Granted accreditation for 3 years for the period (specify period)	2017	2020	Yes	4

Sanctioned Intake for Last Five Years for the Computer Science and Engineering

Academic Year	Sanctioned Intake
2019-20	240
2018-19	240
2017-18	180
2016-17	180
2015-16	180
2014-15	180

S. No	Program Name	Program Applied level	Year of Start	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation Status*	From	То	Program for consideration	Program for duration
1.	Computer Science and Engineeri ng	PG	2010	2010	18	Yes	18	Not eligible for accreditation	-	-	NO	2

Sanctioned Intake for Last Five Years for the Computer Science and Engineering(PG)

Academic Year	Sanctioned Intake
2019-20	18
2018-19	18
2017-18	24
2016-17	24
2015-16	24
2014-15	24
Tabl	

Table A.	.7
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8. Programs to be considered for Accreditation vide this application

Sl. No	Level	Discipline	Program
1.	Under Graduate	Engineering & Technology	Civil Engg.
2.	Under Graduate	Engineering & Technology	Computer Science &Engg.
3.	Under Graduate	Engineering & Technology	Electronics & Communication Engg.
4.	Under Graduate	Engineering & Technology	Mechanical Engg.

Table A.8

9. Total number of employees:

A. Regular Employees (Faculty and Staff):

Items		CA	¥Υ	CAY	Ym1	CAYm2		
		Min	Max	Min	Max	Min	Max	
Faculty in	М	124	137	127	141	139	154	
Engineering	F	107	118	104	115	101	112	
Faculty in Maths,	М	31	34	27	30	26	28	
Science &Humanities teaching in engineering Programs	F	44	48	42	46	40	44	
Non-teaching staff	М	102	113	99	109	103	114	
	F	125	138	125	138	123	136	

Table A.9a



Items		CAY		CAYm1		CAYm2	
		Min	Max	Min	Max	Min	Max
Equility in Engineering	Μ	44	48	33	36	39	43
Faculty in Engineering	F	8	9	5	5	3	3
Faculty in Maths, Science &Humanities teaching in engineering Programs	Μ	0	0	0	0	0	0
	F	0	0	0	0	0	0
Non-teaching staff	Μ	0	0	0	0	0	0
	F	0	0	0	0	0	0

B. Contractual Staff Employees (Faculty and Staff):

Table A.9b

10. Total number of Engineering Students:

Engineering and Technology- UG	Shift1 √	Shift2 $$
Engineering and Technology- PG	Shift1 √	Shift2 $$
Engineering and Technology- Polytechnic	Shift1	Shift2
MBA	Shift1 √	Shift2
МСА	Shift1 √	Shift2

Engineering and Technology- UG Shift-1

Course Name	2019-20	2018-19	2017-18
Total no. of Boys	740	728	629
Total no. of Girls	224	229	239
Total	964	957	868



Engineering and Technology- UG Shift-2

Course Name	2019-20	2018-19	2017-18
Total no. of Boys	134	227	222
Total no. of Girls	47	50	58
Total	181	277	280

Engineering and Technology- PG Shift-1

Course Name	2019-20	2018-19	2017-18
Total no. of Boys	7	4	8
Total no. of Girls	3	0	1
Total	10	4	9

Engineering and Technology- PG Shift-2

Course Name	2019-20	2018-19	2017-18
Total no. of Boys	2	2	2
Total no. of Girls	2	6	10
Total	4	8	12

Engineering and Technology- MBA Shift-1

Course Name	2019-20	2018-19	2017-18
Total no. of Boys	108	117	113
Total no. of Girls	72	62	67
Total	180	179	180

Engineering and Technology- MCA Shift-1

Total no. of Boys 68 82 96 Total no. of Girls 33 49 36 Total 101 121 122	Course Name	2019-20	2018-19	2017-18
	Total no. of Boys	68	82	96
Total 101 121 122	Total no. of Girls	33	49	36
101 151 152	Total	101	131	132

Table A.10

11. Vision of the Institution:

To emerge as an institute of eminence in the fields of engineering, technology and management in serving the industry and the nation by empowering students with a high degree of technical, managerial and practical competence.



12. Mission of the Institution:

- To strengthen the theoretical, practical and ethical dimensions of the learning process by fostering a culture of research and innovation among faculty members and students.
- To encourage long-term interaction between the academia and industry through the involvement of the industry in the design of the curriculum and its handson implementation.
- To strengthen and mould students in professional, ethical, social and environmental dimensions by encouraging participation in co-curricular and extracurricular activities.

13. Contact Information of the Head of the Institution and NBA coordinator, if designated:

- Name: Dr. Manjunatha
 Designation: Principal
 Mobile No: 9901916000
 Email id: principal@newhorizonindia.edu
- NBA coordinator, if designated Name: Dr. M S Ganesha Prasad Designation: Dean, Prof & Head Mobile No: 9886921136 Email id:msgprasad@gmail.com



PART B: Criteria Summary

Name of the program: Computer Science and Engineering

Criteria No.	Criteria	Total Marks	Institute marks		
	Program Level Criteria				
1.	Vision, Mission and Program Educational Objectives	50	50		
2.	Program Curriculum and Teaching –Learning Processes	100	100		
3.	Course Outcomes and Program Outcomes	175	175		
4.	Students' Performance	100	89.40		
5.	Faculty Information and Contributions	200	194.35		
6.	Facilities and Technical Support	80	80		
7.	Continuous Improvement	75	75		
Institute Level Criteria					
8.	First Year Academics	50	46.52		
9.	Student Support Systems	50	50		
10.	Governance, Institutional Support and Financial Resources	120	120		
	Total	1000	980		

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CRITERION 1

VISION - MISSION & PROGRAM EDUCATIONAL OBJECTIVE

10



CRITERION 1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES

50

1. VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (50)

1.1. State the Vision and Mission of the Department and Institute (5)

Vision of the NHCE

To emerge as an institute of eminence in the fields of engineering, technology and management in serving the industry and the nation by empowering students with a high degree of technical, managerial and practical competence.

Mission of the NHCE

- To strengthen the theoretical, practical and ethical dimensions of the learning process by fostering a culture of research and innovation among faculty members and students.
- To encourage long-term interaction between the academia and industry through the involvement of the industry in the design of the curriculum and its hands-on implementation.
- To strengthen and mould students in professional, ethical, social and environmental dimensions by encouraging participation in co-curricular and extracurricular activities.



Vision of the Department

To emerge as a department of eminence in Computer Science and Engineering in serving the Information Technology Industry and the nation by empowering students with a high degree of technical and practical competence.

Mission of the Department

- To strengthen the theoretical and practical aspects of the learning process by strongly encouraging a culture of research, innovation and hands-on learning in Computer Science and Engineering
- To encourage long-term interaction between the department and the IT industry, through the involvement of the IT industry in the design of the curriculum and its hands-on implementation
- To widen the awareness of students in professional, ethical, social and environmental dimensions by encouraging their participation in co-curricular and extracurricular activities

Consistency of Vision of the Institute with that of department		
Components of Vision Statement of NHCE	Components of Vision Statement of department	
 To emerge as an institute of eminence in the fields of engineering, technology, and management in serving the industry and the nation by empowering students with a high degree of technical, managerial and practical competence. 	 To emerge as a department of eminence in Computer Science and Engineering in serving the Information Technology industry and the nation by empowering students with a high degree of technical and practical competence. 	



Consistency of Mission of th	e Institute with that of department
Components of Mission Statement of NHCE	Components of Mission Statement of department
To strengthen the theoretical,	 To strengthen the theoretical and
practical and ethical	practical aspects of the learning
dimensions of the learning	process by strongly encouraging
process by fostering a culture	a culture of research,
of research and innovation	innovation and hands-on
among faculty members and	learning in Computer Science and
students.	Engineering.
To encourage long-term	To encourage long-term
interaction between the	interaction between the
academia and industry through	department and the IT industry,
the involvement of the	through the involvement of the
industry in the design of the	IT industry in the design of the
curriculum and its hands-on	curriculum and its hands-on
implementation.	implementation.
To strengthen and mould	To widen the awareness of
students in professional,	students in professional, ethical,
ethical, social and	social and environmental
environmental dimensions by	dimensions by encouraging
encouraging participation in	their participation in co-
co-curricular and	curricular and extracurricular
extracurricular activities.	activities.



1.2. State the Program Educational Objectives (PEOs) (5)

The Graduate of the program will be able to:

PEO 1	Develop proficiency as computer scientists with an ability to solve a wide range of computational problems in industry, government, or other work environments.
PEO 2	Attain the ability to adapt quickly to new environments and technologies, assimilate new information, and work in multi-disciplinary areas with a strong focus on innovation and entrepreneurship.
PEO 3	Possess the ability to think logically and the capacity to understand technical problems with computational systems.
PEO 4	Possess the ability to collaborate as team members and team leaders to facilitate cutting-edge technical solutions for computing systems and thereby providing improved functionality



1.3. Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (15)

The vision and mission are published and disseminated at:

- College website, http://newhorizonindia.edu/nhengineering/about/
- Department website, http://newhorizonindia.edu/nhengineering/department-ofcomputer-science-engineering/
- Orientation program
- HOD cabin
- Classrooms
- Faculty Rooms
- Laboratories
- Bluebooks
- Lab Record
- Syllabus Book
- Among stakeholders through e-mails
- Various functions such as:
 - o Alumni meet
 - o National and International conferences
 - o Seminars
 - o Workshops

The PEOs are published at:

• Department website,

http://newhorizonindia.edu/nhengineering/department-of-computer-science-

engineering/peo-po-pso/

- Orientation program
- Faculty Rooms
- Laboratories
- Among stakeholders through e-mails
- Bluebooks



- Lab Record
- Syllabus Book
- Various functions such as:
 - o Alumni meet
 - National and International conferences
 - o Seminars
 - o Workshops

The vision, mission and PEOs are disseminated to the stakeholders of the program i.e. management, faculty, students, staff, alumni, parents and employees through continuous interaction.

Vision and Mission of the Department are conveyed to stakeholders as follows:

- Special sessions are organized before the start of the academic session, where faculty members and Lab staff are explained the vision and mission.
- The vision and mission statements are explicitly communicated to the newly enrolled students and the parents during orientation and induction program.
- ✤ Alumni are updated about any changes during Alumni interaction.
- The statements are communicated to the industry/employers through presentations during industrial visits and with other industry-institute interactions.

Additionally, dissemination of PEOs to various stakeholders of the program is done at the meetings of faculty members, Board of Studies (BOS), Program Assessment Committee (PAC) and Department Advisory Board (DAB).



1.4. State the process for defining the Vision and Mission of the Department (15)

The Department's vision and mission are found through a consultative process involving the stakeholders, faculty of the department and the Advisory Board members of the Institution.

The Process for defining the Vision and Mission of the Department:

- 1. Department vision and mission are derivative components of institute vision and mission.
- 2. The internal and the external stakeholders are involved in framing or reframing the vision and mission of the department.
- 3. The internal stakeholders are
 - a. Management
 - b. Governing Council Body members
 - c. Faculty members
 - d. Students
- 4. The external stakeholders are
 - a. Alumni members
 - b. Parents
 - c. Industry members
- 5. Discussions, brainstorming sessions will be made among the members to arrive on vision and mission statements.
- 6. The Program Coordinator will take this forward to the PAC and DAB committee members for the final approval.
- 7. The accepted views are analyzed and reviewed to check the consistency with the vision and mission of the institute.
- 8. The Program Coordinator forwards to the Board of studies (BOS), and the final version is submitted to the Academic Council for approval.
- 9. Program coordinator disseminates the vision and mission statements to the department



Program Assessment Committee (PAC) comprises the following members:

- Head of the Department Chairperson
- Program Chair (PC) Coordinator for PAC
- Professors, Associate Professors & Assistant Professors in the department associated with the program

Departmental Advisory Board (DAB) comprises of the following members:

- Head of the Department Chairperson
- Program Chairs (PC) Coordinators
- Division Chairs (DC)- Members
- External Academicians 2
- Industry Experts 2
- Students from each batch 2
- Alumni 2



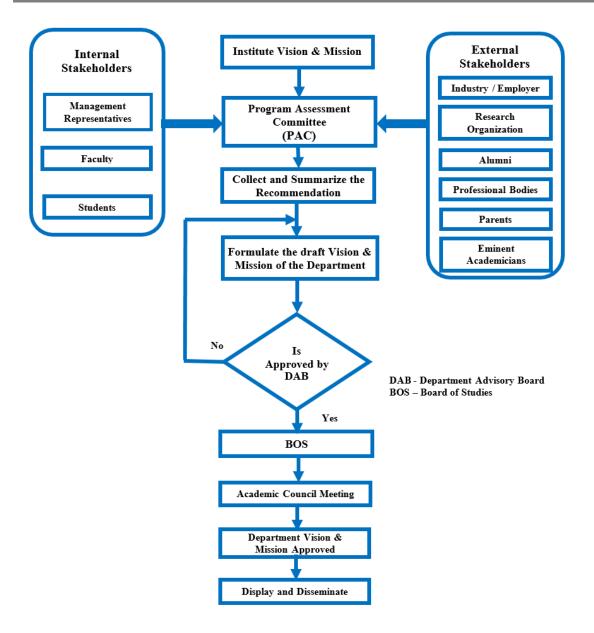


Fig 1.1: Process for defining Vision and Mission of the department



State the process for defining the PEOs

The Program Educational Objectives are established through a consultation process involving the core constituents such as students, alumni, industry, faculty and employers. The PEOs are established through the following process steps:

- 1. Program Educational Objectives (PEO) are broad statements (3 years or more after graduation) describing the career and professional accomplishments that the program is preparing graduates to achieve.
- 2. Department PEO statements are a derivative component of institute vision, mission, graduate attributes defined by NBA and also department vision, mission.
- 3. The internal and the external stakeholders are involved in framing or reframing the PEO's of the department.
- 4. The internal stakeholders are
 - a. Management
 - b. Governing Council Body members
 - c. Faculty members
 - d. Students
- 5. The external stakeholders are
 - a. Alumni members
 - b. Parents
 - c. Industry members
- Discussions, brainstorming sessions will be made among the members to arrive on PEO statements.
- 7. The views are collected from all the stakeholders and passed on to different committees for approval.
- 8. The Program coordinator will take this forward to the PAC and send it to DAB committee members for the approval.
- 9. The Program Coordinator forwards to the Board of studies (BOS), and the final version is submitted to the Academic Council for approval.
- 10. Program coordinator disseminates the PEO statements to the department.



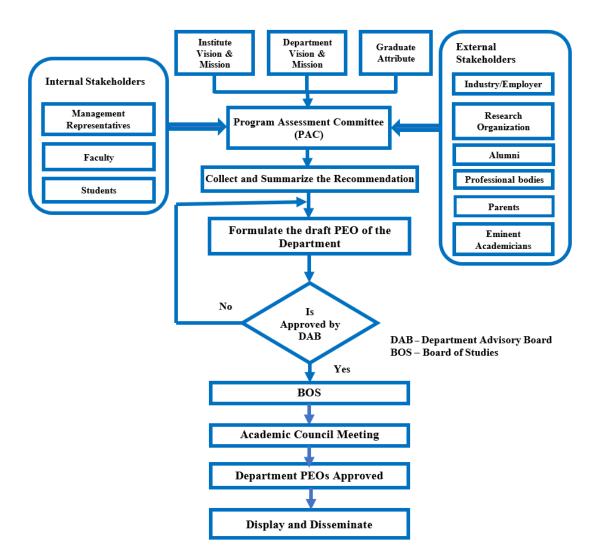


Fig 1.2: Illustrates the Process for establishing the PEOs



1.5. Establish consistency of PEOs with Mission of the Department (10)

Mission of the Department

M1: To strengthen the theoretical and practical aspects of the learning process by strongly encouraging a culture of research, innovation and hands-on learning in Computer Science and Engineering

M2: To encourage long-term interaction between the department and the IT industry, through the involvement of the IT industry in the design of the curriculum and its hands-on implementation

M3: To widen the awareness of students in professional, ethical, social and environmental dimensions by encouraging their participation in co-curricular and extracurricular activities

PEO Statements	M1	M2	M3
PEO 1: Develop proficiency as computer scientists with an ability to solve a wide range of computational problems in industry, government, or other work environments.	2	3	2
PEO 2: Attain the ability to adapt quickly to new environments and technologies, assimilate new information, and work in multi-disciplinary areas with a strong focus on innovation and entrepreneurship	3	2	3
PEO 3: Possess the ability to think logically and the capacity to understand technical problems with computational systems.	3	2	2
PEO 4: Possess the ability to collaborate as team members and team leaders to facilitate cutting-edge technical solutions for computing systems and thereby providing improved functionality.	2	2	2
3 - Strong Correlation2 -Moderate Correlation	1 - V	Weak Co	rrelatio

Consistency of PEOs with Mission of the Department



- PEO1 is concerned with proficiency as computer scientists to solve a wide range of problems maps moderately with M1. Mission M1 focuses on theoretical and practical aspects of the learning process. This PEO maps substantially with M2 as it is concerned with industry-institute interactions. PEO1 is concerned with solving wide range of computing problems in multiple environments and moderately maps with M3
- PEO2 is concerned with adapting to new environments with a strong focus on innovation and substantially relates to M1, since M1 focuses on encouraging a culture of research and innovation. This PEO is concerned with assimilating new information and working in multi-disciplinary areas and has moderate correlation to M2, since M2 focuses on the involvement of the IT industry in ensuring that students are industry ready. PEO2 is concerned with attaining the ability to work in multi-disciplinary areas and substantially related with M3, since M3 focuses on widening the awareness in multiple environments by encouraging participation in co-curricular and extracurricular activities.
- PEO3 is concerned with developing the capacity to understand technical problems with computational systems and hence substantially maps with M1. M1 focuses on strengthening the theoretical and practical aspects of the learning process. PEO3 is concerned with developing the capacity to understand technical problems with computational systems and maps moderately with M2, as M2 focuses on training in latest technologies. PEO3 is concerned with developing the logical thinking ability and moderately correlates to M3, since M3 focuses on improving logical thinking of the students through participation in co-curricular and extracurricular activities.



PEO4 is concerned with facilitating cutting-edge technical solutions for computing systems and moderately maps with M1, since M1 focuses on encouraging a culture of research and innovation. PEO4 is concerned with providing improved functionality for computing systems and moderately maps with M2, since M2 focuses on involvement of the IT industry in exposure to cutting-edge technologies. PEO4 is concerned with ability to collaborate in a team and moderately maps with M3, since M3 focuses on team-based participation with professional, ethical, social and environmental dimensions

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CRITERION 2

PROGRAM CURRICULUM AND TEACHING – LEARNING PROCESSES

25



CRITERION 2 PROGRAM CURRICULUM AND TEACHING LEARNING PROCESSES

100

2.1 Program Curriculum

2.1.1 State the process for designing the program curriculum

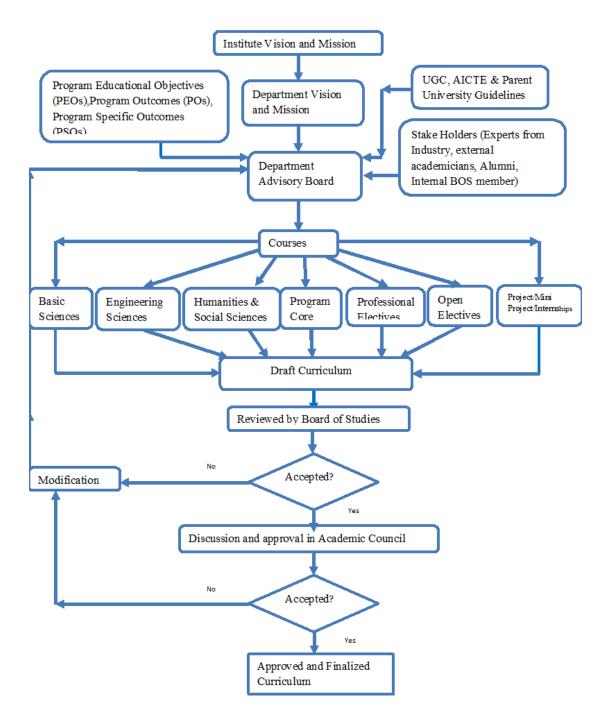
The department frames its program curriculum based on the vision and mission of the institution and the department. The curriculum is revised to help students to be industry ready.

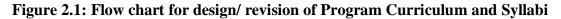
The process flow for Curriculum Design is as follows:

- Based on Institute/Department mission and vision, and the NBA / AICTE guidelines the department formulates its PSOs.
- The HOD along with all faculty members frames the outline of the curriculum based on norms of AICTE, UGC, VTU and referring to the curriculum of premier institutions like NITs, IITs, foreign universities etc.
- The course outcomes of all the courses of the curriculum are planned according to the POs and PSOs. Then, the syllabi of various courses are framed.
- The feedback of the curriculum is obtained from various stakeholders such as academicians, industrial experts, alumni, parents, faculty and students.
- The curriculum is presented in Program Assessment Committee and Department Advisory Board and the necessary changes are incorporated.
- The curriculum is submitted to the Board of Studies (BOS) meeting. The recommendations and modifications suggested by BOS members are incorporated in curriculum forwarded to Academic Council.
- After the approval from Academic Council (AC) and Governing Body, the curriculum is finalized. The curriculum is implemented and the impact will be considered for further implementations.



Flow chart for design/ revision of Program Curriculum is shown in Figure 2.1







2.1.2 Structure of the Curriculum

B.E. Program - Batch: 2018 – 2022

Department of Computer Science and Engineering

SCHEME OF TEACHING AND EXAMINATION

Carrier		Hours/Week				Cre	edits	Total	
Course Code	Course Name	L	Т	Р	Total Hours	Theory Credits	Practical Credits	Credits	
Semester I									
18MAT11	Applied Mathematics-I	2	1	0	4	3	0	3	
18PHY12	Engineering Physics	3	0	0	3	3	0	3	
18MEE13	Elements of Mechanical Engineering	3	0	0	3	3	0	3	
18CIV14	Elements of Civil Engineering	3	0	0	3	3	0	3	
18EEE15	Basic Electrical Engineering	3	0	0	3	3	0	3	
18PHL16	Engineering Physics Lab	0	0	2	4	0	2	2	
18EEL17	Basic Electrical Engineering Lab	0	0	2	4	0	2	2	
18HSS171	Essential English		ndator ourse	У	2	0	0	0	
	Total				26			19	
Semester II									
18MAT21	Applied Mathematics –II	2	1	0	4	3	0	3	
18CHE22	Engineering Chemistry	3	0	0	3	3	0	3	
18CSE23	Introduction to	3	0	0	3	3	0	3	



	Programming							
	with C							
18MEE24	Computer Aided Engineering Drawing	1	0	2	5	3	0	3
18ECE25	Basic Electronics	3	0	0	3	3	0	3
18HSS26	Professional Communication	2	0	0	2	2	0	2
18CHL27	Engineering Chemistry Lab	0	0	2	4	0	2	2
18CSL28	Programming with C Lab	0	0	2	4	0	2	2
18HSS272	Constitution of India and Professional Ethics		Mandatory Course		2	0	0	0
	Total				30			21
		S	emest	er II	Ι			
19CSE31	Applied Mathematics-III	2	1	0	4	3	0	3
19HSS322	Life skills for Engineers	3	0	0	3	3	0	3
19CSE33	Digital Electronics	3	0	0	3	3	0	3
19CSE34	Data Structures using C	3	0	0	3	3	0	3
19CSE35	UNIX System Programming	3	0	0	3	3	0	3
19CSL36	Digital Electronics Lab	0	0	2	4	0	2	2
19CSL37	Data Structures using C Lab	0	0	2	4	0	2	2
19CSL38	UNIX System Programming	0	0	2	4	0	2	2



Criterion-2 Self-Assessment Report (SAR)

	Lab							
19CSE39	Mini Project in C	-	-	-	-	0	2	2
	Total				28			23
		S	emest	er IV	7			
19CSE41	Discrete Mathematics and Graph Theory	2	1	0	4	3	0	3
19HSS421	Economics for Engineers	3	0	0	2	3	0	3
19HSS423	Environmental Science and Awareness	0	0	0	1	0	0	0
19CSE43	Object Oriented Programming with Java	3	1	0	5	4	0	4
19CSE44	ARM Processor	3	0	0	3	3	0	3
19CSE45	Computer Organization	4	0	0	4	4	0	4
19CSL46	Object Oriented Programming with Java Lab	0	0	2	4	0	2	2
19CSL47	ARM Processor Lab	0	0	2	4	0	2	2
19CSE48	Mini Project in Java	-	-	-	-	0	2	2
	Total				27			23
		S	emest	ter V	7			
20CSE51	Analysis and Design of Algorithms	3	0	0	3	3	0	3
20CSE52	Operating System	3	0	0	3	3	0	3
20CSE53	Database Management Systems	3	0	0	3	3	0	3
20CSE54	Finite Automata	3	0	0	3	3	0	3



	and Compiler							
	Design							
20CSE55x	Professional Elective-1	3	0	0	3	3	0	3
20CSE56	Python Programming	0	0	2	4	2	0	2
20CSL57	Analysis and Design of Algorithms Lab	0	0	2	4	0	2	2
20CSL58	Database Management Systems Lab	0	0	2	4	0	2	2
20CSE59	Mini Project using Python	-	-	-	-	0	2	2
	Total				27			23
		S	emest	er V	I			
20CSE61	Web Frameworks and Technologies	3	0	0	3	3	0	3
20CSE62	Computer Networks	3	0	0	3	3	0	3
20CSE63	Data Mining and Machine Learning	3	0	0	3	3	0	3
20CSE64x	Professional Elective-2	3	0	0	3	3	0	3
20CSE65x	Professional Elective-3	3	0	0	3	3	0	3
NHOPxx	Open Elective-I	3	0	0	3	3	0	3
20CSL66	Web Frameworks and Technologies Lab	0	0	1.5	3	0	1.5	1.5
20CSL67	Computer Networks Lab	0	0	1.5	3	0	1.5	1.5
20CSE68	Mini Project in	-	-	-	-	0	2	2



	Web Frame Works							
	Total				24			23
		S	emeste	er VI	I	1		
XXCSE71	Software Testing	3	0	0	3	3	0	3
XXCSE72	Mobile Application Development	3	0	0	3	3	0	3
XXCSE73 X	Professional Elective-4	3	0	0	3	3	0	3
XXCSE74 X	Professional Elective-5	3	0	0	3	3	0	3
NHOPxx	Open Elective -II	3	0	0	3	3	0	3
XXCSL75	Software Testing Lab	0	0	2	4	0	2	2
XXCSL76	Mobile Application Development Lab	0	0	2	4	0	2	2
XXCSE77	Mini Project in Mobile Application Development	-	-	-	-	0	2	2
XXCSE78	Project Phase-1	-	-	-	-	0	2	2
	Total				23			23
		Se	meste	r VI	II			
XXCSE81x	Professional Elective-6	3	0	0	3	3	0	3
XXCSE82x	Professional Elective-7	3	0	0	3	3	0	3
XXCSE83	Internship Viva	-	-	I	-	0	4	4
XXCSE84	Project Phase 2	-	-	-	-	0	10	10
	Total				06			20



2.1.3 State the components of the curriculum

The program curriculum grouping based on course components for batch 2018-2022 and the list of courses corresponding to the various course components are given in the following tables

Course Component	Curriculum Content (%of total number of credit of the program)	Total number of contact hours/Week	Total number of credits
Basic Sciences	12.5	30	22
Engineering Sciences	9.7	21	17
Humanities and Social Sciences	4.57	17	08
Program Core	42.85	101	75
Professional Electives	12	21	21
Open Electives	3.42	6	6
Project(s)/ Mini Project	12.5		22
Internship\Seminar	2.28		4
Any other (Career Competency Development)			
Tota	175		

2.1.4 State the process used to identify extent of compliance of the curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure

The structure of the curriculum designed for B. E. in Computer Science and Engineering is well balanced and appropriate for engineering program. The designed curriculum provides both depth and breadth across the range of engineering topics. The curriculum is designed considering the program criteria of Engineering programs recommended by lead



professional societies like Institute of Electricals and Electronics Engineers (IEEE), Institute of Engineers India (IEI) and ACM.

The designed curriculum is well balanced and it has included various categories of courses from Basic sciences, Engineering sciences, Humanities and Social sciences. The curriculum includes core programs, professional and open electives, Projects and Internship components necessary to analyse and design complex software solutions.

The syllabus for each course has been designed to meet the compliance of the curriculum for attaining the POs and PSOs defined for the program.

The Program Specific outcomes (PSOs) of Computer Science and Engineering are:

PSO1: Ability to design, develop, implement computer programs and use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations.

PSO2: Work with and communicate effectively with professionals in various fields and pursue lifelong professional development in computing.

Process Description:

The course outcomes of all the courses in the program are mapped with the defined twelve POs and two PSOs. The mapping has been done based on the correlation levels defined by Board of Accreditation. The various correlation levels are "3" – substantial (High) Correlation, "2"- moderate (Medium) Correlation, "1"- Slight (low) Correlation. "dash" – No Correlation

Table 2.1. shows the substantial mapping of the courses with POs & PSOs and Figure 2.2(a) and 2.2(b) shows the process to ensure the compliance and attainment of POs & PSOs

- It is ensured that the defined POs/PSOs are adequately covered by the courses being taught and each course is mapped substantially high with at least one PO. It also ensured that the POs/PSOs have high correlation with adequate number of courses.
- The attainment of POs and PSOs are calculated through direct and indirect assessment methods.
- Direct attainment is calculated through Continuous Internal Evaluation (CIE) and indirect attainment through Feedback form from Students, Employers, Industry, and Alumni.
- If the attainment meets the target, enhance the target. Otherwise, rework / revise content / delivery / assessment to get the desired attainment.



	Table: 2.1: POs/PSOs vs Courses Mapped with High Correlation										
POs/ PSOs	Courses Mapped Significantly										
PO1	16CSE33, 16CSE34, 16CSE35, 16CSE36, 16CSE43, 16CSE44, 16CSE45, 16CSE46, CSE51, CSE52, CSE53, CSE54, CSE56, CSE61, CSE62, CSE63, CSE65, CSE71, CSE72, CSE73, CSE76, CSE77, CSE81, CSE82, CSE83, CSE84, CSE551, CSE552, CSE553, CSE641, CSE642, CSE643, CSE741, CSE743, CSE745, NHOP01, NHOP04										
PO2	16CSE33, 16CSE34, 16CSE35, 16CSE36, 16CSE43, 16CSE44, 16CSE45, 16CSE46, CSE51, CSE52, CSE53, CSE54, CSE56, CSE61, CSE62, CSE63, CSE65, CSE71, CSE72, CSE73, CSE76, CSE77, CSE81, CSE82, CSE83, CSE84, CSE551, CSE552, CSE641, CSE642, CSE643, CSE741, CSE743, CSE745, NHOP04										
PO3	16CSE33, 16CSE34, 16CSE35, 16CSE36, 16CSE44, 16CSE46, CSE51, CSE52 CSE53, CSE54, CSE56, CSE61, CSE62, CSE63, CSE65, CSE71, CSE72, CSE73, CSE76, CSE81, CSE82, CSE84, CSE551, CSE641, CSE743										
PO4	16CSE33, 16CSE34, 16CSE36, 16CSE44, CSE51, CSE52, CSE62, CSE63, CSE65, CSE76, CSE81, CSE84, CSE551										
PO5	16CSE33, 16CSE34, 16CSE36, 16CSE43, 16CSE46, CSE51, CSE53, CSE54, CSE56, CSE61, CSE62, CSE71, CSE72, CSE73, CSE76, CSE81, CSE84, CSE551, CSE552, CSE553, NHOP01, NHOP04										
PO6	CSE77, CSE641										
PO7	CSE84										
PO8	16CSE36, CSE51, CSE76, CSE84, CSE551, CSE641										
PO9	16CSE34, 16CSE36, 16CSE43, 16CSE46, CSE51, CSE53, CSE56, CSE61, CSE62, CSE65 CSE71, CSE72, CSE73, CSE76, CSE77, CSE83, CSE84, CSE551, CSE552, CSE553, CSE641, CSE642, NHOP01, NHOP04										
PO10	16CSE36, 16CSE44, 16CSE45, 16CSE46, CSE52, CSE76, CSE77, CSE81, CSE84, CSE551, CSE741, CSE743, CSE745										
PO11	CSE84										
PO12	16CSE34, 16CSE36, 16CSE43, 16CSE44, 16CSE46, CSE63, CSE65, CSE76, CSE84, CSE551, CSE642, CSE743										
PSO1	16CSE33, 16CSE34, 16CSE35, 16CSE36, 16CSE43, 16CSE44, 16CSE46, CSE51, CSE52, CSE53, CSE54, CSE56, CSE61, CSE62, CSE63, CSE71, CSE73, CSE72, CSE76, CSE82, CSE83, CSE84, CSE551, CSE553, CSE641, CSE642, CSE743, CSE745, NHOP01, NHOP04										
PSO2	16CSE34, 16CSE36, 16CSE44, 16CSE45,16CSE46, CSE52, CSE54, CSE56, CSE63, CSE76, CSE73, CSE77, CSE81, CSE82, CSE84, CSE641, CSE642, CSE741										

Table: 2.1: POs/PSOs Vs Courses Mapped with High Correlation



The process is described in Figure. 2.2 a & b

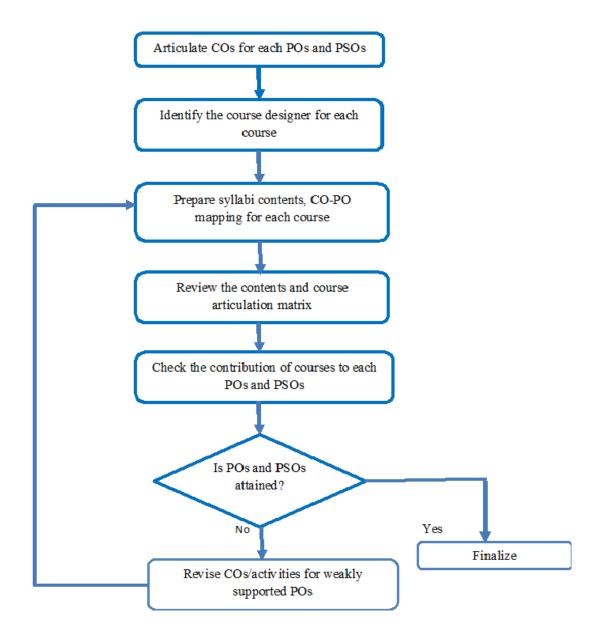


Figure 2.2(a): Process to identify extent of compliance of the curriculum for attaining the program Outcomes and Program Specific Outcome



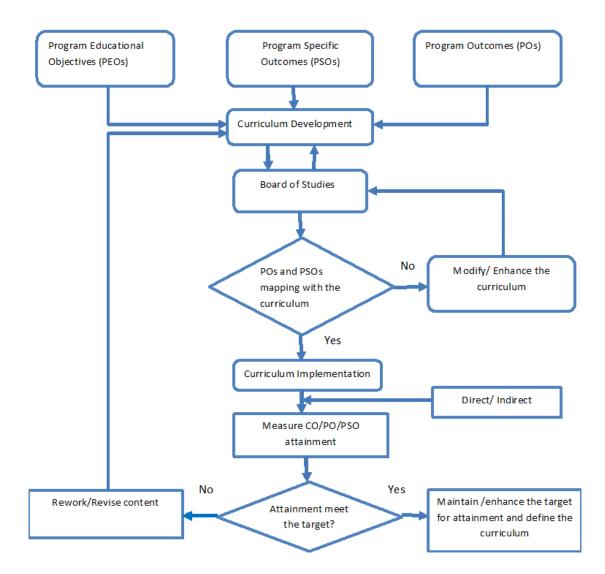


Figure 2.2(b): Process to ensure the compliance and attainment of POs & PSOs



2.2. Teaching-Learning Processes

2.2.1 Describe Processes followed to improve quality of Teaching & Learning

The process followed to improve the quality of teaching and learning in the department of Computer Science and Engineering is described in Figure. 2.3(a) and (b).

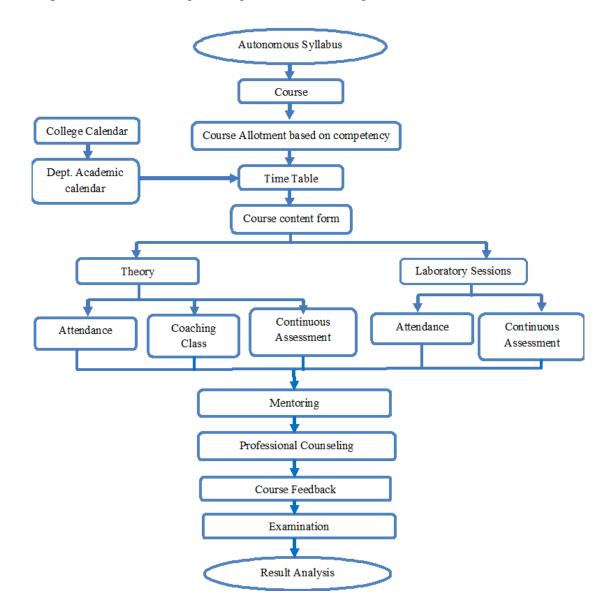
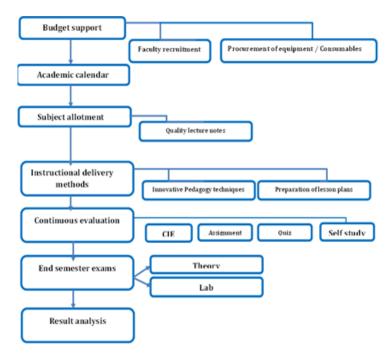


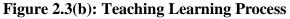
Figure 2.3(a): Teaching Learning Process



To strengthen the teaching-learning process, following initiatives have been taken:

- 1. Adherence to Academic Calendar
 - (i) Preparation of academic action plans/Lesson Plan
- 2. Pedagogical Initiatives Content Delivery (method of instruction)
 - (i) Digital library
 - (ii) Contineo -LMS
 - (iii) Project Based Learning
 - (iv) Continuous Internal Evaluation (CIE) Test
- 3. Methodologies to support weak students and encourage bright Students
 - (i) Mentoring System
 - (ii) Identification of Week Students / Fast Learners
 - (iii) Action Taken
- 4. Quality of Class Room Teaching
- 5. Conduct of Experiments
- 6. Student Feedback and action taken







1. Adherence to Academic calendar

Academic Calendar: Department prepares its own Calendar of events in alignment with Institute academic calendar prior to the commencement of the semester, a sample of Calendar of events in adherence to the Institute academic calendar is presented in Figure 2.4.

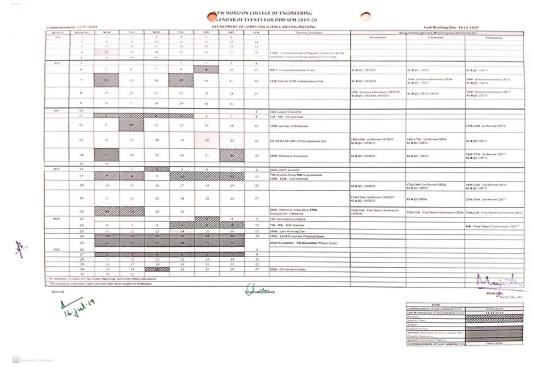


Figure 2.4 Academic Calendar

2. Pedagogical Initiatives

Pedagogies play an important role in delivering of content and it varies with the audience. Course allocation is made based on the choice/ expertise of the faculty members one month before the commencement of semester. Once the courses are allocated, the faculty members prepare a detailed lesson plan, assignments questions, quiz questions etc. for a particular course. Course handout and materials are prepared keeping in mind the lesson plan and course outcomes. Course handout and any other related material uploaded on digital library. Faculty members use various pedagogical methods for effective teaching learning process. Fig 2.5 illustrates some of the pedagogical initiatives which are followed.in the department. A well-defined process for course allotment and load distribution is adopted at the department level. Three to four choices are solicited from the faculty members. Course handout and any other related material both for theory and lab are uploaded on digital library and can be downloaded at http://newhorizonindia.edu/nhengineering/resources/.



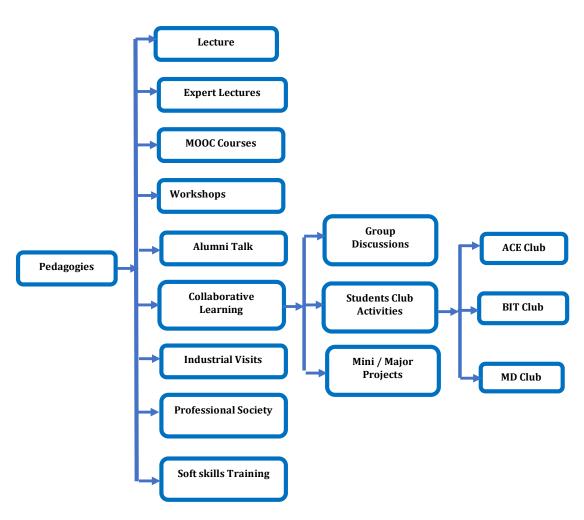


Figure 2.5: Pedagogical Initiatives

Course Delivery Methods

Classroom teaching:

The lecture delivery by the faculty is through a set of educational technology/tools such as,

- Lecturing is done using Smart boards
- Chalk and talk green/black board.
- Power Point Presentation (PPT).
- Animated videos
- Citing real world examples for application based courses.
- Case studies
- Project based Learning
- Digital library enables real time learning, monitoring, comprehension and
- Quiz



- Automation tool for Student data management (Contineo)
- Group discussions/tasks
- Internship
- Co-Curricular activity
- Workshops
- Expert talk
- Access to study material in e-resources
- Use of Open Source Software.

ICT based learning: Use of LCD projectors /Smart boards and provision for interactive teaching learning.

Collaborative / Cooperative teaching/ learning: Students share knowledge or discuss topics in small group or in peer mode.

NPTEL and SWAYAM: The faculty members are using E-sources such as NPTEL and SWAYAM courses for effective teaching. The same also provided to the students in order to develop self-learning and life-long learning skills.

Assignments based problem solving: Assignments are given to students on problems and they solved by themselves. Assignments are based on COs which helps to achieve Program Outcomes.

Laboratory/ video based demonstration: Demonstration of system or parts of a real world system using modern tools.

Group discussion/ presentation: Students learn through group discussion or asked to deliver short presentation on a topic.

Expert Lecture:

Department, with the prime vision of enhancing technical competency of our students, has organized various guest lectures by inviting experts from Industry and Academia to lend valuable guidance on latest technical drive, industry expectations and avenues for knowledge enhancement. (Refer Table 2.29 (a) and 2.29(b)).

Industrial Visits

Industrial visits are arranged to get the student's acquainted with industrial environment and work ethics (Refer 2.34).



Internship

At the end of every semester or in vacation time students is allowed to carry out internship in reputed industries/companies to get practical exposure from industries. It helps the students to bridge the gap between the subject's studies and industrial need (Refer 2.35).

Department symposia / conference

International Conference:

The department organizes conference/department symposia every year to enrich the knowledge of students. This provides a platform for both the faculty and students to share their knowledge and to hold discussion with eminent people from both academia and industry and also with their peers. These events help the students to acquire different soft skills.

International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS – 2019 was conducted during December 19-21, 2019 by New Horizon College of Engineering. The organizing secretary for this conference was HOD-CSE and the CSE department spearheaded this conference. The conference provided a cross-disciplinary venue for researchers, academia and industry practitioners to present their state-of-art research work on a wide spectrum of domains like Machine Intelligence, Modern Technologies & Automation, Green technologies, Emerging Technologies for smarter and Intelligent World, Biosciences, Innovations in Business Management, Contemporary Innovations in Libraries, Sciences and Humanities, to exchange ideas and explore new avenues of collaborations.

The department of CSE received 52 papers of which 39 were selected after a strict review process. The papers were presented on 2 days over 6 sessions which were chaired by Dr. Shilpa Chaudhari (MSRIT, Bangalore) and Mr. Sameer Kaulgud (Infosys Technologies Ltd, Bangalore) as externals and Dr. Pamela Vinitha and Dr. Hanuman Kumar V as internals. The best 3 papers where published in Scopus indexed journal and the remaining 36 where published in International Journal of Scientific Research in Computer Science, Engineering and Information Technology.







Figure 2.6 International Conference ICIREMS – 2019

National Conference:

Department of Computer Science and Engineering has conducted a national conference on "Advancements in Computer science and Engineering" NCACSE 2019 on 24th April. The conference provided a common forum for deliberations, sharing of recent trends, advancements and research in the area of Computer Science. This conference was a very good platform for academia, researchers and technologists to discuss and present recent advances and research outcomes.

We received technical papers on, domains like Image processing, Big data analytics, Machine learning, IoT, Network security, Cloud computing, Data Mining, Blockchain, to name a few. A total of 62 papers were received from different parts of the country. 37 papers were accepted after plagiarism check and blind reviews were done by well qualified academia, with doctorates in their respective domains.

All papers presented will be published in the "International Journal of Computing & Information Science", a UGC approved Journal. These 37 papers were also published in the conference proceeding with an ISBN number.

NCACSE-2019 provided a wonderful opportunity for each participant to discuss the applications of engineering which would embark a new phase in the future days to come.





Figure 2.7: National Conference NCACSE-2019

Workshop

Department organizes at least two workshops per academic year to facilitate the students in having a hands on training in a specific domain.

- These workshops enable students in learning and realizing new and latest technologies.
- The students get a platform to exhibit their ideas and implement them in reality.

Table 2.2(a). Workshop Details of AT 2017-2020											
Sl. No	Name of the	Resource Person	No of	Date of							
51. 140	Workshop	Details	Participants	Conduction							
1	Cyber security Awareness	Mr. Nagaraja, Director IT Secure systems	41	12-11-2019							
2	Mobile application development using android	Mr. Jayashankar, Senior Software Engineer, Integra Micro systems	40	26-10-2019							
3	Big data and its technologies	Mr. Vithal, Module Lead Impetus InfoTech	30	14-09-2019							
4	Introduction to information security and its importance	Mr. Vinay Khande, Associate Consultant, Allstate	30	29-08-2019							

 Table 2.2(a): Workshop Details of AY 2019-2020

 Table 2.2(b): Workshop Details of AY 2018-2019

Sl. No.	Name of the Workshop	Resource Person Details	Date of Conduction	No of Participants
1	Data science and machine learning	Mr. Vinay Haritsa, Data Engineer, Vtricks Technologies	19-03-2019	30
2	Introduction to Ethical Hacking	Mr. Vinay Khande, Associate Consultant, Allstate	08-02-2019	30
3	Python for data science and machine learning	Mr. Mahadeva Prabhu Technical Trainer	06-10-2018	30



	Table 2.2(C). Workshop Details of AT 2017-2010											
S.No	Event Type	Title	Resource Person Details	Date	No. of Participants							
1	Placement Training for Non-Circuit Branches	C and Data Structure	Mr. Omprakash Shyamalan	11-18 June 2018	15							
2	Hands-on Training	Hadoop Ecosystem- SQOOP, HIVE, PIG, HBASE	Mr. Prinshu Verma, Prwatech	20-22 July 2017	20							
3	Hands-on Training	Vertica-Data Warehouse database	Mr. Kushwanth Setty, HPE Engineer, South Asia region	10-15 July 2017	20							

 Table 2.2(c): Workshop Details of AY 2017-2018



Figure 2.8: Workshop



Following are some of the measures taken to aid teaching process and making it more effective.

Content Delivery (Method of Instruction)



Figure 2.9(a): Activity based Learning



Digital Library for self-learning

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Home C PROGRAMMING				
B Sparse Matrix 19CS. B Sparse Matrix 19CS. B Sparse Matrix 19CSL28 C Programming (CSE Department)	12 Binomialcoeff 19C. : 12 Binomialcoeff 19C. : 12 Binomialcoeff 19CSL28 C progamming (CSE Department)	14 B Time difference	19CSL28 1 Roots of For a state of the state of th	
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19CSL28 2 Reverse of an Integer (CSE	19CSL28 3 palindrome (CSE	19CSL28 4 Simplecalc (CSE	19CSL28 5 Sinx (CSE Department)	

COURSE MATERIALS		
OSpace >		
AB EXPERIMENT VIDEOS		
SH	Mechanical Engineering	Computer Science Engineering
hysics Lab Experiments 🗲	Fluid Mechanics – Sem 4 🔉	C PROGRAMMING- 19CSL28 >
Chemistry Lab Experiments 🔉	MOM Lab - Sem 4 🔉	OOPS WITH JAVA LAB-19CSL46 >
	Metrology – Sem 4 🔉	ARM LAB LINK- 19CSL47 🗲
utomobile Engineering	Machine Shop Lab – Sem 4 🔉	CORE JAVA LINK-CSE61 >
ab Experiments 🗲		

Figure 2.9(c): Digital Learning –Online LAB videos



Website Details of Lab Video

Course Code	Course Name	URL
19CSL28	C Programming Lab	http://newhorizonindia.edu/nhengineering/c- programming/
19CSL46	OOPS with Java Lab	http://newhorizonindia.edu/nhengineering/oops-with- java-lab/
19CSL47	ARM Processor Lab	http://newhorizonindia.edu/nhengineering/arm- processor-lab/
CSE61	Core Java Lab	http://newhorizonindia.edu/nhengineering/core-java- cse61/
CSE62	Computer Networks Lab	http://newhorizonindia.edu/nhengineering/cn-lab- cse62/
NPOH01	HP1 Lab	http://newhorizonindia.edu/nhengineering/hp1-lab- nhop01/
NPOH04	HP2 Lab	http://newhorizonindia.edu/nhengineering/hp2-lab- nhop04/
NPOH14	Block Chain Lab	http://newhorizonindia.edu/nhengineering/blockchain- nhop14/



Theory Course Material

The syllabi, previous SEE question papers and Lesson Material of CSE department are all uploaded in the NHCE website under the following URL.

http://202.62.95.70:8080/jspui/handle/123456789/30

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Search DSpace Go Advanced Search	DSpace at My University > NHCE > DEPARTMENTS >	Recent Submissions
⊖ <u>Home</u>		<u>Managing Risk and</u> Information Security: Protect to Enable
Browse	CSE	Elements of Robotics
Communities & Collections	Community home page	Autonomous Control for a Reliable Internet of
Issue Date	In: CSE 🗸	Services: Methods, Models, Approaches,
<u>Author</u> <u> → Title</u>	Search for Go	Techniques, Algorithms,
Subject		and Tools
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Sign on to:	Sub-communities within this community	
	• Books	Automated Machine Learning: Methods, Systems, Challenges
<u>My DSpace</u> authorized users Solit Des Ella	Lesson Module	
Edit Profile	Paper Publication	
 Help About DSpace 	<u>Project Report</u>	
	Question Papers	
	• <u>Syllabus</u>	
1		

Figure 2.9(d): Theory Course Material in NHCE Website

Course Handout

Course handout and materials are prepared as per the syllabus. It helps the students understand the subject better.

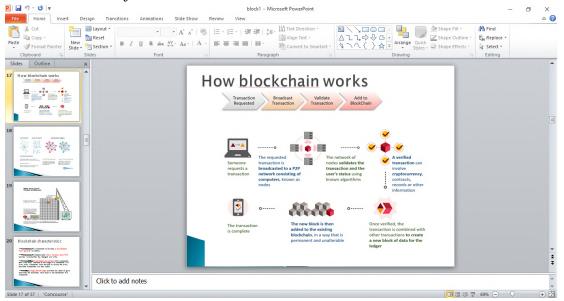


Figure 2.9(e): Snapshot of course handouts



CONTINEO

Contineo' is a pioneering software platform for implementation and administration of academic autonomy. Contineo executes full academic autonomy culminating in secure, confidential, accurate, efficient and auditable examinations of both the digitized answer script and conventional paper and pen variety.

The Contineo IT platform provides insightful analytics which focuses on academic innovation and research. It can implement and administer autonomy - Foster academic excellence - Accelerate academic innovation and streamline research activities.

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	1	KUMAR S	B44	1NH19CS084 Edit	13	10	Individual 77%	Overall 77%	Ρ	Ρ	Р	Р	Р	Ρ	A	A					
	2	L NITHIN REDDY	B45	1NH19CS085 Edit	13	10	Individual 77%	Overall 77%	A	Ρ	Ρ	Ρ	A	Ρ	A	Р					
	3	LEBAKU VENKATA SUBBA REDDY	B47	1NH19CS086 Edit	13	13	Individual 100%	Overall 100%	Ρ	Ρ	Ρ	Р	Ρ	Ρ	Р	P					
	4 🤰	LIKITH AB	B48	1NH19CS088 Edit	13	12	Individual 92%	Overall 92%	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	P	P					
	5	LIKITHA R	B49	1NH19CS089 Edit	13	12	Individual 92%	Overall 92%	Р	A	Р	Р	P	Р	P	Р					
	6	LOKESH B S	B50	1NH19CS090 Edit	13	13	Individual 100%	Overall 100%	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	P Activate \	Window	VS			*

Figure 2.10(a): Digital Learning –Contineo Attendance Management System

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		vation Summ	ary			Nakura ef		Start Ne	ew session					
	Session No.	Mentor Name	Dept.	Semest	er Date & Time	Nature of counselling	Issue/Details	Further Action						
	35722	Mrs. Rashmi N	Electrical and Electronics Engineering	1	24 September 2019 04:46:38	Periodic counseling	student told dasses are going good , so good in her academics	Case Closed	More					
	40660	Mrs. Rashmi N	Electrical and Electronics Engineering	1	19 November 2019 04:32:47	Periodic counseling	student told classes are going good , so good in her academics	Case Closed	More					
	42259	Ms.R.Jaya	Computer Science and Engineering	2	14 February 2020 08:09:11	Periodic counseling	good student no issues need to work hard to study computer and ece subject	Case Closed	More					
	47024	Ms.R.Jaya	Computer Science and Engineering	2	12 April 2020 09:27:36	Periodic counseling	student told classes are going good , so good in her academics	Case Closed	More					

Figure 2.10(b) Digital Learning –Contineo Mentoring



Smart Board

All classrooms are equipped with smart board. Smart boards are more flexible compared to the white boards in the way that we can explain the concepts in a lucid manner to the students with the help of pictures and videos. It creates the learning environment more interactive. Smart boards allow integration of various technologies in order to improve the learning experience. For instance, it is possible to connect the student mobile phones to the interactive board to aid in instruction. It is enriched to integrate the interactive learning tools with a wide range of software applications. The entire lecture delivery through the smart board can be converted and saved as PDF. The saved format could be sent to students for their reference.

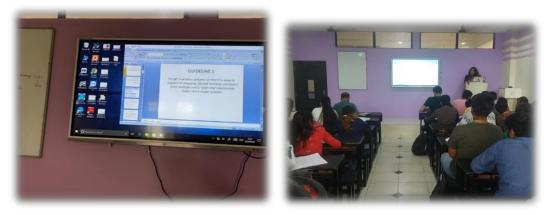


Figure 2.11 Digital Learning –Smart Board Classroom

Google Classroom

The Google classroom is an innovative tool which is very effectively used in our campus for every course. Faculty members add all students to it before commencement of every semester for every course. They also upload course plans, eBooks, course materials, video lectures, question banks etc. It helps the students to come prepared to the class. The tools in the Google class room facilitate online assessment of students, which can be used to measure the outcomes of each course.



→ C ii classroom.goo Apps Ø Science Academies'	jle.com/u/1/w/NzA5NDA1OTUzNzla/t/all		९ 🛧 🛛 🜒
≡ b ^{ipc lab}	Stream Classwor	k People Grades	۵ 🗉 🇌
	+ Create	Google Calendar 📄 Class Drive folder	
	lab exam 2 portions	Posted May 16	
	Sample Viva Questions	Posted May 16	
	Lab Manual	Posted May 10	
	video of files chapter	Posted May 9	
	video of module 3	Posted May 8	
	Structures Video	Posted May 7	
	Pointer sample programs	Posted May 6	
	Notes for Module 4 and 5	Posted May 4	Activate Windows
0	intro to data structures ppt	Posted May 2	Go to Settings to activate Windows.

Figure: 2.12 Digital Learning –Google Classroom

Self- learning Courses

The registration and participation of students in MOOC Courses like NPTEL, Coursera and Edx are evidences of their self-learning capabilities. These courses enable them to enrich their subject knowledge, give an exposure to recent technological advancements and also serve as a platform to strengthen their interdisciplinary skills. It is also considered as a key for lifelong learning. The following tables show the NPTEL courses registered by our students.

 Table 2.4(a): NPTEL Online Courses (AY 2018-2019)

S.No	Year/ Sem	NPTEL Course Name	Course Duration	Total no. of students Registered
1	3rd/6 Sem	Social Networks	12 weeks	40
2	3rd/6 Sem	Privacy and Security in Online Social Media	12 Weeks	25
3	3rd/6 Sem	Introduction to Soft Computing	8 weeks	38
4	3rd/6 Sem	Multimodal Interaction	4 weeks	36



Table 2.4(b). AT TEL Onnie Courses (AT 2019-2020)				
S.No	Year/Sem	NPTEL Course Name	Course Duration	Total no. of students Registered
1	3rd/6 Sem	Social Network Analysis	12 Weeks	64
2	3rd/6 Sem	Cloud Computing	8 Weeks	27
3	3rd/6 Sem	Machine Learning with Python	12 Weeks	2
4	4th/7 Sem	Data Science for Engineers	8 Weeks	81
5	4th/7 Sem	Introduction to Machine Learning (IITKGP)	8 weeks	3
6	4th/7 Sem	Introduction to Machine Learning (IITM)	12 Weeks	4
7	4th/7 Sem	Machine Learning for Engineering and Science Applications	12 Weeks	3
8	4th/7 Sem	Introduction to Internet of Things	12 Weeks	13
9	4th/7 Sem	Human Computer Interactions	8 weeks	9
10	4th/7 Sem	Ethical Hacking	12 Week	4
11	4th/7 Sem	Practical Machine Learning with Tensorflow– Online	8 weeks	7

Table 2.4(b): NPTEL Online Courses (AY 2019-2020)

Additional resources for online learning both for faculty and students

Exposure was given for additional learning resources both for faculty and students. Some of the resources are listed below:

- NHCE digital library resources on the Internet (earlier it was on Intranet) text books / Question papers / Lesson modules / Student project reports / other references / e-books are available online
- 3062 users from New Horizon College of Engineering registered on the portal vtuconsortium.org, qualifying as the highest number among all the colleges as per the communication received from Prof. Dr. Konnur, Advisor-VTU Consortium, VTU, Belagavi
- Virtual labs, e-Content URL's
- Open access resources
- 408 e-books
- Online certification courses
- Websites for academic enrichment
- Webinars



Project Based Learning (PBL)

Project Based Learning (PBL) is significantly more effective than traditional instruction to train competent and skilled practitioners and it promotes long-term retention of knowledge and skills. It is an innovative practice that is used to implement Outcome Based Education Students is encouraged to carry out mini projects to apply their engineering knowledge from third semester onwards till seventh semester. Each student has to take up mini project based on the core subject they learn in the current semester with help of faculty mentor. At the end of each semester, projects are evaluated by the external faculty members. PBL steps and a sample list of projects are mentioned below.

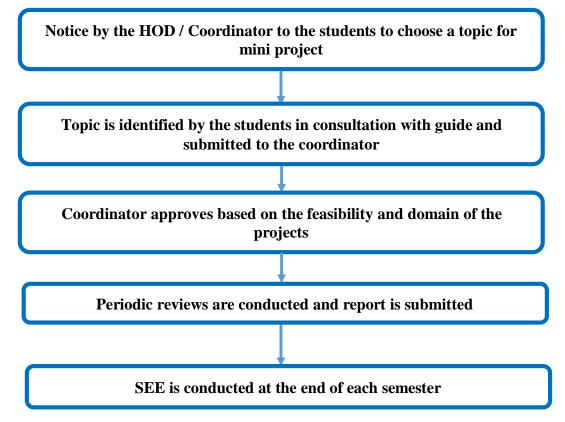


Figure 2.13(a) Flowchart showing the process of PBL





Figure 2.13(b) Project Based Learning

Assessment	Excellent	Good	Satisfactory	Unsatisfactory
Components	(S)	(A)	(B)	(C)
	Clearly			
	defined	Clearly defined		
	problem	problem	Problem	Problem
Problem	statement	statement	statement	statement is
Statement	meeting all the	meeting most	satisfying few	not meeting
(Synopsis)	objectives of	of the	objectives	the objectives
	the mini	objectives	(3-5 Marks)	(0 Mark)
	project	(6-7 Marks)		
	(8-10 Marks)			
	Algorithm with	Algorithm with	Algorithm with	
	clearly defined	clearly defined	satisfactory	Algorithm
	input, expected	input,	outcomes but	with no proper
Algorithm +	output and	functionality	functionality	specification
Data Structure	functionality	and satisfactory	not so clearly	on input and
(Review 1)	with proper	outcomes with	defined with	expected
	understanding	proper	partial	output with no
	of data	understanding	understanding	understanding
	structure	of data structure	of some data	of data

Table 2.5(a): Rubrics for Project Based Learning



	(16-20 Marks)	(11-15 Marks)	structure (5-10 Marks)	structure (0 Mark)
Implementation (Review 2)	All required concepts implemented (partial code demonstrating data structures) meeting objectives (16-20 Marks)	Most of concepts implemented meeting objectives (partial code demonstrating data structures) (11-15 Marks)	Few concepts implemented as per objectives (partial code demonstrating data structure) (5-10 Marks)	No functionality implemented meeting objectives (no code) (0 Mark)
Execution (Code Review)	Executes without errors. Excellent user prompts, good use of symbols, spacing in output + Result verification PPT (30-40 Marks)	Executes without errors. User prompts are understandable, minimum use of symbols or spacing in output + Result verification PPT (20-29 Marks)	User prompts contain little information,	Does not execute due to errors. User prompts are misleading or non- existent + No PPT (0 Mark)
Documentation (Report Submission)	Clearly and effectively documented including descriptions of	Clearly documented including descriptions of all concepts Specific purpose is noted for each function and control structure + Plagiarism	Basic documentation has been completed including descriptions of all concepts. Purpose is noted for each function + Plagiarism Check Report	No documentation included. (0 Mark)



	requirements,	Check Report	(3-5 Marks)	
	and output	(6-7 Marks)		
	results			
	+			
	Plagiarism			
	Check Report			
	(8-10 Marks)			
Assessment	Excellent	Good	Satisfactory	Unsatisfactory
Components	(S)	(A)	(B)	(C)
	Clearly			
	Clearly defined	Clearly defined		
	5	Clearly defined problem	Problem	Problem
Problem	defined	•	Problem statement	Problem statement is
Problem Statement	defined problem	problem		
	defined problem statement	problem statement	statement	statement is
Statement	defined problem statement meeting all the	problem statement meeting most	statement satisfying few	statement is not meeting
Statement	defined problem statement meeting all the objectives of	problem statement meeting most of the	statement satisfying few objectives	statement is not meeting the objectives



A documentation sample of student's work carried out is shown below

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This is to certify that the mini project work titled	ACADEMIC CONDUCT
Academic Conduct	REPORT
Submitted in partial fulfilment of the degree of Bachelor of Engineering in Computer Science and Engineering Submitted by	A MINI PROJECT REPORT
Shreya Pandey	
1NH16CS106	Submitted by
DURING ODD SEMESTER 2019-2020 For	Shreya Pandey
CSE76 Signature of Reviewer Signature of HOD	In partial fulfilment for the award of ` the degree of
SEMESTER END EXAMINATION	BACHELOR OF ENGINEERING
Name of the Examiner Signature with date	IN A
1. Sunanya R	COMPUTER SCIENCE AND ENGINEERING

Figure 2.13(c): Sample Mini Project Report

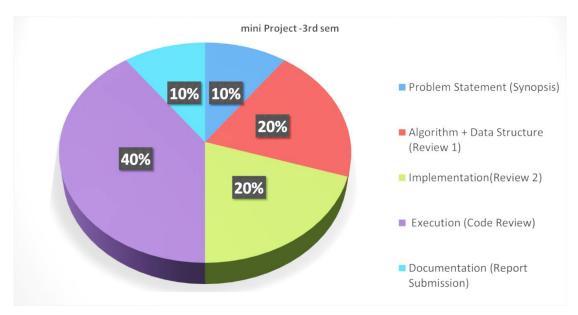


Figure 2.13(d): PBL Mark Distribution



Sl. No.	USN	Name	Sem/ Year	Project Title
1	1NH16CS001	Afshiya Sultana	7/2020	Campus recruitment system
2	1NH16CS002	Akash S	7/2020	Programming-based puzzle video game
3	1NH16CS003	Akash S	7/2020	Bookshare
4	1NH16CS085	Rahul	7/2020	Prohandler
5	1NH16CS086	Rahul Jain V	7/2020	Garbage collection app
6	1NH16CS733	Sriram Gupta Kaluva	7/2020	Movie Buzz
7	1NH16CS745	Madhumitha.R	7/2020	Horizoncart- buy & sell at NHCE
8	1NH16CS746	Manoj.R	7/2020	Financial status analysis using credit score
9	1NH16CS755	Supriya. V.N	7/2020	Juncture app
10	1NH16CS756	Toshbir Singh	7/2020	Your city
11	1NH18CS001	A Harshavardhan Royal	4/2020	Online bike booking
12	1NH18CS002	A M Aathika Parveen	4/2020	E-hospital service
13	1NH18CS003	Aalok Prasad Kurmi	4/2020	E-gleaning
14	1NH18CS004	Aaradhya Priyedarshni	4/2020	Hello donation
15	1NH18CS108	Madhura K	4/2020	Aditusscientia
16	1NH18CS109	Madiha Sehar	4/2020	Easy rides
17	1NH18CS110	Manasa A	4/2020	Online vehicle hiring
18	1NH18CS111	Manoj B M	4/2020	Bullet journal
19	1NH18CS163	S Hari Venkatesh	4/2020	Cab booking
20	1NH18CS164	S M Sourabh	4/2020	Space hotel

Table 2.5(b): Sample Topics of Project Based Learning



Best three Mini Projects for AY 2018-2019

S.No	Name of the student	USN	Project Title
1	Deepthi S	1NH17CS035	E-voting System
2	Ruman Ahmed Shaikh	1NH17CS112	The Traveling Salesman Problem and its Application
3	Meghana Kancherla	1NH17CS078	Reward Points Manager

Table 2.6(a): Best three Mini Projects of Third Semester

Table 2.6(b): Best three Mini Projects of Fourth Semester

S.No	Name of the student	USN	Project Title
1	Aishwarya Kadali	1NH17CS008	Coffee vending machine simulation
2	Kushala P	1NH17CS064	Payless: ease tax saving and investment
3	Shruthi M	1NH17CS123	Doc Analyser

Table 2.6(c): Best three Mini Projects of Fifth Semester

S.No	Name of the student	USN	Project Title
1	Moni Krithika S	1NH16CS064	GeNOMeX
2	Vinay Kumar Jaiswal	1NH16CS122	Vehicle showroom database
3	Ayush Bhardwaj	1NH16CS739	Safety Surveillance Database

Table 2.6(d): Best three Mini Projects of Sixth Semester

S.No	Name of the student	USN	Project Title
1	Anand. R. Patil	1NH16CS009	E-learning recommendation
2	Rahul Jain V	1NH16CS086	Stock control market app
3	Vinay Kumar Jaiswal	1NH16CS122	Cypher Crypto engine

Table 2.6(e): Best three Mini Projects of Seventh Semester

		0	
S.No	Name of the student	USN	Project Title
1	Rohit Mulay	1NH15CS106	Biometric Attendance App
2	D.Sakthi Keerthana	1NH15CS714	Women Safety App
3	Lingam Mohan Krishna Sen	1NH15CS146	Restaurant Self-service App





Figure 2.14: Best Mini Project Competition Winners

Continuous Internal Evaluation CIE

Continuous assessment is conducted for theory as well as laboratory courses. In theory courses, questions are asked based on the Course Outcomes and RBT levels. Whereas in lab courses, continuous assessment is conducted on the basis of predefined rubrics

Theory Courses Evaluation: Assignments, assessment tutorials, continuous Internal Evaluation, Semester end examinations are conducted and evaluated.

The Distribution of marks for theory courses and their weightage is as follows in table.

Assessment Tool	Marks	Weightage						
Assignments / Quizzes	25	25 Marks						
CIE 1	25							
CIE 2	25	25 Marks						
CIE 3	25							
Semester End Examination (SEE)	100	50 Marks						

 Table 2.7(a). Marks distribution for theory courses



The table below shows the Continuous Internal Evaluation marks break-up

Sample Format of marks distribution in CIE														
S. No.	Course Code	Course Name	SEM	IA1	IA2	IA3	Assignment 1	Assignment2	Quiz 1	Quiz 2	Self Study	Co Curricular	LAB	TOTAL CIE
1	19CSE41	Discrete mathematics and graph theory	4	25	25	25	7.5	7.5	5	5	NA	NA	NA	50
2	19HSS421	Economics for Engineers	4	10	10	10	3.75	3.75	NA	NA	7.5	NA	NA	25
3	19HSS423	Environmental science and awareness	4	15	15	15	5	NA	5	NA	NA	NA	NA	25
4	19CSE43	Object Oriented Programming with Java	4	25	25	25	7.5	7.5	5	5	NA	NA	NA	50
5	19CSE44	ARM Processor	4	25	25	25	7.5	7.5	5	5	NA	NA	NA	50
6	19CSE45	Computer Organization	4	25	25	25	5	5	2.5	2.5	NA	10	NA	50
7	CSE61	Core JAVA Programming	6	25	25	25	7.5	7.5	5	5	NA	NA	25	75
8	CSE62	Computer Networks	6	25	25	25	7.5	7.5	5	5			25	50
9	CSE63	Finite Automata & Compiler Design	6	25	25	25	5	5	2.5	2.5	NA	10	NA	50
10	CSE641	Social network Analysis	6	25	25	25	NA	NA	NA	NA	NA	25	NA	50

 Table 2.7(b): Sample Format of marks distribution in CIE

MOOC courses for the faculty

Each faculty completes a MOOC course every semester in their area of specialization or in the subject they handle in the current semester. It helps the faculty to enhance their skills in the specified subject area. They get exposure on the teaching methodologies of the other professors in the foreign universities, IITs and other reputed institutions. Table 2.8 shows the sample list of NPTEL courses completed by faculty.

S.No	Name of the NPTEL course				
1	Human Computer Interaction				
2	Introduction to Internet of Things				
3	Object Oriented Analysis and Design				
4	Python for Data Science				
5	Joy of Computing using Python				
6	Outcome Based Pedagogic Principles				
7	Effective Engineering Teaching in Practice				
8	Computer Organization and Architecture: A Pedagogical Aspect				
9	Joy of Computing using Python				
10	Introduction to Operating Systems				
11	Hardware Modelling using Verilog				
12	Software Testing				
13	Big Data Analytics for Smart Grid				



Python for Data Science
Introduction to Research
Design and Analysis of Algorithms
Problem Solving Through Programming in C
Enhancing Soft Skills and Personality
Theory of Computation
Embedded System Design Using ARM
Introduction to Machine Learning
Problem Solving Using C
Block Chain Architectural Design and Use Cases
Introduction to Programing in C
Introduction to Data Structures and Algorithms using Python
Computer Networks and Internet Protocol
Hardware Modeling Using Verilog

3. Methodologies to support weak students and encourage bright Students

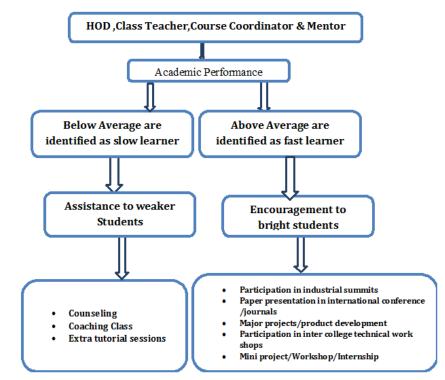


Figure 2.15: Process to identify and support weak students and encourage bright students



This involves the following steps:

(i) Mentoring System

Faculty members identify the list of slow and fast learners of their respective courses and accordingly mentor them to achieve their goals and grades. Mentoring happens at the departmental level and if the student needs more inputs, we take the assistance of counselors at the institute level

(ii) Identification of Weak Students / Fast Learners

Faculty members identify the list of slow and fast learners of their respective courses. Broadly the identification based on student's assessment through Quizzes conducted after completion of 50% of each unit. Students are also accessed through lectures and lab classes, assignments, CIE-I, CIE-II CIE-III results.

(iii) Action Taken

Student identification of slow learners, fast learners and extra care taken for them are presented below.

Category of learners	Method of categorization	Extra care taken for students
Slow learners	Current CGPA <6	 Identify the courses in which student is week Additional time is provided by the faculty member for better understanding Extra counseling to motivate students and guide students for better preparation More test and assignment are given Mentors are facilitated to understand personal and professional difficulties of students.

Table 2.9(a): Category of learners



Fast learners	Current CGPA >9	 Supplementary assignments are provided to develop skills on complex problems solving Fast learners are given practical applications scenario to implement in the laboratory Extra classes for advance topics Special guidance to publish papers and carried out innovative projects
------------------	--------------------	--

Identification Criteria	Actions Taken								
	\succ Peer teaching is conducted by senior and fellow								
	students.								
	Counselling is given to the students by subject handling								
Students scoring	faculty, concerned faculty advisors, Class Counsellors								
less marks	and HoD.								
	Students' performances are intimated to parents.								
	➢ Remedial measures (counselling, classes, retest, and								
	tutorial) are taken.								
	Examination failure reasons are analysed.								
Failures in	Counselling is given to the student.								
Semester End	➢ Coaching classes are conducted before the								
Examinations	commencement of semester end examination.								
	Discussion on important questions and question bank.								

Table 2.9(b): Actions taken in assisting weak students

Impact Analysis of Weak Students:

- Improvement in Semester end examinations.
- Develops positive attitude among students.
- Improvement in analytical and communication skills.
- Improvement in programming skills.



Support to Bright Students

Bright students are found on the basis of their class performances, involvement in classroom, internal assessments and grades. The following facilities are there for bright students to apply their learning on various platforms:

- Extra assignment to enhance complex problems solving skills.
- Extra counseling to motivate students to take up advanced study or take-up projects.
- Involve fast learners for peer tutoring the slow learners.
- Students are motivated to take up one additional advanced level MOOC/SWAYAM / NPTEL in that course.
- They are encouraged to finding the solution of complex problem/innovative projects.
- Give open ended/challenging lab based problem.
- Students are encouraged to take up competitive exams like GATE, GRE, TOEFL, IELTS, CAT, PGCET etc.
- Students are encouraged to be members of professional bodies like IE (India) / SAE / ISTE / CSI / IIPE and organize technical events.
- Bright and diligent students are motivated and inspired to get top ranks in their SEE and in competitive examinations.
- Students are encouraged to take part in various club activities.

Identification Criteria	Actions Taken						
Rank Holders, Semester Toppers & Subject Toppers	 To motivate to get Gold medals and cash prizes given on Graduation Day. To motivate to get Mementos and cash prizes given in department functions. Encouraging them to take part in Research Activities. Motivating them to take part in national level competitions for projects. 						
Students with First Class	 Motivation to continue Excellency. Encouragement to get nationwide exposure. Motivating them to attend conferences, workshop, and other co-curricular activities 						

Table 2.10: Actions taken in assisting bright students



Impact Analysis of Bright students:

- ✓ Improvement in CGPA.
- ✓ Improvement in communication skills and interpersonal skills.
- ✓ Improvement in programming skills.
- ✓ Improvement in inter-institute event participation.
- ✓ Improvement in placement and higher studies.
- \checkmark The students were able to do quality projects, present papers in conferences

Table 2.11(a): Sample List of Student participation in Co-curricular events (AY2019-2020)

Sl. No	USN	Name of the Student	Event Date	Event Details	Institution/ Organization	Achievement
1	1NH18CS103	Kundana R	29/2/2020	Open Day'2020 - Blind coding	HSC – Bangalore	1st Prize
2	1NH18CS108	Madhura K	29/2/2020	Open Day'2020 - Blind coding	HSC – Bangalore	2nd prize
3	1NH18CS203	Yagna Vikas Parvatikar	29/2/2020	Open Day'2020 - Blind coding	HSC – Bangalore	3rd Prize
4	1NH17CS112	Ruman Ahmed Shaikh	3/2/2020 4/2/2020	IBM - Hackervers eHackathon	Kristu Jayanti College, Bangalore	1st Prize
5	1NH17CS127	Sujay Hazra	3/2/2020 4/2/2020	IBM - Hackervers eHackathon	Kristu Jayanti College, Bangalore	1st Prize
6	1NH18CS120	Gulsan Borbhiya	3/2/2020 4/2/2020	IBM - Hackervers eHackathon	Kristu Jayanti College, Bangalore	1st Prize



			2018-2019	,				
Sl. No	USN	Name of the Student	Event Date	Event Details	Institution/ Organization	Achievement		
1	1NH16CS754	Suhas Kamath	11/03/19	Hackathon	NHCE	2nd Place- Team 2		
2	1NH17CS112	Ruman Shaikh	11/03/19	Hackathon	NHCE	2nd Place- Team 2		
3	1NH16CS094	Sivam	31/10/18	BIT Volume-2 (coding, quiz)	1st Place (Rs.1000)			
4	1NH16CS104	Shanmugha	31/10/18	BIT Volume-2 (coding, quiz)	NHCE	1st Place (Rs.1000)		
5	1NH16CS089	Renuka	31/10/18	BIT Volume-2 (coding, quiz)	NHCE	2nd place (Rs.750)		
6	1NH16CS111	Suhasendra	31/10/18	BIT Volume-2 (coding, quiz)	NHCE	2nd place (Rs.750)		
7	1NH16CS750	Sandhya	31/10/18	BIT Volume-2 (coding, quiz)	NHCE	3rd place (Rs.500)		
8	1NH16CS740	Sriram	31/10/18	BIT Volume-2 (coding, quiz)	NHCE	3rd place (Rs.500)		
9	1NH16CS094	Sivan Chakravarthy	26/10/18	Battle of Apps	NHCE	1st Place		
10	1NH16CS755	Supriya V N	26/10/18	Battle of Apps	NHCE	3rd place		

Table 2.11(b): Sample List of Student participation in Co-curricular events (AY2018-2019)



Table 2.11(c): Sample List of Student participation in Co-curricular events (AY2017-2018)

Sl. No	USN	Name of the Student	Event Date	Event Details	Institution/ Organization	Achievement
1	1NH16CS052	Krishna Vineeth P	28/03/18	Volume-1 (Quiz, Puzzle, Treasure hunt)	NHCE	Winner
2	1NH16CS045	Karan D K	28/03/18	Volume-1 (Quiz, Puzzle, Treasure hunt)	NHCE	Winner

Details of toppers

Batch :2014-2018

Sl. No.	USN	Name	Total
1	1NH16CS074	Nisha. R	9.85
2	1NH16CS073	Nirupashree. S	9.77
3	1NH16CS086	Rahul Jain V	9.77

Batch: 2015-2019

Sl. No.	USN	Name	Total
1	1NH15CS105	Rohit Chaudhary	9.77
2	1NH15CS092	Pranav.M	9.77
3	1NH15CS116	Sanjana Anand	9.74

Batch: 2016-2020

Sl. No.	USN	Name	Total
1	1NH14CS162	Sanya Dikshit	88.27
2	1NH14CS110	S R Sai Ramya	87.47
3	1NH14CS129	Supriya	87.47



4. Quality of Class Room Teaching

Quality of teaching is a very important factor for quality learning. The following aspects are considered to ensure a good quality classroom teaching:

- ✓ Classroom ambience is made interactive.
- ✓ Smart board is established across the institution for effective delivery
- ✓ Smart boards allow integration of various technologies and interaction in order to improve the learning experience.
- ✓ Smart board helps Faculty members to bring lessons to life with rich, powerful activities that grabs students' attention, blending real time assessment and real world experience into the learning process.
- ✓ Real components and models are taken by the faculty to the class room to demonstrate the concepts in a clear way to the students.
- \checkmark Real time examples are cited in the form of videos.
- ✓ Complex tutorial problems are solved in the class rooms by the Faculty and students together.
- ✓ Principal, Deans and Head of Department regularly visit classes to observe the teaching process and convey their suggestions and appreciations to the Faculty member.
- ✓ Quality of content delivery in live lectures is evaluated randomly by visiting ongoing lecture classes.
- ✓ The members of NHQSADC will visit the live classes for evaluation of quality content delivery in prescribed format.
- ✓ The evaluation parameters broadly include the plan of presentation, communication skill, delivery methods and awareness of students.
- ✓ On the basis evaluation report, necessary feedback is given to the faculty members to improve the quality of lectures.



Figure 2.16(a): Classroom ambience





Figure 2.16(b): Classroom ambience



Figure 2.16(c): Classroom ambience with smartboard

5. Conduct of Experiments

At the beginning of every semester, the required software's are installed. Faculty members instruct the students about the Syllabus, Course objectives, Course outcomes, and grading methods and how to debug and test with different inputs of the laboratory course before doing the regular laboratory experiments.

Scenario based problems are given to students for programming subjects such as Computer Programming, Object Oriented Programming and Java Programming. For each laboratory



course, 10-12 experiments are to be conducted in the syllabus. Extra experiments are also conducted beyond the specified list for relevant courses wherever necessary.

Laboratory manual explaining the details of the experiment, designing issues are available with the course teacher and are provided to students at the commencement of the semester. These Manuals are checked and verified by Faculty member before the commencement of each semester. Viva voce is conducted for the students in order to test their knowledge in the experiment. The Laboratory assessment is performed on the basis of rubrics such as, submission of laboratory records, participation in performing the experiment, analysis and interpretation of experiments.





Figure 2.17(a): Lab Infrastructure

Format for Continuous Evaluation in Labs

Laboratory Courses Evaluation: Observation, individual report, laboratory examination and viva, are conducted and evaluated. The distribution of marks for laboratory courses is shown in Table 2.12 (a) and (b).

Ta	able 2.12(a): Format for Continuou	s Evaluation in Labs
. No.	Assessment	Marks

SI. No.	Assessment	Marks
1	Performance in lab sessions	15
2	Internal Test	10
	Total	25

Table 2.12(b): Marks distribution for Laboratory courses

Sl. No.	Assessment	Marks
1	CIE	25
2	SEE	25
	Total	50



The sample rubrics for Software Testing Lab are given below.

RUBRICS for CSE72 - SOFTWARE TESTING LAB

Internal Assessment Marks: 25

Divided into two components: Continuous Assessment: 15 marks

Internal Test : 10 marks

Continuous Assessment:

- i) Will be carried out in every lab
- ii) Each lab / program will be evaluated for 15 marks
- iii) Totally for 11 labs it will be 165 marks. This will be scaled down to 15.
- At the end of the semester the internal test for 25 marks, this will be scaled down to 10.

Break up of 15 marks (in every lab):

Will be carried out in every lab

Attributes	Descriptors	Marks		
	Complete program without error	5		
Program write up / Design of Test Cases (5)	Complete code with error	3		
(3)	Not written	0		
	Successful execution with expected output	5		
Execution of Program / Execution of Test Case	Partial execution	3		
(5)	Incomplete execution			
	Not executed	0		
	Correct answer	2		
Viva Voce (2)	Satisfactory answer			
	Do not answer any question	0		
	Submitted on time and completed (during internal test)	3		
Record completion and submission (3)	Incomplete submission			
	Fails to submit the record on time	0		

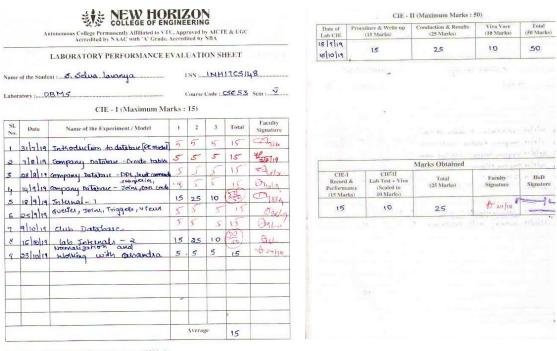
Figure 2.17(b) Sample Lab Rubrics



SEE EXAM MARK ALLOCATION

Table 2.13: End Term Examination Assessment Parameters (Laboratory Courses)

Blooms Taxonomy	Marks (Out of 25)	Description	Mark Allocation
L3: Apply	5	Designing and Developing Program based on the problem statement	5
L4: Analyze	5	Discuss/Analyze the result	5
L5: Evaluate	5	Executing Test Case	5
L6: Create	5	Creating Test Case	5
L3-L6	5	Viva	5



Conduction of Experiment / Writing the Programme (05 Marks)
 Specimen Calculation / Execution (05 Marks)
 Result & Record writing (05 Marks)

Figure 2.17(c) Sample Lab Report



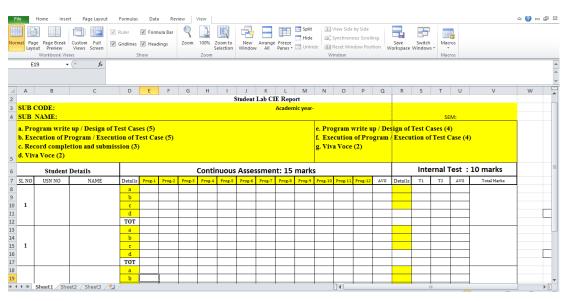


Figure 2.17(d) Sample of Lab evaluation

6. Student Feedback and action taken

Student's feedback is taken from students on the effectiveness of teaching and subject learning at different points of time during the semester. Initially, feedback is taken from representative students from each class informally by HOD after 1-2 weeks of commencement of class work. If students are facing difficulty in any subject, the concerned faculty member is informed of the same. Necessary guidance and support is given by HOD and another senior subject faculty member. Besides the above, on-line students Feedback is taken anonymously once every semester. The feedback is summarized and communicated to all faculty members. This feedback is considered part of Annual Performance Appraisal of the faculty member with a weightage of 25% in Teaching-Learning and Evaluation category. Figure 2.18 indicates different performance parameters.



New Horizon College of Engineering Student Feedback Report Department CS Faculty Name

SR. No.	Name of the faculty	CLASS	No of Students	Subjects	Q1	Q2	Q3	Q4	Q 5	Q 6	Q7	Q8	Q9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Ave
		CS SEM VI SEC A	9	NHOP14	4.56	4.33	4.44	4.22	4.56	4.44	4.44	4.44	4.44	4.44	4.44	4.33	4.33	4.33	4.33	4.33	4.33	4.22	4.3
		FY SEM II SEC B	47	19CSE23	4.6	4.57	4.62	4.66	4.47	4.51	4.64	4.51	4.6	4.55	4.67	4.6	4.7	4.68	4.6	4.6	4.57	4.74	4.6
1		FY SEM II SEC B	21	19CSL28	4.57	4.57	4.52	4.24	4.52	4.48	4.38	4.33	4.52	4.38	4.29	4.43	4.52	4.48	4.52	4.38	4.38	4.57	4.4
		FY SEM II SEC B	26	19CSL28	4.69	4.62	4.73	4.69	4.69	4.62	4.81	4.69	4.73	4.77	4.81	4.62	4.77	4.77	4.58	4.65	4.62	4.65	4.
_			Overall avg		4.61	4.52	4.58	4.45	4.56	4.51	4.57	4.49	4.57	4.54	4.55	4.5	4.58	4.57	4.51	4.49	4.48	4.55	4.5
Q 1	Clarity in explaining the s	ubject																					
Q 2	Subject explained was easy to understand.																						
Q 3	Content quality is relevant and useful.																						
Q.4	Faculty answers to your o	queries/questions.																					
Q 5	Faculty answers to your gueries/questions. Coverage of topic/subject is on time.																						
Q 6	The concepts were explained with examples.																						
Q 7	Faculty preparation for the class.																						
28	Faculty guidance for prep	aration of seminar, cor	ference and exam.																				
29	Punctuality of the faculty	for the class.																					
Q 10	Communicates distinctly	and effectively.																					
Q 11	Treats students with resp	ect and courtesy.																					
Q 12	Control of the classroom	by faculty.																					
Q 13	Relevance of assignment	s to the subject.																					
Q 14	Overall satisfaction.																						
Q 15	Discussion of any interest	ting topic beyond the sy	llabus but relevant to	the field.																			
Q 16	Usefulness of the question	n papers of internal tes	ts in your preparation	for the exam	ination.																		
Q 17	Helpfulness of the online	course material (questi	ion bank, etc.) and ass	ignments for	you to u	indersta	and and	prepar	e and fo														
Q 18	Accessibility availability a	fter the class hours in t	he college.																				
4 10	Accessionity availability a	itter the class hours in t	ne conege.																				
	SCALE USED																						
Not Applica	0																						
Poor	1																						
Fair	2																						

Figure 2.18: Student Feedback Report

2.2.2 Quality of semester end examination, internal semester question papers, assignments and evaluation

1. Quality of question papers

Very Good Excellent

Semester End Evaluation (SEE)

• Question papers for End-semester exams are based on learning levels like remember, understand, analyze and create of Bloom's taxonomy with each COs.



- Faculty engaged in teaching with not less than five years of experience in relevant subject in any University, Research Institute or College affiliated to Universities shall be appointed to set question papers.
- For each subject five question paper will be set, three question papers will be set by internal and two from external.
- The following materials are sent to question paper setters:
 - Copy of the guidelines for question paper setter's
 - Syllabus of the concerned course /courses
 - o Bloom's Taxonomy
 - Question paper Format
- During scrutiny following essentials are considered:
 - Total ten question with two from each unit to be set uniformly covering the entire syllabus.
 - Each Question should not have more than four sub questions.
 - RBT levels and CO are checked for consistency.
- The question papers will be scrutinized by internal and external subject experts along with Board of Examination coordinator and chairman. Figure 2.19 shows the process involved in preparation of SEE question paper.



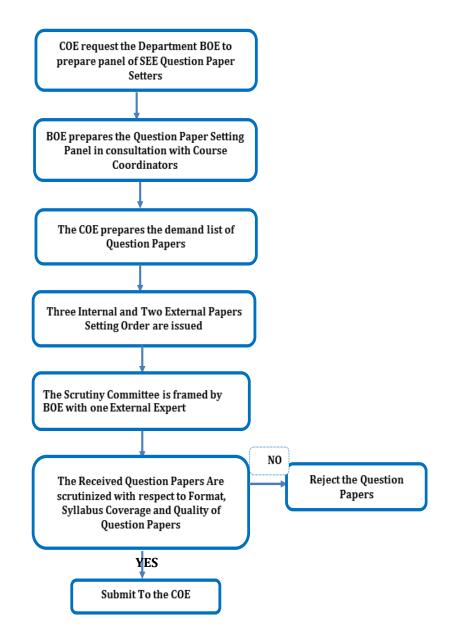


Figure 2.19: Process involved in preparation of SEE question paper



CIE paper

- Every course has a coordinator course coordinator who is responsible for the setting of the question paper.
- The syllabus pertaining to the respective CIE is announced well before the commencement of the same.
- The department conducts three internal assessment tests and covers 100% syllabus. Each test portion may vary from 1.5 to 2 modules. The question paper is set for 25 marks and the duration is 1 hour.
- While framing the question paper the course coordinator keeps in mind Blooms Taxonomy and Course Outcome.
- Questions asked are mapped to the Course Outcomes.
- The question paper is submitted to the CIE coordinator along with scheme and solution one week prior to the commencement of the test. This is forwarded to the internal BOE committee.
- The internal BOE constituted will look into the paper and give their opinion about the same. If the question paper needs to be relooked into for any reason the same is bought to the notice of the course coordinator; other-wise paper accepted is handed back to the program coordinator.

Process to ensure questions from outcomes/learning levels perspective

Each question in internal test is mapped to COs and RBT levels in each subject. The marks obtained by each student in each COs for each internal assessment component is considered and CO-PO attainment is calculated based on that.

Evidence of COs coverage in class test / midterm tests

All faculty members follow the RBT levels and the COs in the question paper



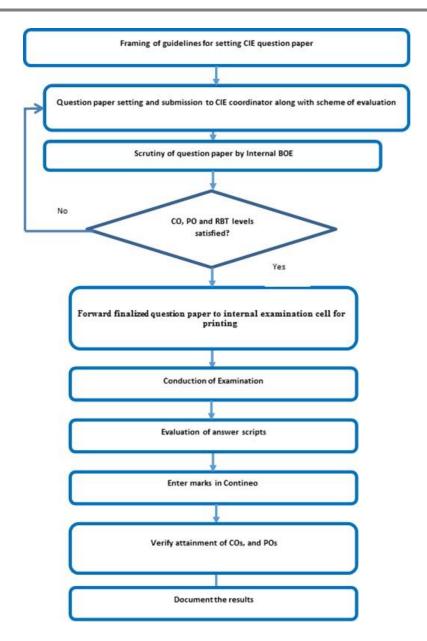


Figure 2.20: Process involved in preparation of CIE question paper





Figure 2.21(a): Internal BOE Meeting



5. No	Course Code	Course Name	No. of Papers Accepted	No. of Papers Rejected	Reason If Rejected	Accredited by NAAC with X Grade, Accredited by NBA
1	19C5E13	Introduction to Programming with C	-	-	÷.	AY: 2019-20
z	19CSE33	Digital Electronics	04	02	Mismatch q ca's & Po's among q-sec.	Odd Semester
3	19CSE34	Data Structures using C	04	-		CIE-I
4	19CSE35	UNIX System Programming	04	Ξ.	4	
5	CSE51	Analysis and Design of Algorithms	03	02	5'A, 5B - O's new tobe rephrased with RBT.	Department of Computer Science and Engineering
6	CSE52	Operating System	03	01	5'B- CO's, pos missed	
7	CSE53	Database Management Systems	02	01	SB - pors mismistriu.	Internal BOE
8	CSE54	Software Engineering	03	01	SC- mor nation of works RBT	I Share the second s
9	CSE71	Web Technologies	03	- 1-		
10	CSE72	Software Testing	03	1 2		Minutes of BOE Meeting
11	CSE73	Mobile Application Development	03	01	L'- not-followed RBT splitups.	
12	CSE741	Fundamentals of Data Science	02-	02	RET - makes split	Held on 27-08-2019
13	CSE743	Artificial Intelligence	01	-	-	Venue: Chamber of HOD-CSE
14	CSE745	Cyber Security, Forensics and Law	01	7	-	Time: 01:20 PM
15	CSE746	Internet of Things	01	01	Q'C not mothed with	
16	19SCS314	Natural Language Processing	OY	-	-	
17	NHOP10	Data Analytics	-			
		Total no.g (). Total may Q		le cuived Englisted	= 38 = 10+1 = 11	Annual Strate of Datamas Annual Compart House and Exponency Revelotion Caluge of Departing Bapatane So 19.3.
						Sangaiore Jouriou.

Figure 2.21(b): Internal BOE meeting Report



NEW HORIZON COLLEGE OF ENGINEERING INTERNAL TEST QUESTION PAPER

DEPT: Computer Science and Engg. COURSE: UNIX &SHELL PROGRAMMING DATE:Nov 9, 2019 INTERNAL TEST: III NOTE: 1) All questions are compulsory. SEM: III (B) COURSE CODE:CSE35 DURATION 1Hr. MAX. MARKS:25

Q#		(Question	RBT Level	COs	POs	Mark
Q1	List the built in variables in awk.Also illustrate the usage of them		L1	CO5, CO6	POS: 1,2,3,10,11	5	
			OR				
Q2	List the bu	uilt in functions in a	wk.Also illustrate the usage of them	LI	CO5, CO6	POS: 1,2,3,10,11	5
Q3	files are of same type as well as whether they are having same permission.Use appropriate messages for display.				CO5, CO6	POS: 1,2,3,10,11	5
			OR				
Q4	to accept whether th	e required comman- 2 filenames as con ne file sizes are equa rity and difference mario	L3	CO5, CO6	POS: 1,2,3,10,11	5	
Q5	Explain t each case	the usage of test in	shell scripting ?Give examples for	L2	CO5, CO6	POS: 1,2,3,10,11	5
			OR				
Q6	Explain the shell parameters \$*, \$#, \$0, \$1, and \$? in UNIX.		L2	CO5 ,CO6	POS: 1,2,3,10,11	5	
Q7		he necessary comm t to find greater of 3	ands required to create an interactive i numbers	L4	CO5, CO6	POS: 1,2,3,10,11	5
			OR				
Q8	a series and from some	d the filename to	reate a shell program to accept the perform grep using command line	L4	CO5 ,CO6	POS: 1,2,3,10,11	5
	Given the employee database as follows: Evaluate USING awk commands to find all the employees who salary is >16000						
00	EMP ID	NAME	SALARY		CO5,	POS:	
Q9	001	Abbiebok	2000	L5	CO6	1,2,3,10,11	5
	002	Pahul	17000		10000000		
	003	Catherine	37000				
_	004	Dimny	43000				
			OR				
Q1 0	Write an a to 10.	wk program which	will find square root of all numbers from 1	L5	CO5, CO6	POS: 1,2,3,10,11	5

Figure 2.22: Sample Internal Test Question Paper



DEPT: Computer Science and Engg.	SEM: III B
SUBJECT: UNIX SYSTEM PROGRAMMING	SUB CODE: 19CSE35
DATE: 9.11.19	DURATION: 1 Hr
INTERNAL TEST: III	MAX. MARKS: 25

Question Description Number		Marks Distribution	Total Marks
1 Any 5 built in variable listing+one eg		5*1	5
2	Any 5 built in function listing+one eg	5*1	5
3	Appropriate command formulation	3	5
	Shellscript formulation	2	1
4	Appropriate command formulation	3	
	Shellscript formulation	2	5
5	Any 2 usage of test with examples	2*2.5	5
6	Explanation of each positional parameter+use	5*1=5	5
7	Appropriate command formulation	3	5
	Shellscript formulation	2	
8	Appropriate command formulation	3	5
	Shellscript formulation	2	1
9	Appropriate command formulation	2	5
	Awk formulation	3	3
10	Appropriate command formulation	2	- 5
	Awk formulation	3	3

Figure 2.23: Sample Internal Test Scheme

Assignments

Assignments are an integral part of the continuous assessment process to ensure that students apply and analyses the knowledge to raise the level of learning and application. Similar to CIE and SEE, the assignments too are in line with RBTL, CO and difficulty levels that have been predefined. Assignment issue and submission dates are announced by the respective faculty members. All assignments are framed and mapped with COs and Bloom's taxonomy and reviewed by CIE Reviewer. Assignment scheme is prepared by the faculty for evaluation.



New Horizon College of Engineering, Bangalore Autonomous College affiliated to VTU, Belagavi

Accredited by NAAC with 'A' Grade, Accredited by NBA

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE CODE :19CSE35

ASSIGNMENT :2

DATE OF SUBMISSION:26.10.19

COURSE NAME: UNIX SYSTEM PROGRAMMING

DATE OF ANNOUNCEMENT:22.10.19

SET-1

SEMESTER :III

ANSWER ALL THE QUESTIONS

Q#	QUESTION	LEVEL	COs	POs	MARKS
1	Analyze the difference between fork() and vfork() system call.	L4	CO4	PO1,PO2, PO3,PO10, PO11	5
2	With proper diagram, Illustrate the kernel support for process with relevant data structures.	L3	CO3	PO1,PO2, PO3,PO10, PO11	5
3	Illustrate the different forms of exec system call with examples	L3	CO4	PO1,PO2, PO3,PO10, PO11	5
4	Apply the knowledge of shell scripting and write a shell script which will accept a command line argument: USN and computes the total marks scored by that particular USN	L3	CO5, CO6	PO1,PO2, PO3,PO10, PO11	5

SET-2

ANSWER ALL THE QUESTIONS

QUESTION	LEVE L	COs	POs	MARKS
Analyze the usage of grep command with respect to pattern matching	L4	CO4	PO1,PO2, PO3,PO10, PO11	5
Illustrate with a sample code snippet in which the child process will print your USN and the parent process will print your name (only once)	L3	CO3	PO1,PO2, PO3,PO10, PO11	5
Alice wants to count the number of words in a file first.txt and then wants to view the line numbers and prepare the file for printing. Use appropriate commands with syntaxes to do this.	L3	CO3	PO1,PO2, PO3,PO10, PO11	5
Apply the knowledge of shell scripting and write a shell script which will accept 2 filenames as command line arguments and check if they are hardlinked files.Also Display appropriate messages	L3	CO5, CO6	PO1,PO2, PO3,PO10, PO11	5
	Analyze the usage of grep command with respect to pattern matching Illustrate with a sample code snippet in which the child process will print your USN and the parent process will print your name (only once) Alice wants to count the number of words in a file first.txt and then wants to view the line numbers and prepare the file for printing. Use appropriate commands with syntaxes to do this. Apply the knowledge of shell scripting and write a shell script which will accept 2 filenames as command line arguments and check if	L Analyze the usage of grep command with respect to pattern matching L4 Illustrate with a sample code snippet in which the child process will print your USN and the parent process will print your name (only once) L3 Alice wants to count the number of words in a file first.txt and then wants to view the line numbers and prepare the file for printing. Use appropriate commands with syntaxes to do this. L3 Apply the knowledge of shell scripting and write a shell script which will accept 2 filenames as command line arguments and check if L3	L L Analyze the usage of grep command with respect to pattern matching L4 CO4 Illustrate with a sample code snippet in which the child process will print your USN and the parent process will print your name (only once) L3 CO3 Alice wants to count the numbers of words in a file first.txt and then wants to view the line numbers and prepare the file for printing. Use appropriate commands with syntaxes to do this. L3 CO3 Apply the knowledge of shell scripting and write a shell script which will accept 2 filenames as command line arguments and check if L3 CO5, CO6	L L Analyze the usage of grep command with respect to pattern matching L4 CO4 PO1,PO2, PO3,PO10, PO11 Illustrate with a sample code snippet in which the child process will print your USN and the parent process will print your name (only once) L3 CO3 PO1,PO2, PO3,PO10, PO11 Alice wants to count the numbers of words in a file first.txt and then appropriate commands with syntaxes to do this. L3 CO3 PO1,PO2, PO3,PO10, PO11 Apply the knowledge of shell scripting and write a shell script which will accept 2 filenames as command line arguments and check if L3 CO5 PO1,PO2, PO3,PO10, PO11

ANSWER ALL THE QUESTIONS

Q#	QUESTION	LEVEL	COs	POs	MARI S
1	Analyze the importance of fcntl API with the possible cmd values and also explain how the access control of a file is changed.	L4	CO3	PO1,PO2, PO3,PO10, PO11	5
2	Alice wants to run a critical program which takes longer time for execution.But at the same time she wants to use the terminal for the execution of other commands.Suggest some way by which Alice can do the same	L3	CO4	PO1,PO2, PO3,PO10, PO11	5
3	Alice got two files from her friends.She wants to know whether the two file contents are same or different, if different the places of difference. Apply the commands with examples to do this.	L3	CO3	PO1,PO2, PO3,PO10, PO11	5
4	Apply the knowledge of shell scripting and write a shell script which will accept 2 filenames as command line arguments and check if they are having all rwx permissions for the owner. Also Display appropriate messages	L3	CO5	PO1,PO2, PO3,PO10, PO11	5

Figure 2.24: Sample Assignment Question Paper with scheme



2. Assessment Procedure – Tests and Examinations

For each theory course, the assessment pattern for CIE and SEE is done as shown in the following Table 2.14(a)

S.No	Assessment	Marks	Weightage	
1	CIE Test 1	25		
2	CIE Test 2	25	25	
3	CIE Test 3	25		
4	Assignment 1	7.5	15	
5	Assignment 2	7.5	15	
6	Quiz1	5	10	
7	Quiz 2	5	10	
	50			

 Table 2.14(a): Theory Course CIE Assessment pattern

Table 2.14(b): Theory (Course Total Assessment Pattern
-------------------------	---------------------------------

S.No	Assessment	Marks
1	CIE	50
2	SEE	50
	Total	100

The semester end examination for all the courses is conducted for 100 marks and is considered for 50 while calculating the final grade.

Impact Analysis

The determination to adapt to the Bloom's taxonomy for maintaining the quality of the question papers has greatly improved the ability of the students to apply and analyze solutions for tricky and challenging questions. The institution has witnessed an enhancement in the student's problem solving ability, imagination and creativity. Students are able to answer questions of higher order thinking level with ease in semester examinations and during placement interviews.



2.2.3 Quality of student projects

Project Identification and Faculty Members allocation

• The Dean / Head of Department provide the list of faculty members and their area of specialization to the students at least one month before the end of the semester. The Dean / Head of Department also identify the industry professionals/alumni for guiding the students.

• The project coordinator advises the students to form a group of 2 to 4 members and identify the project area / title, obtain the consent of faculty/industry professionals to guide them. The Project coordinator collects these details from the students at the beginning of seventh semester.

• The Dean / Head of Department/ project coordinator finalize project titles, project guide, and group of students and display the allocation within one week.

• The Dean / Head of Department / project coordinator allocates laboratory resources for in-house projects and allocates the number of days per week for working on the projects in the industry (if the project is being carried out in industry).

• The Dean / Head of Department / project coordinator lists the types of projects on the basis of Environment, Safety, Ethics, Cost and category of project i.e. whether it is application based, Product Development based or Research based projects.

S.No	Engineering (Specialisation Area)	Competent Faculty
1	Data Structures and Algorithms	Dr. Prashanth CSR Dr. Guruprasad. N Dr. Pamela Vinitha Dr. Hanuman Kumar. V Dr. Clara Kanmani Dr. Nilima Kulkarni Dr. Venkata Ramana Dr. S. Sridevi Dr. Rachana P Mr. Sivabalan. N Ms. Gayathri. G. S Ms. Udhaya.P Ms. Gayathri.T

Table 2.15: Faculty competence	mapping for project allotment
--------------------------------	-------------------------------



		Ms. Rajitha S Nair
		Ms. Heyshanthini Pandyakumari
		Ms. Teena
		Dr. Thirukumaran
		Ms. Asha Rani Borah
		Mr. Santhosh Kumar. B
2	Electronics Based	Mr. Bhaskar
		Ms. Sheba Pari
		Ms. Vasantha M
		Ms. Dimple. W. G
		Dr. Prashanth CSR
		Dr. Jithendranath Mungara
		Dr. G. Pradeep
		Dr. Chandra Naik
		Dr. Clara Kanmani
		Dr. Thirukumaran
	Networks	Dr. Venkata Ramana
3		Dr. Vinodha.K
3		Dr. Rachana.K
		Dr. Viswanath Y
		Dr. Ashok Kumar PS
		Dr. Jaya
		Ms. Uma.N
		Ms. Beena B.M
		Ms. Sheba Pari
		Ms. Deepa Puranik
		Dr. Rajalakshmi B
		Dr. R. Chinnaiyan
		Dr. G. Pradeep
4	Cloud computing	Dr. B. Meenakshi Sundaram
-	Cioud computing	Dr. Ashok Kumar PS
		Mr. Sivabalan
		Mr. Muralidhara
		Ms. Padmapriya
		Dr. Rajalakshmi B
5	Operating System	Dr. Pamela Vinitha
	Operating System	Dr. Guruprasad.N
		Dr. Viswanath Y



		DrBeena.B.M
		Ms. Shanmugam Priya
		Mr. Manjunatha swamy
		Ms. Uma.N
		Ms. Soja Rani
		Ms. Pramila Rani
		Dr. G Pradeep
		Dr. Pamela Vinitha
		Dr. Jaya.R
-	Software Engineering,	Dr. K. Swathi
6	Software Testing	Ms. Shanmugha Priya
		Ms. Heyshanthini Pandyakumari
		Ms. Priti Badar
		Ms. Suganya. R
		Dr. G Pradeep
		Dr. K. Swathi
		Ms. Anjana Sharma
		Ms. Pramila Rani
		Mr. Sivabalan
		Ms. Alpha Vijayan
		Mr. Vijaykumar
		Ms. Gayathri G S
7	Programming	Mr. Puneet S Palagi
		Mr. Manjunath Swamy
		Ms. Rajitha S Nair
		Ms. Udhaya.P
		Ms. Heyshanthini Pandyakumari
		Ms. Sheeba P
		Ms. Vasantha.M
		Mr. Gagan
		Ms. Lakshmi S Hanne
		Dr. Kamatchi Priya L
		Dr. Mohan Kumar S
		Ms. Gayathri G S
8	Big Data and Data	Ms. Jisha Mariam Jose
5	Analytics	Ms. Pramila Rani
		Ms. Yogitha
		Ms. Suganya
		1110. Duguniya



		Ms. Tinu
13	Block Chain Technology	Ms. Rajitha S Nair
		Dr. Jaya
		Ms. Priti Badar
14	internet interingenee	Ms. Pramila Rani
12	Artificial Intelligence	Dr. Vinodha.K
		Dr. B. Meenakshi Sundaram
		Dr. Kamatchi Priya L
		Mr. Anil Kumar. K
11	i mite i sutomata	Ms. Rajitha S Nair
11	Finite Automata	Mr. Muralidhara.S
		Ms. Deepika N
		Dr. Hanuman Kumar. V
		Ms. Tinu
	Database	Mr. Anil Kumar.K
		Ms. Padmapriya M K Mr. Muralidhara.S
10		Ms. Deepthi Rai
10		
		Dr. G. Pradeep Ms. Jisha Mariam Jose
		Dr. R. Chinnaiyan
		Dr. Prashanth CSR
		Ms. Sheeba P
		Ms. Gayathri T Mr. Puneet
		Ms. Soja Rani Ma Gavathri T
		Mr. Puneet S Palagi Ms. Jisha Mariam Jose
	learning	Ms. Gayathri G S Mr. Pupeet S. Palagi
9	Data Mining and Machine	
	Data Mining and Mashing	Ms. Deepika. N Ms. Uma.N
		Ms. Anjana Sharma Ms. Doopika, N
		Dr. Mohan Kumar S Dr. Nilima Kulkarni
		Dr. B. Meenakshi Sundaram
		Dr. Kamatchi Priya L



		Dr. Thirukumaran		
	Mahila Application	Dr. Clara Kanmani		
14	Mobile Application Development	Ms. Gayathri.T		
		Ms. Sheeba P		
		Ms. Yogitha		
		Dr. Jithendranath Mungara		
15	Internet of Things	Dr. Viswanath.Y		
		Mr. Santhosh Kumar. B		



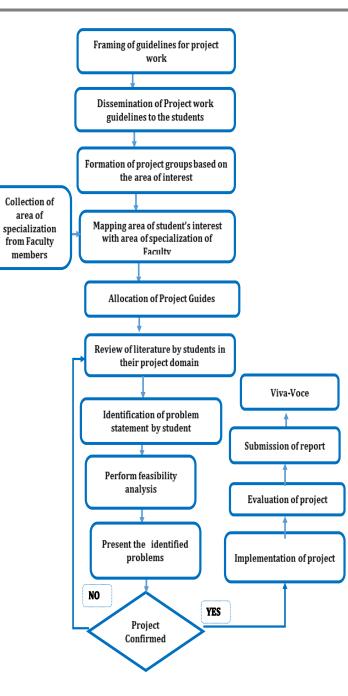


Figure 2.25: Processes of project identification, allotment, monitoring and evaluation



Types and relevance of the projects and their contribution towards attainment of POS and PSOs

Sl. No	Name & USN of the Students)	Project Title	Environment Related	Ethics	Societal Safety	Supported POs	Supported PSOs
1	Bhavana (1NH14CS021) Adithya Reddy (1NH14CS701) Adithya V S (1NH14CS005)	Intelligent Natural Language Voice Assistant for Real-Time Railway Information.		~	✓	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2
2	Gireesh G G (1NH14CS039) K S Shashank (1NH14CS051) H S Sumanth (1NH14CS042) Gokul Vihari Koduru (1NH14CS040)	Fault prediction of an actuator/ a sensor of a Satellite.		~	~	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2
3	Rahul D (1NH14CS097) Prabhat Kumar (1NH14CS089) Kavya K M (1NH14CS058)	Implementa- tion and analysis of machine leaning on cyber security		✓	~	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2
4	Sanya (1NH14CS162) Simran (1NH14CS163) Rashmi (1NH14CS102)	Securing folders using Bluetooth and Rijndael Encryption Algorithm		¥	*	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2
5	Vishwas V (1NH14CS165) Sai Ramya S (1NH14CS110) Sai Shree (1NH14CS161)	Automation script development for power chart		√		PO1, PO2 PO3, PO4 PO5, PO9 PO10, PO11, PO12	PSO1, PSO2

 Table 2.16(a): List of few samples of student projects (Batch 2014-18)



Criterion-2 Self-Assessment Report (SAR)

6	Umashree. R. Kadiwal Monisha. V Swathi M. N	Assisting Farmers in Crop Selection for Farming	✓	~		PO1, PO2 PO3, PO4 PO5, PO7 PO8, PO9 PO10, PO11, PO12	
7	Manjunath B Rashmita Gouthami Ambika Srinivas	Room temperature control and fire alarm/ suppression IOT service	*		*	PO1, PO2 PO3, PO4 PO5, PO6 PO7, PO9 PO10, PO11, PO12	

 Table 2.16(b): List of few samples of student projects (Batch 2015-19)

Sl. No	Name & USN of the Student	Project Title	Environment Related	Ethics	Societal Safety	Supported POs	Supported PSOs
1	Ashwini S (1NH15CS022)	Finger vein Enhancement and Matching Algorithm		~	¥	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2
2	Aswini R (1NH15CS023)	AgriBuddy	✓	~	✓	PO1, PO2 PO3, PO4 PO5, PO6 PO7, PO8 PO9, PO10, PO11, PO11, PO12	PSO1, PSO2
3	Avinash A B (1NH15CS024)	Online pharmaceutical Using AI	✓	~	*	PO1, PO2 PO3, PO4 PO5, PO6 PO7, PO8 PO9, PO10, PO11, PO12	PSO1, PSO2



4	Beenu Kunjumon (1NH15CS027)	Smart surveillance System	~	~	~	PO1, PO2 PO3, PO4 PO5, PO6 PO7, PO8 PO9, PO10, PO11, PO12	PSO1, PSO2
5	Bhargava Reddy (1NH15CS028)	Fetal heart detection using ultrasound	V	~	V	PO1, PO2 PO3, PO4 PO5, PO6 PO7, PO8 PO9, PO10, PO11, PO12	PSO1, PSO2
6	Bindhu M (1NH15CS030)	Color detection using Artificial intelligence		~		PO1, PO2 PO3, PO4 PO5, PO8 PO9, PO10, PO11, PO12	PSO1, PSO2
7	Kevin Samuel Jacob (1NH15CS060)	Physics Simulation using Newtonian Laws		✓		PO1, PO2 PO3, PO4 PO5, PO8 PO9, PO10, PO11, PO12	PSO1, PSO2
8	Likhita Suresh (1NH15CS064)	Traffic Signal Optimization		V	V	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2
9	Rohit Chaudhary (1NH15CS105)	Music Source Separation		~		PO1, PO2 PO3, PO4 PO5, PO8 PO9, PO10, PO11, PO12	PSO1, PSO2



10	Rohit Mulay (1NH15CS106)	Signature Recognition using Artificial Intelligence	✓	~	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2
11	K Naresh Kannan (1NH15CS056)	Near real-time comprehension with artificial neural networks: decoding e learner behavior	*		PO1, PO2 PO3, PO4 PO5, PO8 PO9, PO10, PO11, PO12	PSO1, PSO2
12	Laveena Monis (1NH15CS063)	Virtual assistant for medical help	✓	~	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2
13	Luv Raina (1NH15CS065)	Image 2 Calorie	~		PO1, PO2 PO3, PO4 PO5, PO8 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2
14	V Gokul Naidu (1NH15CS141)	AI chat bot for help desks using Tensor flow	~	~	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2



15	Sachin Sapkota (1NH15CS112)	Cost free chatting via Bluetooth in android		✓	✓	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	
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Table 2.16(c): List of few samples of student projects (Batch 2016-20)

Sl. No	Name & USN of the Student(s)	Project Title	Environment Related	Ethics	Societal Safety	Supported POs	Supported PSOs
1	Sanketh S Huddar (1NH16CS751) Sriram Gupta K (1NH16CS733)	Firefly - An Advanced Can Satellite	¥	~	*	PO1, PO2 PO3, PO4 PO5, PO6 PO7, PO8 PO9, PO10, PO11, PO12	PSO1, PSO2
2	Sowmya PB (1NH16CS753) Sandhya MN (1NH16CS750) Harshini K (1NH16CS036)	Convenience Store Assisting System for Visually Adaptive using OCR		~	~	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1, PSO2
3	Vinay Kumar Jaiswal (1NH16CS122) Rahul Jain (1NH16CS086) Reshma (1NH16CS090)	Natural language processing to analyze and identify the source among multiple users in a social media network		~	~	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9, PO10, PO11, PO12	PSO1, PSO2
4	Manthan Kamila (1NH16CS057) Karthik M (1NH16CS048)	Secure file sharing on HDFS using encryption		~	~	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11,	PSO1, PSO2



Criterion-2 Self-Assessment Report (SAR)

5	Anand R Patil (1NH16CS009) Karthik M Bharadwaj (1NH16CS047) Edwin Benny (1NH16CS031)	REACH OUT- Social Media Platform for Welfare Programs using advanced ML		~	~	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PO12	PSO1, PSO2
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Table 2.17: Domain Analysis of Projects

SI.		No. of Projects				
No	Project Domains	2017-	2018-	2019-	Mapping with POs/PSOs	
110		2018	2019	2020		
1	1 Android Application		7	7	PO1-PO12, PSO1, PSO2	
2	Big Data Analytics	2	10		PO1-PO12, PSO1, PSO2	
3	Cloud Computing	4	12		PO1-PO12, PSO1, PSO2	
4	Computer Networking and Network Security	15	18	11	PO1-PO12, PSO1, PSO2	
5	Data Mining	2	20	1	PO1-PO12, PSO1, PSO2	
6	Image Processing	6	19	3	PO1-PO12, PSO1, PSO2	
7	Internet of Things	4	16	16	PO1-PO12, PSO1, PSO2	
8	8 Machine Learning		17	43	PO1-PO12, PSO1, PSO2	
9	Natural Language Processing & Artificial Intelligence		63		PO1-PO12, PSO1, PSO2	
10	Web Application	3	18	3	PO1-PO12, PSO1, PSO2	
11	11 Other topics		21	3		
Total		56	230	87		



Category Analysis of Projects

All projects carried out by the students are categorized on the basis of types of projects such as application based projects, products based, research based and review based. The summary of analysis report of the projects is given in the following table.

Analysis support of projects

Table 2.28 is describing the number of projects completed by students of batch 2014-18, 2015-19 and 2016-20 categorized as application based, product based and research based.

	Academic Year	Category of projects					
A	Academic Tear	Application	Product	Research	Review		
	2019-2020	19	33	28	7		
	2018-2019	197	32	1	-		
	2017-2018	31	4	17	4		

 Table 2.18: Analysis support of projects

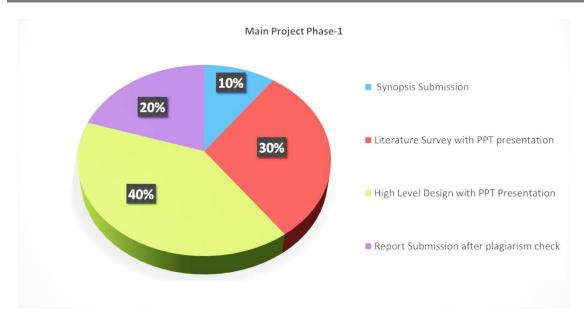
Continuous monitoring and evaluation of Project

- The progress of a project is monitored by the guide on day to day basis and they have to report the updates to the respective guide every Saturday.
- The continuous progress is assessed through periodic review by panel (first review and second review before final review) based on Rubrics, given below

Projects will be evaluated on the basis of:

- Working principle, implementation methodology, design process of components, performance of the system, application of projects and future scopes
- Demonstration of the project work
- Viva-Voce by panel of Experts





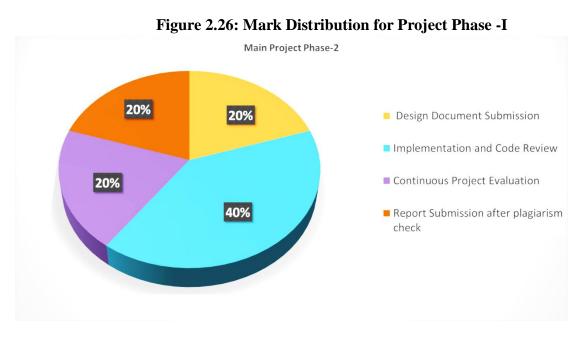


Figure 2.27: Mark Distribution for Project Phase –II



Review	Agenda	Description	Assessment	POs	PSOs	Marks
Zero review	Project synopsis Submission and Evaluation	Synopsis Submission Identification of Domain specific problem statement that focuses on latest technology Project has critical thinking to solve problems	Rubric based	PO1, PO6, PO9, PO10 PO11	PSO2	5
First review	Technical achievement Report evaluation	Literature Survey with PPT presentation Partial report (soft copy) to be shown including Introduction, Literature survey	Rubric based	PO1, PO2, PO6, PO8, P09, PO10	PSO2 PSO1, PSO2	10 5
Second	Methodology and expected Outcome of the project	High level design with PPT presentation	Rubric based	PO1, PO2, PO3, PO5,	PSO2	15
review		Partial report (soft copy) to be shown including		PO9, PO10 PO12		5

Table 2.19:	Rubrics f	for Project	Phase I



	Requirements and high level Design			
Total				

Table 2.20 Rubrics for Project Phase II

Review #	Agenda	Description	Mapped PO	Mapped PSOs	Marks
First review	Design Document	Use case, data flow & state diagrams	PO1- PO12,	PSO1, PSO2	10
	Implementation and code Review Report evaluation	Complete Implementation of proposed project	PO1- PO5, PO8- PO12	PSO1, PSO2	10
Second		Complete working code (Authenticity, complexity & functionality check)			10
review		Submission of hardcopy Report with plagiarism certificate	PO9, PO10	PSO2	10
	Continuous Project Evaluation	Student interaction with faculty	PO1- PO5, PO9, PO10, PO12	PSO1, PSO2	10
Total					



Outcome of student's project

 Table 2.21(a): List of publications out of Student projects

Sl. No	Name of Conference/ Journal (International/ National)	Title of the Paper	Name of Author	Year of Publication	
1		Indexing solr with MySQL database	Nissi Thomas		
2		APACHE PIG as a platform for Data analytics	Sumangala S		
3		A survey of Big Data analytics-it's challenges	V.C Chandra Kishore		
4		Modelling cognitive states of pilots to minimize commercial aviation disasters	Pranav M		
5	International	Weather prediction using deep learning	D. Sakthi Keerthana		
6	Journal of Information and Computing	Machine learning: Supervised learning	Rahul Jain, Sriram Gupta Kaluva, Sandhya Reddy	2018-2019	
7	Science ISSN NO: 0972-1347 May 2010	Hand gesture recognition using convolutional Neural network	Soundarya Saravan		
8	- May 2019	Agricultural crop yield prediction using Machine learning	Harshitha H		
9		Literature survey on predicting Thyroid Cancer using machine learning algorithms	H.D Nidhishree		
10		Data and Pre-Processing of data for Machine Learning	Sriram Gupta Kaluva		
11		Dairy farm tracking using Blockchain	Edwin Benny		



	Name of Conference/		Name of	Year of
S.No	Journal (International/ National)	Title of the Paper	Author(s)	Publication
1		Face emotion recognition techniques	Eric Pooja Nimje, Roshlin Acharya, Prachi Singh	
2		MoC++ Interpreter for the C++ language	Moni Krithika S	
3		WeVote – Secure voting using Blockchain	Anand R Patil, Nasir Hasan	
4		Big Data in Telecommunication	Nasir Hasan Dilawar	
5	International Journal of	A review on emotional intelligence	Nirupashree, Nisha R, Kalyan Naidu M	2010 2020
6	Scientific Research in Computer Science,	Overview of Use of Raspberry Pi in Implementation of Machine Learning and Image Processing	Savion Mario Sequeira	2019-2020
7	- Engineering and Information	Analyzing GraphQL and implementing the framework on Android devices	S Sivan Chakravarthy	
8	Technology ISSN: 2456- 3307 UGC Journal No: 64718 Impact Factor = 4.032	Safe-Ride: Automatic Detection of Potholes and Humps on Roads using Ultrasonic Sensor and Notifying the Same to the Drivers	Namratha L Bemane	
9	1 actor – 4.032	Credit card reader with face recognition using webcam	Kirti R Nambiar, Vaibhavi Kulkarni	

Table 2.21(b): List of publications out of Student projects



10	Efficient Buildings– A key element to build smart cities	Shalini M Koyikkal, Anurag Rajshekar
11	Feature selection for smartphone-based recognition of human activities and postural transitions	Punyasri H
12	An Application of Autocraft Workshop	Srinivas R

IMPACT ANALYSIS

- Project Coordinator and the Project Guide will examine the quality of the project work and ensure that the project is Societal Applications, Safety, Cost Effective and Environmental Issues
- Every year the college conducts a National Level Project Exhibition and Conference called "Tec-horizon" which recognizes and encourages students in developing innovative projects. The projects are evaluated by experts from industry and various educational institutions. From each discipline three best projects are selected and prizes are awarded based on the quality of the projects.
- The students are encouraged to participate in project exhibitions conducted by different colleges/institutes.
- The department will encourage the best projects to file patent.
- The project guide will help the students to publish their work in national/international conference and journal.
- Student publications from projects (Sample shown in Table 2.21 (a),(b))
- Placements offered to students based on performance during internship projects
- Equip students to address real life problems and research issues
- Solutions to challenging problems in the form of prototypes
- New innovations and creative ideas
- The faculty encourages and guides the students to carry out in-house projects and support will be provided with all necessary hardware and software.
- The faculties encourage students to avail the external funding schemes for their project work.



Table 2.22(a): Prize won by students in Techorizon'20

Sl. No	Student Name	Project Title	Prize Won
	Madhumitha R,	Narcotics Elimination through	
1	Ankit Tyagi	Intelligent Ultrasound	First
	Ayush Bhardwaj		

Table 2.22(b): Prize won by students in Techorizon'19

Sl. No	Student Name	Project Title	Prize Won
1	Kevin Jacob	Computational Fluid Dynamics	First
2	Yatin Vaid	Object Recognition using Machine Learning	Second
3	M K Subramani	BLINDLEAP	Third

Table 2.22(c): Prize won by students in Techorizon'18

Sl. No.	Student Name	Project Title	Prize Won
	Sanya	Securing folders using	
1	Simran	Bluetooth and Rijndael	First
	Rashmi	Encryption Algorithm	
	Yogeesh G Konnur		
	Rahul D	Implementation and analysis	
2	Shanbhogue	of machine leaning on cyber	Second
	Prabhat Kumar	security	
	Prasad		
	Bhavan A	Intelligent Natural Language	
3	Adithya Reddy	Voice Assistant for Real-	Third
	Adithya V S	Time Railway Information	





Figure 2.28(a): Tec-horizon





Figure 2.28(b): Winners of Tec-horizon

2.2.4 Initiatives related to industry interaction

Program curriculum provides various methods for industry interaction in addition to the initiatives taken by the management.

MOU's was done with industries to emphasize on

- o (a) Internship
- o (b) Project Workshop for Students
- o (c) Industrial Visits
- (d) Faculty Development Program



Department of Computer Science and Engineering made MoU with the following industries:

Sl.	Name of the	Academic	Objective
No	Organization	Year	Objective
1	CONNECT-KX GmbH (European Center for Knowledge Exchange)	2019-2020	Organizing activities like Projects, Internships, Training, Workshops, Hackathon and International Placements
2	Infibridge (Antara Software and Consulting (P) Ltd.)	2019-2020	Skill Development and Value Added Consultancy in the field of AI and Machine Learning for the Students and Faculties of NHCE
3	IBM Open Power Foundation, USA	2019-2020	Aims to meet the challenging needs of industry, academia and society in the world of Artificial Intelligence (AI), Machine Learning and Deep learning.
4	HP CENTRE OF EXCELLENCE Big Data and Data Analytics Lab	2017-2018	To make learning as hands-on as possible in rendering students industry-ready. Impart hands-on training in Big- Data and Data analytics by incorporating them into the curriculum. Train students using the state-of- the-art software from Hewlett Packard Enterprises. Train faculty members on as ongoing basis on emerging trends in Big Data and data Analytics.

Table 2.23:	Details of MOUs signed with industries
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Figure 2.29: MoU

2.2.4. Industry Supported Laboratories

The industry supported laboratories develops best learning process using a comprehensive understanding of industry's best practices for both students and faculties. This initiative imbibes professionalism, behavior aspects and awareness about industry expectations and also aligns aspirations of the students with the needs of the industries and promotes career counseling by organizing guidance lectures by senior corporate personnel. The details are as shown in Table 2.24 and 2.25.

S.No	Lab	Industry	Objective		
1.	HPE	Vertica Systems is an analytic database management software company. Vertica's acquisition was done by Hewlett Packard in March, 2011. The acquisition expanded the HP Software	focused on giving an insight to students on major two big data platforms:		

 Table 2.24: Details of Industrial Supported Laboratories



portfolio for enterprise companies and			HADOOP(open-source)			
the public sector group. As part of the			Both ci	rcuit and	non-cii	cuit
Micro	Focus-Hewlett	Packard	branch	students	learn	the
Enterprise merger, Vertica joined Micro		courses	offered by	v this la	b to	
Focus in S	eptember, 2017.		make ca	reer in dat	a analyt	ics

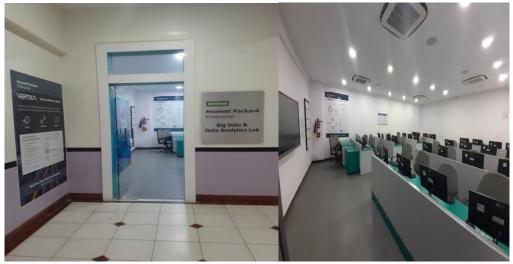


Figure 2.30: HPE Center of Excellence

Sl. No.	Name of the company	Objectives	Outcomes
1	CISCO Networking Academy	 NHCE gets access to all resources, course materials, services, websites or other deliverables "as is", without warranty of any kind. The Cisco CCNA Routing and Switching curriculum is designed for Cisco Networking Academy to pursue more specialized ICT skills. 	POs: PO1, PO5, PO9, PO10, PO12
2	Schneider	• To carry out vocational training programmes in initial and continuing	POs: PO1, PO2, PO3, PO4, PO5, PO6, PO12

Table 2.25: Industry supported laboratories



		1	DCO 1 C
	The state of the second	education in the fields of	PSOs: 1, 2
	and a second	electricity, automation and	The MOU has
	CoE - Schneider Electric	energy management.	resulted in setting
	India Private Limited and	• To develop, within an	up of laboratory in
	French Ministry of	international framework of	industrial
	National Education	"academic-industry" links,	automation.
		training programmes in	In future it is
		continuing education for	planned for valued
		technical teachers, training	added program for
		of young engineers and	practicing
		technicians and to prepare	engineers, teachers
		them for the job market in	and students of
		the field of electricity,	other institution
		automation and energy	and colleges.
		management.	
3		 The whole objective is to make fresh engineers and business management graduates more capable, creative & have innovative approach in thinking. To develop resources those can be absorbed from College & ready to perform in various sectors like 	POs: PO1, PO2, PO3, PO4, PO5, PO6, PO11, PO12
3	HP Vertica CoE	 Banking, Telecom, Manufacturing, E- commerce, Retail etc. HPE will be engaged in overall development of students will invite Industry professional to enhance Big Data Analytics skills through hands on sessions, guest lecturers etc., 	Big data and data analytics is emerging area where skilled professionals are required. Courses are offered as an elective for the students of the Department to hone their skills in



4	VMware IT Academy	 Faculty enablement or empowerment Access to all VMware tools Curriculums on Virtualization, Devops, MDM and other technological advancements VMware academic recognition for students (equivalent to certification) VMware vExperience (CoE) Local student club including annual project competitions and others. MOOC and other new offerings 	Big Data so that they are industry ready professionals. POs: PO1, PO4, PO5, PO9, PO10, PO12 VMware IT Academy Program (VITA) is designed to introduce students to VMware technologies and equip them with technical skills needed for the modern IT world. Faculty/ Students will gain access to technology and contents from VMware, which in turn prepare them for the new IT world. Courses are offered as an elective for the students of the students of the bepartment to hone their skills in VMware
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5	Adobe Digital COE	To train students on Adobe Suite of Products and Services Adobe Experience Manager (AEM) joint certification. Adobe Experience Manager (AEM) curriculum as an Elective Paper to B.E and MCA students at 4th, 5th Semester level with credits attached to the course to deploy Digital Program Sector 2015	POs: PO1, PO5, PO9, PO10, PO12 Adobe is providing required technological and domain related expertise to faculties and students of New Horizon College of Engineering. Courses are offered as an alactive for the
		 Practice Projects by Wipro Technologies immediately after their 8th Semester. Hackathons where a 	elective for the students of the Department to hone their skills in Adobe Systems.
6	SAP Next Generation Lab	 corporate using / working on SAP technologies can provide problem statements for NHCE students to work out using SAP products. Students can work on projects/ problem statements shared by corporate for a longer duration if such problem statements are arrived at. SAP will expose students to the topics via the lectures such as on SAP HANA Cloud Platform, SAP S/4HANA – ERP, Analytics and Design Thinking. 	POs: PO1, PO5, PO9, PO10, PO12 SAP modules are integrated as electives in NHCE courses. NHCE to be given special privilege for Industry Visit to SAP LABS.
7		• Quest Global Services India Pvt Ltd (Quest Global	POs: PO1, PO5, PO9, PO10, PO12



r			
	QuEST Global	India) is establishing	Courses are
		Industrial Internet of Things	offered as an
		(IIoT)	elective for the
		Centre of Excellence.	students of the
		• It prepares Ready to Deploy	Department to
		(R2D) Resources enabling	hone their skills in
		the candidates in developing	Industrial Internet
		the understanding and	of Things.
		expertise of technology stack	
		of IIoT platform.	
		• The focus area would be	
		Software Application	
		Development and Testing,	
		Software tools	
		modernization to adopt	
		Predix or micro services	
		architecture and UX/HMI	
		development.	







Figure 2.31: Industry supported Labs

2.2.4.B Industry involvement in the program design and curriculum

Table 2.26(a) shows list of Open electives designed by industries included in the curriculum

Table 2.26(a) Open Electives

Code	Course	СОЕ
NHOP01	Big Data Analytics using HP Vertica – 1	HP Vertica
NHOP02	VMware Virtualization Essentials - 1	VMware IT Academy
NHOP03	Adobe Experience Manager – 1	Adobe Digital
NHOP04	Big Data Analytics using HP Vertica – 2	HP Vertica
NHOP05	VM Ware Virtualization Essentials - 2	VMware IT Academy

NHOP06	Adobe Experience Manager – 2	Adobe Digital
NHOP07	SAP	SAP Next
NIIOF07	SAL	Generation Lab
NHOP08	Schneider - Industrial Automation	Schneider Electric
NIIOF08	Semielder - Industrial Automation	India Private Limited
NHOP09	CISCO Bouting and Switching 1	CISCO Networking
NHOP09	CISCO- Routing and Switching - 1	Academy
NHOP10	Data Analytics	HP Vertica
NHOP11	Machina Laamina	SAP Next
NHOPII	Machine Learning	Generation Lab
NHOP12	CISCO-Routing and Switching - 2	CISCO Networking
NHOF12	CISCO-Routing and Switching - 2	Academy
NHOP13	Industrial IOT-Embedded Systems	Quest Global
NHOP14	Blockchain	HP Vertica
NHOP15	Product Life Cycle Management	SAP Next
NHUP15	Product Life Cycle Management	Generation Lab

Table 2.26(b): BOS members part of the industry

			1	5	
S. No	Name of the Expert	Designation	Company	Contribution	Period
1	Mr. Ritwik Batabyal	Chief Technologist	Wipro Technologies Ltd	BOS Member	2019-2020
2	Mr. Venkatesh Channal	Software Development Manager	Amazon Development Centre	BOS Member	2019-2020
3	Mr. Rajesh Babu Nalukurthy	Product Development Manager	HoneyWell, Bangalore	BOS Member	2019-2020
4	Mr. Anand Sreenivasan	Program Director	MindTree	Stakeholder	2019-2020
5	Mr. G. Anuhya	SAP Consultant	Shell India Pvt. Ltd	Stakeholder	2019-2020
6	Mr. Rama Rao. N	SAP Tech Head	Shell India Pvt. Ltd	Stakeholder	2019-2020
7	Mr. Vinod Unnikrishnan	Associate Director	Virtusa	Stakeholder	2019-2020



8	Mr. A. V. Vijay Kumar	Senior Architect	Wipro Technologies Ltd	BOS Member	2018-2019
9	Mr. Rajesh Babu Nalukurthy	Development		BOS Member	2018-2019
10	Mr. Rajeev T. C	Sr. Apple Developer	Sourcebits Technologies	Stakeholder	2018-2019
11	Mr. J. Vijay Kumar	Delivery Manager	IBM	Stakeholder	2018-2019
12	Mr. Vinod Unnikrishnan	Associate Director	Virtusa	Stakeholder	2018-2019
13	Mr. Agi. K. Thomas	Senior System Architect	SAP Ariba	Stakeholder	2018-2019
14	Mr. Ravindra Prasanna	Director, Product Development	Tata Elxi	BOS Member	2017-2018
15	Mr. Harish	Senior Manager (Development)	EMC ²	BOS Member	2017-2018
16	Mr. Kamlesh Zanje	Assistant Manager	SAP Labs	Stakeholder	2017-2018
17	Mr. Baranidharar	Principal Software Engineer	AVEVA	Stakeholder	2017-2018

2.2.4.C Industry involvement in partial delivery of any regular courses for students

1. Courses offered by industries to students.

Sl. No.	Industry	Sem	Course Title
1	HPE	V/VI/VII	Big Data Analytics using HP Vertica-1
2	HPE	V/VI/VII	Big Data Analytics using HP Vertica-2



The Curriculum of HPE Big Data Analytics Using HP Vertica-1 and Big Data Analytics Using HP Vertica-2 shown in Figure 2.32(a) and (b) respectively.

BIG DATA ANALYTICS USING HP VERTICA-1

Code : NHOP01	Credits: 04
L: P:T:S : 3:0:0:1	CIE Marks: 50
Exam Hours : 3	SEE Marks: 50
Course Outcomes: At the end of the Course, the	Student will be able to:

CO#	COURSE OUTCOMES	
NHOP01.1	Analyse data in Oracle & Vertica databases using SQL statements.	
NHOP01.2	Explore Vertica for organizing and faster processing of data.	
NHOP01.3	Create projection partition manually using Vertica for efficient data analysis.	
NHOP01.4	Apply copy, delete, merge, purge operations in Vertica database.	
NHOP01.5	Design multi-node clustering in Hadoop for real time applications.	
NHOP01.6	Illustrate working of Hadoop ecosystem tools for big data analysis.	

со	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
NHOP01.1	3	2	-	-	3	-	-	-	3		•	2
NHOP01.2	3	-	•	•	3	•	•	•	3	•	-	-
NHOP01.3	3	•	2	1	3	-	-	-	3	•	-	-
NHOP01.4	3	-	-	•	3	-	-	-	3	•	•	•
NHOP01.5	3	2	2	-	3	-	-	-	3	2	•	2
NHOP01.6	3	•	-	-	-	-	-	-	•	2	•	-

Mapping of Course Outcomes to Program Specific Outcomes (PSOs):

CO	PSO1	PSO2
NHOP01.1	3	2
NHOP01.2	3	-
NHOP01.3	3	-
NHOP01.4	3	
NHOP01.5	3	2
NHOP01.6	-	



4	Big Data Analytics with Hadoop Big data overview, Introduction to Hadoop, Overview of Hadoop Distribution File Systems[HDFS] and Map reduce Operations Clustering types in Hadoop- Standalone mode, Pseudo distributed mode, Fully distributed mode. Hands on Sessions : Verifying Hadoop installation (Pseudo distributed mode) Java path Hadoop location Hadoop configuration files Name Node setup Job Tracker Metadata files Accessing Hadoop on browser	8	NHOP01.5
5	Hadoop Ecosystem Introduction to SQOOP, Overview of PIG - Standalone mode, cluster mode, when to use PIG latin, Introduction to HIVE, Introduction to HBASE- comparison of Hadoophdfs and HBASE . Hands on Sessions : a) Moving data from local file system to Hadoop file system b) Performing MAP Reduction operation in Hadoop c) Verification of operation results through terminal and browser	9	NHOP01.6

Figure 2.32(a): Big Data Analytics using HP Vertica-1



Big Data Analytics Using HP Vertica-2

Code: N	HOP04
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Exam Hours: 3

CIE Marks: 50 SEE Marks: 50

Credits: 04

Course Outcomes: At the end of the Course, the Student will be able to:

CO#	COURSE OUTCOMES					
NHOP04.1	Analyze Big data in Hadoop ecosystem using Mapreduce operations.					
NHOP04.2	HOP04.2 Utilize import and export functionalities of SQOOP tool.					
NHOP04.3	Analyze Big data using Pig tool to address societal issues.					
NHOP04.4	Develop Pig Latin scripts to demonstrate real time applications					
NHOP04.5	Apply HQL to analyze various data sets.					
NHOP04.6	Create tables in HBase and illustrate various HBase commands.					

Mapping of Course Outcomes to Program Outcomes

CO	PO1	PO2	PO3	PO4	PO5	P06	PO7	PO8	PO9	PO10	PO11	PO12
NHOP04.1	3	3	-	-	3	-	-	-	3	-	•	-
NHOP04.2	3				3	- 22	-		3	120	•	2
NHOP04.3	3	3	-		3			-	3	2		2
NHOP04.4	3	3	1	1	3				3	2		•
NHOP04.5	3	3	12		3	340	-		3	127		
NHOP04.6	3			-	3				3			-

Mapping of Course Outcomes to Program Specific Outcomes (PSOs):

CO	PSO1	PSO ₂
NHOP04.1	3	
NHOP04.2	3	2
NHOP04.3	3	2
NHOP04.4	3	-
NHOP04.5	3	-
NHOP04.6	3	-



Module No.	Module Contents	Hours	COS
1	VERTICA & Hadoop Review Vertica Cluster Management: Adding nodes to an existing cluster, Removing nodes from a cluster, Replacing nodes, Node recovery in vertica, Rebalancing data across nodes Hands on sessions ~ Check hadoop configuration file Check hadoop configuration file ~ Load a .csv file from local file system to hadoop file system Perform analysis on loaded files using hadoopmapreduce programs and verify the output using hadoop commands as well as browser o Count Grep SOOOP Verifying Sqoop status through cloudera manager ~ Hand-on Practice on various Sqoop basic commands List-database o List-table Eval ~ Import of tables from Mysql database to hdfs Import of subset of tables using 'where' clause 0 Import of subset of tables using 'where' clause Import table as sequence file	9	NHOP04.1 NHOP04.2
2	database Apache Pig Architecture: - Apache Pig components, Pig Latin Data Model: atom, tuple, bag, relation, map. Basic grunt shell commands, Running local mode - mapreduce mode, Pig Latin 1: Pig Latin Statements: Data types- simple &Complex Data Types Hands on sessions: Operators (Part 1): • Loading and storing - from/to local file system, from/to hdfs	9	NHOP04.3



3	 Diagnostic operator – Dump, Describe, Explain, illustrate Filtering – filter operator; For Each Generate operator: projection, nested projection, schema; Distinct Operator Arthematic operators Comparision operator Boolean Operators Hands on Sessions: Operators (Part 2): Grouping & Joining Operator – GROUP, CO- GROUP, JOIN(INNER, SELF JOIN) Combining & splitting – UNION, SPLIT Sorting – ORDER BY, LIMIT Pig Latin Built-in functions: Eval functions: AVG, SUM, MIN, MAX, COUNT, SIZE, CONCAT, TOKENIZE Bag&Tuple Functions: TOTUPLE, TOBAG, TOMAP String Functions: SUBSTRING, INDEXOF, LCFIRST(), UCFIRST(), UPPER(), LOWER(), REPLACE() Math Functions: ABS, CBRT, SQRT, COS, SIN, TAN, CEIL, FLOOR, EXP, LOG, LOG10, ROUND Apache Pig - Running Scripts: Creating pig script Commenting pig script – Sample examples: word court program using pig script, count of similar events from a log file, simple twitter case study example. 	9	NHOP04.4
4	HIVE Hive: Why hive?, components of hive, simple architecture of hive, data-model of hive(database, table, partition, bucket) Hands on Session: Hive Commands: Data Definition Language (DDL) • CREATE database/ table/ external table , DROP, ALTER, SHOW, DESCRIBE Statements. Data Manipulation Language (DML) • LOAD, INSERT Statements- INSERT INTO, INSERT OVERWRITE Built-in Operators-Relational Operators- Arithmetic Operators- Logical Operators - Complex Operators-	9	NHOP04.5



	example: simple queries on these operators Order by clause- Group by clause- aggregate functions(sum, avg, count, min, max) Joins, Create and drop of views		
5	HBASE :Various types of No SqlDatabses – when HBASE is used? - HBase Data Model(Table, Rowkey, Column families, Column qualifiers, Cell, Timestamp) Hands on Sessions: • HBase shell Command: Create table with /without version – • put command • get command with / without version • Scan command • delete column – column family • disable – enable	9	NHOP04.6

Figure 2.32(b): Big Data Analytics using HP Vertica-2

2. FDP Offered by Industries

Table 2.28 shows the list of faculty who have participated in faculty development programs delivered by experts from industries.

Table 2.26. Faculty participation in FDF conducted by industries								
Academic Year	Date	Title	Faculty	Organization				
	28-01-20 to 30-01-20	Deep Learning	10 Members from CSE	Experts from Object Automation Software Solution Private Limited, NVIDIA, AVNET				
2019-2020	08-03-19	Big data analytics with Hadoop Apache Apark	15 Members from CSE	Experts from Mind Tree, Walmart Global Technology, Amazon Web Service, LinkedIn Lite, Happiestminds, Impetus Infotech				
2018-2019	07-12-18	AI & ML Fundamentals	24 Members from CSE	Mr. Sachin, CTO, Talentpod				
2010-2019	13-04-18	Cloud Computing	24 Members from CSE	Mr. Ramkumar, Special Consultant, Jetking				

Table 2.28: Faculty participation in FDP conducted by Industries





Figure 2.33(a) FDP on deep learning



Figure 2.33(b) FDP on big data analytics



3. Industry Involvement in Partial Delivery of any Regular Courses for Students

The following is the list of expert lectures conducted by industry experts.

Table 2.29(a): List of expert lectures conducted by industry experts AY: 2019-2020[ODD]

Sl. No	Date	Name of the Expert	Designation	Company	Title of the Topic
1	04/11/19	Mr. Vinod Unnikrishnan	Associate Director	Virtusa Software, Bangalore	Basics of Software Engineering with AGILE in industry
2	24/08/19	Mr. Vinod Unnikrishnan	Associate Director	Virtusa Software, Bangalore	Usage of DBMS in industry
3	24/08/19	Mr. Sudiptha Mukherjee	Principal, Enterprise Systems	Sutherland Global Services	Artificial Intelligence and Machine Learning
4	10/08/19	Mr. Abbas Isaac	Director	Cognizant Technology Solutions	Cyber security essentials and applications

Table 2.29(b): List of expert lectures conducted by industry experts AY: 2018-2019[EVEN]

Sl. No	Date	Name of the Expert	Designation	Organization	Title of the Topic
1	30-04-19	Mr. Vinod Unnikrishnan	Associate Director	Virtusa Software, Bangalore	Basics of Software Engineering with AGILE in industry
2	16-04-19	Mr. Vinod Unnikrishnan	Associate Director	Virtusa Software, Bangalore	AGILE in industry



3	09-04-19	Mr. Vinod Unnikrishnan	Associate Director	Virtusa Software, Bangalore	Usage of DBMS in industry
4	08-04-19	Mr. Bhuvneshwar Choksey	Software Specialist	Nokia Networks, Bangalore	Introduction to Python programming with AI/ML
5	25-03-19	Mr. Muralitharan. G	Tech Lead	E-mids Technologies, Bangalore	iOS and mobile application development











Figure 2.34: Sample Expert Lecture by Industry Expert

IMPACT ANALYSIS

Industry institute interaction is effected through,

- Workshops and Faculty Development Programs-The department conducts workshops and Faculty Development Programs every year for the benefit of faculty and students to enhance their skill level.
- Training by industry experts -MOUs also provide means to introduce courses offered by industry experts in the curriculum. Get opportunity to express skills required as per industry need.
- Guest lectures by industry experts.
- Membership of industry experts in Department BoS.
- Membership of industry experts in Department Advisory committee.
- Industrial visits by students.
- Student Project works with involvement of industry.



Industry supported Laboratory and activities

S.No	Event Type	Title	Resource Person Details	Date	No of
	Туре				participants
1	Workshop	Introduction to Ethical Hacking	Mr. Vinay Khande, Associate Consultant, Allstate	08-02-20	30 Students
2	Exclusive Session	Unlock Big Data with Vertica	Mr. Lokesh Sharma, Sales Director, India and SAARC, Microfocus, New Delhi.	05-11-19	120 students from CSE, ISE, ME, ECE, EEE
3	Session Talk	Enhancement of HP Centre of Excellence with new plans and activities	Mr. Lokesh Sharma, Sales Director, India and SAARC, Microfocus, New Delhi.	19-09-19	Faculty SPOC
4	Workshop	Big Data and Its Technologies	Mr. Vithal Sampagar, Module Lead, Impetus Infotech India	14-09-19	30 students, 5th sem CSE
5	Hackathon	American Express CodeStreet'19		10-08-19	500 final participants across India
6	FDP	Knowledge Transfer Session on Vertica Database	Mr. Padmapriya, Ms. Jisha	18-07-19	28 Faculty Members

Table 2.30(a): List of events conducted in HPE Centre of Excellence AY: 2019-2020



Table 2.30(b): List of events conducted in HPE Centre of Excellence

Sl.No	Event Type	Title	Resource Person Details	Date	No of participants
1	FDP	Big Data Analytics with Hadoop- Apache Spark	Mr. Sachin Mudholkar, Chief Technology Officer, Talentpod	08-03-19	GIC Industry Members and NHCE Faculty (15 in total)
2	FDP	BIG DATA ANALYTICS " (15CS82 CBCS as per VTU Syllabus)	Industry experts Mind Tree Walmart Labs Amazon Web Service and Happiest minds	21/01/2019 to 25/01/2019	29 Faculty from various colleges
3	FDP	Artificial Intelligence & Machine learning Fundamentals	Mr. Sachin Mudholkar, Technology Head & Vice President, Relatas	07-12-18	24 Faculty from CSE, ISE, ME, ECE, MCA
4	Workshop	Python for Data science and Machine learning	Mr. Mahadeva Prabhu, Technical Trainer, BeTaught Learning Solutions.	06-10-18	30 students, 5th Sem CSE
5	A Talk	HP Discussion Session at HPE Center of Excellence	Mr. Ravi Gupta, HPE executive, Delhi	06-09-18	7 Vertica trained Faculty from MCA, ISE, CSE

AY: 2018-2019



Table 2.30(c): List of events conducted in HPE Centre of Excellence

AY: 2017-2018

S.No	Event Type	Title	Resource Person Details	Date	No of Participants
1	Placement Training for Non-Circuit Branches	C and Data Structure	Mr. Omprakash Shyamalan	11-18 June 2018	Batch of 15 students
2	Hands-on Training	Hadoop Ecosystem- SQOOP, HIVE, PIG, HBASE	Mr. Prinshu Verma, Prwatech	20-22 July 2017	20 Faculty NHCE
3	Hands-on Training	Vertica- Datawarehouse database	Mr. Kushwanth Setty, HPE Engineer, South Asia region	10-15 July 2017	20 Faculty NHCE





HP Centre of Excellence on Big Data and Data Analysis

HP Centre of Excellence on Big Data and Data Analytics



Figure 2.35: Event conducted under HPE



S.No	Event Type	Title	Resource Person Details	Date	No of participants
1	Online Webinar	Open POWER Academia and Research Webinar	Lutz Kirchner from GTS Data Dr. Alba Cristina Melo from University of Brasilia	19 June 2020	110 CSE Students and Faculties
2	Online Webinar	Vertica- Datawarehouse database	Dr. Sunitha Chandrasekaran, University of Dalware Ms. Clarisse Hedgkin, IBM	12 June 2020	100 CSE Students
3	Online Webinar	Big Data and AI	Dr. Athirai Irissappane, University of Washington- TACOMA, Dr. Linton Ward, IBM	08 May 2020	40 CSE students and faculties
4	Faculty Development Programme (FDP)	Deep Learning	Mr. Sudipta Mukherjee, Sutherland Global Service, Bangalore Mr. Dipesh Agarwal, NVIDIA, Dr. Jayakumar Singaram, Object Automation Software Solution Private Ltd, Bangalore Mr. Patrick Samuel, AVNET, Bangalore	28-30 Jan 2020	15 Faculties from various Colleges

Table 2.31: List of events conducted in IBM OPENPOWER Centre of Excellence



The Value added courses aim to provide additional learner centric, skill oriented technical training, with the primary objective of improving the employability skills of students. The main objectives of the program are:

- 1. To provide students an understanding of the expectations of industry
- 2. To improve employability skills of students.
- 3. To bridge the skill gaps and make students industry ready.
- 4. To provide an opportunity to students to develop inter-disciplinary skills.

S. No	Company	Course Offered	No. of Students	Semester	Batch
1	JetKing	Amazon Web Services	78	7	2016-2020
2	Indian Institute of Hardware Technology (IIHT)	Python training	79	5	2016-2020
3	JetKing	CCNA	93	7	2015-2019
4	Etherglobal	Oracle DBA	86	8	2015-2019
5	JetKing	AWS training & certification	86	4	2017-2021
6	Indian Institute of Hardware Technology (IIHT)	Python training	93	6	2015-2019

Table 2.32: List of events Value added courses handled by Industry professionals

Study abroad Program

NHCE has actively partnered with the Ministry of National Education, France in various educational activities and collaborations. On 12/03/2018, an agreement was signed between NHCE and the Ministry of National Education, France to facilitate student-exchange programs between NHCE and various universities in France.

As a result of this agreement and a number of visits to France by the NHCE delegation, 10 seventh semester students from CSE department successfully completed a 12 week student exchange program in reputed universities in France starting Sept 2018. The Universities in France have provided this rare opportunity to our students to experience their educational system, technology and culture.



The following are the details of the student who opted for study abroad programme in Universities in France.

Table 2.33(a): List of students opted for study abroad program in Universities inFrance (AY: 2019-2020)

USN	Name	University	Start Date	End Date	Duration
1NH16CS088	Ramisetty Guru Pradeep	University of Le Havre	12 th Sept ,2019	2nd December, 2019	12 weeks
1NH16CS144	Brijesh Dobariya	University of Le Havre	12th Sept,2019	2nd December, 2019	12 weeks
1NH16CS735	Sweta	University of Rouen	12th Sept,2019	2nd December, 2019	12 weeks
1NH16CS123	Vinayaka Sandilya	University of Le Havre	12th Sept,2019	2nd December, 2019	12 weeks
1NH16CS100	Sameeksha	University of Rouen	12th Sept,2019	2nd December, 2019	12 weeks
1NH16CS096	Sahana S Chadragiri	University of Le Havre	12th Sept,2019	2nd December, 2019	12 weeks
1NH16CS727	Shalini K	University of Le Havre	12th Sept,2019	2nd December, 2019	12 weeks
1NH16CS098	Salman M J	University of Le Havre	12th Sept,2019	2nd December, 2019	12 weeks

Table 2.33(b): List of students opted for study abroad program in Universities in
France (AY: 2018-2019)

USN	Name	University	Start Date	End Date	Duration
1NH16CS400	Anmol George	UFR Science and Technology	13 th Sept ,2018	10th December, 2018	12 weeks
1NH15CS069	Spandana	University of Rouen	13th Sept,2018	2 nd December, 2018	12 weeks

2.2.5. Initiatives related to industry internship/summer training

The department organizes industrial visits for students once in a year/semester to relevant organizations/companies to enable the students to experience the practical implementation of theoretical knowledge in real world. This gives them an insight of the work culture ethics prevailing in Industries.

Sl. No.	Organization	Date of Visit	No. of Students
1.	Eurofins IT Solutions, Bangalore	07/11/2020	HODs
2.	IoT show	15/2/2020	6 th Semester ,6 students
3.	Volvo Construction	18/10/2019	5 th semester, 19 Students
4.	Capgemini, Bangalore	30/05/2019	HODs and Faculty.
5.	Wipro limited, Bangalore	10/04/2019	6 th semester, 15 Students.
6.	Future mobility show (BIEL)	28/02/2019	4 th semester, 30 Students.
7.	Data Center at Jetking, Bangalore.	18/11/2018	7 th semester, 35 Students.
8.	Cloud Foundry, SAP LABS	08/09/2018	5 th semester, 09 students.
9.	IETKINC Dereslere	24/03/2018	M. Tech 2nd Semester, 09
9.	JETKING, Bangalore	24/03/2010	students
10.	JETKING, Bangalore	28/10/2017	7 th Semester, 30 Students

Table 2.34: Industry visits by students



Industrial Visit Photos









Figure 2.36(a): Industrial Visit Photos



	Accredited by NBA F OF COMPUTER SCIENCE AND ENGINEERING Industry visit Feedback form
Industry visit Feedback form Please fill carefully section-1 Basic details and Section-263 Feedback form * Required 1 USN - INH15CS003	5 Your satisfaction level after Industrial Visit * Mark only one oval Excellent Good Below Arrage Below Arrage
2 NAME * Abdul shahid 3 Semester * Mark only one aval 8	6 Industry visit useful technically * Mark only one oval Vyes No
√ 7 6 5 5	7 which inductrial visit helpful to upgrade your knowledge " Jet King
4 Non-ottle company Data Center at Jetking	8 Do you want such industrial wort feature Mark only one oual her.

Figure 2.36(b): Industrial Visit Feedback

2. Initiatives related to industry internship

Students had undergone **industry internship/summer** training of their areas of interest / specialization at the end semester for duration of 4 to 6 weeks. In addition to this, the department organizes training programs related to emerging industry trends and job functions. External trainers from reputed industrial organizations bring the latest technological evolutions to the students.

Initiatives / Implementation and Impact Analysis of industry Internship/ Summer Training are as under

• The internships are arranged collaboratively by the industrial internship coordinator of the department with the industry associates and student volunteers.

• A copy of the confirmation letter for training is submitted with the industrial internship coordinator / HoD/ Dean

• The Joining Report, providing the following information sent to the industrial



internship coordinator / HoD / Dean by the student immediately after joining the organization:

• The faculty mentor visits / remains in touch with the industry supervisor to monitor the progress of the intern

• On completion of training a project report / completion certificate and student feedback are submitted to the industrial internship coordinator /HoD/ Dean

• A Presentation is made by every student on his/her internship report before a panel constituted by the Dean / HoD. This is followed by a viva to gauge the course outcome / program outcome achieved.

Sl.	USN	Name	Name of the Duration of Internship		Title of	
No	USIN	Ivanie	Company	Start Date	End Date	Internship
1	1NH16CS001	Afshiya Sultana	Inventeron Technologies and Business Solutions LLP	06-01-20	06-03-20	Data Science and Web Development Internship
2	1NH16CS002	Akash S	Knowledge Lens	02-01-20	16-03-20	Python Backend Programming
3	1NH16CS003	Akash S	Planetworx Technologies Pvt. Ltd.	20-02-20	20-05-20	Data Engineering Intern
4	1NH16CS006	Akshaya Padmakar Nayak	Hexaware Technologies Ltd	21-01-20	29-05-20	Mavericks Training
5	1NH16CS008	Anand Kumar V	JMJ Technologies	17-02-20	14-04-20	Document Digitization Text Recognition
6	1NH16CS011	Asif Alam	Inventeron Technologies and Business Solutions LLP	22-01-20	23-03-20	Data Science and Web Development Internship

Table 2.35 (a): Sample list of Internship details for the year 2019-2020



7	1NH16CS013	Ayushi Srivastava	Cerner	06-01-20	30-06-20	Auto Text in Dts transcription Entry and Auto Save In Power Chart
8	1NH16CS014	B Varun Kumar Reddy	Covance India, Bangalore	27-01-20	27-07-20	Encryption of Stored Credentials Within the Application Configuration File
9	1NH16CS015	Balaji G	Covance India, Bangalore	27-01-20	27-07-20	Clinical Trial- Database Management
10	1NH16CS020	Bhavana. N Raj	VMR Cloud Solutions Private Limited	20-02-20	22-04-20	Expense Report - Web Development
11	1NH16CS021	By Reddy Preethi Reddy	Corporate Technologies	21-02-20	10-04-20	Data Access Control Using Attributed Based Encryption Techniques
12	1NH16CS023	Chaithanya Devi. K	Quest Global	07-01-20	14-04-20	Parking Slot Management System
13	1NH16CS024	Chamala Geethika	JMR Infotech	26-02-20	07-05-20	Pharmaceutical Store
14	1NH16CS028	Deekshith. D.V	ITC Infotech	06-01-20	05-06-20	Airwaybill Automation
15	1NH16CS039	Ishita Nilesh Joshi	Capgemini	25-01-20	31-05-20	Product Lifecycle Management



16	1NH16CS042	Jeevana M	Relentless Systems	10-02-20	03-04-20	Crop Rate Prediction
17	1NH16CS045	Karan D Keskar	Uncanny Vision	03-02-20	03-04-20	Data Monitoring Intern
18	1NH16CS046	Karthiga. R	Jmj Tech Pro	10-02-20	27-04-20	(Python) Image Processing Based Multilanguage Translator
19	1NH16CS047	Karthik M Bharadwaj	Capgemini India	09-01-20	31-03-20	Salesforce Internship
20	1NH16CS048	Karthik.M	Hexaware Technologies Ltd	21-01-20	29-05-20	App Development (Mavericks Training)
21	1NH16CS049	Katikala Ashok Kumar	Drdo	03-02-20	20-03-20	Development of Interactive Google Map Based Location Selection Application
22	1NH16CS050	Kavya. A. S	Inventeron Technologies	20-01-20	09-04-20	Student Admission Analysis in Machine Learning
23	1NH16CS051	Kirti. R. Nambiar	Esec Forte Technologies	21-01-20	21-07-20	Web Development Internship
24	1NH16CS052	Krishna Vineeth P	Cerner	13-01-20	30-06-20	Service Client Migrator
25	1NH16CS057	Manthan Kamila	Cerner	06-01-20	30-06-20	X Ray Image Processing
26	1NH16CS058	Maqdoom Baig	Jmr Infotech	26-02-20	07-05-20	Pharmaceutical Store



27	1NH16CS059	Maraka Bhuvanes- wari	Corporate Technologies	19-02-20	10-04-20	Top-K Query Processing Scheme That Is Secure Under the Ind-Cka Security Model.
28	1NH16CS118	Vaibhavi Kulkarni	Quest Global	04-07-19	31-05-20	Design and Development of Smart Power
29	1NH16CS119	Varsha G	Ibm	03-01-20	03-07-20	Data Lake by Ibm
30	1NH17CS407	Iqra Anjum	Jmj Tech Pro	03-02-20	12-03-20	Amazon Web Services

 Table 2.35(b): Sample list of Internship details for the year 2018-2019

Sl. No.	USN	Name	Name of the Company	Duration of Internship	Title of Internship
1	1NH15CS008	Aditya T. Nambiar	ITC Infotech Pvt Ltd	16/01/19-29/03/19	Cab Management
2	1NH15CS009	Aishnaya Jamwal	Charcoal Eats Food Tech Pvt. Ltd	18/02/19-30/04/19	Automation testing and Development
3	1NH15CS013	Aman Kumar	Geek Space Inc	05/02/19-05/04/19	Website Development
4	1NH15CS014	Amit Kumar Sah	Aricent	04/02/19-31/07/19	5G-A next generation wireless technology
5	1NH15CS015	Amritha John	Infosys	14/01/19-14/05/19	Business Intelligence
6	1NH15CS016	Amrutha H R	Infosys	14/01/19-14/05/19	Building report and workflow using O&A-CLE
7	1NH15CS017	Anurag VH	Neo Inreraction Design	04/02/19-04/04/19	New Interaction designs
8	1NH15CS018	Arbind Saraf	Caffine Kicks	28/01/19-28/03/19	Blockchain



			ClavSol		Web design using
9	1NH15CS019	Arun V	ClaySol Media Labs	04/02/19-20/03/19	Clients architecture
10	1NH15CS020	Ashim Shresta	WebBook	12/01/19-27/02/19	Web Design
11	1NH15CS023	Aswini R	Infosys	14/01/19-14/05/19	Business Intelligence
12	1NH15CS041	G. Naveen Saikanth	Infosys	14/01/19-14/05/19	Business Intelligence
13	1NH15CS043	H.B. Pruthvi	C-DAC	05/03/19-05/05/19	Development of PWA
14	1NH15CS044	H D Nidhishree	Lowe's Services India Pvt Ltd	14/01/19-13/09/19	Automation Launchpad
15	1NH15CS045	Haritha Nambiar	VVDN Technologies	21/01/19-23/03/19	Training VVDN technologies
16	1NH15CS047	Harshitha G A	Nineleaps Technology Solutions	11/01/19-30/04/19	Development of document management system
17	1NH15CS050	Huma Farheen Shaikh	Caffine Kicks	24/01/19-24/03/19	Tech Intern
18	1NH15CS051	Imran Khan	Infosys	14/01/19-14/05/19	Python and BI
`19	1NH15CS056	K Naresh Kannan	Aricent	04/02/19-31/07/19	Wireshark Tool & Development
20	1NH15CS060	Kevin Jacob	Hindustan Aeronautics Limited	05/03/19-18/04/19	Fixed Point Algorithm
21	1NH15CS064	Likhita Suresh	Hindustan Aeronautics Limited	05/03/19-18/04/19	Fixed Point Algorithm
22	1NH15CS065	Luv Raina	Reboot Mind Technologies	01/03/19-30/04/19	E-commerce Website
23	1NH15CS066	M K Subramani	Hiver.	09/01/19-31/05/19	CSAT Feature Development
24	1NH15CS067	Madhuri M	Infosys	14/01/19-14/05/19	Customer Churn Analysis
25	1NH15CS070	Madhu D	Covance India Pharmaceutic als Pvt Ltd	10/01/19-05/07/19	VB applications



26	1NH15CS083	Nikhitha M	Infosys	14/01/19-14/05/19	Business
20	11111305005		•	14/01/19-14/05/19	Intelligence
27	1NH15CS084	Nissi Thomas	Lowe's Services India Pvt Ltd	14/01/19-13/09/19	Apache Solr
28	1NH15CS085	Nithin S	Pulse Secure Technologies India Pvt Ltd	18/02/19-24/05/19	Automation of sponsored GAC
29	1NH15CS087	Ozween Dcunha	Hindustan Aeronautics Limited	05/03/19-18/04/19	Fixed point Algorithm
30	1NH15CS089	Paramartha Roy	Infosys	14/01/19-14/05/19	Customer Churn Analysis
31	1NH15CS092	Pranav M	Hindustan Aeronautics Limited	26/02/19-22/04/19	Attack vector dashboard
32	1NH15CS093	Pranita D	Infosys	14/01/19-14/05/19	Customer Churn Analysis
33	1NH15CS094	Prashant Mehta	Infosys	14/01/19-14/05/19	A report on Infosys Organization
34	1NH15CS095	Prathiksha P Shetty	ITC INFOTECH PVT LTD	16/01/19-29/03/19	ITC Infotech on salesforce
35	1NH15CS098	Rahul Prem	Cerner Healthcare	17/01/19-17/07/19	Electronic medical record accessing system: Enhancement of powerchat
36	1NH15CS101	Rajkumar Bhandari	Infosys	14/01/19-14/05/19	Business Intelligence
37	1NH15CS105	Rohit Chaudhary	Cerner corporation	17/01/19-17/06/19	Open link engine and dashbag development
38	1NH15CS106	Rohit Mulay	IBM India Private Limited	11/01/19-10/07/19	IBM Tririga Building Insights
39	1NH15CS108	Sachin Babu S M	Aricent Technologies (Altran)	04/02/19-04/07/19	Web development using Angular
40	1NH15CS110	Saachi Chandrasekhar	Cerner healthcare	17/01/19-17/07/19	Custom reporting





Sample Internship offer letters



UNITERS IT OF LUND S. 4" UBMAA CAMPAGEN
Coordinated Science Lab 1308 W. Main Street Urbanau. Li 61801 (217) 244-8270 w-hwu@uucu.edu
August 29, 2018
To whom it may concern,
This is to certify that Mr. Rohit Mulay, an undergraduate student at Department of Computer Science and Engineering, New Horizon College of Engineering, Bangalore, India has accomplished his internship from July 20, 2018 to Aug 29, 2018 at the IBM- Illinois Center for Cognitive Computing Systems Research (C3SR), University of Illinois at Urbana–Champaign, in Illinois, USA. During the internship, Mr. Rohit Mulay has successfully completed Web UI Development for Machine Learning Models (MLModelscope) under my guidance. Mr. Rohit Mulay's performance during his internship was more than adequate. I wish Mr. Rohit Mulay great success for his future endeavors.
Sincerely,
Wen-mei Hwu Professor and AMD-Sanders Endowed Chair, ECE

Figure 2.37: Sample Internship Letters





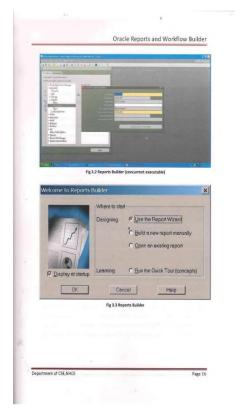


Figure 2.38: Sample Internship Report

NEW HORIZON COLLEGE OF ENGINEERING DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING RUBRICS FOR INTERNSHIP WORK

	Excellent(S) (100%)	Very Good (A) (80%)	Good (B) (60%)	Fair(C) (40%)	Unsatisfactory(D) (0)
Internship Duration and Work Involved	Duration is at least for 3 months Student working on computer science related project on the latest domain	Duration is between 2 months to 3 months. Student working on computer science related project on the latest	Duration is for 1 month to 2 months. Student working on computer science related project on the latest	Duration is for 1 month Student working on computer science related project on the latest or existing domain.	No internship work carried out
Use of methods and processing data during internship work	Description of methods used and analysis of the information is appropriate, complete and clear	Description of methods and analysis of information/data is mostly complete, but there are lacking some details. Used methods and analysis of	Description of methods and analysis of information/data is lacking in a number of placed. Used methods and analysis of data/information mostly appropriate.	Some aspects of the project regarding methods and analysis of information are described insufficiently. Used methods and analysis of data/information are not always appropriate. Description of methods and	No description of methods and analysis of the information/data.
Reflection on the internship	Is able to analyze objectively most events or situations in which he was involved and that relates to formulated learning outcomes, derive improvements for a future situation and formulate plan for improved functioning in a new situation. Shows the ability in at least one case to implement the formulated plan for improved functioning	Is able to describe at least one event or situation in which he was involved and that relates to a formulated learning outcome, properly distinguishing between the event description and the personal emotions involved, and able to formulate personal points of improvement and related actions in a future situation	Is able to describe at least one event or situation in which he was involved and that relates to a formulated learning outcome, properly distinguishing between the event description and the personal emotions involved, but unable to formulate personal points of improvement and related actions in a future situation	Is able to describe at least one event or situation in which he was involved and that relates to a formulated learning outcome but unable to distinguish between the event description and the description of the personal emotions involved.	Is not able to describe an event or situation in which he was involved and that relates to a formulated learning outcome.
Internship Report	Student is able to defend his internship project, including indications how the work could have been done better. Student is able to place thesis in either scientific or practical context.	Student is able to defend his internship project. He masters the contents of what he wrote, but not beyond that. Is not able to place thesis in scientific or practical context.	Student is able to defend his internship project. He mostly masters the contents of what he wrote, but for a limited number of items he is not able to explain what he did, or why.	The student has difficulty to explain the subject matter of the internship project.	Student is not able to defend/discuss his internship reports. He does not master the contents.



IMPACT ANALYSIS

Internships in the industries endow the students with the following benefits.

- Hands on experience provides better understanding of the basic concepts
- Students learn the industrial standards, current trends and practices
- Real environmental exposure enhances student's learning
- Training and/or testing becomes easier
- Helps in building inter personal skills and team work
- Application of academia in industrial environment.
- Students had seen live project site and from this they have gained practical knowledge.
- The industry standards and workplace culture is exposed to students, and they also understand the importance of being punctual and meeting the deadlines
- Communication skills of the students improved.
- Students are inspired to work hard and get placed in such industries

Student feedback on initiative:

- For feedback from training, faculty take viva examination of students.
- Depending upon this result those who have poor knowledge on that particular topic, faculty encourages the students to participate in industrial workshops or other field visit for increasing their core knowledge.
- Department in association with professional bodies conduct distinguished lectures, technical seminars, workshops and conferences to enhance the knowledge of students in program specific domains.



NEW HORIZON COLL	EGE OF ENGINEERING
	FU, Accredited By NAAC with 'A' Grade, ted by NBA
	ER SCIENCE AND ENGINEERING
	Feedback form
USN: 1NH15 (1041	How did your Internship experience help you grow
NAME: Noveen saikanth	personally and/or professionally?
Semester: &	Help me belter in the clust world
Semester. y	theip the rot
Details of Internship (company Name,Address) :	U
Infosys	How was the working environment *
Overall Experience * 0	It was pretty good
Excellent	
Good	What advice would you give future Interna? (May we
Average	use this in promoting Internships to other students?
Below Average	Yes/No)*
Opportunity to Gain Related Experience *	ye, the skills gained here are uninus please do utige this.
Axcellent	please do uttige this.
Good	What new technology learnt from Internship *
Average	•
Below Average	Businers Intelligence
Ability to Acquire New Skills *	Did you receive any
Excellent	laurels/recognition/acknowledgement for
food	outstanding contributions during your Internship?
Average	NO
Below Average	INU
· · · · · · · · · · · · · · · · · · ·	
Quality of Mentoring for the Intern *	Did you face any kind of
Excellent	prejudices/obstacles/challenges during your
4.ood	Internship? *
Average	
Below Average	NO
Opportunity to Expand Professional Network *	
Fxcellent	How would you describe your overall Internship
food	
/.verage	experience? *
Lelow Average	
	Excellent.
l ecommend Experience To Peers *	
Excellent	
1:ood	
liverage	
Below Average	

Figure 2.40 A sample feedback of student Internship

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CRITERION 3

COURSE OUTCOMES AND PROGRAM OUTCOMES

155



CRITERIA 3COURSE OUTCOMES AND
PROGRAM OUTCOMES175

3.1 Establish the correlation between the courses and the Program Outcomes (POs) & Program Specific Outcomes (25)

The curriculum of the program is designed with core and elective courses by considering the Vision, Mission, Program Educational Objectives (PEOs), Program Outcomes (POs), Program Specific Outcomes (PSOs), requirements of stakeholders, suggestions from industries.

Course Outcomes (CO) are statements that are framed in the view of what the students are expected to attain at the end of the course. Each course has 6 course outcomes depending on its significance which are mapped to the Program Outcomes (POs) and Program Specific Outcomes.

Program Outcomes (POs) & Program Specific Outcomes (PSOs) of Computer Science and Engineering department is furnished below:

Program Outcomes

At the time of graduation, students from the Computer Science and Engineering program will possess:

A) Program Outcomes (POs)

Engineering Graduates will be able to:

- 1. Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and computing to solve Computer Science and Engineering related problems.
- 2. Problem Analysis: Demonstrate the ability to identify, formulate and solve engineering problems related to Computer Science and Engineering.
- 3. Design / Development of Solutions: Demonstrate the ability to design, analyze and interpret data and implement solutions for software based real life problems.



- 4. Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.
- 5. Modern tool usage: Create, select and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities related to Computer Science and Engineering with an understanding of the limitations.
- 6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.
- 8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. Individual and Team Work: Function effectively as an individual and as a member or leader to diverse teams, and in multidisciplinary settings.
- 10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective report and design documentation, make effective presentations, and give and receive clear instructions.
- 11. Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- 12. Life-Long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



B) Program Specific Outcomes (PSOs)

- 1. Ability to design, develop, implement computer programs and use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations.
- 2. Work with and communicate effectively with professionals in various fields and pursue lifelong professional development in computing.

3.1. Establish the correlation between the courses and the Program Outcomes (POs) & Program Specific Outcomes (25)

Program Articulation Matrix is formed by the strength of correlation of COs with POs and PSOs. The strength of correlation of COs with POs and PSOs is indicated as "3" for substantial (high) correlation, "2" for moderate (medium) correlation and "1" for slight (low) correlation and "- ", if there is no correlation. If the course outcomes are attained, the POs correlated to these course outcomes are also attained.

Semester	Course Code	Course Name
III	16CSE34	Data Structures using C
IV	16CSE43	Object Oriented Programming with C++
V	CSE51	Analysis & Design of Algorithms
VI	CSE62	Computer Networks
VII	CSE73	Mobile Application Development
VIII	CSE82	Data Mining and Machine Learning

Selected Courses (One Per Semester)

3.1.1. & 3.1.2 CO, CO-PO Matrices of Courses (15)

Course Articulation Matrix of Data Structures using C (Third Semester)

	Data Structu	ire	s us	sing	g C										
16CSE34	Statement	P01	PO2	PO3	P04	PO5	P06	PO7	PO8	909	P010	P011	P012	PSO1	PSO2
16CSE34.1	Analyze the concept of array data structures, its applications and dynamic memory management.	3	3	-	-	-	-	-	-	-	-	-	3	3	3
16CSE34.2	Compare and analyze different sorting techniques	3	3	-	-	3	-	-	-	3	-	-	3	3	3



	and apply them in organizing the data.														
16CSE34.3	Analyze the concepts of stacks, queues and linked list in problem solving.	3	3	-	-	3	-	-	-	3	-	-	-	3	3
16CSE34.4	Design applications using non-linear data structures.	3	-	3	3	3	-	-	-	3	-	-	-	3	3
16CSE34.5	Analyze various advanced tree and graph concepts.	3	3	-	-	3	-	-	-	3	-	-	-	3	3
16CSE34.6	Develop algorithms to solve problems using fundamental data structures	3	3	3	3	-	-	-	-	-	-	-	3	3	3
		3	3	3	3	3	-	-	-	3	-	-	3	3	3

Course Articulation Matrix of Object Oriented Programming with C++ (Fourth Semester)

	Object Oriented Pro	gra	mr	nin	ıg v	vith	n C·	++							
16CSE43	Statement	P01	P02	PO3	P04	PO5	P06	P07	PO8	P09	PO10	P011	P012	PS01	PSO2
16CSE43.1	Identify potential benefits of object-oriented programming over structured programming.	3	-	-	-	-	-	-	-	-	-	-	3	-	-
16CSE43.2	Apply concepts of classes and objects to correlate their significance in real world.	3	3	-	-	3	-	-	-	3	-	-	3	3	-
16CSE43.3	Construct classes using function overloading and operator overloading.	3	3	2	-	3	-	-	-	3	-	-	-	3	-
16CSE43.4	Design programs using inheritance and run time polymorphism.	3	3	2	2	3	-	-	-	3	-	-	-	3	-
16CSE43.5	Apply virtual and pure virtual functions to solve complex problems.	3	3	2	2	3	-	-	1	3	I	-	-	3	-
16CSE43.6	Analyze benefits of generic classes with C++ templates.	3	3	-	2	3	-	-	-	3	-	-	-	3	-
		3	3	2	2	3	-	-	-	3	-	-	3	3	-



	Semest	er)													
	Analysis and Desi	ign	of .	Alg	gori	thr	ns								
CSE51	Statement	P01	P02	PO3	P04	P05	P06	P07	PO8	P09	PO10	P011	P012	PSO1	PSO2
CSE51.1	Analyze and evaluate algorithms to solve complex problems by determining design technique	3	3	3	3	3	_	_	-	3	_	_	2	3	2
CSE51.2	Apply Brute Force and Divide and Conquer design techniques by analyzing and evaluating algorithm to propose solution	3	3	3	3	3	-	-	-	3	-	-	2	3	2
CSE51.3	Make use of greedy strategy and dynamic programming to choose an algorithm to solve graph and knapsack problems	3	3	3	3	3	-	-	-	3	-	-	-	3	-
CSE51.4	Utilize Decrease & Conquer and Transform & Conquer to select an algorithm to solve search and sort problems	3	3	3	3	3	_	-	-	3	_	_	_	3	-
CSE51.5	Apply Backtracking and Branch & Bound technique to assess an algorithm and formulate solution	3	3	3	3	3	-	-	-	3	-	_	-	3	-
CSE51.6	Interpret P, NP & NP- complete classes to analyze the limitations of an algorithm.	3	3	3	3	-	-	-	-	-	-	-	-	-	-
		3	3	3	3	3	-	-	-	3	-	-	2	3	2

Course Articulation Matrix of Analysis and Design of Algorithms (Fifth Semester)

Course Articulation Matrix of Computer Networks (Sixth Semester)

	Computer	Ne	etwo	ork	S										
CSE62	Statement	P01	P02	PO3	P04	504	PO6	PO7	80d	60d	P010	110d	P012	PS01	PSO2
CSE62.1	Apply the concepts of data Communication in real world.	3	3	-	I	-	-	-	-	1	I	1	1	3	1
CSE62.2	Analyze functionalities of OSI Layers.	3	3	-	I	I	-	-	I	I	I	I	-	3	-
CSE62.3	Compare and contrast various transmission media, flow control and error detection & correction techniques.	3	3	-	-	3	-	-	I	3	Η	I	-	3	-
CSE62.4	Evaluate the routing algorithms & transport protocols for achieving	3	3	3	3	3	-	-	-	3	-	-	-	3	-



	efficiency in societal and real world applications.														
CSE62.5	Analyze networking & application protocols with the help of simulation tools.	3	3	-	-	3	-	-	-	3	-	-	-	3	-
CSE62.6	Evaluate the various security mechanisms in real world applications.	3	3	3	3	3	-	-	-	3	-	-	-	3	-
		3	3	3	3	3	-	-	-	3	-	-	1	3	1

Course Articulation Matrix of Mobile Application Development (Seventh Semester)

	Mobile Applicat		n De	evel	lop	mei	nt								
CSE73	Statement	P01	P02	PO3	P04	P05	P06	PO7	PO8	P09	PO10	P011	P012	PSO1	PSO2
CSE73.1	Apply the basics of android to develop mobile applications.	3	-	-	-	3	-	-	-	3	-	-	2	3	_
CSE73.2	Analyze the architecture and design applications using android SDK.	3	3	I	-	3	-	1	-	3	1	I	2	3	3
CSE73.3	Develop applications using data storage, file sharing and inter process communication concepts.	3	3	3	_	3	-	_	_	3	-	_	_	3	-
CSE73.4	Create applications to interface sensors and Bluetooth connectivity.	3	3	3	1	3	-	-	-	3	-	I	-	3	3
CSE73.5	Design mobile applications using multimedia graphics and animations.	3	3	3	1	3	-	-	I	3	-	-	-	3	3
CSE73.6	Deploy and monetize mobile applications.	3	3	-	-	3	-	-	-	3	-	-	-	3	-
		3	3	3	1	3	-	-	-	3	-	-	2	3	3

Course Articulation Matrix of Data Mining and Machine Learning (Eighth Semester)

	Data Mining and N	Íac	hir	ne I	Lea	rni	ng								
CSE82	Statement	P01	P02	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	P011	P012	PSO1	PSO2
CSE82.1	Identify various data mining principles and techniques with different applications.	3	-	-	-	-	-	-	-	-	-	-	1	-	3
CSE82.2	Apply pre-processing and association rule mining techniques for large data.	3	3	3	I	-	-	-	-	-	I	-	-	-	3



CSE82.3	Create clusters using different clustering techniques for performing real-time analysis on common societal data.	3	3	3	_	_	2	_	-	_	_	_	_	_	3
CSE82.4	Classify large dataset into different groups by applying various classification techniques.	3	3	3	-	-	-	I	I	-	-	I	-	-	3
CSE82.5	Categorize different learning techniques and propose solutions to various real time and social impact problems.	3	3	3	-	-	2	-	-	-	-	-	-	-	3
CSE82.6	Make use of neural network and genetic algorithms to investigate and solve problems from different engineering sectors.	3	3	3	1	-	-	_	-	_	-	_	_	-	3
		3	3	3	1	-	2	-	-	-	-	-	1	-	3

3.1.3. Program Level Course-PO Matrix of all Courses Including First Year Courses (10)

NBA Code	Course Code	Course	P01	P02	P03	P04	P05	PO6	P07	PO8	P09	P010	P011	P012	PSO1	PSO2
C101	15MA11	Engineering Mathematics-I	3	3	3	2	2	1	-	-	-	1	I	3	-	-
C102	15PH12	Engineering Physics	3	2	2	-	-	-	-	-	3	I	I	1	-	-
C103	15ME13	Elements of Mechanical Engineering	3	1	3	-	3	2	1	-	-	3	-	1	-	-
C104	15CV14	Elements of Civil Engineering	3	3	3	-	-	-	-	-	-	_	_	-	-	-
C105	15EE15	Basics of Electrical Engineering	3	3	2	1	-	-	-	-	-	2	2	-	-	-
C106	15HB16	Business Communication	-	-	-	-	-	-	-	3	2	3	-	3	-	-
C107	15MA21	Engineering Mathematics II	3	3	3	3	3	-	-	-	1	3	-	3	-	-
C108	15CH22	Engineering Chemistry	3	3	-	1	-	-	3	-	-	-	-	3	-	-
C109	15CS23	Introduction to Programming with C	3	3	3	1	3	-	-	-	3	1	-	1	-	-

Program Articulation Matrix 2015-19



		Commuter Aided	Γ	1			<u> </u>	<u> </u>								
C110	15ME24	Computer Aided Engineering Drawing	2	-	2	2	1	-	-	-	-	2	-	2	-	-
C111	15EC25	Basic Electronics	3	2	2	-	-	-	-	-	-	-	-	-	-	-
C112	15HP26	Personality Development and Soft Skills	-	-	-	-	-	2	-	3	2	3	-	3	-	-
C201	16MAT31	Engineering Mathematics-III	3	3	3	3	3	1	3	-	-	1	3	3	-	-
C202	16HSS322	Life Skills for Engineers	1	1	1	1	2	3	3	3	3	3	1	3	-	-
C203	16CSE33	Analog and Digital Electronics	3	3	3	3	3	-	-	-	-	-	-	1	3	-
C204	16CSE34	Data Structures Using C	3	3	3	3	3	-	-	-	3	-	-	3	3	3
C205	16CSE35	UNIX & SHELL Programming	3	3	3	-	-	-	-	1	2	-	-	1	3	1
C206	16CSE36	Mini Project	3	3	3	3	3	-	-	3	3	3	-	3	3	3
C207	16MAT41	Engineering Mathematics-IV	3	3	3	3	3	3	2	-	2	1	3	3	-	-
C208	16HSS421	Introduction to Economics	1	2	3	3	1	3	2	2	1	1	3	2	1	1
C209	16CSE43	Object Oriented Programming with C++	3	3	2	2	3	-	-	-	3	-	-	3	3	-
C210	16CSE44	Microprocessor	3	3	3	3	-	-	-	-	-	3	-	3	3	3
C211	16CSE45	Computer Organization	3	3	2	2	-	-	-	-	-	3	-	-	2	3
C212	16CSE46	Mini Project	3	3	3	1	3	-	-	2	3	3	-	3	3	3
C301	CSE51	Analysis & Design of Algorithms	3	3	3	3	3	-	-	-	3	-	-	2	3	2
C302	CSE52	Operating System	3	3	3	3	-	-	-	-	-	3	-	1	3	3
C303	CSE53	Database Management Systems	3	3	3	2	3	-	-	-	3	-	-	1	3	1
C304	CSE54	Software Engineering	3	3	3	1	-	-	-	-	1	1	1	-	3	3
C305	CSE551	Digital Experience Management using Adobe	3	3	3	3	3	-	-	3	3	3	-	3	3	-



		Experience Manager (ISE)														
C306	CSE552	Virtualization Essentials with VMware (ISE)	3	3	2	2	3	-	-	1	3	-	-	1	-	2
C307	CSE553	Big Data Analytics with HP Vertica (CSE)	3	2	2	1	3	-	-	-	3	2	-	2	3	2
C308	CSE56	Mini Project	3	3	3	2	3	-	-	-	3	-	-	1	3	3
C309	CSE61	Core Java Programming	3	3	3	2	3	-	-	-	3	-	-	2	3	2
C310	CSE62	Computer Networks	3	3	3	3	3	-	-	-	3	-	-	1	3	1
C311	CSE63	Finite Automata & Compiler Design	3	3	3	3	-	-	-	-	-	-	-	3	3	3
C312	CSE641	Social Network Analysis	3	3	3	2	-	3	-	3	3	1	1	-	3	3
C313	CSE642	Soft Computing	3	3	2	-	-	-	-	-	3	-	3	3	3	3
C314	CSE643	Usability and Human Computer Interaction	3	3	2	-	_	-	_	1	_	2	_	1	2	2
C315	CSE65	Mini Project	3	3	3	3	-	-	-	-	3	1	-	3	2	1
C401	CSE71	Web Technologies	3	3	3	2	3	-	-	-	3	1	1	1	3	-
C402	CSE72	Software Testing	3	3	3	2	3	-	-	-	3	-	-	1	3	1
C403	CSE73	Mobile Application Development	3	3	3	1	3	-	-	-	3	-	-	2	3	3
C404	CSE741	Fundamentals of Data Science	3	3	-	1	-	2	-	1	-	3	-	-	-	3
C405	CSE743	Artificial Intelligence	3	3	3	2	-	-	-	-	-	3	-	3	3	1
C406	CSE745	Cyber Security forensic and Law	3	3	-	1	-	-	-	-	-	3	-	2	3	-
C407	CSE76	Mini Project	3	3	3	3	3	-	-	3	3	3	-	3	3	3
C408	CSE77	Project Phase-1	3	3	2	-	2	3	-	1	3	3	1	1	2	3
C409	CSE81	Object Oriented Analysis and Design	3	3	3	3	3	-	-	-	-	3	-	1	2	3



C410	CSE82	Data Mining and Machine Learning	3	3	3	1	-	2	_	_	_	-	_	1	-	3
C411	CSE83	Internship	3	3	2	2	-	-	-	2	3	2	-	2	3	1
C412	CSE84	Project Phase 2	3	3	3	3	3	1	1	3	3	3	2	3	3	3

3.2 Attainment of Course Outcomes (75)

3.2.1 Describe the assessment tools and processes used to gather the data upon which the evaluation of Course Outcome is based (10)

In Outcome Based Education, assessment is carried out by the department to identify, collect, analyze and evaluate the data towards the achievement of Course Outcomes (CO). The course outcomes are assessed based on direct assessment tools. The direct method of assessment includes the performance of the students in all the relevant assessment tools – Continuous Internal Examination (CIE) like Internal Assessments (IA), Assignments, Quizzes, Co-curricular Activity/Self Study, and Semester End Examination (SEE). CIE contributes 50% and SEE contributes 50% to the total attainment of a course outcome.

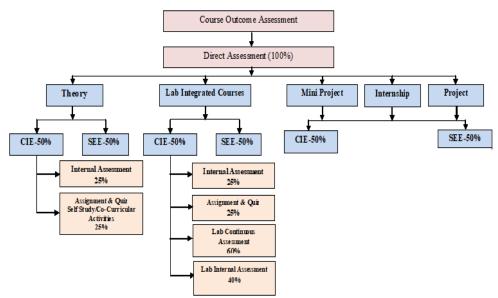


Fig 3.1 CO Assessment Tools

Tools used in measuring CO

The method of assessment method includes:

Internal Assessment (IA)



- > Assignments
- Quizzes
- Internal Laboratory Test
- Mini Projects
- > Project
- ➢ Internship
- Semester End Examination (SEE)

Table 3.1	Tools	used	in	measuring CO
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Assessment Tool Type	Assessment Tool Title	Tool Description				
		The Department will conduct three continuous assessment tests, scheduled in accordance with the calendar of events to achieve the identified COs. Three tests are scheduled per course in a semester. Questions in the question paper are mapped to COs. The teaching of at least 1.5 to 2 units would be completed before each test. The three continuous assessment tests will be conducted for 25 marks for the duration of 1 Hr. The faculty in charge(s) will prepare the Question papers for the respective course and will be submitted to CIE coordinator well in advance. Internal BOE constituted will scrutinize the question paper with a team of members. The assessment process considers the marks scored in three Internal Assessment Tests. Corrected scripts are distributed to students, and results are declared within three working days after the completion of the internal tests.				
	Assignments	Assignment Questions are prepared for each course, based on the course outcomes.				



	Assignment works submitted by students are assessed
	Assignment works submitted by students are assessed
	towards attainment of COs by the faculty in charge
	concerned.
	It also helps to guide written presentation skills and
	improve the thinking capability of the students.
	Quiz questions are prepared for each course to test the
	knowledge and reasoning power of students.
	Quiz is conducted periodically as per the Calendar of
	Events.
	During the class hours, students will be given test
	without previous announcements on any day within
Quizzes	the week as mentioned in the Calendar of Events.
Quilles	The topics handled in the previous class or a problem
	relating to the topic handled will give as questions.
	Correct answers to the questions are discussed in the
	class after the completion of quiz.
	Quiz marks are recorded for assessing the attainment
	of COs.
	To evaluate student's practical knowledge with their
	programming level capabilities, evaluation is done for
	every lab session.
	The evaluation of courses done by the laboratory in-
	charge(s) based on predefined rubrics.
Internal	Two lab internal assessments are done for the lab
Laborator	y integrated courses per semester. Marks in each
Test	practical would be awarded for the maximum of 25
	marks and average of both is taken for and is scaled
	down to 10 marks.
	Based on the performance in the lab sessions, 15
	marks are awarded towards continuous internal
	evaluation.



	The strength of the students is using their stills and
	The strength of the students in using their skills and
	tools in the laboratory is also evaluated in external
	laboratory examinations.
	It provides an opportunity to students to demonstrate
	independence and originality, to plan and organize a
	project over a given period, and to put into practice,
	the techniques that have been taught.
	Students must identify a problem related to the field
Mini Pro	jects of computer science and carry out a mini project on
	the problem defined.
	Reviews are conducted as per the calendar of event.
	Marks are awarded based on the two reviews and the
	report submission.
	Projects will be selected based on the student's
	interest.
	Students will be divided into individual/groups;
	groups will have a maximum of 3-4 students.
	Every group will be mentored by a faculty (guide).
	Project batches are allotted to the guide(s) by the
	project coordinator, based on the area of interest and
	research work carried by the faculty.
Projec	Reviews are conducted by a panel of project
110,00	coordinator and internal project guide.
	Phase-I will be evaluated based on problem
	identification. Students are expected to clearly define
	the objectives, work plan and methodology with the
	support of literature survey.
	Phase-II will be evaluated based on the design and
	implementation.
	The internal project guide will continuously guide,
	monitor the students on weekly basis and get the



	undetes of the mode days has their second 1'			
	updates of the works done by their corresponding			
	batch of students.			
	For project evaluation, assessment process considers			
	the marks scored in reviews.			
	Semester End Examination Project Viva Voce is			
	conducted by the panel of external examiners deputed			
	controller of examination.			
	External examiners will examine the students and			
	awarded the marks to the students.			
	The department encourages the students to showcase			
	their skills by publishing papers in			
	conferences/journals forum and participating in			
	technical paper presentations.			
	The industrial internship is arranged collaboratively			
	by the industrial internship coordinator of the			
	department with the industry associates.			
	On completion of training a project report/completion			
	certificate and student feedback are submitted to the			
Internship	industrial internship coordinator/HoD			
	A presentation is made by every student on his/her			
	internship work before a panel constituted by HoD.			
	This is followed by a viva to gauge the course			
	outcome/programme outcome achieved.			
	At the end of each semester, Semester End			
	Examination is conducted for all courses.			
	Controller of examinations will schedule and execute			
Semester End				
Examination	which would be the metric for assessing whether the			
	C C			
	COs are attained or not.			
	Examinations are focused on attainment of course			
	outcomes using a descriptive exam.			



The questions for this examination covers entire
syllabus of the courses. The questions are mapped
with the course outcomes.
For semester end examination, all assessments of a
course will be done on marks basis. However, for the
purpose of reporting the performance of a candidate,
letter grades are assigned.
course will be done on marks basis. However, for t purpose of reporting the performance of a candida

Table 3.2 Calculation of CO attainment

CO Attainment	Weightage	Assessment Tools					
		Internal Assessment [1, 2, 3],					
		Assignments, Quizzes, Self-study, Co-curricular					
CO attainment	100%	activity [50%]					
		Semester End Examination (SEE) [50%]					

The individual COs of the courses is mapped with correlation level and is being evaluated by prescribed assessment tools. The attainment of COs is compared with the set target attainment level. The CO is said to be attained if its attainment value is greater than or equal to set target attainment level.

Theory Course Evaluation

The distribution of marks for theory courses is as given in table below.

Assessment Tool	Maximum Marks	Marks Scaled to	Weightage
Assignments, Quizzes, Self-Study / Co-Curricular Activities	25	25	
Internal Assessment – 1	25	25	50%
Internal Assessment – 2	25	23	

Table 3.3 Distribution of marks for theory courses evaluation



Internal Assessment – 3	25		
Semester End Exam	100	50	50%

Laboratory Integrated Course Evaluation

The distribution of marks for laboratory integrated courses is shown in the following table.

Table 3.4 Distribution of marks for laboratory integrated courses evaluation

Component of Evaluation	Internal/External	Marks	Weightage
Assignments / Quizzes		25	25%
Internal Assessment – 1	Internal	25	
Internal Assessment – 2	Internal	25	25%
Internal Assessment – 3		25	
Semester End Exam	External	100	50%
Theory Total	100		
Lab Continuous Assessment		15	
Internal Lab Test – 1	Internal	5	50%
Internal Lab Test – 2		5	
Lab Experiment Write-up & Conduction		20	500/
Viva by External Examiner External		5	50%
Lab Total	50		
Integrated Lab Course T	150		



Mini Project Evaluation

Table 3.5 Distribution of marks for Mini Project – 206

Assessment Components	Excellent(S)	Good (A)	Satisfactory (B)	Unsatisfactory (C)
Problem Statement (Synopsis)	Clearly defined problem statement meeting all the objectives of the mini project. (8-10 Marks)	Clearly defined problem statement meeting most of the objectives. (6-7 Marks)	Problem statement satisfying few objectives. (3-5 Marks)	Problem statement is not meeting the objectives. (0 Mark)
Algorithm + Data Structure (Review 1)	Algorithm with clearly lefined input, expected output and functionality with proper understanding of data structure. (16-20 Marks)Algorithm with clearly defined input, functionality and satisfactory outcomes with proper understanding of data structure.Algorithm with clearly defined outcomes but functionality not so clearly defined with partial understanding of some data structure. (5-10 Marks)		specification on input and	
Implementation (Review 2)	All required concepts implemented (partial code demonstrating data structures) meeting objectives. (16-20 Marks)	Most of concepts implemented meeting objectives. (partial code demonstrating data structures) (11-15 Marks)	Few concepts implemented as per objectives. (partial code demonstrating data structure) (5-10 Marks)	No functionality implemented meeting objectives. (no code) (0 Mark)



Execution (Code Review)	Executes without errors. Excellent user prompts, good use of symbols, spacing in output + Result verification PPT. (30-40 Marks)	Executes without errors. User prompts are understandable, minimum use of symbols or spacing in output + Result verification PPT. (20-29 Marks)	Executes without errors. User prompts contain little information, poor design + Result verification PPT. (10-19 Marks)	Does not execute due to errors. User prompts are misleading or non- existent. + No PPT (0 Mark)
Documentation (Report Submission)	Clearly and effectively documented including descriptions of all concepts. Specific purpose is noted for each function, control structure, input requirements, and output results + Plagiarism Check Report. (8-10 Marks)	Clearly documented including descriptions of all concepts Specific purpose is noted for each function and control structure + Plagiarism Check Report. (6-7 Marks)	Basic documentation has been completed including descriptions of all concepts. Purpose is noted for each function + Plagiarism Check Report. (3-5 Marks)	No documentation included. (0 Mark)



Internship Evaluation

Assessment Components	COs	Rubrics	Marks Allotted	Mapped POs	Mapped PSOs
Internship Duration and Work Involved	CO3, CO5, CO6	Excellent(S) (100%): Duration is at least for 3 months.Student working on computer science related project on the latest domain using latest tools.Very Good (A) (80%): Duration is between 2 months	50	PO1, PO2, PO3,	PSO1
		to 3 months. Student working on computer science related project on the latest domain using existing tools.	40		
		Good (B) (60%): Duration is for 1 month to 2 months. Student working on computer science related project on the latest domain. Usage of existing tools and technology	PC PO	PO8, PO9, PO10, PO12	
		Fair(C) (40%): Duration is for 1 month. Student working on computer science related project on the latest or existing domain.	20		

Table 3.6 Distribution of marks for Internship - C411



		Unsatisfactory (D) (0): No internship work carried out.	0		
Use of methods and processing data during internship work	a c V a th a th a CO1, CO2 V a F n in d CO1, CO2	Excellent(S) (100%): Description of methods used and analysis of the information is appropriate, complete and clear.	50	PO1, PO2, PO4, PO12	PSO2
		Very Good (A) (80%): Description of methods and analysis of information/data is mostly complete, but there are lacking some details. Used methods and analysis of data/information are appropriate.	40		
		Good (B) (60%): Description of methods and analysis of information/data is lacking in a number of placed. Used methods and analysis of data/information mostly appropriate.	30		
		 Fair(C) (40%): Some aspects of the project regarding methods and analysis of information are described insufficiently. Used methods and analysis of data/information are not always appropriate. Description of methods and analysis of information/data is lacking in a number of placed. 	20		



		Used methods and analysis of data/information mostly appropriate. Unsatisfactory (D) (0): No description of methods and analysis of the information/data.	0		
Reflection on the internship CO1, C CO4	CO1, CO3,	Excellent(S) (100%): Is able to analyze objectively most events or situations in which he was involved and that relates to formulated learning outcomes, derive improvements for a future situation and formulate plan for improved functioning in a new situation. Shows the ability in at least one case to implement the formulated plan for improved functioning.	50	PO1, PO2, PO3, PO4,	PSO1, PSO2
	V ev re di pe	Very Good (A) (80%): Is able to describe at least one event or situation in which he was involved and that relates to a formulated learning outcome, properly distinguishing between the event description and the personal emotions involved, and able to formulate personal points of improvement and related actions in a future situation.	40	PO8, PO9, PO12	



		Good (B) (60%): Is able to describe at least one event or situation in which he was involved and that relates to a formulated learning outcome, properly distinguishing between the event description and the personal emotions involved, but unable to formulate personal points of improvement and related actions in a future situation.	30		
		Fair(C) (40%): Is able to describe at least one event or situation in which he was involved and that relates to a formulated learning outcome but unable to distinguish between the event description and the description of the personal emotions involved.	20		
		Unsatisfactory (D) (0): Is not able to describe an event or situation in which he was involved and that relates to a formulated learning outcome.	0		
Internship Report	CO1	Excellent(S) (100%): Student is able to defend his/her internship project, including indications how the work could have been done better. Student is able to place report in either scientific or practical context.	50	PO1, PO12	PSO2



Very Good (A) (80%): Student is able to defend his/her project. He masters the contents of what he wrote, but not beyond that. Is not able to place the report in scientific or practical context.	40	
Good (B) (60%): Student is able to defend his/her internship project. He mostly masters the contents of what he wrote, but for a limited number of items he is not able to explain what he did, or why.	30	
Fair(C) (40%): Student has difficulty to explain the subject matter of the internship project.	20	
Unsatisfactory (D) (0): Student is not able to defend/discuss his/her internship reports. He does not master the contents.	0	



Project Phase I Evaluation scheme

 Table 3.7 Evaluation scheme for Project - C408

SI. No	Agenda	Description	Course Outcomes	Marks weightage	Rubric	Mapped POs and PSOs
1	Synopsis Submission	Synopsis submission and problem statement formulation – Synopsis Submission evaluated by Guide and Project Coordinator: Identification of Domain, specific problem statement that focuses on latest technology, summary of proposed solution with hardware/software requirements.	CO1	05	 Excellent(S) 100%: Domain specific problem statement that focuses on latest technology in Computer Science with exact outcomes specified and aligned to societal issues. Very Good (A) 80%: There are very few or too many outcomes specified and have little impact on societal issues. Good (B) 60%: There are very few or too many outcomes specified and have no impact on societal issues. Fair (C) 40%: There are no targeted outcomes specified and have no impact on societal issues. 	PO1, PO6, PO9, PO10, PO11, PSO2



much depth, or as explicit, as expected. Significance to purpose is clear. Fair (C) 40%: Few sections of pertinent content have been omitted. The topic is of little significance to the purpose.	2	Review 1	Literature Survey with PPT presentation - Literature Survey evaluated by Guide: Literature Survey with PPT presentation. Partial report (soft copy) to be shown including Introduction, Literature survey.	CO2, CO3, CO6	15	Unsatisfactory (D) 0%: Irrelevant problem statement and has no outcomes defined and no critical thinking involved. Excellent(S) 100%: The appropriate content is covered in depth without being redundant. Sources are cited when specific statements are made. Significance to purpose is unquestionable. Very Good (A) 80%: All major sections of the contents are included, but not covered in as much depth, or as explicit, as expected. Significance to purpose is evident. Good (B) 60%: Most sections of the content are included, but not covered in as	PO1, PO2, PO6, PO8, PO9, PO10, PSO2
Fair (C) 40%: Few sections of pertinent content have been omitted. The topic is of						much depth, or as explicit, as expected. Significance to purpose is clear.	
						1	



					Unsatisfactory (D) 0%: Major sections of pertinent content have been omitted or greatly run-on. The topic is of little significance to the purpose. Excellent(S) 100%: All required modules designed with data flow diagram meeting	
3	Review 2	High Level Design with PPT Presentation- Design and Implementation evaluated by Guide, High level design with PPT presentation. Partial report (soft copy) to be shown including Requirements and high level Design.	CO4, CO5, CO6	20	 all the objectives that have impact on real world concerns. Very Good (A) 80%: All required modules designed with data flow diagram meeting most of the objectives. Good (B) 60%: All required modules designed with data flow diagram meeting few of the objectives. Fair (C) 40%: Few modules designed with data flow diagram meeting few of the objectives. Unsatisfactory (D) 0%: Project looks like traditional school work with no authentic 	PO1, PO2, PO3, PO5, PO9, PO10, PO12, PSO1, PSO2



					features designed and have no impact on real world concerns.	
4	Report Submission after plagiarism check	Documentation (Report Submission) - Final Project Report Submission with proper table of contents, certificates and bonded as per instructions specified within deadline (based on given project guidelines).	CO6	10	Excellent(S) 100%: Clearly and effectively documented including descriptions of all concepts. Plagiarism check report (Less than 10%). Very Good (A) 80%: Clearly documented including descriptions of all concepts. Plagiarism check report (11%-15%) Good (B) 60%: Basic documentation has been completed including descriptions of all concepts. Plagiarism check report (16%-20%) Fair (C) 40%: Basic documentation has been completed including descriptions of all concepts. Plagiarism Check Report (21%-25%) Unsatisfactory (D) 0%: No documentation included. No Plagiarism check.	PO9, PO10, PSO2



Project Phase II Evaluation scheme

Table 3.8 Evaluation scheme for Project - C412

Review #	Agenda	Description	Course Outcomes	Marks weightage	Rubric	Mapped POs and PSOs
			CO1, CO2	10	Excellent (S) 100%: Domain specific problem statement that focuses on latest technology in Computer Science with exact outcomes specified and aligned to societal issues.	
	Design	Design Document Submission- Evaluated by Guide, High level design with Use case, data flow, state diagrams and modules descriptions.			Very Good (A) 80%: There are very few or too many outcomes specified and have little impact on societal issues.	PO1-
1	Document Submission				Good (B) 60%: There are very few or too many outcomes specified and have no impact on societal issues.	PO12, PSO1, PSO2
					Fair (C) 40%: There are no targeted outcomes specified and have no impact on societal issues.	
					Unsatisfactory (D) 0%: Irrelevant problem statement and has no outcomes defined and no critical thinking involved.	
2	Implementation and Code Review	ImplementationandCodeReview:Implementationto beevaluatedbytheguideworkingcode	CO3, CO4, CO5	20	Excellent (S) 100%: All required concepts implemented meeting the objectives with excellent GUI. Project has authentic features implemented and has real impact	PO1-PO5, PO8- PO12, PSO1,



		(authenticity, complexity and functionality to be checked).			on the real world issues. Usage of latest tools. Very Good (A) 80%: Concepts Implemented meeting most of the objectives with appropriative GUI. Has authentic features implanted with little impact on societal issues. Usage of latest tools. Good (B) 60%: Project has authentic functionality with appropriate front end implemented but they may be limited or feel contrived. Usage of latest tools. Fair (C) 40%: Project has authentic functionality but doesn't have societal importance and no latest tools used. Unsatisfactory (D) 0%: Project looks like traditional schoolwork with no authentic	PSO2
3	Documentation (Report Submission)	Documentation (Report Submission) - Final Project Report Submission with proper table of contents, certificates and bonded as per instructions specified within deadline (based on given project guidelines).	CO6	10	 features implemented and have no impact on real world concerns. Excellent (S) 100%: Clearly and effectively documented including descriptions of all concepts and tools used. Specific purpose is noted for each concept designed and implemented. Plagiarism check report with acceptable limit below 5%. Very Good (A) 80%: Clearly documented including descriptions of all concepts and tools used. Plagiarism check report with acceptable limit below 10%. 	PO9, PO10, PSO2



					Good (B) 60%: Basic documentation has been completed including descriptions of all concepts. Purpose is noted for each function. Plagiarism check report with acceptable limit below 15%. Fair (C) 40%: Basic documentation has been completed including descriptions of all concepts. Plagiarism Check Report with acceptable limit below 20%. Unsatisfactory (D) 0%: No documentation included. No Plagiarism check.	
4	Continuous Project Evaluation	Project Team is evaluated weekly by the guide. Work done and plan for the following week(s) is charted out.	CO4	10	 Excellent (S) 100%: Project team meets with the guide every week without fail. Team is able to complete all the planned work for the given week. Very Good (A) 80%: Project team meets with the guide every week without fail. Team is able to complete most of the planned work for the given week. Good (B) 60%: Project team meets with the guide most of the weeks. Team is able to complete most of the given week. Fair (C) 40%: Project team meets with the guide rarely. Team is able to complete some of the planned work for the given week. Unsatisfactory (D) 0%: Project team does not meet the guide. Team is not able to complete planned work for the given week. 	PO1-PO5, PO9, PO10, PO12, PSO1, PSO2



3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels (65)

The attainment of Course outcome is evaluated under two categories – Continuous Internal Evaluation and Semester End Examination.

Category	Course Code
Basic Science and Humanity	15MA11, 15PH12, 15ME13, 15CV14, 15EE15, 15HB16 15MA21, 15CH22, 15CS23, 15ME24, 15EC25, 15HP26 16MAT31, 16HSS322, 16MAT41, 16HSS421
Electronics Based Courses	16CSE33, 16CSE44, 16CSE45
Lab Integrated Courses	16CSE34, 16CSE35, 16CSE43, CSE51, CSE53, CSE61, CSE62, CSE71, CSE72, CSE73
Theory Courses	CSE52, CSE63, CSE54, CSE81, CSE82
Mini Project	16CSE36, 16CSE46, CSE56, CSE65, CSE76
Internship	CSE83
Project Work	CSE77, CSE84
Professional Elective	CSE551, CSE552, CSE553, CSE641, CSE642, CSE643, CSE741, CSE743, CSE745

Table 3.9 Grouping of the Courses

Course Attainment Calculations

Weightage given to Continuous Internal Evaluation (CIE) = 50%

Weightage given to Semester End Examination (SEE) = 50%

Total Attainment = Continuous Internal Evaluation*0.5 + Semester End Examination*0.5

Table 3.10 Target and Attainment of COs using Continuous Internal Evaluation
(CIE) for batch (2015-2019)

Course Code		CONTINUOUS INTERNAL EVALUATION (CIE)										
	J	Target Percentage of COsAttainment Percentage of Cos										
	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
					I SI	EMES	TER					
C101	55	55	55	55	55	55	93.16	93.16	93.16	92.90	92.90	92.90
C102	60	60	60	60	60	60	99.70	99.70	99.70	99.70	99.70	99.90



C103	60	60	60	60	60	60	96.30	96.60	99.70	99.50	99.50	99.50
C104	60	60	60	60	60	60	99.90	99.90	99.90	99.40	99.40	99.40
C105	50	50	50	50	-	-	95.60	95.60	95.60	97.10	-	-
C106	50	50	50	50	-	-	92.80	92.80	92.80	92.80	-	-
					II S	EME	STER					
C107	55	55	55	55	55	55	87.33	87.33	87.33	86.85	86.85	86.85
C108	60	60	60	60	60	60	99.60	99.60	99.60	99.60	99.60	99.70
C109	60	60	60	60	60	60	91.10	91.20	92.80	92.70	93.20	89.70
C110	60	60	60	60	60	60	92.00	92.00	92.00	91.50	91.50	91.50
C111	60	60	60	60	60	60	70.10	70.80	73.06	71.00	70.80	78.30
C112	65	65	65	65	-	-	81.10	81.10	80.60	81.10	-	-
					III S	SEME	STER					
C201	57	57	57	57	57	57	99.62	98.50	98.87	100	97.37	95.09
C202	65	65	65	65	65	65	94.32	73.21	69.81	60.15	78.28	89.73
C203	65	65	65	65	65	65	66.67	73.86	87.07	88.51	70.47	55.49
C204	65	65	65	65	65	65	90.04	95.83	95.11	96.62	98.87	94.74
C205	65	65	65	65	65	55	91.63	72.83	76.6	73.21	82.71	66.41
C206	65	65	65	65	65	65	55.64	54.89	75.94	88.35	84.96	59.77
					IV S	SEME	STER					
C207	57	57	57	57	57	57	82.20	86.64	95.40	85.17	89.73	89.73
C208	50	50	50	45	45	50	88.76	77.90	91.01	95.88	95.51	92.13
C209	65	65	65	65	65	65	79.23	72.9	63.12	70.61	74.43	77.48
C210	65	65	65	65	65	65	76.45	63.22	73.85	84.62	94.14	65.86
C211	65	65	65	65	65	65	84.79	79.09	79.84	95.40	77.52	86.92
C212	65	65	65	65	65	65	81.82	68.25	82.54	80.56	80.56	76.00
					V S	EMES	STER					
C301	65	65	65	65	65	65	97.96	97.15	98.76	95.83	95.42	98.75
C302	65	65	65	65	65	65	86.80	93.60	79.68	94.29	97.95	99.18
C303	65	65	65	65	65	65	90.32	82.33	79.12	89.80	82.86	84.77
C304	65	65	65	65	65	65	95.22	89.20	97.14	97.55	96.73	88.80
C305	65	65	65	65	65	65	100	100	91.67	95.83	95.83	95.83
C306	65	65	65	65	65	65	48.57	65.71	91.43	68.57	80.00	97.14
C307	65	65	65	65	65	65	95.22	89.2	97.14	97.55	96.73	88.8



							r			<u>r</u>	<u> </u>	
C308	65	65	65	60	65	45	83.63	94.78	85.65	41.63	95.26	87.56
					VI S	EME	STER					
C309	65	65	65	65	65	65	91.77	92.59	81.07	93.83	93.42	87.24
C310	65	65	65	65	65	65	94.65	97.53	95.47	95.47	77.37	84.65
C311	65	65	55	65	65	55	83.70	66.94	78.93	66.12	78.10	82.64
C312	65	65	65	65	65	65	89.09	82.61	90.74	92.11	95.37	91.25
C313	65	65	65	65	65	65	85.33	96	90.67	85.33	96.05	80.26
C314	65	65	65	65	65	65	78.38	90.00	95.74	90.20	84.31	91.84
C315	65	65	65	65	65	65	89.08	89.12	92.95	92.95	89.17	77.68
					VII S	SEME	STER					
C401	65	65	65	60	65	65	91.27	80.79	96.07	87.34	74.24	77.73
C402	65	65	65	65	65	60	94.67	78.17	90.27	86.40	48.44	83.33
C403	65	65	65	65	65	65	95.18	85.02	97.81	78.32	85.40	73.89
C404	65	65	65	65	65	65	91.95	94.25	100	100	100	100
C405	65	65	55	65	65	65	59.04	66.67	98.70	98.70	98.70	97.56
C406	65	65	65	65	45	45	89.66	87.50	100	100	100	85.19
C407	65	65	65	65	65	65	88.89	90.67	91.11	89.33	87.56	91.56
C408	65	65	65	65	65	65	95.54	95.05	84.72	93.45	94.32	93.89
					VIII	SEMF	ESTER					
C409	65	65	55	65	65	65	73.45	68.33	96.90	88.19	72.00	51.08
C410	65	65	65	60	60	65	95.13	91.67	96.44	95.95	94.22	79.36
C411	65	65	65	65	65	65	65.33	95.11	60.89	94.67	87.11	88.89
C412	65	65	65	65	65	65	82.67	78.67	74.22	67.11	80.44	69.78

Table 3.11 Target and Attainment of COs using S	Semester End Examination
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(SEE) for batch (2015-2019)

Course Code		Semester End Examination (SEE)											
	r.	Target Percentage of CosAttainment Percentage of COs											
	CO1	01 CO2 CO3 CO4 CO5 CO6 CO1 CO2 CO3 CO4 CO5 CO6											
					I SI	EMES'	TER						
C101	55	55	55	55	55	55	90.07	90.07	90.07	90.07	90.07	90.07	
C102	60	60	60	60	60	60	98.30	98.30	98.30	98.30	98.30	98.30	
C103	60	60	60	60	60	60	97.90	97.90	97.90	97.90	97.90	97.90	



C104	60	60	60	60	60	60	94.50	94.50	94.50	94.50	94.50	94.50
C105	50	50	50	50	-	-	95.20	95.20	95.20	95.20	-	-
C106	50	50	50	50	-	-	98.30	98.30	98.30	98.30	-	-
					II SI	EMES	TER					
C107	55	55	55	55	55	55	90.11	90.11	90.11	90.11	90.11	90.11
C108	60	60	60	60	60	60	94.70	94.70	94.70	94.70	94.70	94.70
C109	60	60	60	60	60	60	94.80	94.80	94.80	94.80	94.80	94.80
C110	60	60	60	60	60	60	95.00	95.00	95.00	95.00	95.00	95.00
C111	60	60	60	60	60	60	62.10	62.10	62.10	62.10	62.10	62.10
C112	65	65	65	65	-	-	99.40	99.40	99.40	99.40	-	-
					III S	EME	STER					
C201	57	57	57	57	57	57	71.57	73.33	82.87	89.40	81.48	71.36
C202	65	65	65	65	65	65	36.99	51.90	70.19	36.15	40.54	43.18
C203	65	65	65	65	65	65	64.76	80.66	81.31	55.12	60.54	77.78
C204	65	65	65	65	65	65	75.12	78.73	75.91	57.01	71.57	73.87
C205	65	65	65	65	65	55	85.65	84.62	59.72	64.52	52.31	38.85
C206	65	65	65	65	65	65	72.22	84.72	84.72	84.72	84.72	85.65
					IV S	EMES	STER					
C207	57	57	57	57	57	57	83.48	75.00	72.94	88.21	69.41	69.41
C208	50	50	50	45	45	50	39.33	80.00	51.66	65.85	46.19	69.80
C209	65	65	65	65	65	65	86.38	77.59	76.89	78.82	78.88	78.26
C210	65	65	65	65	65	65	94.27	81.03	86.25	82.40	80.26	69.87
C211	65	65	65	65	65	65	87.75	83.56	83.70	64.41	67.94	74.45
C212	65	65	65	65	65	65	74.89	70.66	85.54	85.54	85.54	86.78
					V SI	EMES	TER					
C301	65	65	65	65	65	65	77.98	74.09	65.44	76.15	69.12	79.08
C302	65	65	65	65	65	65	73.18	69.72	50.68	75.89	51.64	55.45
C303	65	65	65	65	65	65	85.07	68.61	70.85	59.72	73.99	69.23
C304	65	65	65	65	65	65	58.97	61.80	66.67	83.76	77.06	51.54
C305	65	65	65	65	65	65	95.65	95.65	95.65	95.65	95.65	91.30
C306	65	65	65	65	65	65	47.11	65.65	90.13	67.65	79.00	96.56
C307	65	65	65	65	65	65	58.97	61.80	66.67	83.76	77.06	51.54



	-		1		-		1	r	1	1	r	
C308	65	65	65	60	65	45	98.67	98.67	96.44	99.11	95.11	25.33
					VI S	EMES	STER					
C309	65	65	65	65	65	65	84.39	75.00	61.95	55.17	51.18	65.27
C310	65	65	65	65	65	65	89.74	94.2	82.91	82.46	75.45	75.00
C311	65	65	55	65	65	55	50.00	45.74	37.5	74.12	52.88	26.23
C312	65	65	65	65	65	65	93.20	83.00	87.25	62.63	61.17	45.74
C313	65	65	65	65	65	65	70.00	70.59	80.00	61.19	81.43	64.29
C314	65	65	65	65	65	65	80.39	56.10	72.55	60.42	80.39	60.00
C315	65	65	65	65	65	65	74.57	84.91	93.97	93.97	86.21	93.97
					VII S	SEME	STER					
C401	65	65	65	60	65	65	80.44	67.71	60.00	43.75	54.84	68.5
C402	65	65	65	65	65	60	78.83	58.06	58.41	76.41	82.63	40.18
C403	65	65	65	65	65	65	82.59	75.11	50.47	72.43	61.49	73.99
C404	65	65	65	65	65	65	81.18	76.47	53.75	84.00	66.67	79.76
C405	65	65	55	65	65	65	78.75	58.97	39.24	59.74	58.90	47.37
C406	65	65	65	65	45	45	72.41	81.03	45.61	50.00	29.82	28.13
C407	65	65	65	65	65	65	96.41	92.41	92.83	93.27	95.07	97.76
C408	65	65	65	65	65	65	92.51	93.36	87.67	90.75	93.39	93.39
					VIII	SEME	STER	•			•	
C409	65	65	55	65	65	65	57.71	65.64	36.20	48.87	85.20	69.16
C410	65	65	65	60	60	65	77.68	78.13	67.29	40.30	43.19	51.34
C411	65	65	65	65	65	65	58.85	100	58.85	100	58.85	58.85
C412	65	65	65	65	65	65	60.79	69.16	71.37	68.72	69.16	53.30

Attainment Levels vs. Targets for Continuous Internal Evaluation

Attainment Level 3: 65% students scoring greater than or equal to the set threshold value. Attainment Level 2: 55% students scoring greater than or equal to the set threshold value. Attainment Level 1: 45% students scoring greater than or equal to the set threshold value.

Attainment Levels vs. Targets for Semester End Examination

Attainment Level 3: 65% students scoring greater than or equal to the set threshold value. Attainment Level 2: 55% students scoring greater than or equal to the set threshold value. Attainment Level 1: 45% students scoring greater than or equal to the set threshold value.



		<u>'</u>	Fable	3.12					tainm	ent L	evels		
					CO) ATT	' AIN I	MEN	Γ				~~
Course Code	At	tainn	nent o	of CO	s – C	IE	Attainment of COs – SEE						CO Attainment Level
	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6	Overall
						I SEN	AEST	ER					
C101	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C102	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C103	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C104	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C105	3	3	3	3	-	-	3	3	3	3	-	-	3.00
C106	3	3	3	3	I	-	3	3	3	3	-	-	3.00
II SEMESTER													
C107	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C108	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C109	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C110	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C111	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C112	3	3	3	3	I	-	3	3	3	3	-	-	3.00
					Ι	II SE	MES	ГER					
C201	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C202	3	3	3	3	3	3	1	3	3	1	2	2	2.50
C203	3	3	3	3	3	2	2	3	3	2	2	3	2.66
C204	3	3	3	3	3	3	3	3	3	2	3	3	2.96
C205	3	3	3	3	3	3	3	3	2	2	1	1	2.64
C206	2	1	3	3	3	2	3	3	3	3	3	3	2.67
					Ι	V SE	MES	ΓER					
C207	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C208	3	3	3	3	3	2	1	3	3	3	3	3	2.81
C209	3	3	2	3	3	3	3	3	3	3	3	3	2.91
C210	3	2	3	3	3	3	3	3	3	3	3	3	2.91
C211	3	3	3	3	3	3	3	3	3	2	3	3	2.90
C212	3	3	3	3	3	3	3	3	3	3	3	3	3.00

Table 3.12 Course Outcomes Attainment Levels



					ŗ	V SEI	MEST	ſER					
C301	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C302	3	3	3	3	3	3	3	3	1	3	1	2	2.63
C303	3	3	3	3	3	3	3	3	3	2	3	3	2.91
C304	3	3	3	3	3	3	2	2	3	3	3	1	2.51
C305	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C306	1	3	3	3	3	3	1	3	3	3	3	3	2.59
C307	3	3	3	3	3	3	2	2	3	3	3	1	2.51
C308	3	3	3	1	3	3	3	3	3	3	3	1	2.76
VI SEMESTER													
C309	3	3	3	3	3	3	3	3	2	2	1	3	2.72
C310	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C311	3	3	3	3	3	3	1	1	1	3	1	0	1.94
C312	3	3	3	3	3	3	3	3	3	2	2	1	2.73
C313	3	3	3	3	3	3	3	3	3	2	3	2	2.86
C314	3	3	3	3	3	3	3	2	3	2	3	2	2.79
C315	3	3	3	3	3	3	3	3	3	3	3	3	3.00
				Γ	V	TI SE	MES	TER	Γ			Γ	
C401	3	3	3	3	3	3	3	3	2	1	1	3	2.59
C402	3	3	3	3	1	3	3	2	2	3	3	1	2.54
C403	3	3	3	3	3	3	3	3	1	3	2	3	2.80
C404	3	3	3	3	3	3	3	3	1	3	3	3	2.81
C405	2	3	3	3	3	3	3	2	1	2	2	1	2.15
C406	3	3	3	3	3	3	3	3	1	1	1	1	2.44
C407	3	3	3	3	3	3	3	3	3	3	3	3	3.00
C408	3	3	3	3	3	3	3	3	3	3	3	3	3.00
					V	III SF	EMES	STER					
C409	3	3	3	3	3	1	2	3	1	1	3	3	2.46
C410	3	3	3	3	3	3	3	3	3	1	1	1	2.53
C411	3	3	2	3	3	3	2	3	2	3	2	2	2.50
C412	3	3	3	3	3	3	2	3	3	3	3	1	2.80



Sample CO Attainment Calculation

CO attainment calculation

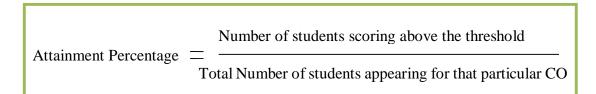


Table 3.13 Sample CO Attainment Calculation

	CO ATTAINMENT Course Code: 403 Course Name: Mobile Application Development											
	Assessment = 50% of CIE + 50% of SEE											
	CIE											
со	CO Threshold Target Levels Number of Students Scored Above Threshold $\frac{1}{2}$											
CO1		65%	217	228	95.18	3						
CO2		65%	193	227	85.02	3						
CO3	60%	65%	223	228	97.81	3						
CO4	0070	65%	177	226	78.32	3						
CO5		65%	193	226	85.40	3						
CO6		65%	167	226	73.89	3						
			SEE									
CO1		65%	185	224	82.59	3						
CO2		65%	166	221	75.11	3						
CO3	600/	65%	107	212	50.47	1						
CO4	60%	65%	155	214	72.43	3						
CO5	1	65%	99	161	61.49	2						
CO6		65%	165	223	73.99	3						



3.3 Attainment of Program Outcomes and Program Specific Outcomes (75)

3.3.1 Describe assessment tools and processes used for measuring the attainment of each Program Outcome and Program Specific Outcomes (10)

The list of assessment tools for both direct and indirect methods is given below.

Assessment Tool Type	Assessment Tool Title	Tool Description
Direct Attainment Tools	Internal Assessments, Assignments, Quizzes, Self-Study / Co-Curricular Activities Internal Laboratory Test	Internal Assessment, assignments, quizzes, self-study/co-curricular activities are conducted during every semester to award final CIE marks. These tests and assignments will prepare the students for the Semester End Examination. During the semester, two laboratory test conduction and evaluation is done. These tests will enhance the confidence of students to face SEE practical examination.
	Mini Projects, Internship, Projects	Evaluation is done in phases by a committee (HOD, two senior faculties inclusive of the project guide).
	Semester End Examination	Both theory and practical/project examination are conducted as per the guidelines provided by the Controller of Examination.
	Graduate Survey	Feedback for the betterment of the department.
Indirect Attainment Tools	Alumni Survey	Feedback for the improvement of infrastructure, library, placement activities, industry-academic interaction.
10015	Employer Survey	Expectations and the requirements to bridge the industry-academia gap.

Table 3.14 Assessment tools used for calculation of PO attainment

Process of PO & PSO Attainment

Course outcomes are assessed through Continuous Internal Evaluation (CIE) and Semester End Examination (SEE). The analysis is done to find the level of attainments of each course COs. The attainment of POs and PSOs are being calculated based on the COs attainment. For indirect assessments, survey questionnaire is circulated to students, alumni and employer. The surveys are assessed and evaluated to determine the strength of attainment level of POs/PSOs. Survey results from graduates, alumni, and employer



are consolidated and the final PO values are calculated through 3-point scale (Excellent, Very Good, Satisfactory). Overall attainments of POs are calculated by taking 80% of direct attainment and 20% of indirect attainment. If the POs and PSOs attainment value is below the target, an essential remedial action has been taken.

Table 3.15 Calculation of PO attainment

PO Attainment	Direct Assessment	Internal Tests, Assignments, Quizzes, Lab Internal Tests, Self-Study, Co-Curricular Activities, Semester End Examination	80%
PO Attainment	Indirect Assessment	Graduate Survey, Alumni Survey, Employer Survey	20%

Survey Forms - Questionnaires

Sl. No	Program Outcomes(POs)	Excellent	Very Good	Satisfactory
110		(3)	(2)	(1)
	Engineering Knowledge			
1	I have gained an in-depth knowledge of			
1	mathematics, computer science and engineering			
	as it applies to computer hardware and software.			
	Problem analysis			
	I have an ability to identify, formulate, and solve			
2	hardware and software computing problems,			
	accounting for the interaction between hardware			
	and software.			
	Design / Development of Solutions			
	I am able to apply my engineering knowledge to			
3	design hardware and software systems,			
	components, or processes to meet desired needs			
	within realistic constraints.			
	Conduct investigations of complex problems			
4	I am able to design and conduct experiments, as			
	well as to organize, analyze and interpret data.			
	Modern tool usage			
5	I have had the opportunity to use the techniques,			
	skills, and modern engineering tools necessary			
	for computer engineering practice.			

Table 3.16 Graduate Survey– Questionnaires



		1	 1
6	The engineer and society Able to show the understanding of impact of		
0	engineering solutions in a global on the society, economic, environmental.		
	Environment and sustainability		
7	I am able to understand the impact of the		
/	computer based solutions in societal and		
	environmental context.		
	Ethics		
8	I have had the opportunity to learn professional,		
	legal, and ethical issues and responsibilities.		
	Individual and team work		
9	I have the training necessary to work individually		
-	or as a member with responsibility to function on		
	multi-disciplinary teams.		
	Communication		
10	I am able to communicate effectively in speech		
	and in writing, including documentation of		
	hardware and software systems.		
	Project management and finance		
11	I have had the opportunity to learn and apply		
11	engineering and management knowledge and		
	techniques to estimate time and resources needed		
	to complete a computer engineering project.		
	Life - long learning Line on ability to acquire new knowledge in the		
12	I have an ability to acquire new knowledge in the		
	computing discipline and to engage in life- long learning.		
	icai iiiig.		

SI. No	Program Specific Outcomes (PSOs)	Excellent	Very Good	Satisfactory
140		(3)	(2)	(1)
1	PSO1: Ability to design, develop, implement computer programs and use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations.			
2	PSO2: Work with and communicate effectively with professionals in various fields and pursue lifelong professional development in computing.			



SI. No.	Questions	POs	Excellent	Very Good	Satisfactory
190.			(3)	(2)	(1)
1	How do you rate the engineering knowledge obtained during course period?	PO1			
2	How do you find the programme related to problem analysis?	PO2			
3	Were able to design solutions for complex engineering problems?	PO3			
4	Did you use research based knowledge for interpreting your data during project work?	PO4			
5	How this programme helped in applying modern tool usage for your problems?	PO5			
6	How do you rate your understanding of impact of engineering solutions in a global on the society, economic, environmental aspects?	PO6			
7	Did you understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	PO7			
8	Were you able to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice?	PO8			
9	Did you have opportunity to function as an individual or in a team?	PO9			
10	How do you rate your skill of communicating effectively in speech and in writing, including documentation of hardware and software systems?				
11	Were you able to manage project and finance aspects effectively in your work environment?	PO11			
12	How far this programme helped you to acquire new knowledge in	PO12			

Table 3.17 Alumni Feedback Survey– Questionnaires



	the computing discipline and to engage in life- long learning?			
13	Whether this programme cultivated the skills to design, develop, implement computer programs and use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations?	PSO1		
14	Were you able to work with and communicate effectively with professionals in various fields and pursue lifelong professional development in computing?	PSO2		

Your suggestions

1. Relevance of curriculum in your present job.

2. Need any change in curriculum and syllabi.

3. Need improvement in Teaching Learning Process.

4. Any other Suggestions / Comments.

Sl. No	Questions	POs/ PSOs	Excellent	Very Good	Satisfactory
INU		1505	(3)	(2)	(1)
1	How satisfied were you with the information provided by the department about the skills and knowledge of the student for campus recruitment?	PO1			

Table 3.18 Employer Survey– Questionnaires'



2	How do you rate our students' ability to identify, formulate, and solve hardware and software computing problems?	PO2
3	How did u find our student, with respect to design and development of new products or solutions?	PO3
4	Your view on our students, regarding investigating new problems in the industry and interpretation of data.	PO4
5	How fit is our graduate in applying modern tools for solving problems?	PO5
6	How responsible are our graduates in contextual knowledge to assess societal, health, safety, legal and cultural issues?	PO6
7	You're rating on our student in handling environmental contexts?	PO7
8	Your opinion about our graduates with respect to their ethical and moral values?	PO8
9	How do our students present themselves individually and in team work?	PO9
10	Our student's skill in communicating effectively in speech and in writing, including documentation of software systems.	PO10
11	How do you find our students performance in understanding project management and financial principles of the company?	PO11
12	Rating of our students with respect to attitude and willingness for lifelong learning?	PO12
13	Are our graduates able to find problems in various domains of Computer Science and provide innovative solutions?	PSO1
14	Work with, and communicate effectively with professionals in various fields and pursue lifelong professional development in computing?	PSO2

Your detailed comments on our graduate employees: (Optional)



3.3.2. Provide results of evaluation of each PO & PSO (65)

The attainment levels by direct (student performance) and indirect (surveys) are to be presented through Program Level Course-PO&PSO matrices as indicated.

NBA Code	Course Code	Course Name	P01	P02	P03	P04	P05	P06	P07	PO8	P09	P010	P011	P012	PS01	PSO2
C101	15MA11	Engineering Mathematics- I	3	3	3	3	3	-	-	-	-	3	-	3	-	-
C102	15PH12	Engineering Physics	3	3	3	-	-	-	-	-	3	-	-	3	-	-
C103	15ME13	Elements of Mechanical Engineering	3	3	3	-	3	3	3	-	-	3	-	3	-	-
C104	15CV14	Elements of Civil Engineering	3	3	3	-	-	-	-	-	-	-	-	-	-	-
C105	15EE15	Basics of Electrical Engineering	3	3	3	3	-	-	-	-	-	3	3	-	-	-
C106	15HB16	Business Communicati on	-	-	-	-	-	-	-	3	3	3	-	3	-	-
C107	15MA21	Engineering Mathematics II	3	3	3	3	3	-	-	-	3	3	-	3	-	-
C108	15CH22	Engineering Chemistry	3	3	-	-	-	-	3	-	-	-	-	3	-	-
C109	15CS23	Introduction to Programming with C	3	3	3	3	3	-	-	-	3	3	-	3	-	-
C110	15ME24	Computer Aided Engineering Drawing	3	-	3	3	3	-	-	-	-	3	-	3	-	-
C111	15EC25	Basic Electronics	3	3	3	-	-	-	-	-	-	-	-	-	-	-
C112	15HP26	Personality Development and Soft Skills	-	-	-	-	-	3	-	3	3	3	-	3	-	-
C201	16MAT31	Engineering Mathematics- III	3	3	3	3	3	3	3	-	-	3	3	3	-	-
C202	16HSS322	Life skills for Engineers	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	-	-
C203	16CSE33	Analog and Digital Electronics	2.62	2.56	2.69	2.69	2.58	-	-	-	-	-	-	2.5	2.69	-
C204	16CSE34	Data Structures Using C	2.96	3	2.92	2.92	2.9	-	-	-	2.9	-	-	3	2.96	2.96
C205	16CSE35	UNIX & SHELL Programming	2.78	2.67	2.61	-	-	-	-	2	2.66	-	-	3	2.67	3
C206	16CSE36	Mini Project	2.72	2.79	2.79	2.72	2.75	-	-	2.72	2.72	2.72	-	3	2.79	2.79

POs/PSOs Attainment of 2015-2019 Batch



		F · ·	1	1		1	1		1	1	1	1	1	1	<u> </u>	<u> </u>
C207	16MAT41	Engineering Mathematics- IV	3	3	3	3	3	3	3	-	3	3	3	3	-	-
C208	16HSS421	Introduction to Economics	2.72	2.72	2.89	2.87	2.89	2.72	2.72	2.72	2.89	2.72	2.69	2.89	2.72	2.72
C209	16CSE43	Object Oriented Programming with C++	2.91	2.9	2.84	3	2.9	-	-	-	2.9	-	-	3	2.9	-
C210	16CSE44	Microprocess or	2.91	2.89	2.79	2.79	-	-	-	-	-	3	-	2.91	2.91	3
C211	16CSE45	Computer Organization	2.9	2.9	2.73	2.75	-	-	-	-	-	3	-	-	2.73	2.89
C212	16CSE46	Mini Project	3	3	3	3	3	-	-	3	3	3	-	3	3	3
C301	CSE51	Analysis & Design of Algorithms	3	3	3	3	3	-	-	-	3	-	-	3	3	3
C302	CSE52	Operating System	2.63	2.55	2.55	2.55	-	-	-	-	-	2.86	-	3	2.55	2.55
C303	CSE53	Database Management Systems	2.91	2.91	3	3	3	-	-	-	2.91	-	-	3	3	3
C304	CSE54	Software Engineering	2.51	2.47	2.47	2	-	-	-	-	3	3	3	-	2.47	2.73
C305	CSE551	Digital Experience Management using Adobe Experience Manager (ISE)	3	3	3	3	3	-	-	3	3	3	-	3	3	-
C306	CSE552	Virtualization Essentials with VMware (ISE)	2.66	3	3	3	3	-	-	3	3	-	-	1	-	3
C307	CSE553	BigDataAnalytics withHPVertica(CSE)	2.9	3	3	3	2.89	-	-	-	2.89	3	-	3	2.89	3
C308	CSE56	Mini Project	2.76	2.88	3	3	3	-	-	2.72	2.6	2	-	3	3	3
C309	CSE61	Core Java Programming	2.72	2.86	2.78	2.66	2.78	-	-	-	2.78	-	-	2.76	2.78	2.82
C310	CSE62	Computer Networks	3	3	3	3	3	-	-	-	3	-	-	3	3	3
C311	CSE63	Finite Automata & Compiler Design	1.94	1.94	1.88	2	-	-	-	-	-	-	-	2	1.94	1.94
C312	CSE641	Social Network Analysis	2.73	2.73	2.81	2.5	-	2.61	-	2.73	2.73	2.5	3	-	2.68	2.7
C313	CSE642	Soft Computing	2.86	2.86	3	-	-	-	-	-	-	2.82	-	2.82	2.82	2.82
C314	CSE643	Usability and Human Computer Interaction	2.79	2.83	2.93	-	-	-	-	3	-	2.73	-	3	2.86	2.93
C315	CSE65	Mini Project	3	3	3	3	-	-	-	-	3	3	-	3	3	3
C401	CSE71	Web Technologies	2.67	3	2.67	2.27	2.67	-	-	-	2.67	3	3	3	2.67	-



C402	CSE72	Software Testing	2.54	2.54	2.41	2.3	2.41	-	-	-	2.41	-	-	3	2.41	2
C403	CSE73	Mobile Application Development	2.8	2.74	2.45	2.87	2.8	-	-	-	2.8	-	-	3	2.8	2.94
C404	CSE741	Fundamentals of Data Science	2.81	2.77	-	3	-	3	-	3	-	2.81	-	-	-	2.81
C405	CSE743	Cryptography & Network Security	2.15	2.15	2.26	2.16	-	-	-	-	-	2.15	-	1.99	2.21	2
C406	CSE745	Artificial Intelligence	2.44	2.55	2	2	-	2	-	-	-	-	-	2.55	3	-
C407	CSE76	Mini Project	3	3	3	3	3	-	-	3	3	3	-	3	3	3
C408	CSE77	Project Phase- 1	3	3	3	-	3	3	-	3	3	3	3	3	3	3
C409	CSE81	Object Oriented Analysis and Design	2.52	2.46	2.45	2.45	2.21	-	-	-	-	2.52	-	3	2.5	2.36
C410	CSE82	Data Mining and Machine Learning	2.53	2.41	2.41	2	-	2.39	-	-	-	-	-	3	-	2.53
C411	CSE83	Internship	2.5	2.5	2.33	3	-	-	-	2.33	2.43	2.5	-	2.25	2.34	2.5
C412	CSE84	Project Phase 2	2.87	2.79	2.84	3	3	2.5	2.5	2.8	2.8	2.8	2.73	2.84	2.84	2.8
		AVERAGE	2.79	2.80	2.78	2.73	2.86	2.70	2.76	2.77	2.86	2.84	2.87	2.84	2.76	2.68

Indirect POs/PSOs Attainment of 2015-19 Batch

Survey	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Graduate Survey	2.66	2.57	2.59	2.58	2.69	2.66	2.58	2.73	2.78	2.83	2.65	2.77	2.72	2.64
Alumni Survey	2.68	2.63	2.68	2.75	2.76	2.83	2.75	2.68	2.84	2.75	2.62	2.85	2.65	2.72
Employer Survey	2.78	2.68	2.56	2.68	2.82	2.75	2.73	2.83	2.88	2.82	2.71	2.6	2.78	2.72
Indirect Attainment	2.71	2.63	2.61	2.67	2.76	2.75	2.69	2.75	2.83	2.80	2.66	2.74	2.72	2.69

Final POs/PSOs Attainment o	of 2015-19 Batch
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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Direct	2.79	2.80	2.78	2.73	2.86	2.70	2.76	2.77	2.86	2.84	2.87	2.84	2.76	2.68
Indirect	2.71	2.63	2.61	2.67	2.76	2.75	2.69	2.75	2.83	2.80	2.66	2.74	2.72	2.69
Final Attainment	2.77	2.77	2.75	2.72	2.84	2.71	2.75	2.77	2.85	2.83	2.83	2.82	2.75	2.68

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CRITERION 4

STUDENTS' PERFORMANCE

203



CRITERION 4 STUDENTS' PERFORMANCE

100

		1	Table 4.	1			
Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2019-20 (CAY)	2018-19 (CAYm1)	2017-18 (CAYm2)	2016-17 (CAYm3)	2015-16 (CAYm4)	2014-15 (CAYm5)	2013-14 (CAYm6)
Sanctioned intake of the program (<i>N</i>)	240	240	180	180	180	180	180
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	315	297	220	209	218	209	218
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	20	21	28	31	26	31	19
Separate division students, If applicable (N3)	0	0	0	0	0	0	0
Total number of students admitted in the program (N1 + N2 + N3)	335	318	248	240	244	240	237



Year of entry	Total no of students admitted in the program	Number of students who have successfull graduated without backlogs in any Semester/ year of study (Without Backlo means no compartment or failures in an Semester/ year of study)			gs in any out Backlog lures in any
	(N1 + N2 + N3)	I Year	II Year	III Year	IV Year
2019-20 (CAY)	315				
2018-19 (CAYm1)	318	225			
2017-18 (CAYm2)	248	150	155		
2016-17 (CAYm3)	240	148	162	156	
2015-16 (LYG)	244	165	168	150	145
2014-15 (LYGm1)	240	99	105	90	87
2013-14 (LYGm2)	237	145	163	158	153

Table 4.2

Table 4.3

Year of entry	Total No of students admitted in the program	Number of students v successfully graduated i period of study) [Tota Backlog + without B		ated in sti) [Total of	ipulated with
	(N1 + N2 + N3)	I Year	II Year	III Year	IV Year
2019-20 (CAY)	315				
2018-19 (CAYm1)	318	261			
2017-18 (CAYm2)	248	197	225		
2016-17 (CAYm3)	240	189	205	202	
2015-16 (LYG)	244	201	227	211	211
2014-15 (LYGm1)	240	160	171	162	155
2013-14 (LYGm2))	237	187	195	180	162



4.1 Enrolment Ratio (20)

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N) *100]
2019-20 (CAY)	240	315	131.25
2018-19 (CAYm1)	240	297	123.75
2017-18 (CAYm2)	180	220	122.22

Average[(ER1+ER2+ER3)/3] = 125.74 Assessment: 20.00

4.2 Success Rate in the stipulated period of the program (20)

4.2.1 Success rate without backlogs in any Semester / year of study (15)

SI= (Number of students who have graduated from the program without backlog) / (Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry and separate division, if applicable)

Average SI = Mean of Success Index (SI) for past three batches Success rate without backlogs in any Semester/year of study = $15 \times$ Average SI

Item	Latest Year of Graduation, LYG (2015-16)	Latest Year of Graduation minus 1, LYGm1 (2014-15)	Latest Year of Graduation minus 2 LYGm2 (2013-14)
X Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	244	240	237
Y Number of students who have graduated without backlogs in the stipulated period	145	87	153
Success Index [$SI = Y / X$]	0.59	0.36	0.65

Average SI [(SI1 + SI2 + SI3) / 3]: 0.53 Assessment [15 * Average SI]: 7.95



4.2.2 Success rate in stipulated period of study (5)

SI= (Number of students who graduated from the program in the stipulated period of course duration)/ (Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry and separate division, if applicable)

Average SI = mean of Success Index (SI) for past three batches

Success rate = $5 \times \text{Average SI}$

Note: If 100% students clear without any backlog then also total marks scored will be 20 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

Item	Last Year of Graduate, LYG (2015-19)	Last Year of Graduate minus 1, LYGm1 (2014-15)	Last Year of Graduate minus 2, LYGm2 (2013-14)
X Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	244	240	237
Y Number of students who have graduated in the stipulated period	211	155	162
Success Index [$SI = Y / X$]	0.86	0.65	0.68

Average SI [(SI1 + SI2 + SI3) / 3]: 0.73

Assessment = $5 \times \text{Average SI: } 3.65$

Note: If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously



4.3 Academic Performance in Second Year (10)

Academic Performance = Average API (Academic Performance Index), where $API = ((Mean of 2^{nd} Year Grade Point Average of all successful Students on a 10-point$ scale) or (Mean of the percentage of marks of all successful students in SecondYear/10)) x (number of successful students/number of students appeared in theexamination)

Successful students are those who are permitted to proceed to the Third year.

Academic Performance	CAY <i>m2</i> (2017-18)	CAY <i>m3</i> (2016-17)	LYG (2015-16)
Mean of CGPA or Mean Percentage of all successful students (X)	8.25	8.41	8.32
Total no. of successful students (Y)	225	205	227
Total no. of students appeared in the examination (Z)	225	220	227
$API = X^* (Y/Z)$	8.25	7.84	8.32

Average API [AP1 + AP2 + AP3]/3: 8.14

Assessment 1.5 * Average API = 12.20

4. 4 Placement, Higher Studies and Entrepreneurship (30)

Assessment Points = $30 \times \text{Average placement}$

Item	LYG (2015-16)	LYGm1 (2014-15)	LYG m2 (2013- 14)
Total No. of Final Year Students (N)	211	162	180
No. of students placed in companies or Government Sector (x)	198	150	154
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	3	2	1
No. of students turned entrepreneur in engineering/technology (z)	3	0	2
Placement Index: $[(x + y + z) / N]$	0.97	0.94	0.87

Average placement= [(P1 + P2 + P3)/3 Assessment Points = 30 × average placement:27.80



Program Name: Computer Science & Engg. Assessment Year: 2018-19 (CAYm1)

	Assessment Year: 2018-19 (CAYm1)					
S.No	Student Name	Enrollment No.	Employee Name	Appointment No.		
1	Harish Kumar Reddy	1NH15CS001	Mindtree	NH-CS-19-MCRT-001		
2	A.M. Keerthan Rao	1NH15CS002	Danske IT and Support Services India Pvt Ltd	NH-CS-19-DITSSIPL-001		
3	Abdul Shahid	1NH15CS003	Aricent	NH-CS-19-ATHL-001		
4	Abhijit.R	1NH15CS005	Wipro	NH-CS-19-WL-001		
5	Adithya R V	1NH15CS007	Aricent	NH-CS-19-ATHL-002		
6	Aditya.T. Nambiar	1NH15CS008	ITC Infotech	NH-CS-19-ITCIIL-001		
7	Aishnaya Jamwal	1NH15CS009	L & T Technologies	NH-CS-19-LTTS-001		
8	Ajith Reddy E	1NH15CS010	Aquity Solution	NH-CS-19-AS-001		
9	Allen Clement	1NH15CS012	Infosys Ltd	NH-CS-19-IL-001		
10	Aman Kumar	1NH15CS013	Mu Sigma	NH-CS-19-MSBSPL-001		
11	Amit Kumar Sah	1NH15CS014	Aricent	NH-CS-19-ATHL-003		
12	Amritha John	1NH15CS015	Infosys Ltd	NH-CS-19-IL-002		
13	Amrutha.H.R	1NH15CS016	Infosys Ltd	NH-CS-19-IL-003		
14	Anurag Vinayak Harischandrakar	1NH15CS017	L & T Technologies	NH-CS-19-LTTS-002		
15	Arbind Saraf	1NH15CS018	Aricent	NH-CS-19-ATHL-004		
16	Arun V	1NH15CS019	Aricent	NH-CS-19-ATHL-005		
17	Ashim Shrestha	1NH15CS020	Cameo Global	NH-CS-19-CGCPL-002		
18	Ashish Sapkota	1NH15CS021	Mu Sigma	NH-CS-19-MSBSPL-002		
19	Ashwini.S	1NH15CS022	Nineleaps	NH-CS-19-NL-001		
20	Aswini.R	1NH15CS023	Infosys Ltd	NH-CS-19-IL-004		
21	Avinash A Badiger	1NH15CS024	EXL Service	NH-CS-19-EXLA-001		



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22	Barun Koirala	1NH15CS026	Catnip Infotech	NH-CS-19-CIPL-001
23	Beenu Kunjumon	1NH15CS027	Incadea India Pvt Ltd	NH-CS-19-IIPL-001
24	Bimal Bhattarai	1NH15CS029	Velocis Systems Pvt Ltd	NH-CS-19-VSPL-001
25	Bindhu M	1NH15CS030	Cerner Healthcare Solutions India Pvt Ltd	NH-CS-19-CIHSPL-001
26	Bishal Kumar Sah	1NH15CS031	Novelsynth Soft Solutions	NH-CS-19-NSS-001
27	C Bhavya Shree	1NH15CS032	Cerner Healthcare Solutions India Pvt Ltd	NH-CS-19-CIHSPL-002
28	Chandana. N. R	1NH15CS035	L & T Technologies	NH-CS-19-LTTS-003
29	Chethan. J	1NH15CS036	Aricent	NH-CS-19-ATHL-006
30	Darshan G	1NH15CS037	SonicWALL Technology Systems India Pvt Ltd	NH-CS-19-STSPL-001
31	Devashish Chandra	1NH15CS038	Cerner Healthcare Solutions India Pvt Ltd	NH-CS-19-CIHSPL-003
32	Gadamsetty Sravya Lakshmi	1NH15CS040	Applied Materials	NH-CS-19-AMIPL-001
33	Gemaraju Naveen Saikanth	1NH15CS041	Infosys Ltd	NH-CS-19-IL-005
34	Gokul Warthavani	1NH15CS042	L&T Infotech	NH-CS-19-LTIL-001
35	H.B. Pruthvi	1NH15CS043	JMR Infotech	NH-CS-19-JMRII-001
36	H.D. Nidhishree	1NH15CS044	Aricent	NH-CS-19-ATHL-007
37	Haritha Nambiar	1NH15CS045	VVDN Technologies	NH-CS-19-VVDNTPL-001
38	Harshith G A	1NH15CS047	Nineleaps	NH-CS-19-NL-002
39	Harshitha.H	1NH15CS048	Aricent	NH-CS-19-ATHL-008
40	Hitesh Kumar S	1NH15CS049	Novelsynth Soft Solutions	NH-CS-19-NSS-002
41	Huma Fahreen	1NH15CS050	Mindtree	NH-CS-19-MCRT-002
42	Imran Khan	1NH15CS051	Infosys Ltd	NH-CS-19-IL-006



43	Indrajeet Gupta	1NH15CS052	EKA Software	NH-CS-19-ESSPL-001
44	Ishan Gyawali	1NH15CS053	Zenken	NH-CS-19-ZC-001
45	J Vignesh	1NH15CS054	Eleation Academy	NH-CS-19-EESA-01
46	Jayanth.J	1NH15CS055	Aricent	NH-CS-19-ATHL-009
47	K. Naresh Kannan	1NH15CS056	Aricent	NH-CS-19-ATHL-010
48	Kabiraj Mahato Nuniya	1NH15CS057	Primenumbers Technologies Pvt Ltd	NH-CS-19-PTPL-001
49	Kevin Samuel Jacob	1NH15CS060	Emertxe	NH-CS-19-EIT-001
50	Kota Nikhil Kumar	1NH15CS061	Aricent	NH-CS-19-ATHL-011
51	Laveena Monis	1NH15CS063	Eurofins IT Solutions Pvt Ltd	NH-CS-19-EISIPL-001
52	Likhita Suresh	1NH15CS064	SonicWALL Technology Systems India Pvt Ltd	NH-CS-19-STSPL-002
53	Luv Raina	1NH15CS065	L & T Technologies	NH-CS-19-LTTS-004
54	M.K. Subramani	1NH15CS066	Hiver	NH-CS-19-HGSPT-001
55	Madhuri	1NH15CS067	Infosys Ltd	NH-CS-19-IL-007
56	M.Spandana	1NH15CS069	Wipro	NH-CS-19-WL-002
57	Madhu D	1NH15CS070	Covance India Pharmaceuticals Services Pvt Ltd	NH-CS-19-CIPSPL-001
58	Madhumitha S	1NH15CS071	Aricent	NH-CS-19-ATHL-012
59	Mailaresh.S	1NH15CS072	Aricent	NH-CS-19-ATHL-013
60	Mallakunta Ramya	1NH15CS073	Emertxe	NH-CS-19-EIT-002
61	Mantosh Prasad Sah	1NH15CS074	Pulse Secure India Pvt Ltd	NH-CS-19-PSPTL-001
62	Mediboina Mahesh Babu	1NH15CS075	Emertxe	NH-CS-19-EIT-003
63	Mudakana Gouda	1NH15CS079	Udaan	NH-CS-19-APL-001
64	Tejaswini	1NH15CS080	EXL Service	NH-CS-19-EXLA-002



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65	Nayana.K	1NH15CS081	Danske IT and Support Services India Pvt Ltd	NH-CS-19-DITSSIPL-002
66	Nikhitha.M	1NH15CS083	Infosys Ltd	NH-CS-19-IL-008
67	Nissi Thomas	1NH15CS084	Ad2pro Media Solutions Pvt Ltd	NH-CS-19-2AAMS-001
68	Nithin.S	1NH15CS085	L & T Technologies	NH-CS-19-LTTS-005
69	Ozween Silvanus D Cunha	1NH15CS087	Emertxe	NH-CS-19-EIT-004
70	Pabitra	1NH15CS088	Simeio Solutions	NH-CS-19-SS-001
71	Paramartha Roy	1NH15CS089	Infosys Ltd	NH-CS-19-IL-009
72	Pavan Kumar Thokala	1NH15CS090	TCS	NH-CS-19-TCS-001
73	Sai Krishna Chaitanya	1NH15CS091	L & T Technologies	NH-CS-19-LTTS-006
74	Pranav M	1NH15CS092	Pulse Secure India Pvt Ltd	NH-CS-19-PSPTL-002
75	Pranita D Biradar	1NH15CS093	Infosys Ltd	NH-CS-19-IL-010
76	Prashant Kumar	1NH15CS094	Infosys Ltd	NH-CS-19-IL-011
77	Prathiksha P Shetty	1NH15CS095	ITC Infotech	NH-CS-19-ITCIIL-002
78	Putta Reddy Purvaj Reddy	1NH15CS096	Fintellix Solutions	NH-CS-19-FSPL-001
79	Raghav Sharma	1NH15CS097	ITC Infotech	NH-CS-19-ITCIIL-003
80	Rahul Prem	1NH15CS098	Cerner Healthcare Solutions India Pvt Ltd	NH-CS-19-CIHSPL-004
81	Raja M	1NH15CS100	Udaan	NH-CS-19-APL-002
82	Rajkumar Bhandari	1NH15CS101	Infosys Ltd	NH-CS-19-IL-012
83	Rakshitha N S	1NH15CS103	Wipro	NH-CS-19-WL-003
84	Rashmi Nagappa Gond	1NH15CS104	Pulse Secure India Pvt Ltd	NH-CS-19-PSPTL-003
85	Rohit Chaudhary	1NH15CS105	Cerner Healthcare Solutions India Pvt Ltd	NH-CS-19-CIHSPL-005
86	Rohit Mulay	1NH15CS106	GrayMatter Software Services Pvt Ltd	NH-CS-19-GMSSPL-001



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87	Rudresh Singh	1NH15CS107	NTT DATA	NH-CS-19-NDGDSPL-001
88	Sachin Babu	1NH15CS108	Aricent	NH-CS-19-ATHL-014
89	Saachi Chandrashekhar	1NH15CS110	Cerner Healthcare Solutions India Pvt Ltd	NH-CS-19-CIHSPL-006
90	Sabir Hussain	1NH15CS111	Subex Ltd	NH-CS-19-SL-001
91	Sachin Sapkota	1NH15CS112	ITC Infotech	NH-CS-19-ITCIIL-004
92	Sahil Ghosh	1NH15CS113	Harman Connected Services Corporation (I) Pvt. Ltd	NH-CS-19-HCSCIPL-001
93	Saideep S	1NH15CS115	Rakuten	NH-CS-19-RAK-001
94	Sanjana Anand	1NH15CS116	Eurofins IT Solutions Pvt Ltd	NH-CS-19-EISIPL-002
95	Sanjana Ramesh	1NH15CS117	Infosys Ltd	NH-CS-19-IL-013
96	Shabadi Akshay	1NH15CS120	TCS	NH-CS-19-TCS-002
97	Sharanya Iyer G S	1NH15CS121	HP	NH-CS-19-HPPPS-001
98	Sharon Ann Gomes	1NH15CS122	Cerner Healthcare Solutions India Pvt Ltd	NH-CS-19-CIHSPL-007
99	Shimna P	1NH15CS124	TCS	NH-CS-19-TCS-003
100	Sohan S Tandle	1NH15CS128	Epicor Software	NH-CS-19-ESIPL-001
101	Soubhagya Sanjay Kinagi	1NH15CS129	Wipro	NH-CS-19-WL-004
102	Sree Priya	1NH15CS131	CenturyLink Technologies India Pvt Ltd	NH-CS-19-CLTIPL-001
103	Sri Raksha G	1NH15CS132	Covance India Pharmaceuticals Services Pvt Ltd	NH-CS-19-CIPSPL-002
104	Stephen Banz	1NH15CS133	Infosys Ltd	NH-CS-19-IL-014
105	Sudarshan V	1NH15CS134	Udaan	NH-CS-19-APL-003
106	Sullivan L Joshua	1NH15CS135	HSBC	NH-CS-19-HSBC-001



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107	Swathi. U	1NH15CS137	L & T Technologies	NH-CS-19-LTTS-007
108	Santhosh Venkata Subash	1NH15CS138	Unisys	NH-CS-19-UIPL-001
109	Tapish Rana	1NH15CS139	ITC Infotech	NH-CS-19-ITCIIL-005
110	Thanushree.P.N	1NH15CS140	Nineleaps	NH-CS-19-NL-003
111	Gokul Naidu	1NH15CS141	NTT DATA	NH-CS-19-NDGDSPL-002
112	Varsha.S	1NH15CS142	Eurofins IT Solutions Pvt Ltd	NH-CS-19-EISIPL-003
113	Vemula Venkata Sree Maha Vishnu	1NH15CS143	Simeio Solutions	NH-CS-19-SS-002
114	Yatin Mohan Vaid	1NH15CS145	Eurofins IT Solutions Pvt Ltd	NH-CS-19-EISIPL-004
115	Lingam Mohan Krishna Sen	1NH15CS146	Infosys Ltd	NH-CS-19-IL-015
116	Likhitha V Reddy	1NH15CS147	Aricent	NH-CS-19-ATHL-015
117	Soundarya S	1NH15CS148	Aricent	NH-CS-19-ATHL-016
118	Sree Meghana K S	1NH15CS149	Nineleaps	NH-CS-19-NL-004
119	Sonal Aggarwal	1NH15CS150	ITC Infotech	NH-CS-19-ITCIIL-006
120	Rahul Kumar Mandal	1NH15CS151	Wipro	NH-CS-19-WL-005
121	Hemavathi N	1NH15CS152	IBJ	NH-CS-19-IBJ-001
122	Sumit Kumar	1NH15CS153	Hiver	NH-CS-19-HGSPT-002
123	Digvijay D V	1NH15CS154	ITC Infotech	NH-CS-19-ITCIIL-007
124	Mallagnana Vardhan Sai	1NH15CS156	Temairasu	NH-CS-19-TI-001
125	Nitin Kumar Reddy K A	1NH15CS157	IBJ	NH-CS-19-IBJ-002
126	R Rakesh	1NH15CS158	Pinclick	NH-CS-19-PC-001
127	Aishwarya	1NH15CS700	Speridian Technologies	NH-CS-19-ST-001
128	Abhishek. B.M	1NH15CS701	Cognizant Technologies	NH-CS-19-CTS-001
129	Advaith C Warrier	1NH15CS702	ServiceNow	NH-CS-19-SSDIPL-001



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130	Ankita Dey	1NH15CS703	Aricent	NH-CS-19-ATHL-017
131	Anusha. V	1NH15CS704	Mu Sigma	NH-CS-19-MSBSPL-003
132	Anushma Dubey	1NH15CS705	ITC Infotech	NH-CS-19-ITCIIL-008
133	Archana S	1NH15CS706	Ideas91 India Pvt Ltd	NH-CS-19-IIPL-001
134	Arpit Rasyara	1NH15CS707	JMR Infotech	NH-CS-19-JMRII-002
135	Ashwini.P	1NH15CS709	Aricent	NH-CS-19-ATHL-018
136	Bikkina Harshitha	1NH15CS711	Ideas91 India Pvt Ltd	NH-CS-19-IIPL-002
137	Chaitra B Kallolli	1NH15CS712	Simeio Solutions	NH-CS-19-SS-003
138	Chandana.V.S	1NH15CS713	Wipro	NH-CS-19-WL-006
139	D Sakthi Keerthana	1NH15CS714	Aricent	NH-CS-19-ATHL-019
140	G Parimala	1NH15CS715	Simeio Solutions	NH-CS-19-SS-004
141	Kavya P	1NH15CS716	ITC Infotech	NH-CS-19-ITCIIL-009
142	Lavanya Jeyakumar	1NH15CS718	Aricent	NH-CS-19-ATHL-020
143	Manish.K.Pai	1NH15CS719	EXL Service	NH-CS-19-EXLA-003
144	Meghana.V	1NH15CS721	Incadea India Pvt Ltd	NH-CS-19-IIPL-002
145	Mouna.C	1NH15CS722	Ad2pro Media Solutions Pvt Ltd	NH-CS-19-2AAMS-002
146	Muhammed Faisal K M	1NH15CS723	Thermofisher Scientific	NH-CS-19-IBIPL-001
147	Sriranjan N R	1NH15CS724	Velocis Systems Pvt Ltd	NH-CS-19-VSPL-002
148	Namita Sharma	1NH15CS725	Aricent	NH-CS-19-ATHL-021
149	Namitha.M S	1NH15CS726	ITC Infotech	NH-CS-19-ITCIIL-010
150	Nandan	1NH15CS727	Eurofins IT Solutions Pvt Ltd	NH-CS-19-EISIPL-005
151	Nithish Naidu	1NH15CS729	Surya Software Systems Pvt Ltd	NH-CS-19-SSSPL-001
152	Nitin Kumar J	1NH15CS730	ITC Infotech	NH-CS-19-ITCIIL-011



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153	Pallavi. S. G	1NH15CS731	Simeio Solutions	NH-CS-19-SS-005
154	Poly Paul	1NH15CS732	JMR Infotech	NH-CS-19-JMRII-003
155	Pooja.R	1NH15CS733	EXL Service	NH-CS-19-EXLA-004
156	Poorvi. B. Praksah	1NH15CS734	L & T Technologies	NH-CS-19-LTTS-008
157	Priyanka Dubey	1NH15CS735	IBM	NH-CS-19-IBMIPL-001
158	R. Deepika	1NH15CS736	L & T Technologies	NH-CS-19-LTTS-009
159	R.P Rachana	1NH15CS737	ITC Infotech	NH-CS-19-ITCIIL-012
160	Ramana. H. M	1NH15CS740	Surya Software Systems Pvt Ltd	NH-CS-19-SSSPL-002
161	Ramya.B	1NH15CS741	Infosys Ltd	NH-CS-19-IL-016
162	Rishav Tiwary	1NH15CS742	L&T Infotech	NH-CS-19-LTIL-002
163	Sathiya S	1NH15CS743	Udaan	NH-CS-19-APL-004
164	S Sujith Kumar	1NH15CS744	Thermofisher Scientific	NH-CS-19-IBIPL-002
165	Sattanathan	1NH15CS746	Aricent	NH-CS-19-ATHL-022
166	Seema Ibrahim	1NH15CS747	Mindtree	NH-CS-19-MCRT-003
167	Shri Vignesh	1NH15CS748	Unisys	NH-CS-19-UIPL-002
168	Shweta Jha	1NH15CS749	Cerner Healthcare Solutions India Pvt Ltd	NH-CS-19-CIHSPL-008
169	Siddharth Konar	1NH15CS750	ITC Infotech	NH-CS-19-ITCIIL-013
170	Sindhu Hegde	1NH15CS751	Infosys Ltd	NH-CS-19-IL-017
171	Sindhuvsvta Mohanty	1NH15CS752	ITC Infotech	NH-CS-19-ITCIIL-014
172	Supongtemjen Longchar	1NH15CS754	L&T Infotech	NH-CS-19-LTIL-003
173	E. Susheela	1NH15CS755	ITC Infotech	NH-CS-19-ITCIIL-015
174	Swapnil Konar	1NH15CS756	Betsol	NH-CS-19-Betsol-001
175	Rishil Suresh	1NH15CS757	Surya Software Systems Pvt Ltd	NH-CS-19-SSSPL-003



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176	Vikrant Sharma	1NH15CS758	L & T Technologies	NH-CS-19-LTTS-010
177	Vinamra Khurana	1NH15CS759	Aricent	NH-CS-19-ATHL-023
178	Anmol George	1NH16CS400	ServiceNow	NH-CS-19-SSDIPL-002
179	Bhaskara K E	1NH16CS401	Cognizant Technologies	NH-CS-19-CTS-002
180	Dinesh R	1NH16CS403	Telaverge Communications	NH-CS-19-TCIPL-001
181	Gajendra S	1NH16CS404	L&T Infotech	NH-CS-19-LTIL-004
182	Gokul R	1NH16CS405	Cognizant Technologies	NH-CS-19-CTS-003
183	Karthik Muthappa K B	1NH16CS407	L&T Infotech	NH-CS-19-LTIL-005
184	Kavya S	1NH16CS408	Ocwen Financial	NH-CS-19-OFSPL-001
185	Keshava N	1NH16CS409	Pinclick	NH-CS-19-PC-002
186	Lakshmi V	1NH16CS410	Infosys Ltd	NH-CS-19-IL-018
187	Neelufar	1NH16CS412	Telaverge Communications	NH-CS-19-TCIPL-002
188	Nusrath Fathima.S	1NH16CS413	Thermofisher Scientific	NH-CS-19-IBIPL-003
189	Pavan Kumar K	1NH16CS414	Lowe's Services India Pvt Ltd	NH-CS-19-LSIPL-001
190	Pooja Kumari	1NH16CS415	JMR Infotech	NH-CS-19-JMRII-004
191	Priyanka C T M	1NH16CS417	Lowe's Services India Pvt Ltd	NH-CS-19-LSIPL-002
192	Ramu N B	1NH16CS419	Thermofisher Scientific	NH-CS-19-IBIPL-004
193	Sanjay T	1NH16CS420	Moengage	NH-CS-19-MIPL-001
194	Sarma Khatoon	1NH16CS421	Infosys Ltd	NH-CS-19-IL-019
195	Sharath Kumar B K	1NH16CS422	Infosys Ltd	NH-CS-19-IL-020
196	Suresh K	1NH16CS423	EXL Service	NH-CS-19-EXLA-005
197	Suresha A	1NH16CS424	McKinsey & Company	NH-CS-19-MGS-001
198	Vishwanath M Hirekurubar	1NH16CS426	Moengage	NH-CS-19-MIPL-002



	Assessment Year: 2017-18 (CAYm2)				
Sl. No.	Student Name	Enrollment No	Employee Name	Appointment No	
1	Adithya Vishwanathan Subramaniam	1NH14CS005	Mindtree	NH-CS-18-MTL-001	
2	Aditya Raj	1NH14CS006	Hotelsoft	NH-CS-18-RTPL-001	
3	Aishwarya Sankhla	1NH14CS008	Century Link	NH-CS-18-CLTIPL-001	
4	Akshat Sharma	1NH14CS009	NineLeaps	NH-CS-18-NLTSPL-001	
5	Ambika Srinivas	1NH14CS011	TCS	NH-CS-18-ASSPL-001	
6	Anusha.A(1/8	1NH14CS015	DXC	NH-CS-18-DXCT-001	
7	Aparna R	1NH14CS016	Allstate	NH-CS-18-ASSPL-001	
8	Ayush Thakur	1NH14CS019	NineLeaps	NH-CS-18-NLTSPL-002	
9	Sharadha B L	1NH14CS020	Allstate	NH-CS-18-ASSPL-002	
10	Bhavan.A	1NH14CS021	Eurofins IT	NH-CS-18-EITSIPL-001	
11	C.H.Sai Shankar	1NH14CS022	Wipro Ltd	NH-CS-18-WL-001	
12	Chaya Chandrashekar Shetty	1NH14CS024	TCS	NH-CS-18-AIPL-003	
13	Chetana.M. Jyothi	1NH14CS025	Wipro Ltd	NH-CS-18-WL-002	
14	Deekshya Mohapatra	1NH14CS029	Cerner	NH-CS-18-CHSPL-001	
15	Deeshma R	1NH14CS031	Allstate	NH-CS-18-ASSPL-003	
16	G Aishwarya	1NH14CS034	Netscope	NH-CS-18-NSIPL-001	
17	Vamsi Krishna Reddy	1NH14CS035	NTTDATA	NH-CS-18-NTTDGDSPL- 001	
18	Gireesh Ganapati Gaonkar	1NH14CS039	Mindtree	NH-CS-18-MTL-002	
19	Gokul Vihari Koduru	1NH14CS040	Ellucian	NH-CS-18-EHESIPL-001	
20	Gouthami	1NH14CS041	Datagres IT	NH-CS-18-DISPL-001	
21	H.S.Sumanth	1NH14CS042	Hotelsoft	NH-CS-18-RTPL-002	

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22	Harshitha Sharma P	1NH14CS044	Ellucian	NH-CS-18-EHESIPL-002
23	Impana S	1NH14CS045	Ellucian	NH-CS-18-EHESIPL-003
24	Janavi M	1NH14CS047	Epsilon	NH-CS-18-CSDCMLLP-001
25	Jyothi	1NH14CS050	Telaverge	NH-CS-18-TC-001
26	K.S.Shashank	1NH14CS051	Mindtree	NH-CS-18-MTL-003
27	Kavya K	1NH14CS056	Epsilon	NH-CS-18-CSDCMLLP-002
28	Kavya.K.M	1NH14CS058	Torry Harris	NH-CS-18-THBSPL-001
29	Kruthika.P	1NH14CS059	Infosys Ltd	NH-CS-18-IL-002
30	Kushala T	1NH14CS060	NineLeaps	NH-CS-18-NLTSPL-003
31	Vijay Kumar M	1NH14CS062	TCS	NH-CS-18-CHSPL-009
32	Attar Mahay Sheetal	1NH14CS064	NineLeaps	NH-CS-18-NLTSPL-004
33	Mahendra V	1NH14CS065	Profinch	NH-CS-18-PSPL-001
34	Mandara.B.M	1NH14CS067	Hotelsoft	NH-CS-18-RTPL-003
35	Mohammed Farhan Shaikh	1NH14CS070	Epsilon	NH-CS-18-CSDCMLLP-003
36	Mohan Krishna B	1NH14CS071	Fintellix Solutions	NH-CS-18-FSPL-001
37	Muhammed Nisamudheeen	1NH14CS072	Profinch	NH-CS-18-PSPL-002
38	Nagamani. A	1NH14CS074	Quintiles (IQVIA)	NH-CS-18-IHASPL-001
39	Nayana.M.M	1NH14CS076	TCS	NH-CS-18-EHESIPL-002
40	Neha.R	1NH14CS078	Wipro Ltd	NH-CS-18-WL-003
41	Niharika A	1NH14CS080	Epsilon	NH-CS-18-CSDCMLLP-004
42	Nitish.R	1NH14CS083	Eurofins IT	NH-CS-18-EITSIPL-002
43	Pavithra.P	1NH14CS084	Cerner	NH-CS-18-CHSPL-002
44	Pavithra. S. N	1NH14CS085	Epsilon	NH-CS-18-CSDCMLLP-005
45	Pema Wangdue	1NH14CS086	Datacorp Traffic	NH-CS-18-DTPL-001



46	Poonam Vijay Deshpande	1NH14CS088	Applied Materials	NH-CS-18-AMIPL-001
47	Prabhat Kumar Prasad	1NH14CS089	Epsilon	NH-CS-18-CSDCMLLP-006
48	Pranaya.D	1NH14CS092	Epsilon	NH-CS-18-CSDCMLLP-007
49	Prashanth Manohar G	1NH14CS093	Microgenesis	NH-CS-18-MGTSPL-001
50	Pravallika S	1NH14CS094	Wipro Ltd	NH-CS-18-WL-004
51	Punith Kamini. S	1NH14CS096	NTTDATA	NH-CS-18-NTTDGDSPL- 002
52	Rahul D Shanbhogue	1NH14CS097	Wipro Ltd	NH-CS-18-WL-005
53	Rahul Nurukurthi	1NH14CS098	Epsilon	NH-CS-18-CSDCMLLP-008
54	Ramya.K	1NH14CS101	Cerner	NH-CS-18-CHSPL-003
55	Rashmi Ranjan	1NH14CS102	Profinch	NH-CS-18-PSPL-003
56	Rashmi. D.S	1NH14CS103	Telaverge	NH-CS-18-TC-002
57	Rashmita	1NH14CS104	TCS	NH-CS-18-EITSIPL-004
58	Rudra Roy Choudhury	1NH14CS107	Wipro Ltd	NH-CS-18-WL-006
59	S. Preethi	1NH14CS109	NTTDATA	NH-CS-18-NTTDGDSPL- 003
60	S.R. Sai Ramya	1NH14CS110	Cerner	NH-CS-18-CHSPL-004
61	Sagar. K	1NH14CS111	Epsilon	NH-CS-18-CSDCMLLP-009
62	Sahana. P. Reddy	1NH14CS112	Eurofins IT	NH-CS-18-EITSIPL-003
63	Sambuddha Biswas	1NH14CS113	Epsilon	NH-CS-18-CSDCMLLP-010
64	Sangyal Tsering	1NH14CS116	Profinch	NH-CS-18-PSPL-004
65	Saswata Chandra	1NH14CS117	Profinch	NH-CS-18-PSPL-005
66	Shakthivelu. A	1NH14CS118	Epsilon	NH-CS-18-CSDCMLLP-011
67	Shivani P	1NH14CS120	Profinch	NH-CS-18-PSPL-006
68	Shravanthi.S	1NH14CS121	Cerner	NH-CS-18-CHSPL-005
69	Somala Venkata Sai Krishna	1NH14CS125	Exotel	NH-CS-18-ETPL-001



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70	Sonia. K. John	1NH14CS126	Cerner	NH-CS-18-CHSPL-006
71	Srikanth Hebbar. M.P	1NH14CS127	NTTDATA	NH-CS-18-NTTDGDSPL- 004
72	Sumukh. S	1NH14CS128	Cerner	NH-CS-18-CHSPL-007
73	Supriya	1NH14CS129	Wipro Ltd	NH-CS-18-WL-007
74	Surbhi Pamnani	1NH14CS130	Hexaware	NH-CS-18-HTL-001
75	Syed Ruhan	1NH14CS132	Wipro Ltd	NH-CS-18-WL-008
76	Tenzin Namdol	1NH14CS136	Profinch	NH-CS-18-PSPL-007
77	Tuhin Kumar Das	1NH14CS137	Quintiles (IQVIA)	NH-CS-18-IHASPL-002
78	Umesh Naik	1NH14CS138	Telaverge	NH-CS-18-TC-003
79	Utsha Saha	1NH14CS139	Valtech	NH-CS-18-VISPL-001
80	Venkatesh.R	1NH14CS141	NTTDATA	NH-CS-18-NTTDGDSPL- 005
81	Vinay Khande	1NH14CS143	Allstate	NH-CS-18-ASSPL-004
82	Vinu Paul	1NH14CS144	Exotel	NH-CS-18-ETPL-002
83	Vivek	1NH14CS145	Telaverge	NH-CS-18-TC-004
84	Aman Bhattarai	1NH14CS148	Wipro Ltd	NH-CS-18-WL-009
85	Atish Ojha	1NH14CS149	Exotel	NH-CS-18-ETPL-003
86	Bhanu Bhakta Bhattarai	1NH14CS151	Global Logic	NH-CS-18-GL-001
87	Bishwas Belbase	1NH14CS152	Profinch	NH-CS-18-PSPL-008
88	Kriti Aryal	1NH14CS154	Exotel	NH-CS-18-ETPL-004
89	Niki Kumar Sah Kalwar	1NH14CS155	Broadridge	NH-CS-18-BR-001
90	Sabnam Pandeet	1NH14CS158	Exotel	NH-CS-18-ETPL-005
91	Sabin Pandey	1NH14CS159	Profinch	NH-CS-18-PSPL-009
92	Sai Shree Nagireddy	1NH14CS161	Cerner	NH-CS-18-CHSPL-008
93	Sanya Dikshit	1NH14CS162	Wipro Ltd	NH-CS-18-WL-010



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94	Simran Singh	1NH14CS163	Wipro Ltd	NH-CS-18-WL-011
95	Paruchuri Aishwarya	1NH14CS164	NTTDATA	NH-CS-18-NTTDGDSPL- 006
96	Vishwas V	1NH14CS165	Cerner	NH-CS-18-CHSPL-009
97	Saurabh Rajnala	1NH14CS166	Quintiles (IQVIA)	NH-CS-18-IHASPL-003
98	Prakash H	1NH14CS167	Envision Financial	NH-CS-18-EFS-001
99	Yashila Baskar	1NH14CS169	Wipro Ltd	NH-CS-18-WL-012
100	Debanjana Dey	1NH14CS171	Envision Financial	NH-CS-18-EFS-002
101	Poojitha Reddy T	1NH14CS175	Artech (HP)	NH-CS-18-AIPL-001
102	Adithya Reddy K	1NH14CS701	Verdantis	NH-CS-18-VTPL-001
103	Chinthana Prakash	1NH14CS707	Verdantis	NH-CS-18-VTPL-002
104	Gaurav Palei	1NH14CS710	Artech (HP)	NH-CS-18-AIPL-002
105	Goutham T	1NH14CS711	ITOrizon	NH-CS-18-ITOI-001
106	J R Kusuma	1NH14CS712	Global Logic	NH-CS-18-GL-002
107	Kesiya Abraham	1NH14CS714	VVDN	NH-CS-18-VVDNTPL-001
108	Kirti Gupta	1NH14CS715	Exotel	NH-CS-18-ETPL-006
109	Muthumariyappan U	1NH14CS721	Cropin Technologies	NH-CS-18-CTSPL-001
110	Nanditha N	1NH14CS722	Artech (HP)	NH-CS-18-AIPL-003
111	Poonam Sing Neghi	1NH14CS723	Cropin Technologies	NH-CS-18-CTSPL-002
112	Suchit R	1NH14CS730	Mindtree	NH-CS-18-MTL-004
113	Sushmitha. K	1NH14CS731	Cropin Technologies	NH-CS-18-CTSPL-003
114	Madhavan Swathi	1NH14CS732	Wipro Ltd	NH-CS-18-WL-013
115	Asha Yadav	1NH14CS737	Quintiles (IQVIA)	NH-CS-18-IHASPL-004
116	Chaitra. N. R	1NH14CS738	Bias Infotech	NH-CS-18-BIPL-001
117	Gagan Reddy N	1NH14CS741	Global Logic	NH-CS-18-GL-003



110	Gagan Vinay		CODIOT	
118	Hegde	1NH14CS742	CCP IOT	NH-CS-18-CCPITPL-001
119	J. Kaushik	1NH14CS743	Torry Harris	NH-CS-18-THBSPL-002
120	Kapil Kumar	1NH14CS744	Hotelsoft	NH-CS-18-RTPL-004
121	Manish	1NH14CS746	NTTDATA	NH-CS-18-NTTDGDSPL- 007
122	Manjunath B Danammanavar	1NH14CS747	Hotelsoft	NH-CS-18-RTPL-005
123	Naima Hussain	1NH14CS748	CCP IOT	NH-CS-18-CCPITPL-002
124	Nikilesh Raj.N	1NH14CS749	Eurofins IT	NH-CS-18-EITSIPL-004
125	Rahul.Y	1NH14CS752	CCP IOT	NH-CS-18-CCPITPL-003
126	Rohit.V	1NH14CS753	Torry Harris	NH-CS-18-THBSPL-003
127	Sanchita.P Kushnoor	1NH14CS755	Global Logic	NH-CS-18-GL-004
128	Shwetha Barua	1NH14CS756	Netscope	NH-CS-18-NSIPL-002
129	Shwetha. S.T	1NH14CS757	Global Logic	NH-CS-18-GL-005
130	Vandana Sharma	1NH14CS758	IBM	NH-CS-18-IBMIPL-005
131	Arathi Rajendra Tiwari	1NH15CS401	24/7	NH-CS-18-24/7-010
132	Blessina D Jutike	1NH15CS402	Hexaware	NH-CS-18-HTL-002
133	Chethan N	1NH15CS405	Torry Harris	NH-CS-18-THBSPL-004
134	Jyothi M	1NH15CS406	Hexaware	NH-CS-18-HTL-003
135	Jyoti Venkappa Reddi	1NH15CS407	ITOrizon	NH-CS-18-ITOI-002
136	Kruthika K V	1NH15CS409	Bias Infotech	NH-CS-18-BIPL-002
137	Lakshmi M	1NH15CS410	Bias Infotech	NH-CS-18-BIPL-003
138	Maruti	1NH15CS413	Accion Labs	NH-CS-18-ALIPL-001
139	Neha K	1NH15CS414	ITOrizon	NH-CS-18-ITOI-003
140	Pavithra K Mugali	1NH15CS415	ITOrizon	NH-CS-18-ITOI-004
141	Santhosh Prabhu P	1NH15CS416	ITOrizon	NH-CS-18-ITOI-005



142	Suchithra A B	1NH15CS418	Microgenesis	NH-CS-18-MGTSPL-002
143	Yogeesh G Konnur	1NH15CS421	Bias Infotech	NH-CS-18-BIPL-004
144	Abhishek Francis S	1NH15CS422	Accion Labs	NH-CS-18-ALIPL-002
145	Allabaksh Karajagi	1NH15CS423	Microgenesis	NH-CS-18-MGTSPL-003
146	Devendar Kumar K Choudary	1NH15CS425	Microgenesis	NH-CS-18-MGTSPL-004
147	Juhisha Uday	1NH15CS426	Accion Labs	NH-CS-18-ALIPL-003
148	Pallavi N R	1NH15CS428	Infosys Ltd	NH-CS-18-IL-003
149	Riyaz K	1NH15CS429	Hotelsoft	NH-CS-18-RTPL-006
150	Sayed Hussain M	1NH15CS430	CCP IOT	NH-CS-18-CCPITPL-004

Assessment Year: 2016-17 (CAYm3)

Sl. No	Student Name	Enrollment No	Employee Name	Appointment No
1	Aishwarya.D.C	1NH13CS005	Incadea	NH-CS-17-IIPL-001
2	Aishwarya Rajeev	1NH13CS006	Epsilon	NH-CS-17-CSDCMLLP-001
3	Aishwarya Sridhar	1NH13CS008	Profinch	NH-CS-17-PSPL-001
4	Aishwarya V	1NH13CS009	Capgemini	NH-CS-17-CTSIL-001
5	Aksharadeep	1NH13CS010	Tech Mahindra	NH-CS-17-ELTP-001
6	Akshatha. K. V	1NH13CS011	Cerner	NH-CS-17-CHSPL-001
7	Akshay. P	1NH13CS012	Profinch	NH-CS-17-PSPL-002
8	Amy John Padayatti	1NH13CS015	Profinch	NH-CS-17-PSPL-003
9	Anil Bikram Tharu	1NH13CS016	Capgemini	NH-CS-17-CTSIL-002
10	Anselm Joseph	1NH13CS017	Cyient	NH-CS-17-CL-001
11	Anshul Sinha	1NH13CS018	Capgemini	NH-CS-17-CTSIL-003
12	Anurag K	1NH13CS020	Cerner	NH-CS-17-CHSPL-002
13	Ashik Paul.M	1NH13CS021	RLE India	NH-CS-17-RLEIMEPL-001



14	Bhavana B	1NH13CS023	Incadea	NH-CS-17-IIPL-002
15	Bhoomika.C	1NH13CS024	Profinch	NH-CS-17-PSPL-004
16	Chaithra T M	1NH13CS027	Cerner	NH-CS-17-CHSPL-003
17	Chaithra	1NH13CS028	Torry Harris	NH-CS-17-THBSPL-001
18	D Elavarasi	1NH13CS030	Cerner	NH-CS-17-CHSPL-004
19	D Sushmitha Jain	1NH13CS031	Cerner	NH-CS-17-CHSPL-005
20	Darisa Srujana	1NH13CS032	RLE India	NH-CS-17-RLEIMEPL-002
21	Debanga Pratim Bora	1NH13CS033	Cerner	NH-CS-17-CHSPL-006
22	Deeksha Vats	1NH13CS034	Incadea	NH-CS-17-IIPL-003
23	Dinesh.P	1NH13CS037	Tech Mahindra	NH-CS-17-ELTP-002
24	Divya Somarajan	1NH13CS039	Capgemini	NH-CS-17-CTSIL-004
25	Francy George	1NH13CS040	Cerner	NH-CS-17-CHSPL-007
26	Gadamsetty Vishnu Vardhan	1NH13CS042	Cerner	NH-CS-17-CHSPL-008
27	H.S.Kruthi	1NH13CS044	ITC Infotech	NH-CS-17-ITCIIL-001
28	Harish.R	1NH13CS046	Incadea	NH-CS-17-IIPL-004
29	Harshitha Ezil	1NH13CS047	Orange Business Solutions	NH-CS-17-MGSIPL-001
30	Hema Chitrapu	1NH13CS048	Profinch	NH-CS-17-PSPL-005
31	Himanshu Sharma	1NH13CS049	Cerner	NH-CS-17-CHSPL-009
32	Indumathi. H. G	1NH13CS051	Incadea	NH-CS-17-IIPL-005
33	Irfan Alam	1NH13CS052	Cerner	NH-CS-17-CHSPL-010
34	Jas Vijay Shah	1NH13CS053	Century Link	NH-CS-17-CLTIPL-001
35	Keerthana	1NH13CS057	NTT Data	NH-CS-17-NTTDGDSPL-001
36	Lavanya	1NH13CS059	Cigital Asia	NH-CS-17-CAPL-001
37	Lindsey Catherine Sequeira	1NH13CS060	Cerner	NH-CS-17-CHSPL-011



38	M Ashwini	1NH13CS061	Cerner	NH-CS-17-CHSPL-012
39	M Prashanth Kumar	1NH13CS062	Cigital Asia	NH-CS-17-CAPL-002
40	Madala Aparna	1NH13CS063	NTT Data	NH-CS-17-NTTDGDSPL-002
41	Mahesh Bhandari	1NH13CS064	Incadea	NH-CS-17-IIPL-006
42	Majunatha J	1NH13CS065	Torry Harris	NH-CS-17-THBSPL-002
43	Maria Priscilla Priyanka	1NH13CS067	NTT Data	NH-CS-17-NTTDGDSPL-003
44	Megha D	1NH13CS068	Cigital Asia	NH-CS-17-CAPL-003
45	Mohammed Firoz	1NH13CS070	Cigital Asia	NH-CS-17-CAPL-004
46	Nagendra	1NH13CS073	Torry Harris	NH-CS-17-THBSPL-003
47	Nanditha	1NH13CS074	Mindtree	NH-CS-17-MTL-001
48	Nidhi Srinivas	1NH13CS076	Cigital Asia	NH-CS-17-CAPL-005
49	Nitish Kumar	1NH13CS077	Cropin Technologies	NH-CS-17-CTSPL-001
50	Prabha P	1NH13CS078	Datagres IT	NH-CS-17-DISPL-001
51	Pradeep Karthik S	1NH13CS079	Century Link	NH-CS-17-CLTIPL-002
52	Prakruthi K	1NH13CS080	ITC Infotech	NH-CS-17-ITCIIL-002
53	Prashant Garbuja	1NH13CS081	Datagres IT	NH-CS-17-DISPL-002
54	Priyanka H	1NH13CS083	Epsilon	NH-CS-17-CSDCMLLP-002
55	R Nivedhaa	1NH13CS084	Epsilon	NH-CS-17-CSDCMLLP-003
56	Rachana P	1NH13CS085	Epsilon	NH-CS-17-CSDCMLLP-004
57	Rahul Bhatt	1NH13CS087	Cerner	NH-CS-17-CHSPL-013
58	Rajesh N Itagi	1NH13CS088	Eurofins IT	NH-CS-17-EITSIPL-001
59	Rakesh Kumar Sah	1NH13CS089	Eurofins IT	NH-CS-17-EITSIPL-002
60	Rakesh Kumar Swamy H Reddy	1NH13CS090	Eurofins IT	NH-CS-17-EITSIPL-003
61	Ratna Priya	1NH13CS093	Eurofins IT	NH-CS-17-EITSIPL-004



62	Reev Ranj	1NH13CS094	Eurofins IT	NH-CS-17-EITSIPL-005
63	Rubiya Mehnaaz A	1NH13CS096	NTT Data	NH-CS-17-NTTDGDSPL-004
64	S L Vijaya Sumathi	1NH13CS097	Spirent Technologies	NH-CS-17-SCIPL-001
65	Sagar B R	1NH13CS098	Pin Click	NH-CS-17-PC-001
66	Sahana C	1NH13CS099	Eurofins IT	NH-CS-17-EITSIPL-006
67	Sandip Shah	1NH13CS101	Eurofins IT	NH-CS-17-EITSIPL-007
68	Sarah Biju	1NH13CS103	Cerner	NH-CS-17-CHSPL-014
69	Saurabh Rai	1NH13CS104	Eurofins IT	NH-CS-17-EITSIPL-008
70	Shashank K R	1NH13CS106	All State	NH-CS-17-ASSPL-001
71	Shashank R	1NH13CS107	NTT Data	NH-CS-17-NTTDGDSPL-005
72	Shivam Pandey (Umesh)	1NH13CS108	Torry Harris	NH-CS-17-THBSPL-004
73	Shreevidya R	1NH13CS110	Mindtree	NH-CS-17-MTL-002
74	Shweta	1NH13CS112	Eurofins IT	NH-CS-17-EITSIPL-009
75	Sneha Kriti	1NH13CS113	FTD Automation	NH-CS-17-FTDAPL-001
76	Sneha Podder	1NH13CS114	ICT Technologies	NH-CS-17-ICTHTSIPL-001
77	Srinidhi S	1NH13CS117	Capgemini	NH-CS-17-CTSIL-005
78	Sumesh Mohan C	1NH13CS118	Eurofins IT	NH-CS-17-EITSIPL-010
79	Sumit Banerjee	1NH13CS119	Capgemini	NH-CS-17-CTSIL-006
80	Supritha N	1NH13CS121	Profinch	NH-CS-17-PSPL-006
81	Suvotama Sarkar	1NH13CS122	Profinch	NH-CS-17-PSPL-007
82	Tejas Vishwanath	1NH13CS125	Profinch	NH-CS-17-PSPL-008
83	Thriveni G	1NH13CS126	ICT Technologies	NH-CS-17-ICTHTSIPL-002
84	Tirupati Harshitha	1NH13CS127	ICT Technologies	NH-CS-17-ICTHTSIPL-003
85	Udit Sengupta	1NH13CS128	Cerner	NH-CS-17-CHSPL-015



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86	V Kishor Kumar	1NH13CS130	ICT Technologies	NH-CS-17-ICTHTSIPL-004
87	Vaibhav Sharma	1NH13CS131	Epsilon	NH-CS-17-CSDCMLLP-005
88	Vaishnavi K	1NH13CS132	ICT Technologies	NH-CS-17-ICTHTSIPL-005
89	Vedavathi M S	1NH13CS134	Profinch	NH-CS-17-PSPL-009
90	Vegitha Kuduru Kodu	1NH13CS135	NTT Data	NH-CS-17-NTTDGDSPL-006
91	Vidhya R	1NH13CS136	Eurofins IT	NH-CS-17-EITSIPL-011
92	Vidhya V	1NH13CS137	Wipro	NH-CS-17-WL-001
93	Vishal B	1NH13CS140	Tech Mahindra	NH-CS-17-ELTP-003
94	Vishal M Patil	1NH13CS141	Capgemini	NH-CS-17-CTSIL-007
95	Vishwas J	1NH13CS142	Thomson Reuters	NH-CS-17-TRISPL-001
96	Zaiba Sultana K	1NH13CS143	Cerner	NH-CS-17-CHSPL-016
97	Bir Vikram Dev	1NH13CS144	NTT Data	NH-CS-17-NTTDGDSPL-007
98	Sangha Mitra Sen	1NH13CS145	Tech Mahindra	NH-CS-17-ELTP-004
99	Vaishnapu Sai Teja	1NH13CS146	NTT Data	NH-CS-17-NTTDGDSPL-008
100	Lavuteja Sai Prakhyat	1NH13CS148	Epsilon	NH-CS-17-CSDCMLLP-006
101	Abhishek Saini	1NH13CS700	Cerner	NH-CS-17-CHSPL-017
102	Adwaid Das	1NH13CS701	Capgemini	NH-CS-17-CTSIL-008
103	Adwait Priyam	1NH13CS702	Capgemini	NH-CS-17-CTSIL-009
104	Aishwarya V Phutane	1NH13CS703	Torry Harris	NH-CS-17-THBSPL-005
105	Aman Kumar	1NH13CS705	Capgemini	NH-CS-17-CTSIL-010
106	Amrutha	1NH13CS707	Capgemini	NH-CS-17-CTSIL-011
107	Ancy Mary Joy	1NH13CS708	Epsilon	NH-CS-17-CSDCMLLP-007
108	Anmol Saini	1NH13CS709	Capgemini	NH-CS-17-CTSIL-012
109	Apurva Arnav	1NH13CS710	Cerner	NH-CS-17-CHSPL-018



110	Ashwin R M	1NH13CS711	Cigital Asia	NH-CS-17-CAPL-006
111	Ashwini C	1NH13CS712	Lowe's	NH-CS-17-LSIPL-001
112	Avinash Gupta	1NH13CS713	Cerner	NH-CS-17-CHSPL-019
113	Divya K	1NH13CS715	Cerner	NH-CS-17-CHSPL-020
114	Dwithishree H S	1NH13CS716	Thomson Reuters	NH-CS-17-TRISPL-002
115	Gaurav Kumar	1NH13CS718	Torry Harris	NH-CS-17-THBSPL-006
116	Hithashree M Achar	1NH13CS719	Stellapps	NH-CS-17-STPL-001
117	Joshua Roshan Dhamanigi	1NH13CS721	Mindtree	NH-CS-17-MTL-003
118	Kalsang Dhondup	1NH13CS723	Cerner	NH-CS-17-CHSPL-021
119	Konduru Iswarya	1NH13CS724	ITC Infotech	NH-CS-17-ITCIIL-003
120	Laasya Soujanya K A	1NH13CS725	Cerner	NH-CS-17-CHSPL-022
121	Madhushree C	1NH13CS726	Cigital Asia	NH-CS-17-CAPL-007
122	Manasa A	1NH13CS727	Cigital Asia	NH-CS-17-CAPL-008
123	Manjunatha S N	1NH13CS728	Cigital Asia	NH-CS-17-CAPL-009
124	Mrinalini Jha	1NH13CS729	Cigital Asia	NH-CS-17-CAPL-010
125	Joseph Cho Nurukurthi	1NH13CS730	Software AG	NH-CS-17-SAGBTPL-001
126	Nikhil S Beelur	1NH13CS733	Incadea	NH-CS-17-IIPL-007
127	Nimmalapudi Havya	1NH13CS734	Cigital Asia	NH-CS-17-CAPL-011
128	Nithin B	1NH13CS735	Cigital Asia	NH-CS-17-CAPL-012
129	Niveditha	1NH13CS736	Cropin Technologies	NH-CS-17-CTSPL-002
130	Pavithra N	1NH13CS738	Cropin Technologies	NH-CS-17-CTSPL-003
131	Pavithra S	1NH13CS739	Datagres IT	NH-CS-17-DISPL-003
132	Prakash N	1NH13CS740	Servion Global Solutions	NH-CS-17-SGSL-001
133	Pramila Kumari	1NH13CS741	Thomson Reuters	NH-CS-17-TRISPL-003



134	Praveen Kumar Sindhu	1NH13CS743	NTT Data	NH-CS-17-NTTDGDSPL-009
135	Priyanka G S	1NH13CS744	IBM Tech	NH-CS-17-IBMIPL-001
136	Mohan Kumar R	1NH13CS745	ITC Infotech	NH-CS-17-ITCIIL-004
137	Raksshak Shaam S A	1NH13CS746	IBM Tech	NH-CS-17-IBMIPL-002
138	Rashmi Subray Hegde	1NH13CS748	Software AG	NH-CS-17-SAGBTPL-002
139	Rony Mathew	1NH13CS749	NTT Data	NH-CS-17-NTTDGDSPL-010
140	Satyaraj S Moily	1NH13CS750	Eurofins IT	NH-CS-17-EITSIPL-012
141	Shivam Pandey (S/O.Bindbasini)	1NH13CS751	NTT Data	NH-CS-17-NTTDGDSPL-011
142	Sravanthi D	1NH13CS752	ICT Technologies	NH-CS-17-ICTHTSIPL-006
143	Sridharan S	1NH13CS753	Cerner	NH-CS-17-CHSPL-023
144	Supriya G	1NH13CS754	Amazon	NH-CS-17-ADC-003
145	Suresh O	1NH13CS755	ICT Technologies	NH-CS-17-ICTHTSIPL-007
146	Sushma M	1NH13CS756	Incadea	NH-CS-17-IIPL-008
147	V Suraj Reddy	1NH13CS758	ICT Technologies	NH-CS-17-ICTHTSIPL-008
148	Yashvi Solanki	1NH13CS761	ICT Technologies	NH-CS-17-ICTHTSIPL-009
149	Arpitha B B	1NH14CS401	Datacorp Traffic	NH-CS-17-DTPL-001
150	Chaithra P	1NH14CS404	Exotel	NH-CS-17-ETPL-001
151	Madhu B	1NH14CS406	24/7	NH-CS-17-24/7-001
152	Mahesha G	1NH14CS407	Datacorp Traffic	NH-CS-17-DTPL-002
153	Smitha Jagadish J	1NH14CS412	Zapcom Solutions	NH-CS-17-ZCSPL-001
154	Soujanya Mary K	1NH14CS413	Exotel	NH-CS-17-ETPL-002



4.5 Professional Activities (20)

4.5.1 Professional societies/chapters and organizing engineering events (5)

ISTE, CSI student chapters conducts various events.

NHCE received Largest Student Branch Award and Best Accredited Student Branch Award for conducting quality events from CSI at Bhubaneshwar.

Various student clubs are formed under these chapters and has the following broad objectives:

> Plan & organize technical programmes and activities, such as special lectures, workshops, Seminars, symposia, national and international conferences and exhibitions etc. for benefit of students on regular basis.

> Provide a platform to students to exchange ideas and information on the topics of their interest like curriculum, job market, higher studies, emerging technologies, contemporary issues related to Computer Science and Engineering.

- > Encourage team work and self-reliance among students.
- > Augment various aspects relating to professional development of students.



Fig. 4.1 Largest Student Branch Award and Best Accredited Student Branch Award function





Fig. 4.2 Largest Student Branch Award and Best Accredited Student Branch Award



Website Link for professional body and other activities

Sl. No	Professional body/other activities	Website Link
1.	CSI	http://newhorizonindia.edu/nhengineering/department- of-computer-science-engineering/category/computer- society-of-india/
2.	IEEE	https://site.ieee.org/sb-nhce/
3.	CTE	http://newhorizonindia.edu/nhengineering/department- of-computer-science-engineering/dept-of-cse-has- taken-the-initiative-for-nhce-becoming-an- educational-institution-member-of-consortium-for- technical-education-cte/
4.	Club activities	http://newhorizonindia.edu/nhengineering/department- of-computer-science-engineering/category/club- activities/
5.	Student Achievements	http://newhorizonindia.edu/nhengineering/department- of-computer-science- engineering/category/achievements/
6.	Extension Programme	http://newhorizonindia.edu/nhengineering/department- of-computer-science-engineering/extension- programme-on-cyber-security-awareness-programme/
7.	Seminars and Workshops	http://newhorizonindia.edu/nhengineering/department- of-computer-science-engineering/category/Seminars- and-workshops/
8.	Techorizon 2020	http://newhorizonindia.edu/nhengineering/department- of-computer-science-engineering/techorizon-2020/
9.	Co-curricular Activities	http://newhorizonindia.edu/nhengineering/department- of-computer-science-engineering/category/co- curricular-activities/
10.	International education tour to Germany	http://newhorizonindia.edu/nhengineering/department- of-computer-science-engineering/category/news/
11.	Club newsletters	http://newhorizonindia.edu/nhengineering/department- of-computer-science-engineering/clubs-newsletters/
12.	Department newsletters	http://newhorizonindia.edu/nhengineering/department- of-computer-science-engineering/department-news- letters/



Events organized during AY: 2019-2020

Sl. No	Event Type	Event Name/ Title	Resource person	Duration/ Date
1.	Online Webinar	Cross Platform Mobile App Development	Mr. Manish Singh ATS Learning Solutions, Bangalore	30-07-2020
2.	Project Exhibition	TECHORIZON 2020	Mr. Vinay Khande Associate Consultant at Allstate India	29-06-2020
3.	Online Alumni Meet	Understanding Industry Needs - Challenges Faced Moving from Campus to Corporate	 Srilekha Chandrashekar, Senior Technology Consultant at Ernst and Young, California Smithashree Senior engineer at Continental AG, Bangalore Christy Lalu, Senior Project Engineer at Wipro Technologies Kavitha, TCS as SAP Functional Consultant Shivangi Anand, senior software engineer in Wipro. Aishwarya Rajeev, cloud associate and a certified Aws solution architect associate Vinay khande, Ethical Hacker. Sindhusuta Mohanty, IT consultant in ITC Infotech, 	27-06-2020, 10 AM (IST)



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4.	Webinar	Kubernetes and Openshift	 Himanshu Dhar, Ciitibank Mr. Mithun H R from IBM 	26 -06-2020 7.30 PM (IST)
5.	Webinar	Open POWER Academia and Research Webinar from University of Brasilia and IBM	 Dr Alba Cristina Melo from University of Brasilia Lutz Kirchner from GTS Data 	19-06-2020, 6.30 PM(IST)
6.	Online FDP	Image & Video processing Techniques using Python Programming	Mr. Ganesh Attarde, Founder, GB Softronics Solutions, Nashik.	15-06-2020 to 19-06-2020
7.	Webinar	Vertica- Datawarehouse database	1.Dr. SunitaChandrasekaranUniversity ofDelaware2. Ms. ClarisseHedglinIBM	12-06-2020 7.30 PM(IST)
8.	Webinar	IBM - Object Automation Webinar - BIG DATA & AI	Dr. Linton Ward from IBM presented Covid-19 Response Capability with IBM Power Systems	08-05-2020 7.30 PM(IST)
9.	Online Webinar	BigData and AI	Dr. Athirai Irissappane, University of Washington- TACOMA, Dr. Linton Ward, IBM	08-05-2020
10.	Special placement readiness discussion for the 2017-2021 batch	Design Thinking and Placement Strategic Planning	Mr. Vinay Khande, A certified Ethical Hacker and CCNA certified professional working as Associate Consultant in Allstate Solutions Pvt Ltd.	04-03-2020
11.	Expert Lectures	.NET Technologies	Mr. Santosh B.G, Software developer from TCS	27-02-2020



12.	Expert Lectures	Developed software testing	Mr. Vinod Unnikrishnan, Product manager from Dell	27-02-2020
13.	Student Club Activity	Technologic event	-NA-	27-02-2020
14.	Coding contest	Coding contest	-NA-	25-02-2020
15.	Motivational Talk	Emotional Intelligence for being smart in studies	Dr. A. Nagasubramaniam (WgCdr - VR)	08-02-2020
16.	Workshop	Introduction to Ethical Hacking	Mr. Vinay Khande, Associate Consultant and Certified Ethical Hacker, All states Pvt Ltd	08-02-2020
17.	Student Club Activity	CODESTORM	-NA-	07-02-2020
18.	Club event	Appatronics- 2K20	-NA-	06-02-2020
19.	Extension program	Cyber Security Awareness	Dr. Clara Kanmani, Associate Professor, NHCE	05-02- 2020
20.	Faculty Development Program	Deep learning	Mr. Sudiptha Mukherjee, Director, Solution Definition and Architecture, Technical Consultant, Sutherland Global Service, Bengaluru	28-01-2020 to 30-01-2020
21.	Alumni Talk	Machine learning	Mr. Tara Shankar, Product lead, AWS.	16-01-2020



22.	International Conference	International Conference on Innovative Research in Engineering, Management and Sciences (ICIREMS)	Dr. Shilpa MSRIT, Bangalore Mr. Sameer Infosys, Bangalore Dr. Hanuman, NHCE Dr. Pamela Vinitha Eric, NHCE	19-12-2019, 20-12-2019 & 21-12-2019
23.	Mini Project Competition	Best Mini- Project Competition	Dr. Pamela Vinitha Eric Dr. Hanuman Kumar Dr. Thirukumarani Ms. Clara Kanmani Mr. Muralidhara Sriram	15-11-2019
24.	Workshop	Cyber Security Awareness Workshop	Mr. Nagaraja, Director, IT Secure Systems	12-11-2019
25.	Seminar	Unlock Big Data with Vertica	Mr. Lokesh Sharma, Sales Director, India and SAARC, Microfocus, New Delhi.	05-11-2019
26.	Workshop	A Self Study Presentation on The Industry Expectations Through the Theory Of Multiple Intelligences	Dr. Sowmya	05-11-2019
27.	Expert Lecture	Agile Technologies in Industry	Mr. Vinod Unnikrishnan, Associate director, Virtusa,	04-11-2019
28.	Alumni Talk	Alumini Talk	Ashwin Uday Kumar Senior technical analyst, Manhattan Associates Vaibhav Sharma HashedIn Technologies, Brijesh K R Software Engineer in Happiest	26.10.2019



			Minds Technologies Pvt Ltd. Sreedevi R VMware.	
29.	Workshop	Workshop on Mobile Application Development Using Android	Mr. Jayashankar, Senior Software Engineer, Integra Micro systems	26-10-2019
30.	MOU with Infibridge	MOU with Infibridge	Mr. Girish Nuli, the CEO of Infibridge.	30-10-2019
31.	Industrial Visit	Industrial Visit	Mr. Raghavendra, Asst. Manager HR & Admin, VOLVO Construction	18-10-2019
32.	Club Event	Event X	Dr. Sowmya HOD Life skills department Mrs. Rajitha Nair faculty from CSE	16.10.2019
33.	Seminar	Enhancement of HP Centre of Excellence with new plans and activities	Mr. Lokesh Sharma, Sales Director, India and SAARC, Microfocus, New Delhi	19-09-2019
34.	Workshop	Big Data and its Technologies Workshop	Mr. Vithal Sampagar, Module Lead, Impetus Infotech India	14-09-2019
35.	Expert Lecture	Identifying and Preparing For The First Job	Mr. Sudiptha Mukherjee, Principal Solution Designer, Sutherland Global	14-09-2019
36.	Club Event	Tech Talk on Advanced CSS	Anand R Patil President Ace club	13-09-2019



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37.	Workshop	Introduction to information security and its importance	Mr. Vinay Khande, Associate Consultant, Allstate	29-08-2019
38.	Club Event	Fundamentals of Blockchain	Ms. Jaya Sr. AP from CSE department	28-08-2019
39.	Expert Lecture	Expert Lecture on Usage of DBMS in the Industry	Mr. Vinod Unnikrishnan Associate Director, Virtusa	24-08-2019
40.	Expert Lecture On AI/ML	Expert Lecture On AI/ML	Mr. Sudiptha Mukherjee, Principal solution designer, Sutherland Global	24-08-2019
41.	Motivational Talk	Introduction to Emotions and Management of Emotions	Mr. Eshwar Sundaresan, Life Skills Trainer,	24.08.2019
42.	CSI-Student Chapter Inauguration	CSI-Student Chapter Inauguration for AY 2019- 20	Mr. Ritwik Batabyal, Chief of Engineering and Technology and Head of NextGen Business Products at Wipro	23-08-2019
43.	Club Event	Hour of Code	-NA-	23-08-2019
44.	Hackathon	American Express Codestreet'19	-NA-	10-08-2019
45.	Expert Lecture on Cyber Security Fundamentals	Cyber Security Fundamentals	Mr. Abbas Isaac, Director, CTS	10-08-2019
46.	Mobile Application Development Lab Inauguration	Mobile Application Development Lab Inauguration	-NA-	02.08.2019



Photographs of events organized



Fig. 4.3 Coding contest certificate distribution by HOD's of CSE, ISE & MCA



Fig. 4.4 International Conference on Innovative Research in Engineering, Management and Sciences (ICIREMS- 2019) in association with VTU and cosponsored by Capgemini from 19-12-2019 to 21-12-2019.





Fig 4.5 Paper presentation by the participants in ICIREMS- 2019



Fig 4.6 ICIREMS- 2019





Fig 4.7 Mini Project Competition held on 15-11-2019

Sl. No.	Event Type	Event Name/ Title	Resource person	Duration/ Date
1.	Knowledge Transfer Session	Vertica database	Ms. Padma Priya Ms. Jisha Mariam Jose	18.07.2019
2.	Tech fiesta @ Capgemini	Tech fiesta @ Capgemini	-NA-	31-05-2019
3.	Mini Project Competition		Mr. Ram Kumar, Senior Technology Specialist, Wells Fargo Solutions India Pvt. Ltd Mr. Muralitharan, Technical Lead, Emids Technologies Pvt.Ltd	02-05-2019
4.	National level Project Exhibhition	Techorizon' 2019	Mr. Sathiyaraj, Ms. Sri Vidya, Mr. Ashwin Udaya Kumar, Ms. Archana, Mr. Deepak Kumar, Ms. S. Sumitha,	27-04-2019

Events organized during AY: 2018-2019



			Ms. Dwithishree,	
			Ms. S. Prathibha	
			Wis. S. Framiona	
5.	National Conference	Advanceme nts in Computer Science & Engineering	-NA-	24-04-2019
6.	Expert Lecture	"AGILE" and "SDLC".	Mr. Vinod Unnikrishnan Associate director, Virtusa technologies,	17-04-2019
7.	Club Event	Current Trends in Data Analytics	Mr. Sanketh S Huddar, 6 th Sem CSE, NHCE	17-04-2019
8.	Expert Lecture	"AGILE" and "SDLC".	Mr. Vinod Unnikrishnan Associate director, Virtusa technologies,	17-04-2019
9.	Club Event	Android App development workshop	Mr. Sivan Chakraborty, NHCE	11-04-2019
10.	Club Event	Android App development workshop	Mr. Sivan Chakraborty, NHCE	11-04-2019
11.	Industrial Visit	Industrial Visit	Mr. Binoy K, Wipro campus, Mr. Mohan Kumar, Wipro	10-04-2019
12.	Industrial Visit	Industrial Visit	Mr. Binoy K, Wipro campus, Mr. Mohan Kumar, Wipro	10-04-2019
13.	Expert Lecture	Usage of DBMS in industries	Mr. Vinod Unnikrishnan Associate director, Virtusa technologies	09-04-2019
14.	Expert Lecture	Usage of DBMS in industries	Mr. Vinod Unnikrishnan Associate director, Virtusa technologies	09-04-2019
15.	Expert Lecture	TCP/IP", and "AI/ML	Mr. Bhuvneshwar Chouksey, R & D team, Nokia Networks, Bangalore	08-04-2019
16.	PTM	Parent- Teacher Meeting	-NA-	23-03-2019



17.	Workshop	Data Science and Machine Learning Hands-On Using R Programming	Mr Vinay Haritsa, Data Engineer, Vtricks Technologies	19-03-2019
18.	Workshop	Data Science and Machine Learning Hands-On Using R Programming	Mr Vinay Haritsa, Data Engineer, Vtricks Technologies	19-03-2019
19.	Club Event	Hackathon	-NA-	11-03-2019
20.	Club Event	Hackathon	-NA-	11-03-2019
21.	Alumni Talk	Introduction to Data Science	Pruthvi Diwakar Hegde, Harish T, Ajay Raghunathan	09-03-2019
22.	Alumni Talk	Introduction to Data Science	Pruthvi Diwakar Hegde, Harish T, Ajay Raghunathan	09-03-2019
23.	FDP	Big Data Analytics with Hadoop- Apache Spark	Mr. Sachin Mudholkar, Chief Technology Officer in Talent pod.	08-03-2019
24.	Seminar	Changing face of success	Dr Asha Sidd Banjara Academy	01-03-2019
25.	Coding contest	Coding contest	-NA-	20-02-2019
26.	Zoom tech talk	Project Management for student's project	Suresh Thiagarajan, Director	20-02-2019
27.	Workshop	Introduction to Ethical Hacking	Mr. Vinay Khande, Associate Consultant, Allstate	08-02-2019



28.	FDP	VTU sponsored five days Faculty Development Programme on Big Data Analytic	Dr. Suresh, Director, CIT, Gubbi, Executive Council Member, VTU, Chairman IE, Tumkur, Mr. Kumar Saurabh, Senior Data Scientist, Mind Tree, Mr. Prabakar Reddy, Big Data Engineer, Amazon Web Service Dr. Kamatchi Priya, Mr. Kalyan Chembeti Principal Big Data, Specialist Analytics, Mr. Chandrsekhar, Senior Software Engineer, Impetus Infotech, Mr. Sachin, Sr. Principal - AI Technology, Bangalore, Ms. Jisha Mariam Jose, CSE	21-01-2019 to 25-01-2019
29.	FDP	Machine Learning & Artificial Intelligence Fundamentals	Mr Sachin CTO Talentpod	07-12-2018
30.	РТМ	Parent- Teacher Meet	-NA-	24-11-2018
31.	Industrial Visit	Industrial Visit to Data-Center	Ms. Sunitha, senior trainer Jetking	18-11-2018
32.	Mini Project Competition	Best Mini- Project Competition	Mr. Ram Kumar, Senior Technology Specialist, Wells Fargo Solutions India Pvt. Mr. Muralitharan, Technical Lead, Emids Technologies Pvt.Ltd.	09-11-2018
33.	Club Event	Business ideas & Quiz - Volume II	-NA-	31-10-2018
34.	IBM Tech meet up	IBM Tech meet up on Artificial Intelligence	The resource persons were from IBM, H20 and PES group of institutions	31-10-2018



				1
35.	Club Event	Work shop on Mobile Application Development	Mr. Pranav F Computer Science Engineering, NHCE.	26-10-2018
36.	HR skill	HR skills - How to handle HR round	Mr Ashwin Kumar, senior HR from L& T Infotech	13-10-2018
37.	Workshop	Python for data science and machine learning	Mr. Mahadeva Prabhu, Technical Trainer, Be Taught Learning Solutions.	06-10-2018
38.	Club Event	Entretien	-NA-	05-10-2018
39.	Club Event	Blank Coding	-NA-	05-10-2018
40.	Overseas Education Session	Overseas Education Session	Global Reach Enterprises	04-10-2018
41.	Industrial Interaction	Industrial Interaction - VMWare Academic Initiatives	Mr. Sachin VMWare	03-10-2018
42.	Motivationa l talk	Motivational talk by ED cell	Mr. Gaurav Singh Wadhwani Foundation	12-09-2018
43.	Extension Program	One-day session on MS-Office	Ms. Yogitha	08-09-2018
44.	High Profile Motivational Talk	Life Changing Angles for Success	Rajdeep Manwani Professor & amp; Co- Ordinator, Department of Commerce, Jain University.	08-09-2018
45.	Industrial Visit	Cloud Foundry - Tech at SAP Labs	-NA-	08-09-2018
46.	Extension Programme	One-day session on MS-Office	Student volunteers	08-09-2018



47.	Discussion Session	HPE Discussion Session	Mr. Ravi Gupta, HPE executive, Delhi	06-09-2018
48.	Alumni Talk		Mr. Tarun, Senior Consultant, Deloitte Archana, Business Systems Analyst, VMware Mr. Syed, Software Engineer, Infinite Computer Solutions	01-09-2018
49.	CSI Inauguration	CSI Student Chapter Inauguration	Dr.S. Prakash, past chairman, CSl, Bangalore chapter.	31-08-2018
50.	Workshop	AI &ML	-NA-	11-08-2018



Photographs of events organized



Fig. 4.8 Industrial Visit to Data-Center on 18-11-2018



Fig. 4.9 Blank Coding held on 05-10-2018





Fig 4.10 Industrial Interaction - VMWare Academic Initiatives happened on 03-10-2018



Fig. 4.11 National Conference on Advancements in Computer Science & Engineering - NCACSE 2019 on 24-04-2019





Fig. 4.12 Coding contest certificate distribution by Dean Academic and CSE HOD on 20-02-2019



Fig. 4.13 Department of CSE hosted VTU sponsored five days Faculty Development Programme on Big Data Analytics from 21-01-2019 to 25-01-2019 in association with CSI





Fig.4.14 CSI Inauguration for AY-2018-2019 held on 31-08-2018



Events organized during AY: 2017-2018

Sl. No.	Event Type	Event Name/ Title	Resource person	Duration/ Date
1.	Placement Training for Non-Circuit Branches	C and Data Structure	Mr. Omprakash Shyamalan	11-06-2018 to 18-06-2018
2.	National Level Project Exhibition & Conference	Techorizon '18	Mr. Tarun Mootheoath Mr. Jagadeesh R Ms. Dwithishree H. S	11-05-2018
3.	FDP	Cloud Computing	Mr Ramkumar, Special Consultant, Jetking	13-04-2018
4.	Training	HP Vertica	Mr. Kushwanth Country Head of Big data, HPE	10-07-2017 to 15-07-2017

Photograph of event organized



Fig.4.15 HP Vertica and Big data Training



4.4.2 Publication of technical magazines, newsletters, etc. (5)

In the beginning of the Semester, the Head of the Department along with faculty coordinator conducts a meeting with the pre final year students to select the student editors. Two interested students will be selected as student editors. Every month, the activities conducted in the department are recorded and documented. At the end of the Semester, these documents are properly designed and the Newsletter of that Semester will be released.

Sl. No.	Name of the Magazine/ News Letter	Month/ Volume No.	Name of the Chief editor	Name of the Associate editor	Student editors
		Acade	emic Year 2019-20		
1	Newsletter November 2019-June 2020	November 2019- June 2020 Volume 2	Dr. B. Rajalakshmi	Ms. Alpha Vijayan	1) Sainath G V 8 th Semester CSE 2) Harshini K 8 th Semester CSE
2	Newsletter August 2019- October 2019	August 2019- October 2019 Volume 1	Dr. B. Rajalakshmi	Ms. Alpha Vijayan	1) Sainath G. V 7 th Semester CSE 2) Sowmya P. B 7 th Semester CSE
		Acade	mic Year 2018-19		
3	Newsletter May 2019- July2019	May 2019- July 2019 Volume 4	Dr. B. Rajalakshmi	Ms. Alpha Vijayan	1) Sainath G. V 7 th Semester CSE 2) Sowmya P. B 7 th Semester CSE
4	Newsletter February 2019-April 2019	February 2019- April 2019 Volume 3	Dr. B. Rajalakshmi	Ms. Alpha Vijayan	1) Sanketh. S. Huddar 6 th Semester CSE 2) Suhail. A 6 th Semester CSE
5	Newsletter November 2018-January 2019	November 2018- January 2019 Volume 2	Dr. B. Rajalakshmi	Ms. Alpha Vijayan	1) Sriram Kaluva Gupta 6 th Semester CSE 2) Krishna Vineeth. P 6 th Semester CSE
6	Newsletter August 2018- October 2018	August 2018- October 2018 Volume 1	Dr. B. Rajalakshmi	Ms. Alpha Vijayan	1) Kajol Shamdasani 5 th Semester CSE 2) Varun Kumar Reddy 5 th Semester CSE
		Acade	emic Year 2017-18		
7	Newsletter January 2018- July 2018	January 2018- July 2018 Volume 2	Dr. B. Rajalakshmi	Ms. Alpha Vijayan	1) M.K. Subramani 6 th Semester CSE 2) H.D. Nidhishree 6 th Semester CSE
8	Newsletter August 2017- December 2017	August 2017- December 2017 Volume 1	Dr. B. Rajalakshmi	Ms. Alpha Vijayan	1) Rohit Mulay 5 th Semester CSE 2) Ashwini.P 5 th Semester CSE



4.4.3 Participation in inter-institute events by students of the program of study (10)

Participation of students in events/ conferences organized by other institutes during last 3 academic years and their achievements in the same is presented below along with event photographs.

Within State

Date / Session	Event	Organized by	Team/ Participants	Remarks
29-02-2020	Blind Coding	Dept of Computational and Data Sciences, IISC , Bangalore	Ms. Kundana – I Place, Ms. Madhura - II Place Ms. Yagna – III Place	Fourth Semester Computer Science and Engineering students have won in the programming contest Blind coding organized by Dept of Computational and Data Sciences, IISc, Bangalore during the Open Day 2020
04-02 2020	National Level Inter- Collegiate Tech Fest	IBM	Mr. Ruman 1NH17CS112 Mr. Sujay Hazara 1 NH17CS127 Mr. Gulshan 1NH18CS127	Students from New Horizon College of Engineering (CSE & ISE) secured the 1 st place among 10 teams
03-02-2020	Hackerverse Hackathon On AI Pollution Control	IBM India Pvt ltd	Ruman Ahmed Shaikh Sujay Hazra	IBM India Pvt ltd
03-02-2020	Xactitude – National Level College Fest- Hackathon	Kristu Jayanti college	Ruman Ahmed Shaikh Sujay Hazra	Xactitude – National level college fest- hackathon
02-02-2020 & 03-02-2020	Pravega'20. National Level Street Plav Fest at St. Claret college	IISC	Keerthana K Bhat, Siri Soundarya, Sreehari N R of 6th Sem and Gouri Rajesh, Akshaya of 4th Sem students	Secured 3 rd place in Street Play – Won 1 st place in Footprints at St. Claret college – Pravega'20, National Level Street Play Fest at IISC College on February 2 and 3, 2020
27-01-2020	Street play	St. Joseph College of Commerce	Keerthana K Bhat, Siri Soundarya, Sreehari N R of 6th Sem and Gouri Rajesh, Akshaya of 4th Sem	Students won 1st place in Street play
09-01-2020	Fashion show	Lasya, National level Inter- collegiate cultural fest, CMS Jain	Sparsha Srinath	Secured 3 rd place in Fashion show for the theme women empowerment by showcasing the example of Draupadi to convey to the audience



				that women aren't any lesser than men
18-10-2019	Sap Semicolon Hackathon 3.0.	SAP	Ms. Shreya Pradeep 1NH18CS177	III Semester CSE student Ms. Shreya Pradeep(1NH18CS177) has been declared as one among the Top 7 national finalists in the SAP Semicolon Hackathon 3.0.
02-07-2019	Secure & Private AI Scholarship Challenge	Udacity, sponsored by facebook	Mr. Sanketh Huddar 1NH16CS033	He bagged the "Secure and AI Scholarship Challenge. He is one among 5000* students selected out of more than 7Lakh applications across the Globe. He is also handling the coordination and Point of Contact (PoC) of the Challenge
12-03-2019 to 14-03-2019	ACCELATHON 2019	NHCE in association with Bangalore chamber of industry and commerce (BCIC)	Moni Krithika R Karthiga D R Chaithanya Namratha	Won first place cashprize: Rs. 30000 Team-Shadow knight (6 th Sem CSE) topic- smartstick9lot solution to blind people
12-03-2019 to 14-03-2019	ACCELATHON 2019	NHCE in association with Bangalore chamber of industry and commerce (BCIC)	Sanketh of 6 th Sem CSE and his team members	Won1st Runner up team-consolidated topic- Modular Satellite Bus (Space grade and ready to fly in an affordable price of Rs 8,500
12-03-2019 to 14-03-2019	ACCELATHON 2019	NHCE in association with Bangalore chamber of industry and commerce (BCIC)	Kishor Chandra, Prakash Kumar Rakesh Kumar Chakramani Joshi Darshan Shan (6 th Sem CSE)	Won 2st runner up team –Ace Topic- Evolve (Solution for students Mentoring and career guidance)
12-03-2019 to 14-03-2019	ACCELATHON 2019	NHCE in association with Bangalore chamber of industry and Commerce (BCIC)	Ankit Tyagi of 6 th Sem CSE and his team members	Won 2 nd runner up Team-Waffles Topic- Eliminate Surgical Narcotics through Intelligent ultrasound
12-03-2019	VTU Rank Holder	VTU	Ms. Sanya Dikshit bearing USN- 1NH14CS162 5th rank in VTU university	Ms. Sanya has secured 5th rank in VTU university and also college department topper of batch 2014- 18. She has secured the first position in Tech horizon for the final Semester project



	1	Г	Г	
				competition with more
				than 100 projects
09-03-2019	Hackathon	Edge Verve and Hackerearth at Infosys campus	Vinay Kumar Jaiswal, Prakesh Vinod of 6 th SEM	Winner of jury special award at the hackathon organized by edge verve and hacker earth and became Assitedge community version certified members
07-03-2019	Aerothon - AIRBUS hackathon	Airbus India	Madhumitha R Ayush Bhardwaj of 6 th C Sem	Participated in final round of AIRBUS hackathon- Aerothon" After clearing the 1 st round of coding cotest which was open for all over india the team won 10,000 inr for the performance
15-02-2019	Poster making	National Productivity Council	Rachana BS of 6 th B Sem	Participated in poster making for the world productivity week 12 th -18 th and got selected to national level
11-11-2018	Fashion Show	PES university Electronic city campus	Huma Fahreen 7 th Sem Swapnil Konar 7 th Sem Mohan Yadav 3 rd Sem	Won first place in the event Fashion Show at Maaya 2018 an intercollegiate Techno
04-11-2018	Machine Learning workshop using TensofFlow	Indian Institute of Science Bangalore	Rohit Mulay 7 th Sem	He (webmaster IEEE- NHCE) represented IEEE NHCE Student branch at an IEEE Event on Machine Learning workshop using TensofFlow
27-10-2018	Fashion Show	Nagarjuna college of engineering and technology	Won first place in the event fashion Show at 1KYA FIESTA 2018	Nagarjuna college of engineering and technology
15-10-2018 to 17-10-2018	Inter zonal /single zonal tournament 2018-2019 in Wrestling(74KG) competition	Sapthagiri college of engineering	Banu Prathap Reddy 3 rd Sem	Won Gold Medal in inter zonal /single zonal tournament 2018-2019 in Wrestling(74KG) competition
15-10-2018 to 17-10-2018	Inter zonal /single zonal tournament 2018-2019 in Judo 63KG competition	Sapthagiri college of engineering	Kavya A S 5 th Sem	Secured the Runner up place in inter zonal /single zonal tournament 2018-2019 in JUDo 63KG competition
15-10-2018 to 17-10-2018	Inter zonal /single zonal tournament 2018-2019 in Wrestling (62KG) competition	Sapthagiri college of engineering	Kavya A S 5 th Sem	Secured the third place in inter zonal /single zonal tournament 2018- 2019 in Wrestling (62KG) competition
08-10-2018	News/ content editor	LinkedIn India	Anushma Dubey 7 th Sem	Currently working in LinkedIn with their editorial team she has



				received the post of a news/ content editor through zero Chaos work force solutions Pvt. Ltd
03-10-2018 & 05-10-2018	Kabaddi(M)	Spardha infini	Banu Prathap Reddy 3 rd Sem	Secured the first place along with his team members in Kabaddi(M)
14-09-2018 to 15-09-2018	Basket Ball competition	Bangalore central zone held in MSRIT	Mohan Sai Krishna 3 rd Sem	Secured the runner up place in the Basket Ball competition
05-09-2018 to 06-09-2018	Seminar	NIMHANS convention center Bangalore	Inducuri swetha vinay kumar Jaiswal, Harshini K, Ishita Nilesh Joshi, Aishwarya Iyer of 5 th Sem	Participated in a Seminar held by Indian technology congress

Outside the state

Date / Session	Event	Organized by	Team/ Participants	Remarks
08-02-2020	Small satellites	Unisec India	Mr. Vamsi Sainath, 1NH16CS033 7 th Sem CSE Vishwa Gopal Sanketh Huddar	Carried Vibrant activities related to small satellites under the banner of UNISEC India
08-02-2020	Young research Engineer award AT CanSat Launching Event	Jeppiar Institute of Technology (JIT), Chennai	Mr. Vamsi Sainath, 1NH16CS033 7th Sem CSE Vishwa Gopal Sanketh Huddar	Sanketh S Huddar, Vishwa Gopal, Sainath Vamshi of 7th Semester along with their NHCE R&D team members received Young Research Engineer Award
01-01-2020	ARISS SSTV Award	International Space Station (ISS)	Mr. Vamsi Sainath, 1NH16CS033 7th Sem CSE	Sainath Vamshi of department of Computer Science has received the ARISS SSTV Award from International Space Station (ISS) for receiving the images beamed by ISS when it passes over India
08-11-2019	Online and Functional Sat Nogs Ground Station.	Serbia Committee for Space Research and Development! - CPSD	Mr. Vamsi Sainath, 1NH16CS033 7th Sem CSE	First in INDIA. ONLINE AND FUNCTIONAL SatNOGS GROUND STATION. We can now perform many observations of passing by Satellites



				may it be Imaging, Amateur Radio, Astronomy. Also, will be linked to the Serbia GS to Collaborate with CSPD (Serbia's former Yugoslavia) for the future INTERCONTINENT AL AEROSPACE COMMAND (ICAS). One of the major milestones achieved by Indo-Serbia Collaborations!
September 2019	Mars 2020	NASA	Sanketh S Kuddar Vamsi Sainath 1NH16CS033	NASA's Mars 2020 Rover is heading to the Red Planet in 2020. NHCE is the First Institution in Asia to send its name to Mars with Rover two of computer science Students names are included in Mars Rover of NASA!
25-09-2019	Serbia International CanSat Competition 2019	Serbia International CanSat Competition 2019	1. Sanketh S Huddar – VII Sem 2. Vamsi Sainath – 1NH16CS033 VII Sem	Serbia International CanSat Competition 2019 Teams from NHCE have participated in building their CanSats. Two students from CSE department have participated in the satellite building competition.
August 2019	Space Quiz	ISRO and MYGOV	Mr.G.V. Sainath 1NH16CS033	Mr.G.V. Sainath bearing USN 1NH16CS033 participated in a "Space Quiz" that was organized by ISRO and MYGOV.
17-06-2019 to 29-06-2019	International summer space school	Russian Academy of Cosmonautics, Samara Space Centre, Samara University with the Support of United Nations Office for Outer Space Affairs, University Space Engineering Consortium and International Astronautical Federation	Rohit Mulay IV-year CSE Viswa – III-year CSE	6 Students from NHCE team (2 from CSE) has been selected for the World Famous "The International Summer Space School: Future Space Technologies and Experiments in Space XV Summer Space School to be held at Samara National Research



				University, Samara, RUSSIA.
27-02-2019	Aviation quiz	St. Thomas mount, Chennai	Sainath G V of 6 th A Sem	Participated and successfully completed aviation quiz consisting of 3 levels hosted by orient flights
31-07-2018	Exchange student programme	CMQ (campus des métiers etdes qualification)2E energie et Efficacite Energeique))	Spandana 7 th Sem	She has attended Master CS at the university of Rouen Normandy from 13 th Sep 2018 to 2 nd Dec 2018
20-07-2018 to 29-08-2018	Internship	University of Illinois at Urbana Champaign in Illinois USA	Rohit Mulay (CSE Final Year)	He has successfully accomplished his internship at the IBM- Illinois center for cognitive computing system research university of Illinois at Urbana- chamaiga in Illinois USA
10-07-2018	Exchange student programme	Universite Le havre Normandie	Anmol Z George of 7 th Sem	He has attended 1 st year master degree computer science in UFR science and technology from 13 th sep 2018 to 10 th December 2018



Photographs of the events participated



Fig. 4.16 National Level Inter-Collegiate Tech Fest Hackathon–IBM on 04-02-2020

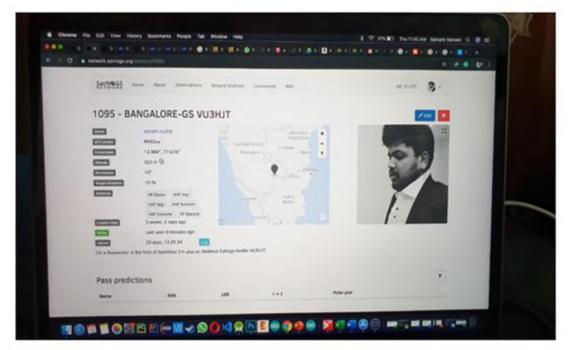


Fig. 4.17 Online and Functional SATNOGS ground station



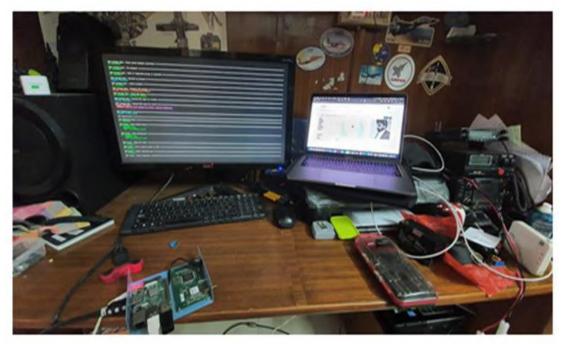


Fig. 4.18 Online and Functional SATNOGS ground station



Fig. 4.19 NHCE Students attended XV International Space Summer School at Samara International Research University at Russia from 15-06-2019 to 30-06-2019





4.20 Rohit Mulay completed internship at the IBM-Illinois Center for Cognitive Computing System Research, University of Illinois



Journal articles Published by students during the last 3 academic years and their achievements in the same is presented below:

	Academic Year 2019-20						
Sl. No	USN	Name of the Student	Title of the Paper	Journal	Date of Publication		
1	1NH16CS079, 1NH16CS093, 1NH14CS091	Eric Pooja Nimje, Roshlin Acharya, Prachi Singh	Face emotion recognition techniques		Dec-19		
2	1NH16CS064	Moni Krithika S	MoC++ Interpreter for the C++ language		Dec-19		
3	1NH16CS009, 1NH16CS069	Anand R Patil, Nasir Hasan	We Vote – Secure voting using Blockchain				
4	1NH16CS077	P. Giri Kishore, Athira Ajayakumar	Intelligent Character Recognition- Character detection using Neural Networks		Dec-19		
5	1NH16CS069	Nasir Hasan Dilawar	Big Data in Telecommuni cation	International Journal of Scientific Research in Computer Science, Engineering	Dec-19		
6	1NH16CS073 1NH16CS074, 1NH16CS145	Nirupashree S, Nisha R, Kalyan Naidu M	A review on emotional intelligence		Dec-19		
7	1NH17CS745	Savion Mario Sequeira	Overview of Use of Raspberry Pi in Implementation of Machine Learning and Image Processing	and Information Technology ISSN: 2456- 3307 UGC Journal No: 64718 Impact Factor = 4.032	Dec-19		
8	1NH16CS094	S Sivan Chakravarthy	Analyzing Graph QL and implementing the framework on Android devices		Dec-19		
9	1NH16CS066	Namrata L Bemane	Safe-Ride: Automatic Detection of		Dec-19		



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	Academic Year 2018-19							
Sl. No	USN	Name of the Student	Title of the Paper	Journal	Date of Publication			
1	1NH15CS084	Nissi Thomas	Indexing solar with MySQL database	International Journal of Information	May-19			
2	1NH16CS112	Sumangala S	APACHE PIG as a platform for Data analytics	and Computing Science	May-19			
3	1NH16CS736	V.C Chandra	A survey of Big	Issn No:	May-19			



		Kishore	Data analytics-it's challenges	0972-1347	
4	1NH15CS092	Pranav M	Modelling cognitive states of pilots to minimize commercial aviation disasters		May-19
5	1NH15CS714	D. Sakthi Keerthana	Weather prediction using deep learning		May-19
6	1NH16CS086, 1NH16CS733, 1NH16CS750	Rahul Jain, B Sriram Gupta Kaluva, Sandhya Reddy	Machine learning: Supervised learning		May-19
7	1NH15CS148	Soundarya Saravan	Hand gesture recognition using convolutional Neural network		May-19
8	1NH15CS048	Harshitha H	Agricultural crop yield prediction using Machine learning		May-19
9	1NH15CS044	H.D Nidhishree	Literature survey on predicting Thyroid Cancer using machine learning algorithms		May-19
10	1NH16CS733	Sriram Gupta Kaluva	Data and Pre- Processing of data for Machine Learning		May-19
11	1NH16CS031	Edwin Benny	Dairy farm tracking using Blockchain		May-19

Sports Achievement AY 2019-2020

Sl. No.	Name	USN	Sem	Event	Tournament	Achievement
1	Anurag Rajshekar	1NH16CS701	VII	Basket Ball(M)	RIT VTU(BCZ) VTU(IZ)	RUNNER
2	Mohan Sai Krishna	1NH17CS082	V	Basket Ball(M)	RIT VTU(BCZ) VTU(IZ)	RUNNER



	Muskan	1)111000117		Basket Ball	RIT	WINNER
3	Agrawal	1NH18CS117	III	(W)	KREEDOSTAVA	III PLACE
4	Mushtaq	1NH17CS086	V	Badminton	VTU-SPRADHA	III PLACE
4	Ahmed Ks	1111705080	v	(M)	2019	WINNER
5	Preksha	1NH17CS102	V	Badminton (W)	VTU	III PLACE
6	KN Sripriya	1NH17CS060	V	Badminton (W)	VTU	III PLACE
7	Kavya A S	1NH16CS050	VII	Wrestling Judo	VTU	BRONZE MEDAL
8	Tanith T	1NH18CS194	III	Football	SPRADHA 2019	RUNNER
9	Nitish Naik	1NH19CS421	III	Basket Ball(M)	VTU(IZ)	WINNER
10	Nitish Naik	1NH19CS408	IV	Basket Ball(M)	DEVADAN CUP	WINNER
11	Mohan Sai Krishna	1NH17CS082	VI	Basket Ball(M)	DEVADAN CUP	WINNER
12	Banu Prathap Reddy	1NH17CS022	VI	Kabaddi	SJCC	RUNNER
13	Jayesh Naidu	1NH18CS080	IV	Handball	CUFEE	RUNNER
14	Devendra Desai	1NH18CS057	IV	Handball	CUFEE	RUNNER
15	Ashwij Kumar	1NH18CS031	IV	Handball	CUFEE	RUNNER

Sports Achievement AY 2018-2019

S. No.	Name	USN	Sem	Event	Tournament	Achievement
					BTL	WINNER
1.	Abhishek	1NH14CS001	VII	Volley Ball(M)	FISA	WINNER
					AMC	WINNER



					NEW HORIZON CUP	WINNER
	Mohan Sai	1NH17CS082		Basket	VTU(BCZ)	RUNNER
2.	Krishna		III	Ball(M)	NEW HORIZON CUP	RUNNER
				Kabaddi (M)	SPARDHA	WINNER
	Banu Prathap Reddy			Wresting	VTU	GOLD
3.	(Played VTU	1NH17CS022	III	Judo	NEW HORIZON	MEDAL
	Nationals)			Kabaddi (M)	CUP	WINNER
				Kabaddi (M)	RNSIT	WINNER
					KREEDOSTAV	WINNER
					M S RAMAIAH	WINNER
					SPARDHA	WINNER
4.	Madhuri Mandlem	1NH15CS067	IV	Basket Ball(W)	MALLESHWARA M	II RUNNERS UP
					5RVCE	WINNERS
					NEW HORIZON CUP	WINNERS
					VTU(BCZ)	WINNERS
					VTU(IZ)	WINNERS
					KREEDOSTAV	WINNER
5.	Tulasi Somaiah	1NH16CS078	v	Basket Ball(W)	M S RAMAIAH	WINNER
				2	SPARDHA	
						WINNER
					VTU	SILVER MEDAL
6.	Kavya A S	1NH16CS050		Wrestling Judo	VTU(BCZ)	II RUNNERS UP
0.	Kavya A S	1111005050	V	Volley Ball(W)	АМС	WINNER
					FISA	WINNER



					NEW HORIZON CUP	RUNNERS
					VTU(BCZ)	II RUNNERS UP
7.	Sameeksha P 1NH16CS100 VI	VI	Volley Ball(W)	АМС	WINNER	
					FISA	WINNER
					NEW HORIZON CUP	RUNNERS

Sports Achievement AY 2017-2018

Sl. No.	Name	USN	Sem	Event	Tournament	Achievement
1	Anurag Rajshekar	1NH16CS701	IV	Basket Ball(M)	KREEDOSTAVA	RUNNER
	j. i i				AZURA 2018	RUNNER
					MALLESHWARAM	RUNNER
					RV MOMENTUM	WINNERS
	Madhuri			Basket	KREEDOSTAV	WINNER
2	Mandlem	1NH15CS067	IV	Ball(W)	AZURA 2018	WINNERS
					DR AIT(VTU)	RUNNER
					BLDEACET (VTU)	RUNNER
3	Arun Kumar	1NH15CS708	VI	Kabaddi	BGS CUP	II RUNNERS UP
5	i un rumur			(M)	AZURA2018	WINNER
4	Tenzin Namdol	1NH14CS136	VIII	Football	AZURA2018	RUNNERS
5	G Naveen Sai Kanth	1NH15CS041	VI	Badminton (M)	AZURA2018	RUNNERS
6	Naveen Raj	1NH13CS732	VIII	Handball	VTU(BCZ)	WINNERS
7.	Bhavan A	1NH14CS021	VIII	Badminton (M)	AZURA 2018	RUNNERS



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CRITERION 5

FACULTY INFORMATION AND CONTRIBUTIONS

270



5. 1 Student-Faculty Ratio (SFR) (20)

S: F ratio = N/F; F = No. of faculty = (a + b - c) for every assessment year

a: Total number of full-time regular Faculty serving fully to 2nd, 3rd and 4th year of this program

b: Total number of full-time equivalent regular Faculty (considering fractional load) serving this program from other Program(s)

c: Total number of full time equivalent regular Faculty (considering fractional load) of this program serving other program(s)

Regular Faculty means:

Full time on roll with prescribed pay scale. An employee on contract for a period of not less than two years AND drawing consolidated salary not less than applicable gross salary shall only be counted as a regular employee.

Prescribed pay scales means pay scales notified by the Regulatory Authority/ Central Government and implementation as prescribed by the Central/State Government as the case may be. In case State Government prescribes lesser consolidated salary for a particular cadre then same will be considered as reference while counting faculty as a regular faculty.

N=No. of students= 3x where x is (approved intake + 20% lateral entry intake + separate division, if any)

Marks to be given proportionally from a maximum of 20 to a minimum of 10 for average SFR between 15:1 to 20: and zero for average SFR higher than 20:1.



UG

No. of UG Programs in the Department: 1

	Computer Science and Engineering									
	САҮ		CAY	Ym1	CAYm2					
	(201	9-20)	(201	8-19)	(201)	7-18)				
Year of Study	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students				
2nd Year	240	21	180	28	180	31				
3rd Year	180	28	180	31	180	26				
4th Year	180	31	180	26	180	31				
Sub Total	600	80	540	85	540	88				
Total	680		62	625		628				
Grand Total	68	80	625		628					



PG

No. of PG Programs in the Department: 01

Computer Science and Engineering									
Year of Study CAY (2019-20) CAYm1(2018-19) CAYm2(2017-									
	Sanction Intake	Sanction Intake	Sanction Intake						
1st Year	18	18	24						
2nd Year	18	24	24						
Total	36	42	48						
Grand Total	36	42	48						

SFR

No. of UG Programs in the Department: 1

No. of PG Programs in the Department: 1

Description	CAY (2019-20)	CAYm1(2018-19)	CAYm2(2017-18)				
Total No. of	716	667	676				
Students in the	Sum total of all	Sum total of all	Sum total of all				
Department(S)	(UG+PG) students	(UG+PG) students	(UG+PG) students				
No. of Faculty in	48	46	45				
the Department(F)	F1	F2	F3				
Student Faculty	14.92	14.50	15.02				
Ratio(SFR)	SFR1=S1/F1	SFR2=S2/F2	SFR3=S3/F3				
	Average S	SFR :14.81					
SFR=(SFR1+SFR2+SFR3)/3							
F=Total Number of	F=Total Number of Faculty Members in the Department (excluding first year						
faculty)							



Note: 75% should be Regular/full time faculty and the remaining shall be Contractual Faculty/Adjust Faculty/Resource persons from industry as per AICTE norms and standards. The contractual faculty will be considered for assessment only if a faculty is drawing a salary as prescribed by the concerned State Government for the contractual faculty in the respective cadre

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

Year	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY (2019-20)	48	0
CAYm1(2018-19)	46	0
CAYm2(2017-18)	45	0

Average SFR for three assessment years: 14.81

Assessment SFR: 20



5.2 Faculty Cadre Proportion (20)

The reference Faculty cadre proportion is 1(F1):2(F2):6(F3)

F1: Number of Professors required = 1/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

F2: Number of Associate Professors required = 2/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

F3: Number of Assistant Professors required = 6/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

Cadre Ratio Marks= [(AF1/RF1) +(AF2x0.6/RF2)+(AF3x0.4/RF3)] x 10

If AF1 = AF2 = 0 then zero marks

Maximum marks to be limited if it exceeds 20

Example: Intake = 60 (i.e. total no. of students= 180);; Required number of Faculty: 9; RF1= 1, RF2=2 and RF3=6

	Professors		Associate	Professors	Assistant Professors	
Year	Required F1	Available	Required F2	Available	Required F3	Available
CAY (2019-20)	3.00	6.00	7.00	10.00	23.00	32.00
CAYm1 (2018-19)	3.00	5.00	7.00	9.00	22.00	32.00
CAYm2 (2017-18)	3.00	6.00	7.00	9.00	22.00	30.00
Average Numbers	3.00	5.67	7.00	9.33	22.33	31.33

Cadre Ratio Marks [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 10 : **20.00**



5.3 Faculty Qualification (20)

Year	X	Y	F	FQ=2 x[(10X+4Y)/F]
2019-20	16	32	35.00	16.46
(CAY)				
2018-19	14	32	33.00	16.24
(CAYm1)				
2017-18	15	30	33.00	16.36
(CAYm2)				

Average Assessment: 16.35

5.4 Faculty Retention (10)

Description	2018-19 (CAYm1)	2019-20 (CAY)
No of Faculty Retained	38	33
Total No of Faculty	45	45
% of Faculty Retained	84	73

Average: 79.00

Assessment Marks: 8.00



5.5. Faculty competencies in correlation to Program Specific Criteria (10)

In order to prepare tomorrow's professionals for challenging and rewarding careers, the role of faculty in higher education is of exceptional importance. A professional teacher should possess essential competencies that develop as a result of changing needs of our educational community, diversity of student groups and rapid industrial growth. In the Department of Computer Science and Engineering, the faculty members, are motivated to participate in workshops, FDPs, MOOC courses, conference and paper publication etc. to enable them to be at par with the changing trends in technology. The knowledge and expertise gained by the faculty members are further used in the development of courses, project guidance etc.

Sl.No	Engineering (Specialization Area)	Relevant Courses in the Curriculum	Competent Faculty
1	Data Structures and Algorithms	Data Structures, Advances in Data structures, Algorithm Analysis and design	Dr. Prashanth CSR Dr. Guruprasad.N Dr. Pamela Vinitha Dr. Hanuman Kumar.V Dr. Clara Kanmani Dr. Nilima Kulkarni Dr. Venkata Ramana Dr. S. Sridevi Dr. Rachana P Mr. Sivabalan. N Ms. Gayathri. G.S Ms. Udaya.P Ms. Gayathri.T Ms. Rajitha Nair Ms. Heyshanthini Pandyakumari Ms. Teena
2	Electronics Based	Analog and Digital Electronics, Computer Organization, Microprocessor, ARM processors, Advanced Computer Architecture,	Dr. Thirukumaran Ms. Asha Rani Borah Mr. Santhosh Kumar.B Mr. Bhaskar Ms. Sheba Pari Ms. Vasantha M

Table 5.1 Faculty Competencies in Program Specific criteria



		Logic Design, Embedded Computing System, IOT	Ms. Dimple. W.G
3	Networks	Data Communication and Computer Networks, Cryptography and network security, Cyber forensics, Wireless sensor Networks, Advances in computer networks and network security	Dr. Prashanth CSR Dr. Jithendranath Mungara Dr. G. Pradeep Dr. Chandra Naik Dr. Clara Kanmani Dr. Thirukumaran Dr. Venkata Ramana Dr. Vinodha.K Dr. Rachana.P Dr. Viswanath Y Dr. Ashok Kumar PS Dr. Jaya Ms. Uma.N Ms. Beena B.M Ms. Sheba Pari Ms. Deepa Puranik
4	Cloud computing	Cloud Computing	Dr. Rajalakshmi B Dr. R. Chinnaiyan Dr. G. Pradeep Dr. B. Meenakshi Sundaram Dr. Ashok Kumar PS Mr. Sivabalan Mr. Muralidhara Ms. Padmapriya
5	Operating System	Operating system Unix Shell programming Unix System Programming Advances in Operating system	Dr. Rajalakshmi B Dr. PamelaVinitha Dr. Guruprasad.N Dr. Viswanath Y Dr. Beena.B.M Ms. Shanmugha Priya Mr. Manjunatha swamy Ms. Uma.N Ms. Soja Rani Ms. Pramila Rani
6	Software Engineering, Software Testing	Software Engineering, Software Testing	Dr. G Pradeep Dr. PamelaVinitha Dr. Jaya.R Dr. K. Swathi Ms. Shanmugha Priya



			Ms. Heyshanthini
			-
			Pandyakumari
			Ms. Priti Badar
			Ms. Suganya. R
			Dr. G Pradeep
			Dr. K. Swathi
			Ms. Anjana Sharma
			Ms. Pramila Rani
			Mr. Sivabalan
			Ms. Alpha Vijayan
			Mr. Vijaykumar
		C programming, C++	Ms. Gayathri G S
-	D '	Programming, Java	Mr. Puneet S Palagi
7	Programming	Programming, Python,	Mr. Manjunath Swamy
		Web programming	Ms. Rajitha Nair
		······································	Ms. Udaya.P
			Ms. Heyshanthini
			Pandyakumari
			Ms. Sheeba P
			Ms. Vasantha.M
			Mr. Gagan
			Ms. Lakshmi S Hanne
			Dr. Kamatchi Priya L
			Dr. Mohan Kumar S
			Ms. Gayathri G S
8	Big Data and Data	Big Data Analytics	Ms. Jisha Mariam Jose
0	Analytics	Data Analytics	Ms. Pramila Rani
			Ms. Yogitha
			0
			Ms. Suganya
			Dr. Kamatchi Priya L
			Dr. B. Meenakshi Sundaram
			Dr. Mohan Kumar S
			Dr. Nilima Kulkarni
		Data Mining &	Ms. Anjana Sharma
		warehousing	Ms. Deepika.N
9	Data Mining and	Machine Learning	Ms. Uma.N
	Machine learning	Web Intelligence	Ms. Gayathri G S
		Computational	Mr. Puneet S Palagi
		Intelligence	Ms. JishaMariam Jose
			Ms. Soja Rani
			Ms. Gayathri T
			Mr. Puneet
			Ms. Sheeba P



10	Database	Database Management Systems	Dr. Prashanth CSR Dr. R. Chinnaiyan Dr. G. Pradeep Ms. Jisha Mariam Jose Ms. Deepthi Rai Ms. PadmapriyaM K Mr. Muralidhara.S Mr. AnilKumar.K Ms. Tinu
11	Finite Automata	Finite Automata and Compiler Design	Dr. Hanuman Kumar. V Ms. Deepika N Mr. Muralidhara.S Ms. Rajitha Nair Mr. Anil Kumar.K
12	Artificial Intelligence	Artificial Intelligence	Dr. Kamatchi Priya L Dr. B. Meenakshi Sundaram Dr. Vinodha.K Ms. Pramila Rani Ms. PritiBadar
13	Block Chain Technology	Block Chain Technology	Dr. Jaya Ms. Rajitha Nair Ms. Tinu
14	Mobile Application Development	Mobile Application Development	Dr. Thirukumaran Dr. Clara Kanmani Ms. Gayathri.T Ms. Sheeba P Ms. Yogitha
15	Internet of Things	Internet of Things	Dr. Jithendranath Mungara Dr. Viswanath.Y Mr. Santhosh Kumar. B

Table 5.2 Faculty Competencies in correlation to Courses

SI. No	Name of the Faculty	Competency	E- Content Web Links
1	Dr. Pamela Vinitha	Computer Organization	https://classroom.google.com/c/NTc0MTU 0NDgwNDBa
2	Dr Clara Kanmani A	Design and analysis of algorithm	https://www.youtube.com/watch?v=wQ8A8 sirhzw https://www.youtube.com/watch?v=9OklW dgVXaw https://classroom.google.com/c/NjgxNTE4 NzIONjNa?3cjc=qpllbbx



3	Dr. R. Thirukkumaran Dr. S. Sridevi	Computer Networks C Programming Data Structures	https://classroom.google.com/c/NjgxNTE4 NzI0NjNa?cjc=qpllbbx https://classroom.google.com/c/MTU5MTc 1NDk1NDYx?cjc=enjrsrh https://classroom.google.com/c/NjgyNzE0 NTk4MTNa http://newhorizonindia.edu/nhengineering/c n-lab-cse62/ https://classroom.google.com/c/MTU4ODI 2OTUyNTY4 https://classroom.google.com/c/MTU4Nzc5 ODg4NjQx
5	Dr. Vinodha. K	Computational intelligence C Programming	https://classroom.google.com/c/MTY3jcNz QxQTcz https://classroom.google.com/c/MTUSMTc xNDAxODUx
6	Dr. Rachana P	Analysis and Design of Algorithm	https://classroom.google.com/w?MTUxNjQ 1OTA3MTky/t/all https://classroom.google.com/u/0/h
7	Dr. R Jaya	C programming Computer Networks Data mining Software testing Blockchain	https://classroom.google.com/u/1/c/NzA5N DA1OTUzNzla 978-93-86176-58-5 978-93-86638-91-5 978-93-5351-969-8 http://newhorizonindia.edu/nhengineering/b lockchain-nhop14/
8	Mr. Siva Balan N	Cloud computing	https://classroom.google.com/u/1/c/OTE5N zYwMzMyOTBa
9	Ms. Shanmuga Priya S	Operating Systems	https://classroom.google.com/u/0/c/MTU1 NTEwODY3OTY2
10	Ms. K. Pramilarani	Computer Organization	https://classroom.google.com/u/0/c/MTEx MDM2ODYyNDMx https://classroom.google.com/u/0/c/MTA3 NjY0NTIxMDQ2
11	Ms. Alpha Vijayan	Introduction to programming with C	https://www.youtube.com/watch?v=gW_Mi poq7nw https://classroom.google.com/c/MTIyNDE0 OTI2OTQw?cjc=o25bb5j



12	Ms. Suganya.R	Object Oriented Programming with Java	https://classroom.google.com/h
13	Mr. Manjunatha Swamy	Operating System, C Programming	https://classroom.google.com/u/1/w/MTM4 OTMzMzk1Mjkw/t/all https://classroom.google.com/u/1/w/MTM4 OTMzMzk1MzI2/t/all
14	Ms. Padmapriya M K	Computer Organization	https://classroom.google.com/c/MTIyOTEx ODk2Nzc3?cjc=sbqdh7l
15	Ms. Soja Rani S	Unix System Programming	https://classroom.google.com/u/0/c/MTQ0 ODA0MDg5ODk5
16	Ms. Uma.N	Computer Networks	http://newhorizonindia.edu/nhengineering/c n-lab-cse62/ https://classroom.google.com/u/1/c/NTc1M jQxNTU3Mzda https://classroom.google.com/u/1/c/Njg4Mj czODQyODha
17	Ms. Deepti Rai	Core java programming , Database management systems	https://classroom.google.com/u/1/c/MTYx MzQ1MTkxMjcx http://newhorizonindia.edu/nhengineering/c ore-java-cse61/ http://newhorizonindia.edu/nhengineering/h p1-lab-nhop01/
18	Ms. P. Rajitha Nair	Data Structures, C Programming	https://www.youtube.com/watch?v=rm0jx7t 9AWc https://classroom.google.com/u/0/c/MTM4 NDM5NzI3NTQ3
19	Ms. Tinu N S	Database Management System, C Programming	https://classroom.google.com/u/2/c/NTY0N jcyMjI5MDha https://classroom.google.com/u/2/c/MTQw NDY2NDEwNjI2
20	Ms. Yogitha	C Programming	https://classroom.google.com/u/1/c/MTYw MjYwNTU5NTgz
21	Mr. Gagan	Core Java Programming	https://www.youtube.com/watch?v=AiMeT soWhQE https://classroom.google.com/u/0/c/MTAzO DU5NTQ2Nzk2



22	Ms. Lakshmi S	C	https://sites.google.com/view/lakshmi-s-
	Hanne	Programming	hanne/home
23	Mr. Bhaskar S V	ARM processor	https://sites.google.com/view/bhaskartime/b e-study-material/arm- microprocessor?authuser=0 https://www.youtube.com/results?search_q uery=bhaskar+time

Table 5.3 Faculty Competencies based on Publications

Sl. No	Name of the Faculty	Competency	Research Publications with respect to specialization
1	Dr. B Rajalakshmi	Deep Learning, Cloud computing	 Image Organization Using Unsupervised Deep Learning - Case study Security Audit on Cloud Data Storage A Comparison of Load Balancing Approaches in Cloud: EOLB Research Frontiers in Cloud Forensics Securing Data in Cloud using Disinformation Data in Fog Computing
2	Dr. Prashanth C Sai Ranga	Algorithms, Cloud Computing	 A Detailed Analysis of the various frequent item set mining Algorithms Scheduling Workflows with Data Host Reservation in Cloud Computing Understanding Live Migration Techniques Intended for Resource Interference Minimization in Virtualized Cloud Environment



			4. Predictive Probabilistic Resource Availability based Cloud Workflow Scheduling (PPRA)
3	Dr. Guruprasad	Cloud Computing	 Cloud Based RDF Security: A Secured Data Model for Cloud Computing Cloud Computing and Semantic web: An Interplay
4	Dr. Pamela Vinitha	Data Mining, Network Security, Semantic Web, Bioinformatics	 Efficient Approximate Pattern Matching Algorithm for Biological Sequences Twitter Sentimental Analysis using Deep Learning Techniques Review On Intrusion Detection System Based Methods On Knowledge Discovery Data (KDD) Dataset Ontologies in Semantic Web: A Comprehensive Analysis Comparative Study of Gene Expression Data Set Using Biclustering Methods An Optimal Seed Based Compression Algorithm for DNA Sequences An Improved Method to Identify Exact and Approximate Tandem Repeats in DNA Sequences Using Biclustering Prevention of Black Hole Attack in Wireless Mobile Adhoc Networks



			 9. Text Stream Mining Using Suffix Trees 10. A Review on Face Emotion Recognition Techniques
5	Dr. Clara Kanmani A	Cloud computing, Semantic web, Ontology Engineering, Cyber security	 A survey on Data Models for Cloud Computing RDF Data Model and its Multi Reification approaches: A comprehensive comparative Analysis Reification in RDF Data Model: a Qualitative Survey An Analysis about RDF: A Data Model for Cloud Computing Hybrid Data Model of PACE and Quadruple: an efficient data model for Cloud Computing Cloud based RDF security: a secured data model for cloud computing Data Security Model Enhancement in Cloud Environment Ontologies in semantic web: a comprehensive analysis SPARQL query generation on RDF Attribute based encryption for secure allocation of E-health data on cloud Cloud Computing and Semantic web: An Interplay



			 12. Implementation of abstractive summarization using attentive recurrent neural network 13. An application of autocraft workshop 14. Analysis on Different Algorithms Estimation of Blood Pressure using ECG and PPG Sensors 15. Analysis on Blockchain in Internet
6	Dr. Hanuman Kumar	Natural Language Processing, Machine Learning, Neural Network, Cloud computing	 of Things for Building Smart Cities 1. Significance of Natural Language Processing in Language Based Automated Systems and Intelligent Agents 2. License Plate Recognition and Detection using Machine Learning 3. Skin Cancer Detection Using Machine Learning Algorithm 4. Regression Technique to Predict Stages of Basal Cell Carcinoma 5. Analysing Privacy for Remote Data in a Cloud Storage 6. Expression Recognition using Neural Network 7. Python Libraries, Development Frameworks and Algorithms for Machine Learning Applications 8. Modern sensors, applications and health safety



			9. Automated Students Answer Scripts Evaluation System using Advanced Machine Learning Techniques
7	Dr. Jaya R	Data Mining, Machine Learning, Blockchain, Networks, Ad-hoc network, Neural Network, wireless sensor network	



11. Effective routing protocol for Ad- hoc network
noe network
12. Opportunistic routing with congestion diversity in wireless multi hop network
13. Hand Gesture Recognition using Convolutional Neural Network
14. Data and Pre-Processing of Data for Machine Learning
15. Machine learning based Air gesture to control wheel chair
16. Design and Development of Air Gesture Algorithm based on Video Processing
17. College bandwidth traffic shaping
18. Improved dynamic cluster head election using wireless sensor network
19. Detection of malicious packet dropping in wireless ad-hoc network
20. Intelligent image encoding Methodology using covq with fss norms
21. Ontology Based Optimization with Adaptive Network Based Fuzzy Inference System Based Health Maintenance System
22. Swarm Intelligence Algorithms - A Survey



8	Dr. Kamatchi Priya L	Big Data Analytics	 Review on Feature Selection for the Analysis of Human Activities and Postural Transitions on Smart Phone Improvising Classification Performance for High Dimensional and Small Sample Data Sets
9	Dr. Meenakshi Sundaram B	ІоТ	A Roadmap to Application Integration Using IoT Cloud Platform
10	Dr. R. Thirukkumaran	Internet of Things, WSN, Security	 A Roadmap to Application Integration Using IoT Cloud Platform TOPSIS based Ranking system for Heterogeneous Nodes in IoT TAACS-FL: Trust Aware Access Control System using Fuzzy Logic for Internet of Things Survey: Security and Trust Management Scheme in Internet of Things An Effective Solution to Select Cluster Head Using TOPSIS for Heterogeneous Network in IoT Security Issues in Wireless Sensor Networks on an Internet of Things (IoT) Platform Detection of malicious activities in mobile ad-hoc networks using mac layer parameters and channel traffic pattern



			 8. A Novel MAC Algorithm for Energy Aware Wireless Sensor Networks 9. Efficient Broadcast Authentication using TSG Algorithm for WSN
11	Dr. S. Sridevi	Wireless sensor networks, Machine Learning	 Priority based congestion control for heterogeneous traffic in multipath wireless sensor networks Taxonomy of transport protocols for Wireless Sensor Networks Energy-aware QoS based routing protocols for heterogeneous WSNs— a survey Dynamic priority and fairness based congestion control framework for heterogeneous wMSNs Survey of MAC Protocols for Heterogeneous Traffic in Wireless Sensor Networks Towards a cross layer framework for improving the QoS of delay sensitive heterogeneous WMSNs Implementation of Movie Recommendation System Using Machine Learning Zone Based Energy Aware Multi- Level Multi-Hop Clustering Protocol for Heterogeneous Wireless Sensor Networks



			 9. Q-learning based fault tolerant routing with congestion control for Wireless Sensor Networks 10. Fault Tolerant and Energy Aware Clustering for improving the Lifetime of Wireless Sensor Networks with Isolated Nodes 11. Energy Efficient Gateway based Multi hop Routing Protocol for Wireless Sensor Networks
12	Ms. Asha Rani Borah	IoT, Machine learning	End-Stage Renal Disease Risk Prediction via Machine Learning and IoT
13	Ms. Anjana Sharma	Deep Learning	 CCTV Pedestrian Anomaly Detection Using Deep Learning Networks and Repeat Classifier Survey on Pedestrian and Object Detection in Video
14	Ms. Sheba Pari	Machine learning	 Detection in Video Providing cyber security using machine learning for social networks Modelling Cognitive States of Pilots to Minimize Commercial Aviation Disasters Maintenance of Structural and Designs of Historical Buildings Using Light Detection and Ranging (LiDAR) Analysing the Detection of Rheumatoid Arthritis using Image Processing Techniques
15	Ms. Deepika N	Machine learning, Wireless sensor Network, Data	1. Analysing different machine learning approaches for detecting malicious content: A Survey



		Mining, Cloud Computing	 2. Opportunistic routing with congestion diversity in wireless multi hops network 3. Anomaly Detection Using CNN Algorithm 4. Anomaly Detection on Images Using Machine Learning Algorithm
			5. Survey on Credit Card Fraud Detection Using Data Mining Techniques
			6. Two factor protection for accessing data using efficient revocation in cloud storage system
			7. A survey on various detection techniques on run time Machines
			 8. Survey on Privacy Based Health Data Storage and Retrieval in a Cloud environment 9. A survey on the analysis of emotions In spams in social network
			10. Anomaly detection on run time machines using OC-SVM
			1. Structure and Development of an E- Voting System Utilizing Blockchain Technique
16	Mr. Muralidhara S	Blockchain	2. Anamoly Detection Using Cnn Algorithm
			3. Study of Information Mining (DM) and Machine Learning (ML) Strategies on Digital Security



17	Ms. Priti B Badar	Web Technology	 Analysis on Ontology and Semantic Web Technique in Education Comparison of Classification Modelling Algorithms in Web Usage Mining A Survey on Various Techniques used for Video Retrieval Study on Web Intelligence in Higher Education: A Review on Business Intelligence Techniques, Frameworks and Usage A Conspectus of Research Directions for Ontologies The Utilization of Ontologies for Knowledge Model and Data Recovery Extraction of E-Learners non- verbal behavior
18	Mr. Siva Balan	IOT, Machine Learning, Networks, Optical Network	 Predicting cancer using machine learning algorithms A Survey on Device Discovery in Internet of Things PoS security with biometric fingerprint credentials A comparative study of open source content management systems A study of Adobe experience manager security



			 6. Blocking Performance and Analysis of Routing and Wavelength Assignment Using Shortest Path Routing Algorithm in All-Optical Network 7. Predicting Type of Cancer's Using Machine Learning Algorithm's 8. Internet of Things: Survey on MQTT Protocol 9. Internet of Things (IoT) Communication Protocols: Analysis and Review
19	Mr. Puneet S Palagi	E-Commerce, social networks	 A Novel Approach to Share the Online Shopping Cart Items in the E- Commerce Apps with Anyone Knowledge enhancement platform using q&a social media system A novel approach to risk assessment in online social networks Enhancement of Privacy and User Interaction in a Social Network with the Aid of Adaptive Intelligence
20	Ms. Soja Rani S	Data Analysis, Social Network Analysis, Cyber Security	 A Survey on Different Approaches for Malware Detection using Machine Learning A Survey Paper on the Comparison of NOSQL Engines (Mongo dB vs. Cassandra) using Spark Blockchain technology- an extensive study on its users and applications



			 4. Social network analysis – survey on data collection methods, data formats and analysis tools 5. Social Network Analysis – Network Metrics for Detection of Influential Nodes 6. Indexing Solr with Mysql Database 7. An Overview on Cashier Free Checkout System
21	Ms. Tinu N.S	Blockchain and Data Analytics	 Data Models used in Bitcoin and Ethereum Blockchain Platforms Ethereum: A Blockchain Platform with smart contract support for Distributed Application Development Hyperledger Fabric – A Platform for Enterprise Blockchain Solutions: Architecture and Transaction Flow Blockchain Technology- An Extensive Study On Its Users and Applications Social Network Analysis – Survey On Data Collection Methods, Data Formats and Analysis Tools A Survey on Blockchain Technology- Taxonomy, Consensus Algorithms and Applications A Survey Paper on the Comparison of NOSQL Engines (Mongo dB vs. Cassandra) using Spark



22	Ms. Uma. N	Networking, Data Analytics, Machine Learning, Algorithms	 Itemset Mining 3. Literature survey on predicting thyroid cancer using machine learning algorithms 4. Agriculture crop yield prediction using machine learning 5. Study on cipher suite to secure the data on cloud web server 6. A Detailed Analysis of various frequent itemset mining algorithms 7. Frequent Item Sets Mining Using MapReduce Technique 8. Social CRM: A Survey on Various Techniques for Text Analysis in Social Media 1. Data Integrity Verification in Cloud Database 2. Apache PIG as a platform for Data
23	Ms. Padmapriya M K	Big data analytics	 Analytics 3. A survey of Big Data analytics – it's challenges
24	Ms. K. Pramilarani	Big data security and privacy, Artificial intelligence, Cloud	 Analyzing Various Techniques to Safeguard User Sensitive Data Secure Text Transfer



		Computing, Image Processing	 Attribute Based Storage: Supporting Assured Deduplication of Encrypted Data in Cloud storage system Parallel Mining of Frequent Itemsets Using MapReduce Social Media and Big data Comparison of Frequent Pattern Mining Algorithms for Data Streams: A Survey Survey on Exudates Extraction for Fundus Images An Image Processing Algorithm to Detect Exudates in Fundus Images A Combination of AES and Key Hash Message Algorithm to Secure Data in Cloud
25	Ms. S. Shanmuga Priya	Software Engineering, Software Testing, Machine Learning, IoT	 Smart Test Case Quantifier Based on MC/DC Coverage Criterion with UML Sequence Diagram Integrated Testing Approach for Social-Mobile-Analytics-Cloud (SMAC) Convergence Technology Define – Use Testing – An Example A Review on Mutant Reduction Techniques Integrated Testing Approach for Social-Mobile-Analytics-Cloud (SMAC) Convergence Technology



			6. Sentiment Analysis of Reviews on E-Commerce Website to Rank Products
			7. Ranking Products on E-Commerce Website Using Machine Learning Techniques like Artificial Neural Networks Based on User Reviews
			8. IoT Based Remote Health Care Monitoring System Using Wearable Sensor for Tracking Anomalous Situation
			9. Shoulder Surfing Resistance Using Message Digest 5 Algorithm (MD5)
			1. Credit Card Reader with Face Recognition Using Webcam
		Image Processing, Big Data, Blockchain	2. A Comparative Air Quality Analysis Using Big Data Technologies
	Ma Lisha Mariana		3. An experimental Study on Different Data Models in Apache Hive
26	Ms. Jisha Mariam Jose		4. Dairy Farm Tracking using Blockchain
			5. Data movement in wos - ros on sql operations in data Warehousing database-vertica
			6. A Detailed Study on Features of Data Warehousing Database-Vertica
	Ms. Gayathri.T		Data watchousing Database-vertica 1. Fashion sales prediction using data mining
27		Data mining	2. Solution based mining of Students Academic Performance
			3. Prediction of Fake Review



			4. Data mining of Absentee data to
			increase productivity
			5. Data mining of restaurant review using WEKA
			1. Weka Workbench for Analysis of
			Machine Learning Classification
28	Ms. Sheeba P	Machine learning,	Algorithms
20		Cloud Computing	
			2. Secure Online Data Encryption in
			Cloud Computing
			1. Effective marketing with digital
			channel: An experimental study
		Web Technologies,	2. An effective approach for building
29	Mr. Vijayakumar R	Cloud computing	efficient websites
			2 Securing Date in Claud weight
			3. Securing Data in Cloud using Disinformation Data in Fog
			Computing
			1. Clustering Based Approach for
			Isolating the Drug Elements Causing
			Side Effects
			2. Weather Prediction using Deep
			Learning
			3. A Framework of Computational
			Methods for Recommender Engine
		Machine	
		learning, Cloud	4. Isolation of the drug elements
30	Ms. Alpha Vijayan	~ .	causing side effects through machine
		Network Security	learning
			5. A Survey on Realms and
			-
			Analysis
			III a Cloud over a Secured Network
			7. Filtering Mechanisms on Internet
			Protocol
		Computing, Network Security	 learning 5. A Survey on Realms and Applications of Social Media Data Analysis 6. Preserving Privacy of Multiple I in a Cloud over a Secured Network 7. Filtering Mechanisms on Internet



	8. Project Based Learning by Bitcoin				
31	Mr. Santosh Kumar B	Embedded System, Memory, DMA, PCI express	 8. Project Based Learning by Bitcoin 1. FPGA implementation of PID Controller using Xilinx System Generator 2. Implementation of a Reconfigurable Delta-Sigma modulator using PSOC 3. Realization of a Delta Sigma Data converter with lower proportion of oversampling 4. Network processing through Multicore processor 5. Direct Memory Access controller design and implementation for decreasing the memory access time, power and area 6. An 8B/10 encoding for high speed communication 7. Review of Bus Mastering DMA through PCI 8. Development of DMA controller for real time data processing in FPGA 		
			based Embedded application		
32	Ms. Suganya R	Digital Image Processing	 On the Review of Dehazing Methods for Bad Weather Images Gradient flow-based deep residual networks for enhancing visibility of scenery images degraded by foggy weather conditions Automatic Reportage of Accident Zone to the Emergency Vehicles Using Smart Route Framework 		



33	Ms. Deepti Rai	Cloud Computing, Software Engineering, Artificial Neural Network	 Instance based multi criteria decision model for cloud service selection using Topsis and Vikor Comparative analysis of cloud service selection methods Timestamp and IP Address based Fraud Detection in Credit Cards using Hidden Markov Model Game Playing Agent Using Artificial Neural Network
34	Mr. Bhaskar S. V	VLSI & Embedded system design	 Efficient Simulation of DCT architecture using CORDIC Algorithm Design and Implementation of Low Power and Highly Scaled DCT Architecture with CORDIC Algorithm
35	Mr. Manjunatha Swamy C	Big data Analytics, Cloud computing, Web Mining, Information Extraction	 Information mining using Genetic algorithm and big data analytic approach Web content mining using bio inspired algorithm Significance of Restful web services in Bigdata Analytics Load balancing in cloud using partition technique
36	Mr. Gagan S P	Data Mining, Data Analytics, Big Data, IOT	1. Productive Scheduling of Scientific Workflows utilizing Multiple Site Awareness Big Data Management in Cloud



			 2. The Stimulus of Sentimental Analysis for Consumer Consummation in Reference to Social Media Presence of Consumer 3. Amassing the significance of a business organization with the use of Data Analytics and the key technologies related to it. 4. A Brief Breakdown of the Vital Technologies and Solicitations of Online Learning using Educational Data Mining 5. A novel survey on current state of smart cars 6. Discovering High Utility Item Sets to Achieve Lossless Mining using Apriori Algorithm 7. Summarizing and Enriched Extracting technique using Review Data by Users to the Users for Merchandise Recommendation
37	Ms. Rajitha Nair	Network security, Image Processing	 Discriminating DDoS Attacks from Flash Crowds in IPv6 networks using Entropy Variations and Sibson distance metric Review of Various BlockChain Based SSL techniques Review of Various BlockChain Based SSL techniques Review of Various BlockChain Based SSL techniques Disclosure and Sniff out of Moving Entity in Real World Human Emotion Based Song Player



			6. Image De-noising based on Self-
			Learning 7. Emotion Identification Based Song
			Shuffler
			8. Survey Paper on Block-chain Based SSL
			1. A Study on Mobile Cloud
			Computing Systems
			2. Energy Efficient Resource
			Allocation in Cloud Computing
			Environments
			3. Survey of Task Scheduling
			Algorithms
38	Ms. Vasantha M	Cloud Computing	
			4. Mobile Location Tracking without
			Internet Connectivity to make
			decisions for the Geo-social network
			based on the Cloud Environments
			5. On the use of Neuro Fuzzy
			Inference System to predict crop
			selection based on climate
			1. Image Organization Using
			Unsupervised Deep Learning - Case
			study
			2. Generating Chard D. (1. DNA
			2. Securing Cloud Data by DNA Cryptography
			Cryptography
	Ms. Heyshanthini	Deep Learning,	3. Security Audit on Cloud Data
39	Pandiya Kumari S	Cryptography, Cloud	Storage
	-	computing	
			4. A Comparison of Load Balancing
			Approaches in Cloud: EOLB
			5. Research Frontiers in Cloud
			Forensics
1		l	



	6. Discriminating DDoS Attacks from Flash Crowds in IPv6 networks using Entropy Variations and Sibson distance metric
	7. Human Emotion Based Song Player

Sl. No.	Name of the Faculty	Competency	Book Publications with respect to specialization
1	Ms. Jisha Mariam Jose	Big Data Analytics	Hadoop Practice Guide Notion Press,7/7/2019
2	Dr. Kamatchi Priya L	Algorithms	The Complete Guide on Design of Algorithms
3	Ms. Jaya R, Dr. Rajan C	Software Testing	Software Testing
4	Ms. Jaya R, Deepika N	Data Structures	 Data and Pre-Processing of Data for Machine Learning A survey on importance and applications of data mining using artificial neural network
5	Ms. R Jaya Dr. Rajan	Computer Networks	 Effective Routing Protocol (DSDV, DSR, AODV) for Ad- Hoc Network Detection of Malicious Packet Dropping in Wireless Ad Hoc Networks College Bandwidth Traffic Shaping
6	Ms. Shanmuga Priya S, Dr. B. Rajalakshmi, Ms. N. Uma	Operating systems	Operating Systems - Question Bank ISBN: 978-93-5351-173-9

Table 5.4 Faculty Competencies Based on Book Publications



7	Mr. SivaBalan, Dr. Illengo, Mr. Gangadhar, Ms. Kavitha, Mr. Vijaykumar, Mr. Govind Raj, Mr. Vishwanath	Mobile Application Development, Web development	Adobe Experience Manager 6.2.A practitioner Guide
8	Dr. R. Thirukkumaran	IoT, Security	Security Issues and Trust Management Schemes in Internet of Things

Table 5.5 Faculty competencies in correlation to Research Patents

			Pater	nt details	
Sl No	Name of the Authors	Title of the Patent	Application No	Date of Application/ Publication	Publication Reference
1	Denzel Abraham George, Tarun Sai Reddy, Shyam S, Hariraj Rajkumar, Sainath Vamshi, Sanketh S Huddar, Nikhil Riyaz, Athira Ajayakumar, Dr. Nisha KCR Ashwin Shankar Reddy, Vishwa Gopal, Sriram Gupta,	Novel System, Design and Methods of Circular Stack Can Satellite (CSCS)	201941046496	15/11/2019	E-2/3624/2019-CHE



	K Bhavana Savanth, Jaiteg Singh Joshua Tom Jaccob, Dr. Mohankumar. S				
2	Hariraj Rajkumar, Sainath G V, Sanketh SH, Nikhil R Athira AK, Dr. Nisha KCR Denzel A G Tarun S T Shyam S, Ashwin S R Vishwa Gopal, Sriram G K. Bhavana Savanth, Jaiteg Singh Joshua TJ Dr. Mohankumar.S	Novel System, Design and Methods of Compact CanSat: Satellite in a CAN	201941046497	15/11/2019	E-2/3625/2019-CHE
3	Dr.R.1Thirukumaran Bhaskar S V	Automated Air Cooler Ceiling Fan	202041016342	15/04/2020	E-12/811/2020-CHE



4	Dr. R. Thirukumaran Dr. Clara Kanmani.A Dr. B. Rajalakshmi B. Santhosh Kumar Dr. S. Sridevi Dr. Pamela Vinitha Dr. Jaya.R	IOT Based People Counting and Alert System Using Dual Ultrasonic Sensor for Post Pandemic safety	202041029561 A	11/07/2020	TEMP/E- 1/32880/2020-CHE
5	Dr. Prashanth CSR Dr. Mohan Kumar Beena BM Suriya Begum Clara A Pramila Rani	System and Method Using Median Index Sort (MI Sort) for Integers	201741018092	23.05.2017	E-2/1429/2017-CHE
6	Dr. Prashanth CSR Deepika Jaya R Anjana Sharma Asha Rani Sivabalan Shanmugapriya Kundhavai	Apparatus and Novel Method Using Indexed Bucket Sorting Algorithm	201741018091	23.05.2017	E-2/1428/2017-CHE
7	Dr. Prashanth CSR	Novel Method to Ensure Wrong Window Message Alert System	201741018093	23.05.2017	E-2/1430/2017-CHE
8	Vishwa. G	System and Method for Smart	201741018076	23.05.2017	E-2/1413/2017-CHE



	Dr. Prashanth. CSR Dr. K. Gopalakrishnan Dr. Manjunatha Dr. M.S. Ganesha Prasad Dr. Nisha. KCR Dharmambal	Sustainable and Expandable Helmet with IoT Capabilities			
9	Dr. C.S.R. Prashanth Mr. Sanketh S Huddar Mr. Vishwa Gopal, Mr. Hariraj Mr. Bhavan.A, Mr. Nikhil Riyaz Mr. Denzel Abraham George Mr. Srisha Vittal, MCA. Mr. Sunil S. K, MCA., Mr. Mansoor Ahmed. F, MCA.,	Novel Arrangement of Apparatus, System and Method for creating an efficient cloud platform where an Uneducated Villagers Can Serve as Tourist Guides or Service Providers to Tourists	201741034938	03.10.2017	E-2/2936/2017-CHE
10	Dr. C.S.R. Prashanth Mr. Sanketh S Huddar Mr. Vishwa Gopal, Mr. Hariraj Mr. Bhavan.A, Mr. Nikhil Riyaz Mr. Denzel Abraham George	Novel Arrangement of Apparatus, System and Method for creating an efficient cloud platform to help the Uneducated Farmers and Fishermen Regarding the Weather and Water Source	201741034935	03.10.2017	E-2/2933/2017-CHE



	r. Srisha Vittal, CA.	Related Information		
Mr	r. Sunil S. K, MCA.,			
	r. Mansoor Ahmed. MCA.,			

Table 5.6 Faculty competencies in guidance of projects

SI. No	Name of the Faculty	Competency	Projects Guided
1	Dr. Pamela Vinitha	Image Processing, Machine Learning	Recyclocator Face emotion recognition using image processing and machine learning techniques Driver Drowsiness Detection System
2	Dr. Hanuman	IOT, Machine Learning, Artificial Intelligence	Online pharmaceutical Using AI Home Automation Efficient smart watch-based workout tracking using automatic segmentation
3	Dr. Clara Kanmani A	Machine Learning, Algorithms, Artificial Intelligence	Blood cell classification using CNN System to detect neurological disorder like Parkinson's disease Color detection using Artificial intelligence
4	Dr. R. Thirukkumaran	Machine Learning, IoT	Phishing website detection using machine learning Automatic tollgate controller using RFID



_	Dr. Kamatchi	Machine Learning, Network Security	Data Security Using DNA cryptography
5			Classifications on online shoppers purchasing intention.
6	Dr. R Jaya	NLP, Machine Learning	Natural language processing to analyze and identify the source among multiple users in a social media network
			Prediction of Air Pollution Level using machine learning
7	Dr. Vishwanath.Y	Cloud Computing	SECURE: Self-Protection Approach in cloud Resource management
8	Mr. Siva Balan N	Data Mining,	Crowd Behavioral analysis
9	Ms. Asha Rani Borah	Natural Language Processing (NLP), Cloud Computing, Computer Architecture	Help App with text recognition using Natural Language Processing (NLP) video classification using cloud Pipeline Accurate model of MIPS R2000 Risc Architecture
10	Ms. Anjana Sharma	Artificial Intelligence	Student AI Chat Bot Using NLP
11	Ms. Deepika	Networks, Operating System, Machine	Scatter-Gather Live Migration of Virtual Machines
		Learning, Image Processing	Image recognition using machine learning
			Product Search Engine with Inventory & Affiliate Api
12	Ms. Shanmuga Priya S	Data Mining, Machine Learning,	Diabetes Detection using various model comparison
			Social Media Sentimental Analysis Using Machine Learning



			Black Friday sales market analysis prediction using ML
			Earthquake prediction using seismic information
			Convenience Store Assisting System for Visually Adaptive using OCR
		Machine Learning, Mobile Application	Secure file sharing on HDFS using encryption
13	Ms. K.Pramilarani	Development, Network Security, Big Data, Cloud	Secured Mapreduce Layer for Big Data Privacy and Security
			Data Detection and Data Prevention using Data Strategy
			An Algorithm for Finding the Minimum Cost of Storing and Regenerating Datasets in Multiple Clouds
	Ms. Alpha Vijayan	Machine Learning, Big Data Analytics	Stock Market Prediction Using ML
14			An approach for Big data security based on HDFS
15	Ms. Priti Badar	Image Processing	Image identification using image processing for banking
			Phishing website detection
16	Ms. Suganya.R	Network Security, Machine Learning	Google playstore apps price prediction using reviews, ratings by maching learning technique
			Credit card fraud transaction detection
17	Mr. Vijaykumar	Machine Learning, Database	In-memory Stream Indexing of Massive and Fast Incoming Multimedia Content
18			SWARA - The Smart Assistant



	Mr. Manjunatha Swamy	Web programming, Networks, Machine learning	Fashion Accessories Using Virtual MirrorDetecting Depression Using
			Machine Learning
			Weather forecasting using machine learning
19	Ms. Padmapriya M K	Machine Learning, Block Chain, Cloud computing	Bitcoin price prediction using machine learning techniques
			Securing cloud data under key exposure
20	Ms Soja Rani S	Network Security, Machine Learning	High End Security Systems for Banking
20			Analyzing visual imagery using deep CNN
			Data-oriented Computer simulation
	21 Ms. Uma.N	Object Oriented Concepts, Recommendation Algorithms, Network security & Privacy, Machine Learning	Smart Shopping Cart with Recommendation System
21			Cyber Bullying Detection
			Agricultural production output prediction using Supervised Machine Learning techniques
	Mr. Marslidhaa	Mashina Laurina Data Minina	REACH OUT- Social Media Platform for Welfare Programs using advanced ML
22	Mr. Muralidhara	Machine Learning, Data Mining	Efficient and Private Scoring of Decision Trees using Support Vector Machines
23	Ms. Deepti Rai	Machine Learning	Development of Frontal Apprehension And Superficial Enunciation Structure
23			Disease Prediction Using Machine Learning



			Narcotics Elimination through Intelligent Ultrasound
24	Ms. P. Rajitha Nair	Machine Learning, Cloud computing, Networks	A Cloud-based Voting System for Emotion Recognition in Human– Computer Interaction
			CSR: Classified Source Routing in Distributed Networks
25	Mr. Santhosh Kumar. B	IOT, Image Processing	Design and development of smart power system for buildings
			Image Similarity Search Engine
			Traffic Sign Recognition using Deep Learning
26	Mr. Puneeth Palagi	Machine Learning, Deep Learning, IoT	Heart Disease Prediction using Machine Learning
			Underground Cable Fault Detection System using IOT
27	Ms. Sheba Pari	Machine Learning, Block Chain	Handwriting recognition system using machine learning
21			Secure Trade Using Blockchain
28	Ms. Tinu N S	Machine Learning,	Emotion Recognition using Machine Learning
29	Ms. Jisha Mariam Jose	Machine Learning, Image Processing	Overcoming Disability: Using Image
29			processing with CNN
	Mc Covothri T	Machina Learning, Pig Data Analytica	Deep Air Learning Using Machine Learning
30	Ms. Gayathri.T Machine Learning, Big Data Analytics		Hybrid Job-Driven Scheduling for Virtual MapReduce Clusters
31	Ms. Heyshanthini Priya	Machine Learning, Data Mining, Cryptography	Analysis of movie review with various feature selection techniques



			Web Media and Stock Markets using data mining
			power efficient encryption for image using Rubik's cube algorithm nd zeta function
			Movie recommendation using Machine Learning
32	Ms. Yogitha	Machine Learning, Security, Blockchain	Three server swapping for access confidentiality
			Smart healthcare record security using blockchain
		Cloud Computing Plack Chain	Cloud Message Queueing and Notification: Challenges and (Blockchain) Opportunities
33	Ms. Vasantha	Cloud Computing, Block Chain, Operating System	Multi-boot bootloader with operating system auto-detection and bootstrapping the selected OS
34	Mr. Gagan	IoT, Image Processing	Theft Identification and Alert through motion detection and facial recognition using IoT
35	Ms. Lakshmi S Hanne	Machine Learning, Stock Market Analysis	Smart Selfie using Gesture Recognition

Table 5.7 FDP organized by the Faculty

Sl.No	Event Name	Date and Year	Event organised by	Faculty who organized the event
1	Python for data science and machine Learning (Workshop arranged) Data science and Machine learning	19-3-2019	NHCE	Dr. Jaya R



	(Workshop arranged) 6-10-2018			
2	VTU sponsored FDP on Big Data analytics	21-1-2019 to 25-1-2019	NHCE	Dr. Jaya.R Ms. Asha Rani Borah Ms. Shanmugha Priya

Academic Year 2019-2020

Table 5.8 Summary of faculty competencies in the Academic year 2019-20

S. No	Event	Numbers
1	Conference Papers	18
2	Invited Talk	08
3	Workshop	68
4	Seminar	175
5	Courses Developed	03
6	Event	26
	Total	298

Academic Year 2018-2019

Table 5.9 Summary of faculty competencies in the Academic year 2018-19

Sl. No	Event	Numbers
1	Conference Papers	13
2	Invited Talk	12
3	Workshop	34



4	Seminar	14
5	Courses Developed	03
6	Event	12
	Total	88

Academic Year 2017-2018

Table 5.10 Summary of faculty competencies in the Academic year 2017-18

Sl. No	Event	Numbers
1	Conference Papers	12
2	Invited Talk	00
3	Workshop	25
4	Seminar	09
5	Courses Developed	03
6	Event	11
	Total	60

Table 5.11 Summary of Short-term courses developed, workshopsarranged and course modules developed

Events	2019-2020	2018-2019	2017-2018	Total
Conference Papers	18	13	12	43
Invited Talk	08	12	00	20
Workshop	68	34	25	127



Seminar	175	14	09	198
Courses Developed	03	03	03	09
Event	26	12	11	49
Total	298	88	60	446

5.6 Innovations by the Faculty in Teaching and Learning (10)

Innovations by the Faculty in teaching and learning shall be summarized as per the following description. Contributions to teaching and learning are activities that contribute to the improvement of student learning. These activities may include innovations not limited to, use of ICT, instruction delivery, instructional methods, assessment, evaluation and inclusive class rooms that lead to effective, efficient and engaging instruction. Any contributions to teaching and learning should satisfy the following criteria:

- The work must be made available on Institute website
- The work must be available for peer review and critique
- The work must be reproducible and developed further by other scholars

The Department/Institution may set up appropriate processes for making the contributions available to the public, getting them reviewed and for rewarding. These may typically include statement of clear goals, adequate preparation, use of appropriate methods, and significance of results, effective presentation and reflective critique.

In the Department of Computer Science and Engineering, much importance is given for incorporating innovative techniques in teaching. At college level, in the beginning of every semester a faculty development program to create and promote the innovation techniques are conducted. Every class room in the Department is equipped with Projector, Black board and also white board. Every Class room is equipped with LCD Projectors. Faculty members use the LCD Projectors for their presentations. In most of the class rooms, smart boards



are also there and faculty members use these aids to take the teaching learning process to the next level. Apart from this the faculty members encourage the students to participate in Group discussions, team-based activities, presentations etc.

Table 5.12 Summary of Innovative Teaching techniques in Teaching Learning
Process

Sl. No	Item	Description
1	Usage of Smart Boards	Most of the class rooms are equipped with smart boards which faculty members can use to take TLP process to a higher Level.
2	Usage of online platforms	Faculty members use WhatsApp, google drive, Google classroom etc. for discussions as well as sharing of course materials.
3	Usage of Modern Tools	SMART BOARD, LCD Projectors Document Camera, Wireless Keyboard and mouse, Power Point Laser Presenter, Wireless Presenter, USB wireless pen mouse, Slide Changer, Wi-Fi enabled laptops are usually employed in classrooms and other student learning environments.
4	Academic reinforcement based on project-based model	Every semester student has to complete a mini project as a part of their curriculum and these are evaluated for on spot programming skills by mini project reviewers based on the rubrics.
5	Semester break Internship	Every semester break, students are advised to go for Internship activities.
6	Reinforcement through student club activities	Learning/Reinforcement of concepts is encouraged through the activities of various student clubs monitored by faculty coordinator.



7	Innovative practices during regular TLP process	During the lecture sessions, various innovative strategies like inquiry-based learning, team-based learning, activity-based learning, Role Play, Games, brain storming methods, flip classroom techniques are also used.
8	Usage of animated videos, models, charts in TLP process	During the lecture sessions animated videos, models, charts in TLP process.
9	Availability of course materials in institution website.	The videos of the Courses and Labs are available in the college website.
10	Usage of Video conference room in the Digital Library	Students and Faculty members avail the same for the discussion and usage of expert video lectures.
11	Usage of visual library, digital library and other Open Source platforms	Faculty members use visual library, digital library and other Open Source platforms to make the subject easy to understand. A copy of e – learning material is kept in individual department and in digital library.
12	Train the trainer using short term courses, MOOC courses, staff development programs, Conferences and workshops	The faculty members are encouraged to participate in webinars, short term courses, staff development programs, Conferences and workshops on advanced topics to keep pace with the advanced level of knowledge and skills.
13	Availability of immense resources at institutional website	The students and faculty members are encouraged to make use of the various resources available in the website which enables research-based learning. Some of the resources which are available in institution website are given below.

Table 5.13 Summary of Innovative Teaching Technique used by Faculty for theEven Semester 2019-2020



	New Horizon College of Engineering, Bangalore											
	Autonomous College Affiliated to VTU, Accredited by NAAC with 'A' Grade											
Department of Computer Science and Engineering EVEN SEM 2019-20												
SI No	Faculty Name	Designation	COMPUTATIONAL THINKING	ACTIVITIES	MEDIA	MODERN PEDAGOGY	MODERNs COMMUNICATION MEANS	ARGUMENTATION	GAMES/ ANALOGY STORY TELLING	CROSSOVER	FIGURE IT OUT	TRAIN THE TRAINER
1	Dr. B Rajalakshmi	Professor & HOD			\checkmark							
2	Dr. Prashanth CSR	Prof & Dean- Academics					\checkmark					
3	Dr. Pamela Vinitha Eric	Professor			\checkmark		\checkmark					
4	Dr. Mohan Kumar S	Professor			\checkmark							
5	Dr. Hanuman Kumar V	Sr. Associate Prof					\checkmark					
6	Dr. Clara Kanmani A	Associate Prof		\checkmark								
7	Dr. Kamatchi Priya	Associate Prof					\checkmark					
8	Dr. Rachana	Associate Prof					\checkmark					
9	Dr. Thirukkumaran R	Associate Prof			<u>.</u>		\checkmark					\checkmark
10	Dr. Sridevi S	Associate Prof		\checkmark			\checkmark					



11	Mr. Siva Balan N	Sr. Asst Prof			\checkmark				
12	Dr. Jaya R	Sr. Asst Prof			\checkmark				
13	Ms. Priti B Badar	Sr. Asst Prof			\checkmark	\checkmark			
14	Ms. Asha Rani Borah	Sr. Asst Prof			\checkmark				
15	Ms. Shanmuga Priya S	Sr. Asst Prof		\checkmark	\checkmark				
16	Ms. Pramilarani K	Sr. Asst Prof			\checkmark		\checkmark		
17	Ms. Padmapriya M K	Sr. Asst Prof	\checkmark		\checkmark	\checkmark			
18	Ms. Alpha Vijayan	Sr. Asst Prof			\checkmark	\checkmark			
19	Ms. Soja Rani S	Sr. Asst Prof			\checkmark				
20	Mr. Santosh Kumar B	Sr. Asst Prof			\checkmark				
21	Ms. Deepti Rai	Sr. Asst Prof	\checkmark		\checkmark	\checkmark			
22	Ms. Suganya.R	Sr. Asst Prof	\checkmark		\checkmark				
23	Mr. Manjunatha Swamy C	Sr. Asst Prof	\checkmark	\checkmark	\checkmark				
24	Ms. Uma N	Sr. Asst Prof	\checkmark		\checkmark				
25	Mr. Muralidhara S	Sr. Asst Prof			\checkmark				
26	Mr. Vijayakumar R	Sr. Asst Prof			\checkmark				



27	Ms. Rajitha Nair	Sr. Asst Prof		\checkmark		\checkmark	\checkmark	\checkmark			
28	Mr. Puneet S Palagi	Asst Prof 2				\checkmark					
29	Ms. Jisha Mariam Jose	Asst Prof 2	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	\checkmark		
30	Ms. Gayathri G S	Asst Prof 2				\checkmark					
31	Mr. Prem Kumar	Asst Prof 2				\checkmark					
32	Ms. Yogitha	Asst Prof 2				\checkmark					
33	Ms. Gayathri T	Asst Prof 2				\checkmark					
34	Ms. Dimple W G	Asst Prof 2									
35	Ms. Teena. A. James	Asst Prof 2		\checkmark		\checkmark				\checkmark	
36	Mr. Bhaskar S V	Asst Prof 2				\checkmark					
37	Ms. Tinu N S	Asst Prof 2					\checkmark	V			
38	Mr. Gagan S Purad	Asst Prof 1				\checkmark				\checkmark	
39	Ms. Lakshmi S Hanne	Asst Prof 1									

Table 5.14 Summary of Innovative Teaching Technique used by Faculty for theOdd Semester 2019-2020

New Horizon College of Engineering, Bangalore

Autonomous College Affiliated to VTU, Accredited by NAAC with 'A' Grade

Department of Computer Science and Engineering ODD SEM 2019-20



SL No	Faculty Name	Designation	COMPUTATIONAL THINKING	ACTIVITIES	MEDIA	MODERN PEDAGOGY	MODERN COMMUNICATION MEANS	ARGUMENTATION	GAMES/ANALOGY/ STORY TELLING	CROSSOVER	FIGURE IT OUT	TRAIN THE TRAINER
1	Dr. Rajalakshmi. B	Professor & Head		\checkmark				\checkmark				
2	Dr. Pamela Vinitha Eric	Professor		\checkmark				\checkmark				
3	Dr. Hanuman Kumar V	Sr. Associate Prof	\checkmark	\checkmark								
4	Dr. Clara Kanmani A	Associate Prof			\checkmark		\checkmark	\checkmark				
5	Dr. Kamatchi Priya	Associate Prof					\checkmark					\checkmark
6	Dr. Vinodha	Associate Prof				\checkmark						
7	Dr. Rachana	Associate Prof				\checkmark						
8	Dr. Thirukkumaran R	Associate Prof				\checkmark	\checkmark					
9	Mr. Siva Balan N	Sr. Asst Prof		\checkmark								
10	Ms. Jaya R	Sr. Asst Prof	\checkmark							\checkmark		
11	Ms. Priti B Badar	Sr. Asst Prof			\checkmark						\checkmark	
12	Ms. Asha Rani Borah	Sr. Asst Prof					\checkmark					
13	Ms. Shanmuga Priya S	Sr. Asst Prof		\checkmark					\checkmark			
14	Ms. Pramilarani K	Sr. Asst Prof		\checkmark			\checkmark	\checkmark				
15	Ms. Padmapriya M K	Sr. Asst Prof		\checkmark	\checkmark		\checkmark					
16	Ms. Alpha Vijayan	Sr. Asst Prof		\checkmark				\checkmark				
17	Ms. Soja Rani S	Sr. Asst Prof		\checkmark	\checkmark		\checkmark	\checkmark				



10	Mr. Santosh	Sr. Asst		1	1	1	1					
18	Kumar B	Prof		\checkmark	\checkmark	\checkmark	\checkmark					
19	Ms. Deepti Rai	Sr. Asst Prof		\checkmark	\checkmark							
20	Ms. Suganya.R	Sr. Asst Prof		\checkmark								
21	Mr. Manjunatha Swamy C	Sr. Asst Prof	\checkmark			\checkmark						
22	Ms. Uma N	Asst Prof 2		\checkmark								
23	Mr. Muralidhara S	Asst Prof 2		\checkmark								
24	Mr. Puneet S Palagi	Asst Prof 2		\checkmark								
25	Ms. Jisha Mariam Jose	Asst Prof 2	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark			\checkmark
26	Mr. Vijay Kumar R	Asst Prof 2									\checkmark	
27	Ms. Gayathri G S	Asst Prof 2				\checkmark						
28	Ms. Yogitha	Asst Prof 2		\checkmark								
29	Ms. Gayathri T	Asst Prof 2		\checkmark						\checkmark		
30	Ms. Heyshanthini Pandiyakumari	Asst Prof 2		\checkmark			\checkmark	\checkmark				
31	Ms. Rajitha Nair	Asst Prof 2							\checkmark			
32	Ms. Teena. A. James	Asst Prof 2		\checkmark	\checkmark		\checkmark		\checkmark			
33	Mr. Bhaskar S V	Asst Prof 2		\checkmark	\checkmark							
34	Ms. Deepa Puranik	Asst Prof 2				\checkmark						
35	Ms. Tinu N S	Asst Prof 1		\checkmark								
36	Mr. Gagan S Purad	Asst Prof 1		\checkmark								
37	Ms. Lakshmi S Hanne	Asst Prof 1		\checkmark						\checkmark		

Table 5.15 Summary of Innovative Teaching Technique used by Faculty for theEven Semester 2018-2019

New Horizon College of Engineering, Bangalore

Autonomous College Affiliated to VTU, Accredited by NAAC with 'A' Grade



	Departme	ent of Comput	ter Sci	ence an	nd En	gineer	ing EVEN	SEM	2018-1	9	
SL. No	Faculty Name	Designation	LOGICAL HINKING	EXPERENTIAL LEARNING	MEDIA	MODERN PEDAGOGY	MODERN COMMUNICATION MEANS	TEAM BASED LEARNING	GAMES/ANALOGY/ STORY TELLING	CROSSOVER	TRAIN THETRAINER
1	Dr. Pamela Vinitha Eric	Professor		\checkmark	\checkmark	\checkmark	\checkmark				
2	Dr. Hanuman Kumar V	Sr. Associate Prof	\checkmark			\checkmark	V				
3	Dr. Vishwanath Y	Associate Prof					\checkmark				
4	Dr. Clara Kanmani A	Associate Prof		\checkmark	\checkmark	\checkmark	\checkmark				
5	Dr. Vinodha	Associate Prof					\checkmark				
6	Dr. Rachana	Associate Prof					\checkmark				
7	Dr. Nilima Kulkarni	Associate Prof					\checkmark				
8	Dr. Kamatchi Priya	Sr. Asst Prof						\checkmark		\checkmark	
9	Ms. Deepika N	Sr. Asst Prof					\checkmark				
10	Mr. Siva Balan N	Sr. Asst Prof									
11	Ms. Jaya R	Sr. Asst Prof					\checkmark				



12	Ms. Prithi B Badar	Sr. Asst Prof					\checkmark				
13	Ms. Asha Rani Borah	Sr. Asst Prof					\checkmark				
14	Ms. Shanmuga Priya S	Sr. Asst Prof					\checkmark				
15	Ms. Anjana Sharma	Sr. Asst Prof					\checkmark				
16	Ms. Pramilarani K	Sr. Asst Prof					\checkmark				
17	Ms. Padmapriya M K	Sr. Asst Prof				\checkmark	\checkmark			\checkmark	
18	Ms. Alpha Vijayan	Sr. Asst Prof					\checkmark				
19	Ms. Soja Rani S	Sr. Asst Prof					\checkmark				
20	Mr. Santosh Kumar B	Sr. Asst Prof	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark				
21	Ms. Sheba Pari N	Asst Prof 2					\checkmark				
22	Ms. Uma N	Asst Prof 2									
23	Mr. Muralidhara S	Asst Prof 2					\checkmark				
24	Mr. Puneet S Palagi	Asst Prof 2		\checkmark		\checkmark					
25	Ms. Jisha Mariam Jose	Asst Prof 2	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark
26	Mr. Vijay Kumar R	Asst Prof 2								\checkmark	
27	Ms. Yogitha	Asst Prof 2									
28	Ms. Gayathri T	Asst Prof 2					\checkmark				



29	Ms. Sheeba P	Asst Prof 2						
30	Ms. Heyshanthini Pandiya Kumari	Asst Prof 2			\checkmark		\checkmark	
31	Ms. Rajitha Nair	Asst Prof 2						
32	Ms. Vasantha M	Asst Prof 2						
33	Vinoth Kumar A	Asst Prof 1						
34	Ms. Tinu N S	Asst Prof 1						
35	Mr. Gagan S Purad	Asst Prof 1			\checkmark			

Table 5.16 Summary of Innovative Teaching Technique used by Faculty for the OddSemester 2018-2019

	New Horizon College of Engineering, Bangalore Autonomous College Affiliated to VTU, Accredited by NAAC with 'A' Grade													
	Autonomo	ous College Af	filiated	to VTI	J , Acc	redite	d by NAAC	C with '	'A' Grao	le				
	Department of Computer Science and Engineering ODD SEM 2018-19													
SL No	Fac Fac De LOGICA EXPERENT EXPERENT EXPERENT N M M M DE R M M M M COMM N N TEAM BAS STOR STOR STOR STOR TRAIN T													
1	Dr. Pamela Vinitha Eric	Professor	\checkmark	\checkmark	V	\checkmark	\checkmark				\checkmark			
2	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
3	Dr Vishwanath Associate													

Criterion-5 Self-Assessment Report (SAR)



4	Dr. Clara Kanmani A	Associate Prof			\checkmark	\checkmark	\checkmark				\checkmark
5	Dr. Kamatchi Priya	Associate Prof				\checkmark	\checkmark		\checkmark	\checkmark	
6	Dr. Vinodha	Associate Prof			V		\checkmark				
7	Dr. Rachana	Associate Prof			V		\checkmark				
8	Ms. Deepika N	Sr. Asst Prof		\checkmark		\checkmark	\checkmark				
9	Mr. Siva Balan N	Sr. Asst Prof		\checkmark							
10	Ms. Jaya R	Sr. Asst Prof		\checkmark		\checkmark	\checkmark			V	
11	Ms. Priti B Badar	Sr. Asst Prof					\checkmark				
12	Ms. Asha Rani Borah	Sr. Asst Prof					\checkmark				
13	Ms. Shanmuga Priya S	Sr. Asst Prof				\checkmark				\checkmark	
14	Ms. Anjana Sharma	Sr. Asst Prof		V	V	\checkmark					
15	Ms. Pramilarani K	Sr. Asst Prof				\checkmark	\checkmark				
16	Ms. Padmapriya M K	Sr. Asst Prof					\checkmark				
17	Ms. Alpha Vijayan	Sr. Asst Prof		\checkmark		\checkmark		\checkmark			
18	Ms. Soja Rani S	Sr. Asst Prof		\checkmark		\checkmark	\checkmark				
19	Mr. Santosh Kumar B	Sr. Asst Prof	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark				



20	Ms. Sheba Pari N	Asst Prof 2		\checkmark		\checkmark	\checkmark			
21	Ms. Uma N	Asst Prof 2				\checkmark		\checkmark		
22	Mr. Muralidhara S	Asst Prof 2					\checkmark			
23	Mr. Puneet S Palagi	Asst Prof 2				\checkmark				
24	Ms. Jisha Mariam Jose	Asst Prof 2		\checkmark		\checkmark	\checkmark			
25	Mr. Vijay Kumar R	Asst Prof 2					\checkmark			
26	Ms. Yogitha	Asst Prof 2		V	V	V	V			
27	Ms. Syamili Mohandas	Asst Prof 2					\checkmark			
28	Ms. Gayathri T	Asst Prof 2		V	\checkmark	\checkmark			V	V
29	Ms. Heyshanthini Pandiya Kumari	Asst Prof 2						\checkmark		
30	Ms. Rajitha Nair	Asst Prof 2	\checkmark	\checkmark		\checkmark		\checkmark	\checkmark	
31	Ms. Vasantha M	Asst Prof 2		\checkmark		\checkmark				
32	Dimple W G	Asst Prof 1								
33	Ms. Tinu N S	Asst Prof 1				\checkmark				
34	Mr. Gagan S Purad	Asst Prof 1		\checkmark	\checkmark					



Table 5.17 Summary of Innovative Teaching Technique used by Faculty for theEven Semester 2017-2018

	New Horizon College of Engineering, Bangalore Autonomous College Affiliated to VTU, Accredited by NAAC with 'A' Grade													
	Autonomous	s College Affi	liated to V	TU, Accre	dited by N	AAC with '	'A' Grade							
	Department of Computer Science and Engineering EVEN SEM 2017-18 Z Z Z Z Z													
SL No	Faculty Name	Designation	EXPERENTIAL LEARNING	MEDIA	MODERN PEDAGOGY	MODERN COMMUNICATION MEANS	TEAM BASED LEARNING	GAMES/ ANALOGY/ STORY TELLING						
1	Dr. Hanuman Kumar V	Sr. Associate Prof	V		\checkmark	V								
2	Dr. Vishwanath Y	Associate Prof				\checkmark								
3	Dr. Clara Kanmani A	Associate Prof		\checkmark	\checkmark	\checkmark								
4	Dr. Kamatchi Priya	Associate Prof			\checkmark	\checkmark								
5	Ms. Deepika N	Sr. Asst Prof			\checkmark	\checkmark								
6	Mr. Siva Balan N	Sr. Asst Prof		\checkmark	\checkmark									
7	Ms. Jaya R	Sr. Asst Prof	\checkmark		\checkmark									



8	Ms. Priti B Badar	Sr. Asst Prof				\checkmark		
9	Ms. Asha Rani Borah	Sr. Asst Prof				\checkmark		
10	Ms. Shanmuga Priya S	Sr. Asst Prof	\checkmark		\checkmark			
11	Ms. Anjana Sharma	Sr. Asst Prof		\checkmark	\checkmark			
12	Ms. Pramilarani K	Sr. Asst Prof			\checkmark	\checkmark		
13	Ms. Padmapriya M K	Sr. Asst Prof				V		
14	Ms. Alpha Vijayan	Sr. Asst Prof			\checkmark		\checkmark	
15	Ms. Soja Rani S	Sr. Asst Prof			\checkmark	\checkmark		
17	Ms. Sheba Pari N	Asst Prof 2	\checkmark		\checkmark	\checkmark		
18	Ms. Uma N	Asst Prof 2	\checkmark		\checkmark	V		
19	Mr. Muralidhara S	Asst Prof 2				\checkmark		
20	Mr. Puneet S Palagi	Asst Prof 2			\checkmark			
21	Ms. Jisha Mariam Jose	Asst Prof 2			\checkmark	\checkmark		
22	Mr. Vijay Kumar R	Asst Prof 2				\checkmark		
23	Ms. Yogitha	Asst Prof 2		V	\checkmark			
24	Ms. Gayathri T	Asst Prof 2		V	V			
25	Ms. Heyshanthini	Asst Prof 2					\checkmark	



	Pandiya Kumari							
26	Ms. Rajitha Nair	Asst Prof 2	\checkmark		\checkmark		\checkmark	\checkmark
27	Ms. Vasantha M	Asst Prof 2			\checkmark	\checkmark		
28	Ms. Tinu N S	Asst Prof 1			V	V		
29	Mr. Gagan S Purad	Asst Prof 1	\checkmark	\checkmark	\checkmark			

Table 5.18 Summary of Innovative Teaching Technique used by Faculty for the OddSemester 2017-2018

	New Horizon College of Engineering, Bangalore							
	Autonomous College Affiliated to VTU, Accredited by NAAC with 'A' Grade							
	Departme	ent of Computer	Science ar	nd Enginee	ering ODI	D SEM 20 1	17-18	
SL No	Faculty Name Faculty Name Designation EXPERENTIAL LEARNING MEDIA MEDIA MEDIA MODERN MODERN MODERN MEANS TEAM BASED LEARNING GAMES/ANALOGY/ STORY TELLING							
1	Dr. Clara Kanmani A	Associate Prof			\checkmark			
2	Ms. Deepika N	Sr. Asst Prof				V		
3	Mr. Siva Balan N	Sr. Asst Prof			\checkmark			
4	Ms. Jaya R	Sr. Asst Prof			\checkmark			
5	Ms. Asha Rani Borah	Sr. Asst Prof				\checkmark		
6	Ms. Shanmuga Priya S	Sr. Asst Prof	\checkmark		\checkmark			



7	Ms. Pramilarani K	Sr. Asst Prof						
8	Ms. Padmapriya M K	Sr. Asst Prof	\checkmark			\checkmark		
9	Ms. Soja Rani S	Sr. Asst Prof			V	V		
10	Ms. Uma N	Asst Prof 2	V		V	V		
11	Ms. Yogitha	Asst Prof 2		\checkmark	\checkmark			
12	Ms. Gayathri T	Asst Prof 2		\checkmark	\checkmark		\checkmark	
13	Ms. Rajitha Nair	Asst Prof 2	\checkmark		\checkmark		\checkmark	
14	Ms. Tinu N S	Asst Prof 1			\checkmark	V		
15	Mr. Gagan S Purad	Asst Prof 1	V	\checkmark	\checkmark			

Resources available in the institutional website to promote research-based learning

- Free Book Bank facility for SC/ST students and book bank facility for other category of students at the nominal price is also provided to fulfil their academic needs.
- Reprography and printing facility is available in the college premises.
- Books are arranged subject wise and department wise and personal attention is given for fulfilling their library related needs.
- Open access facility is available. Library Staff motivate the students for open access to aware them about the latest arrivals.
- Separate Reference, Periodical, Circulation, Digital Library section and reading room facility is available in the Library.
- In addition to the central Library, each department has its own Departmental Library to facilitate easy access to the faculty, students and research scholars.
- The Department library has 7663 titles and1445 reference books.

E-Journals



Sl. No	Database Name	Website
1.	IEEE Xplore Digital Library	http://ieeexplore.ieee.org/
2.	Science Direct http://www.sciencedirect.com/	
3.	Taylor & Francis (E-Journals)	http://www.tandfonline.com/
4.	Springer Nature	https://link.springer.com/
5.	5. Emerald https://www.emerald.com/insight/	
6.	Knimbus Digital Library	http://www.new.knimbus.com/

Table 5.19 List of E-Journals

E-Books

Table 5.20 List of E-Books

Sl. No	Database Name	Website	
1.	McGraw Hill Education	https://www.expresslibrary.mheducation.com/	
2.	Taylor & Francis (E-Books)	s) https://www.taylorfrancis.com/	
3.	New Age Publishers	https://digital.elib4u.com/	
4.	Springer Nature	https://link.springer.com/	
5.	Packt	https://www.packtpub.com/in/	
6.	6. Elseveir https://www.sciencedirect.com/		

Resource Search Platforms

Table 5.21 List of Research Search Platforms

SL. No	Database Name	Website
1	Turnitin (Similarity Check)	https://www.turnitin.com/
2	Knimbus Digital Library	http://www.new.knimbus.com/
3	Netanalytiks (Writing Tool)	https://sententia.online/

Open Access E-Journals

Table 5.22 List of Open Access Journals



Sl. No	Database Name	Website
1	DOAJ (Directory of Open	https://doaj.org/
1	Access Journals)	
2	Indian Academy of Science	https://www.ias.ac.in/
3	Indian Journals	http://indianjournals.com/ijor.aspx
4	NISCAIR Research Journals	https://www.niscair.res.in/index.php?/science communication/researchjournals/rejour/rejour 1.htm
5	Hindawi Publishing Corporation	https://www.hindawi.com/search.aspx
6	Bentham Science Publishers	https://benthamscience.com/
7	Indian Journal of Science & Technology	https://www.indjst.org/
8	Journal of Digital Information (JoDI)	https://journals.tdl.org/jodi/index.php/jodi
9	Advances in Theoretical and Mathematical Physics	https://www.intlpress.com/site/pub/pa ges/journals/items/atmp/_home/_main /
10	High Wire Press	https://www.highwirepress.com/

E-Database: IITS & IISC Library

Table 5.23 List of E-Database

Sl. No	Database Name	Website
1	IIT Bombay	https://www.library.iitb.ac.in/
2	IIT Delhi	http://library.iitd.ac.in/
3	IIT Varanasi	https://www.iitbhu.ac.in/library/
4	IIT Bhubaneshwar	https://library.iitbbs.ac.in/
5	IIT Gandhinagar	http://www.iitgn.ac.in/research/library
6	IIT Guwahati	http://www.iitg.ac.in/lib/
7	IIT Hyderabad	http://library.iith.ac.in/



8	IIT Indore	http://library.iiti.ac.in/
9	IIT Kanpur	http://pkklib.iitk.ac.in/
10	IIT Mandi	http://library.iitmandi.ac.in/
11	IIT Madras	https://www.cenlib.iitm.ac.in/
12	IIT Patna	https://library.iitp.ac.in/
13	IIT Jodhpur	http://library.iitj.ac.in/
14	IIT Roorkee	http://mgcl.iitr.ac.in/
15	IIT Ropar	http://www.iitrpr.ac.in/library/
16	IISC Bangalore	https://www.library.iisc.ernet.in/

5.7 Faculty as participants in Faculty development/training activities/ STTPs (15)

A Faculty scores maximum five points for participation

Participation in 2 to 5 days Faculty/faculty development program: 3 Points

Participation>5 days Faculty/faculty development program:5 points



CI			Year	
Sl.	Faculty Name	CAYm1	CAYm2	CAYm3
No		2018-19	2017-18	2016-17
1	Dr. Mohan Kumar S	3	3	3
2	Dr. Pamela Vinitha Eric	3	0	0
3	Dr. Hanuman Kumar	3	3	0
4	Dr. Vishwanath Y	3	3	0
5	Dr. Beena .B.M	0	0	3
6	Dr. Clara Kanmani	3	3	3
7	Dr. Kamatchi Priya L	5	3	0
8	Dr. Vinodha.K	3	0	0
9	Dr. Rachana	3	0	0
10	Dr. Meenakshi Sundaram B	3	0	0
11	Dr. Venkata Ramana	3	0	0
12	Dr. Sreenivasulu M	3	0	0
13	Dr. G Sambasiva Rao	3	0	0
14	Dr. Jaya R	3	5	3
15	Ms. Anjana Sharma	3	3	3
16	Ms. Sheba Pari	5	3	3
17	Ms. N Deepika	3	3	3
18	Ms. Asha Rani Borah	3	3	3
19	Ms. Priti B Badar	3	0	0
20	Mr. Sivabalan N	3	3	3
21	Mr. Puneet S Palagi	3	3	3
22	Ms. Soja Rani S	5	5	3
23	Mr. Anil Kumar K	3	3	3
24	Ms. Gayathri G S	3	3	3
25	Ms. Tinu N S	5	3	3
26	Ms. Uma N	5	3	3
27	Ms. Padmapriya M K	5	3	3
28	Ms. Pramilarani K	3	3	3
29	Mr. Muralidhara S	5	3	3
30	Ms. Shanmuga Priya S	5	3	3
31	Ms. Jisha Mariam Jose	3	3	0
32	Ms. Gayathri.T	5	3	0
33	Mr. VijayaKumar R	5	3	3
34	Ms. Yogitha	3	5	3
35	Ms. Sheeba P	3	0	0
36	Ms. Alpha Vijayan	3	3	3
37	Mr. Prem Kumar	0	3	0
38	Mr. Santosh Kumar B	5	3	0



39	Ms. Dimple W G	3	0	0
40	Ms. Syamili Mohandas	3	0	0
41	Ms. Deepa Puranik	3	0	0
42	Ms. Udaya	3	0	0
43	Mr. Vinoth Kumar	3	0	0
	SUM	145	90	66
RF= Number of Faculty required to comply with 20:1 Student- Faculty ratio as per 5.1		35	33	33
	essment = 3 × (Sum/0.5RF) rks limited to 15)	24.86	16.36	12

Average assessment over 3 years: 17.74

5.8 Research and Development (75)

5.8.1 Academic Research (20)

Academic research includes research paper publications, Ph.D. guidance, and faculty receiving Ph.D. during the assessment period.

Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc. (15)

Ph.D. guided /Ph.D. awarded during the assessment period while working in the institute (5)

All relevant details shall be mentioned



The Department of Computer Science and Engineering encourages faculty members to participate in active research by participating in conferences, journal publications, MOOC courses, FDP participation etc.

Paper publications

Sl. No	Academic Year	Total No of Publications
1	2019-20	56
2	2018-19	89
3	2017-18	68

Table 5.24 Summary of paper publications

Table 5.25 List of Sample paper Publications:2019-2020

Sl. No	Authors	Title	Citation Details	DOI No / Web link	Citation
1	Dr.B Rajalakshmi	Image Organization Using Unsupervised Deep Learning - Case study	International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)	DOI : 10.32628/CSE IT19491100	UGC Care
2	Dr. Prashanth C Sai Ranga, Ms. Uma.N	A Detailed Analysis of the various frequent itemset mining Algorithms	Journal of Advanced Research in Dynamical and Control Systems - JARDCS	10.5373/JAR DCS/ V12SP2/SP20 201091	Scopus
3	Dr. Hanuman Kumar	Significance of Natural Language Processing in Language Based Automated Systems and	International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)	DOI: 10.32628/CSE IT19491102	UGC Care



		Intelligent Agents			
4	Dr. Jaya R	Hybrid Fuzzified Fish School Search Based Learning Method for Prakriti Analysis	Journal of Advanced Research in Dynamical and Control Systems - JARDCS	https://www.ja rdcs.org/abstra ct.ph?id=1130	Scopus
5	Dr. Kamatchi Priya L	Review on Feature Selection for the Analysis of Human Activities and Postural Transitions on Smart Phone.	International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)	DOI: 10.32628/CSE IT19491116	UGC Care
6	Dr. Thirukkumaran R	A Roadmap to Application Integration Using IoT Cloud Platform	International Journal of Psychosocial Rehabilitation	DOI:10.37200 /IJPR/V24I5/P R2020701	Scopus
7	Dr. S Sridevi	Implementation of Movie Recommendation System Using Machine Learning	International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)	10.32628/CSE IT2063143 http://ijsrcseit. com/paper/CS EIT2063143.p df	UGC Care
8	Mr. Sivabalan N	Blocking Performance and Analysis of Routing and Wavelength Assignment Using Shortest Path Routing Algorithm In	IEEE XPLORE	10.1109/INCO S45849.2019. 8951375	Scopus



		All-Optical Network			
9	Mr. Puneet S Palagi	A Novel Approach to Share the Online Shopping Cart Items in the E- Commerce Apps with Anyone	International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)	DOI: 10.32628/CSE IT1949152	UGC Care
10	Ms. Soja Rani S	A Survey on Different Approaches for Malware Detection Using Machine Learning Techniques	Springer, Cham	https://doi.org/ 10.1007/978- 3-030-34515- 0_42	Scopus
11	Ms. Pramilarani K	Analyzing Various Techniques to Safeguard User Sensitive Data	International Journal of Engineering Research and Technology	http://dx.doi.or g/10.17577/IJ ERTV9IS0610 14	UGC care
12	Ms. Shanmuga Priya S	Smart Test Case Quantifier Based on MC/DC Coverage Criterion with UML Sequence Diagram	International Journal of Recent Technology and Engineering	https://www.ij rte.org/wp- content/upload s/papers/v9i1/ A2280059120. pdf	Scopus
13	Ms. Jisha Mariam Jose	Credit Card Reader with Face Recognition Using Webcam	International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)	DOI: 10.32628/CSE IT19491111	UGC Care



14	Ms. Gayathri.T	Fashion sales prediction using data mining	International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)	DOI: 10.32628/CSE IT1949122	UGC Care
15	Mr. Santosh Kumar B	Review of Bus Mastering DMA through PCI express	Journal of Advanced Research in Dynamical and Control Systems - JARDCS	https://www.ja rdcs.org/abstra ct.php?id=298 8	Scopus
16	Ms. Alpha Vijayan	Project Based Learning by Bit coin	International Journal of Engineering Research and Applications (IJERA)	DOI: 10.9790/9622- 1005025459	UGC Care
		On the Review of Dehazing Methods for Bad Weather Images	International Journal of Engineering Trends and Technology (IJETT)	http://www.int ernationaljour nalssrg.org/sp ecial_issues/sp ecialissues_pa perlist/14- Part1-22	Scopus
17	Ms. Suganya R	Gradient flow- based deep residual networks for enhancing visibility of scenery images degraded by foggy weather conditions	Journal of Ambient Intelligence and Humanized Computing	DOI 10.1007/s1265 2-020-02225-2	Springer
18	Ms. Rajitha P Nair	Disclosure and sniff out of moving entity in real world	International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)	http://ijsrcseit. com/CSEIT19 491113	UGC Care



19	Ms. Heyhantshini Pandiya Kumari S	Image Organization Using Unsupervised Deep Learning - Case study	International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)	DOI: 10.32628/CSE IT19491100	UGC Care
20	Mr. Gagan S Purad	Amassing the significance of a business organization with the use of Data Analytics and the key technologies related to it	Journal of Emerging Technologies and Innovative Research	http://www.jet ir.org/view.ph p?paper=JETI R1905O76	UGC Care

 Table 5.26 List of Sample Paper Publications:2018-2019

Sl. No	Authors	Title	Citation Details	DOI No / Web link	Citation
1	Dr. Pamela Vinitha Eric, Dr. Clara Kanmani	Ontologies in Semantic Web: A Comprehensive Analysis	Jour of Adv Research in Dynamical & Control Systems	https://www.ja rdcs.org/abstra ct.php?id=157 9	Scopus
2	Dr. Hanuman Kumar	Skin Cancer Detection Using Machine	International Journal of Research in Advent Technology	http://www.ijr at.org/downlo ads/Vol-6/dec- 2018/Paper%2 0ID-	UGC Care



		Learning Algorithm		611201879.pd f	
3	Dr. Kamatchi Priya L	Improvising Classification Performance for High Dimensional and Small Sample Data Sets	Asian Journal of Information Technology	https://medwel ljournals.com/ abstract/?doi= ajit.2018.261. 270	Scopus
4	Ms. Sheba Pari	Providing cyber security using machine learning for social networks	Indian Journal of Public Health Research & Development	https://www.re searchgate.net/ publication/32 9474525_Prov iding_cyber_s ecurity_using_ machine_learn ing_for_social _networks	Scopus
5	Mr. Sivabalan N	Predicting Type of Cancers Using Machine Learning Algorithms	International Journal of Information and Computing Science	http://ijics.co m/gallery/39- may-1129.pdf	UGC Care
6	Ms. Deepika N	Analyzing different machine learning approaches for detecting malicious content: A Survey	International Journal of Pure and Applied Mathematics	https://acadpu bl.eu/hub/201 8-120- 6/8/808.pdf	Scopus
7	Ms. Soja Rani S	A Survey Paper on the Comparison of NOSQL Engines (Mongo dB vs.	International Journal of Information and Computing Science	http://ijics.co m/gallery/36- may-1126.pdf	UGC Care



		Cassandra) using Spark			
8	Ms. Tinu N S	Ethereum: A Blockchain Platform with smart contract support for Distributed Application Development	International Journal of Information and Computing Science	DOI:16.10089 .IJICS.2019.V 6I7.18.3245	UGC Care
9	Ms. Jaya R	Hybrid Fuzzified Fish School Search Based Learning Method for Prakriti Analysis	Jour of Adv Research in Dynamical & Control Systems	https://www.ja rdcs.org/abstra ct.php?id=113 0	Scopus
10	Ms. Uma N	Study on Cipher Suit to Secure the Data on Cloud Web Server	Journal of Emerging Technologies and Innovative Research	http://www.jet ir.org/papers/J ETIR1905387. pdf	UGC Care
11	Ms. Padmapriya M K	Apache Pig as A Platform for Data Analytics	International Journal of Information and Computing Science	DOI:16.10089 .IJICS.2019.V 6I5.18.3087	UGC Care
12	Ms. Pramilarani K	Survey on Exudates Extraction for Fundus Images	International Journal of Research in Advent Technology	http://www.ijr at.org/downlo ads/Vol- 6/nov- 2018/Paper%2 0ID- 611201868.pd f	Publons Web of Science, Mendeley Elsevier, Cornell University Library Google scholar etc.
13	Mr. Muralidhara S	Structure and Development ofan E-Voting System Utilizing	Journal of Emerging Technologies and Innovative Research (JETIR)	http://www.jet ir.org/papers/J ETIR1906P99 .pdf	UGC Care



		Blockchain Technique			
14	Ms. Shanmuga Priya S	Define – use Testing – An Example	International Journal of Recent Technology and Engineering	https://www.ij rte.org/wp- content/upload s/papers/v7i5/ E1947017519. pdf	Scopus
15	Ms. Jisha Mariam Jose	Dairy Farm Tracking using Blockchain	International Journal of Information and Computing Science	http://ijics.co m/gallery/77- may-1173.pdf	UGC Care
16	Mr. Vijayakumar R	Effective marketing with digital channel: An experimental study	International journal of Computer Science Trends and Technology	https://www.ij ariit.com/man uscript/effecti ve-marketing- with-digital- channel-an- experimental- study/	UGC Care
17	Ms. Anjana Sharma	CCTV Pedestrian Anomaly Detection Using Deep Learning Networks and Repeat Classifier	International Journal of Information and Computing Science	http://ijics.co m/gallery/38- may-1128.pdf	UGC Care
18	Ms. Alpha Vijayan	Isolation of The Drug Elements Causing Side Effects Through Machine Learning	International Journal of Engineering Research in Electronics and Communication Engineering (IJERECE)	https://www.te chnoarete.org/ common_abstr act/ pdf/IJERECE/ v5/i11/Ext_81 423.pdf	UGC Care



19	Mr. Gagan S Purad	Amassing the significance of a business organization with the use of Data Analytics and the key technologies related to it	Journal of Emerging Technologies and Innovative Research	http://www.jet ir.org/view.ph p?paper=JETI R1905O76	UGC Care
20	Ms. Vasantha M	A Study on Mobile Cloud Computing Systems	International Journal of Technical Innovation in Modern Engineering & Science	http://ijtimes.c om/papers/fini shed_papers/1 50620111014. pdf	UGC Care

 Table 5.27 List of Sample Paper Publications: 2017-2018

Sl. No	Authors	Title	Citation Details	DOI No / Web link	Citation
1	Dr. B Rajalakshmi	Comparison of Load Balancing Approaches in Cloud: EOLB	International Journal of Scientific Research in Computer Science Applications and Management Studies	https://www.ijsr csams.com/imag es/stories/Past_I ssue_Docs/ijsrcs amsv7i3p48.pdf	UGC Care
2	Dr. Prashanth C Sai Ranga	Scheduling Workflows with Data Host Reservation in Cloud Computing	International Journal of Engineering and Technology (IJET)	http://www.eng gjournals.com/ij et/docs/IJET17- 09-04-080.pdf	Scopus



		Understanding Live Migration Techniques Intended for Resource Interference Minimization in Virtualized Cloud Environment	Springer	https://link.sprin ger.com/chapter /10.1007/978- 981-10-6620- 7_47	Scopus
3	Dr. Guruprasad	Cloud Based RDF Security: A Secured Data Model for Cloud Computing	International Journal of Intelligent Engineering and Systems	http://www.inas s.org/2018/2018 022809.pdf	UGC Care
4	Dr. Hanuman Kumar	Python Libraries, Development Frameworks and Algorithms for Machine Learning Applications	International Journal of Engineering Research & Technology	https://www.ijer t.org/research/p ython-libraries- development- frameworks- and-algorithms- for-machine- learning- applications- IJERTV7IS040 173.pdf	UGC Care
5	Dr. Clara Kanmani	Cloud Based RDF Security: A Secured Data Model for Cloud Computing	International Journal of Intelligent Engineering and Systems	http://www.inas s.org/2018/2018 022809.pdf	UGC Care
6	Ms. Sheba Pari	Maintenance of Structural and Designs of Historical Buildings Using Light Detection and Ranging (LiDAR)	Global journal of engineering science and researches	http://www.gjes r.com/Issues%2 0PDF/Archive- 2018/July- 2018/7.pdf	UGC Care



7	Mr. Sivabalan N	A Survey on Device Discovery in Internet of Things	International Journal for Research in Applied Science & Engineering Technology	10.22214/ijraset .2018.5173	UGC Care
8	Mr. Puneet S Palagi	Enhancement of Privacy and User Interaction in a Social Network with the Aid of Adaptive Intelligence	International Journal on Recent and Innovation Trends in Computing and Communication	https://ijritcc.org /index.php/ijritc c/article/view/1 675	UGC Care
9	Ms. Soja Rani S	Social Network Analysis – Network Metrics for Detection of Influential Nodes	International Journal of Scientific Research in Computer Science Applications and Management Studies	https://doi.org/1 0.26438/ijcse/v6 i5.691696	UGC Care
10	Ms. Tinu N S	A Survey on Blockchain Technology- Taxonomy, Consensus Algorithms and Applications	International Journal of Computer Sciences and Engineering	https://doi.org/1 0.26438/ijcse/v6 i5.691696	UGC Care
11	Ms. Jaya R	Intelligent image encoding Methodology using covq with fss norms	International Journal of Creative Research Thoughts	http://ijcrt.org/p apers/IJCRT181 2588.pdf	UGC Care
12	Ms. Uma N	A Survey and comparative study of the various algorithms for Frequent Itemset Mining	International Journal of Computer Sciences and Engineering	https://doi.org/1 0.26438/ijcse/v6 i5.761765	UGC Care



13	Ms. Padmapriya M K	Data Integrity Verification in Cloud Database	International Journal of Engineering Science Invention	http://www.ijesi .org/papers/Vol(7)i6/Version- 2/K0706027985 .pdf	UGC Care
14	Ms. Pramilarani K	A Combination of AES and Key Hash Message Algorithm to Secure Data in Cloud	International Journal of Scientific Research in Computer Science Applications and Management Studies	http://ijsrcsams. com/images/stor ies/Past_Issue_ Docs/ijsrcsamsv 7i3p71.pdf	SIS
15	Mr. Muralidhara	Study of Information Mining (DM) and Machine Learning (ML) Strategies on Digital Security	International Journal of Computer Sciences and Engineering	https://www.ijcs eonline.org/pdf_ paper_view.php ?paper_id=2361 &225- IJCSE%200369 9.pdf	UGC Care
16	Ms. Shanmuga Priya S	A Review on Mutant Reduction Techniques	An International Peer Review E-3 Journal of Sciences and Technology	http://www.ijirc ce.com/ 10.24214/jecet. B.7.1.00922.	UGC Care
17	Ms. Jisha Mariam Jose	Data movement in wos - ros on sql operations in data Warehousing database-vertica	Global journal of engineering science and researches	https://zenodo.o rg/record/13040 27#.Xz9t8sgzbI U	UGC Care
18	Ms. Gayathri.T	Data mining of Absentee data to increase productivity	International Journal of Engineering and Techniques	http://www.ijetj ournal.org/Volu me4/Issue3/IJE T-V4I3P78.pdf	UGC Care
19	Ms. Sheeba P	Weka Workbench for Analysis of Machine Learning Classification Algorithms	International Journal of Research in Advent Technology	http://www.ijrat. org/downloads/ Vol-6/may- 2018/paper%20I D-65201870.pdf	UGC Care



20	Mr. Santosh Kumar	Realization of a Delta-Sigma Data converter with Lower Proportion of Oversampling	International Journal of Technical Innovation in Modern Engineering & Science	http://ijtimes.co m/papers/finishe d_papers/15063 0230155.pdf	UGC Care
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Book Publications

Table 5.28 Summary of Book Publications: CAY/CAYm1/CAYm2

Sl. No	Name of Faculty	Title of the Book / Book Chapter	Book / Book Chapter	Book Publication Details	Date of Publication
1	Ms. Jisha Mariam Jose	Hadoop Practice Guide	Book	Notion Press	7/7/2019
2	Dr. Kamatchi Priya L	The Complete Guide on Design of Algorithms	Book	Self- Publication	30/6/2019
3	Ms. Jaya R, Dr. Rajan C	Computer Networks- 1	Book	Bonfring Publications	1/4/2019
4	Ms. Jaya R, Ms. Deepika N	Data Structures	Book	Self- Publication	1/4/2019
5	Ms. R Jaya Dr. Rajan	Software testing	Book	Bonfring Publications	May 2018



6	Dr. B. Rajalakshmi, Ms. Shanmugha Priya S. Ms. N. Uma	Operating Systems - Question Bank	Book	Self- Publication	28/3/2019
7	Mr. Siva Balan, Dr. Illengo, Mr. Gangadhar, Ms. Kavitha, Mr. Vijaykumar Mr. Govind Raj, Mr. Vishwanath	Adobe Experience Manager 6.2.A practitioner Guide	Book	Digital Centre of Excellence Adobe	20/4/2017
8	Dr.R. Thirukkumaran	Security Issues and Trust Management Schemes in Internet of Things	Book Chapter	The Internet of Everything- Advances, Challenges, Applications	05/06/2020
9	Dr. Jaya R	 Data and Preprocessing of data for machine learning A survey on importance and applications of data mining using artificial neural network 	Book Chapter	International Journal of Information and Computer Science	01/05/2019



10	Ms. R Jaya Dr. Rajan	 Effective Routing Protocol (DSDV, DSR, ADOV) for Ad-Hoc Networks Detection of Malicious Packet dropping in wireless adhoc networks College Bandwidth Traffic Shaping 	Book Chapter	International Journal of Research in Engineering, Science and Management	01/01/2019
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Ph.D Guidance

Table 5.29 Ph.D. guided during the assessment periods while working in theinstitute with NHCE as Research Centre

Sl. No	Faculty Name	No of Students Guided/Guiding	University Name & Research Centre
1	Dr. Rajalakshmi. B	1	VTU-NHCE
2	Dr. Prashanth CSR	6	VTU-NHCE
3	Dr. Pamela Vinitha	2	VTU-NHCE
4	Dr. Hanuman Kumar	3	VTU-NHCE

PhD awarded

Table 5.30 Ph.D. awarded during the assessment periods while working in theinstitute

Sl. No	Name of Faculty Member	University	Year of Completion
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1	Dr. Jaya	VTU	2019
2	Dr. Kamatchi Priya L	Anna University	2018
3	Dr. Clara Kanmani	VTU	2018
4	Dr. Vinodha.K K	VTU	2018
5	Dr. Beena B.M	VTU	2017

SI. No.	Title of Patent/Discovery/Patent Pending No./Patent No./Patent Journal: Published Date	Jurisdiction/Published in Patent Journal	Inventors' Name/Faculty Members/Students /Emeritus Professors	Year of Application/ Department
1	Novel System, Design and Methods of Circular Stack Can Satellite (CSCS) E-2/3624/2019-CHE and Application No.201941046496 Dt 15/11/2019	India Dt 15/11/2019	Denzel Abraham George, Tarun Sai Reddy, Shyam S, Hariraj Rajkumar, Sainath Vamshi, Sanketh S Huddar, Nikhil Riyaz, Athira Ajayakumar Dr. Nisha KCR Ashwin Shankar Reddy	ECE, CSE, ME, EEE, ISE and R&D Cell 2019



			Vishwa Gopal,	
			Sriram Gupta,	
			K Bhavana Savanth,	
			Jaiteg Singh,	
			Joshua Tom Jaccob,	
			Dr. Mohankumar. S	
			Hariraj Rajkumar,	
			Sainath G V,	
			Sanketh SH,	
			Nikhil R	ECE, CSE, ME, EEE, ISE and R&D Cell 2019
		India 15/11/2019	Athira AK,	
			Dr. Nisha KCR	
	Novel System, Design and Methods of Compact		Denzel A G	
	CanSat: Satellite in a CAN		Tarun S T	
2	E-2/3625/2019-CHE and		Shyam S,	
	Application No.201941046497 Dt		Ashwin S R	
	15/11/2019		Vishwa Gopal,	
			Sriram G	
			K Bhavana Savanth,	
			Jaiteg Singh	
			Joshua TJ	
			Dr. Mohankumar.S	
	Automated Air	India	Dr. R.	CSE 2020
3	Cooler Ceiling Fan	The patent office journal	Thirukumaran	Publication
	Application No.202041016342	No:21/2020 Dt:22/05/2020	Bhaskar S V	Date:22/05/2 020



	Date of filing of Application :15/04/2020			
4	IOT Based People Counting and Alert System Using Dual Ultrasonic Sensor for Post Pandemic safety Application No.202041029561 A Date of filing of Application :11/07/2020	Jurisdiction: India The Patent Office Journal No. 31/2020 Dated 31/07/2020	Dr. R. Thirukumaran Dr. Clara Kanmani. A Dr. B. Rajalakshmi B. Santhosh Kumar Dr. S. Sridevi Dr. Pamela Vinitha Dr. Jaya. R	CSE 2020 Publication Date :31/07/2020

Table 5.32 Patents Published-2018-19

Sl.No.	Title of Patent/Discovery/Patent Pending No./Patent No./Patent Journal: Published Date	Jurisdiction/ Published in Patent Journal	Inventors' Name/Faculty Members/Students/ Emeritus Professors	Year of Application/ Department
1	System and Method Using Median Index Sort (MI Sort) for Integers E-2/1429/2017-CHE and Application No. 201741018092 Dt.23.05.2017	India No. 48/2018 Dt. 30/11/2018	Dr. Prashanth CSR Dr. Mohan Kumar Beena BM Suriya Begum Clara A Pramila Rani	CSE 2017
2	Apparatus and Novel Method Using Indexed Bucket Sorting Algorithm E-2/1428/2017-CHE and Application No. 201741018091 Dt.23.05.2017	India No. 48/2018 Dt. 30/11/2018	Dr. Prashanth CSR Deepika Jaya R Anjana Sharma Asha Rani Sivabalan Shanmugapriya Kundhavai	CSE 2017
3	Novel Method to Ensure Wrong Window Message Alert System E-2/1430/2017-CHE and Application No. 201741018093 Dt.23.05.2017	India No. 48/2018 Dt. 30/11/2018	Dr. Prashanth CSR	CSE 2017



4	System and Method for Smart Sustainable and Expandable Helmet with IoT Capabilities E-2/1413/2017-CHE and Application No. 201741018076 Dt.23.05.2017	India No. 48/2018 Dt. 30/11/2018	Vishwa. G Dr. Prashanth. CSR Dr. K. Gopalakrishnan Dr. Manjunatha Dr. M.S. Ganesha Prasad Dr. Nisha. KCR Dharmambal	CSE Mechanical ECE 2017
5	Novel Apparatus, System and Method for a voice based tool to have better communication E-2/2721/2017-CHE and Application No. 201741032337 Dt.13.09.2017	India No. 11/2019 Dt. 15/03/2019	Mr. Denzel Abraham George Mr. Bhavan. A, Mr. Nikhil Riyaz, Mr. Hariraj. R, Mr. Vishwa Gopal, Mr. Sanketh S Huddar Mr. SrishaVittal, MCA., Mr. Sunil S. K, MCA., Mr. Mansoor Ahmed. F, MCA.,	ECE CSE MCA R&D 2017
6	Novel Arrangement of Apparatus, System and Method to Provide Convenient E- Learning Platform to Reduce Student Dropout Rates and Enhance Job Opportunities E- 2/2935/2017-CHE and Application No. 201741034937 Dt.03.10.2017	India	Dr. C.S.R. Prashanth Mr. Sanketh S Huddar Mr. Vishwa Gopal, Mr. Hariraj Mr. Bhavan.A, Mr. Nikhil Riyaz Mr. Denzel Abraham George Mr. SrishaVittal, MCA. Mr. Sunil S. K, MCA., Mr. Mansoor Ahmed. F, MCA.,	CSE ECE MCA R&D 2017
7	Novel Arrangement of Apparatus, System and Method for creating an efficient cloud platform where an Uneducated Villagers can Serve as Tourist Guides or Service Providers to Tourists E-2/2936/2017-CHE and Application No. 201741034938 Dt.03.10.2017	India	Dr. C.S.R. Prashanth, Mr. Vishwa Gopal, Mr. Hariraj Mr. Bhavan.A, Mr. Nikhil Riyaz Mr. Denzel Abraham George Mr. Sanketh S Huddar, Mr. Srisha Vittal, MCA., Mr. Sunil S. K, MCA., Mr. Mansoor Ahmed. F, MCA.,	CSE ECE MCA R&D 2017
8	Novel Arrangement of Apparatus, System and Method for creating an efficient cloud platform to help the Uneducated Farmers and Fishermen	India	Dr. C.S.R. Prashanth, Mr. SrishaVittal, MCA., Mr. Vishwa Gopal, Mr. Hariraj	CSE ECE MCA R&D 2017



Regarding the Weather and	Mr. Bhavan.A,
Water Source Related	Mr. Nikhil Riyaz
Information	Mr. Denzel Abraham
E-2/2933/2017-CHE and	George
Application No. 201741034935	Mr. Sanketh S Huddar,
Dt.03.10.2017	Mr. Sunil S. K, MCA.,
	Mr. Mansoor Ahmed.
	F, MCA.,

5.8.2 Sponsored Research (20)

2018-19

Sl. No	Project Title	Duration	Name of the Funding Agency	Amount Received (In Rupees)
1.	UNITYSat/SlimSat 0.33U Satellite (Engineering Model Prototype for Qualification Testing & Flight Model) x 3 =1U with Deployer for ITCA Consortium/CSPD Serbia and UNISEC India (CSE: On Board Computer (OBC), Coding and Programming Responsibilities)	2 years	ITCA, UNISEC India, TSC P Ltd, CSPD, Serbia	6,00,000/-
2.	Development of "Single Card Satellite-Bus (SiCS-B)": 10 cm x10 cm (Timeline: 30 Months). Indo- Israel Joint Development	2.5 years	ITCA, UNISEC India, DRL, TSC P Ltd	8,00,000/-



3.	Development under UNISEC India. (CSE: On Board Computer (OBC), Coding and Programming	2 years	DRL, TSC P Ltd	9,00,000/-
4.	Responsibilities) Design and Development of TSC SatNAV: Amateur Radio and Weather Satellite Tracker and Passes Predictor for Android	10 Months	TSC Technologies P Ltd	15,00,000/-
	Tota	al		38,00,000/-

2017-18

Sl. No	Project Title	Duration	Name of the Funding Agency	Amount Received (In Rupees)
1.	UNITYSat/SlimSat 0.33U Satellite (Engineering Model Prototype for Qualification Testing & Flight Model) x 3 =1U with Deployer for ITCA Consortium/CSPD Serbia and UNISEC India (CSE: On Board Computer (OBC), Coding and Programming Responsibilities)	2 years	ITCA, UNISEC India, TSC P Ltd, CSPD, Serbia	4,00,000/-
2.	Development of "Single Card Satellite-Bus (SiCS-B)": 10 cm x10 cm (Timeline: 30 Months). Indo-Israel Joint Development	2.5 years	ITCA, UNISEC India, DRL, TSC P Ltd	5,00,000/-



	To	tal		17,50,000/-
4.	Design of OBC for PocketQube Satellite and Programming and Validation	9 Months	TSC Technologies P Ltd	3,50,000/-
3.	 (CSE: On Board Computer (OBC), Coding and Programming Responsibilities) Design and Development of CubeSat 2U; ADSB including Launch Cost; Indo-Israel Joint Development under UNISEC India. (CSE: On Board Computer (OBC), Coding and Programming Responsibilities) 	2 years	ITCA, UNISEC, DRL, TSC P Ltd	5,00,000/-

2016-17

Sl. No	Project Title)	Duration	Name of the Funding Agency	Amount Received (In Rupees)
1.	Design of OBC for CubeSat and Programming and Validation	6 Months	TSC Technologies P Ltd	3,00,000/-
2.	Development of "Single Card Satellite-Bus (SiCS-B)": 10 cm x10 cm (Timeline: 30 Months). Indo-Israel Joint Development (CSE: On Board Computer (OBC), Coding and Programming Responsibilities)	2.5 years	ITCA, UNISEC India, DRL, TSC P Ltd	5,00,000/-
	Total			8,00,000/-

Total: 63,50,000/-

5.8.3 Product Development

Table 5.33 Summary of Product Development Details: 2019-2020



Sl. No	Name of the Faculty/Students	Name of the Product	Description
1	Faculty: Mr. Sivabalan N Students: Goutham M Wodayar Haligi Shiva Sharana	Design and development of smart irrigation system	Aim: Development of a smart Power irrigation system which provides smart irrigation facilities
2	Faculty: Mr. Sivabalan Students: Yatin Anurag Hemanth	License verification using RFID technology	Aim: Development of a system which helps to perform License verification using RFID technology
3	Faculty: Dr. Vinitha Students: Kaveri R Anju N	Gester Recognition using image Processing and conversion to speech	Aim:Development of a System which helps in the Gester recognition using the image processing techniques
4	Faculty: Mr. Santhosh Kumar B Students: Yeshwant Raj	Predictive maintenance of car brake system	Aim: To Predict the outcome of any failure in car brake system before the actual fail.
5	Faculty: Ms. Shanmughapriya Students: Shalini. K	Advanced driver machine interface for locomotives	Aim: Implementing an advanced driver machine interface for locomotives for the benefit of the customer to have a standard interface to be followed for DMI uniformity across major railway systems. Which also acts as a point of contact between the driver and the railway signaling system.
6	Faculty: Ms. Pramilarani Students: S Hema Sai, Vikitha M Kathari	Earthquake prediction using seismic information	Aim: To Predict the outcome of any earth quake by analyzing the seismic information well before its onset.
7	Faculty: Ms. Asha Rani Borah Students: Navya.K Swapna KM Vidhya M	Text Recognition and Face Detection Aid for visually impaired person using Raspberry Pi.	Aim: To build a prototype for blind people to recognize the products in real world by extracting the text on image and face by converting it into speech using Raspberry Pi.



Sl. No	Name of the Faculty/Students	Name of the Product	Description
1	Faculty: Ms. Alpha Vijayan Student: Siddarth Konar	Detection of Fraud Behavior in Water Consumption	Aim: Development of a smart Power management system which improves overall power usage and management.
2	Faculty: Ms. Sheba Pari Student: A M Keerthan Rao	Handwriting recognition system using machine learning	Aim: Development of a handwriting recognition system using machine learning techniques.
3	Faculty: Ms. Kamatchi Priya L Student: Adithya Nambiar	Skin Disease Classification Using Deep Learning	Aim: To develop a classification system which can classify the skin diseases based on the symptoms using deep learning techniques
4	Faculty: Ms. Heyshanthini Pandya Kumari Student: Balasubramaniya D	Smart traffic light control system+	Aim: To develop a smart light traffic control system detecting the traffic conditions

Table 5.35 Summary of Product Development Details:2017-2018

Sl. No	Name of the Faculty/Students	Name of the Product	Description
1	Faculty: Ms. Jaya R/Ms. Sheba Pari	Virtual Motion Detector to detect crime in real-time and alert authorized persons using binary comparison algorithm	Aim: Development of a real time Crime detector based on binary comparison algorithm
2	Faculty: Ms. Sheeba P/Ms. Asha	Predicting Air Pollution Trend from Historical Data collected from Cities	Aim: Development of a Prediction system which can show the trends in air pollution based on historical data collected
3	Faculty: Ms. Alpha Vijayan/ Mr. Vijay Kumar	Reversible Data Hiding in Encrypted Images using Interpolation-based Distributed Space Reservation	Aim: To develop a reversible data hiding using Interpolation based Distributed Space Reservation Technique



Research Laboratories

The main objectives of Research Laboratories are,

- To organize workshops on the use and application of various types of software for students, faculties.
- To provide facilities of software to faculties and students to enable them to carry out or R&D work.

Table 5.36 Details of Research Laboratories

Sl. No	Name of the lab
1	Project Works Lab
2	R&D Lab

Pictures of the Research Laboratories



Figure 5.1: Project Works Lab



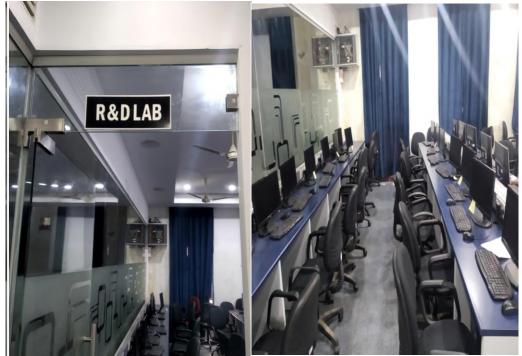


Figure 5.2: R&D Lab

Instructional materials

 Table 5.37 Details of Instructional Materials Used in Teaching and Learning

 Process

Sl. No	Name of the Faculty	Instructional Materials
1	Dr. B Rajalakshmi	Smart Board, E-Notes, Ppts, Videos
2	Dr. Prashanth C Sai Ranga	Smart Board, E-Notes, Ppts, Videos
3	Dr. Mohan Kumar S	Smart Board, E-Notes, Ppts, Videos
4	Dr. M. Chandra Naik	Smart Board, E-Notes, Ppts, Videos
5	Dr. Pamela Vinitha Eric	Smart Board, E-Notes, Ppts, Videos
6	Dr. Clara Kanmani	Smart Board, E-Notes, Ppts, Videos
7	Dr. Hanuman Kumar	Smart Board, E-Notes, Ppts, Videos
8	Dr. Jaya R	Smart Board, E-Notes, Ppts, Videos
9	Dr. Kamatchi Priya L	Smart Board, E-Notes, Ppts, Videos
10	Dr. Meenakshi Sundaram B	Smart Board, E-Notes, Ppts, Videos



11	Dr. Vinodha.K	Smart Board, E-Notes, Ppts, Videos
12	Dr. Rachana	Smart Board, E-Notes, Ppts, Videos
13	Dr. Venkata Ramana	Smart Board, E-Notes, Ppts, Videos
14	Dr. Sreenivasulu M	Smart Board, E-Notes, Ppts, Videos
15	Dr. G Sambasiva Rao	Smart Board, E-Notes, Ppts, Videos
16	Dr. Thirukkumaran R	Smart Board, E-Notes, Ppts, Videos
17	Dr. S Sridevi	Smart Board, E-Notes, Ppts, Videos
18	Dr. Neelima Kulkarni	Smart Board, E-Notes, Ppts, Videos
19	Dr. Guruprasad	Smart Board, E-Notes, Ppts, Videos
20	Dr. Mouleeshwaran	Smart Board, E-Notes, Ppts, Videos
21	Dr. Jithengranath Mungara	Smart Board, E-Notes, Ppts, Videos
22	Ms. Asha Rani Borah	Smart Board, E-Notes, Ppts, Videos
23	Ms. Priti B Badar	Smart Board, E-Notes, Ppts, Videos
24	Mr. Sivabalan N	Smart Board, E-Notes, Ppts, Videos
25	Mr. Puneet S Palagi	Smart Board, E-Notes, Ppts, Videos
26	Ms. Soja Rani S	Smart Board, E-Notes, Ppts, Videos
27	Mr. Anil Kumar K	Smart Board, E-Notes, Ppts, Videos
28	Ms. Gayathri G S	Smart Board, E-Notes, Ppts, Videos
29	Ms. Tinu N S	Smart Board, E-Notes, Ppts, Videos
30	Ms. Uma N	Smart Board, E-Notes, Ppts, Videos
31	Ms. Padmapriya M K	Smart Board, E-Notes, Ppts, Videos
32	Ms. Pramilarani K	Smart Board, E -Notes, Ppts, Videos
33	Mr. Muralidhara S	Smart Board, E- Notes, Ppts, Videos
34	Ms. Shanmuga Priya S	Smart Board, E-Notes, Ppts, Videos
35	Ms. Jisha Mariam Jose	Smart Board, E-Notes, Ppts, Videos
36	Ms. Gayathri.T	Smart Board, E-Notes, Ppts, Videos
37	Mr. Vijayakumar R	Smart Board, E-Notes, Ppts, Videos
38	Ms. Yogitha	Smart Board, E-Notes, Ppts, Videos
39	Ms. Alpha Vijayan	Smart Board, E-Notes, Ppts, Videos



40	Mr. Prem Kumar	Smart Board, E-Notes, Ppts, Videos
41	Mr. Santosh Kumar B	Smart Board, E -Notes, Ppts, Videos
42	Ms. Deepa Puranik	Smart Board, E-Notes, Ppts, Videos
43	Ms. Syamili Mohandas	Smart Board, E-Notes, Ppts, Videos
44	Ms. Dimple W G	Smart Board, E-Notes, Ppts, Videos
45	Ms. Udaya	Smart Board, E-Notes, Ppts, Videos
46	Mr. Vinoth Kumar	Smart Board, E-Notes, Ppts, Videos
47	Ms. Suganya R	Smart Board, E-Notes, Ppts, Videos
48	Ms. Deepti Rai	Smart Board, E-Notes, Ppts, Videos
49	Ms. Teena Annamma James	Smart Board, E-Notes, Ppts, Videos
50	Mr. Bhaskar S V	Smart Board, E-Notes, Ppts, Videos
51	Mr. Manjunatha Swamy C	Smart Board, E-Notes, Ppts, Videos
52	Ms. Lakshmi S Hanne	Smart Board, E-Notes, Ppts, Videos
53	Ms. Anjana Sharma	Smart Board, E-Notes, Ppts, Videos
54	Ms. Sheba Pari	Smart Board, E-Notes, Ppts, Videos
55	Ms. Deepika N	Smart Board, E-Notes, Ppts, Videos
56	Ms. Sheeba P	Smart Board, E-Notes, Ppts, Videos
57	Mr. Gagan S Purad	Smart Board, E-Notes, Ppts, Videos
58	Ms. Rajitha Nair	Smart Board, E-Notes, Ppts, Videos
59	Ms. Heyshanthini Pandiya Kumari S	Smart Board, E-Notes, Ppts, Videos
60	Mr. Karthik V	Smart Board, E-Notes, Ppts, Videos
61	Ms. Vasantha M	Smart Board, E-Notes, Ppts, Videos
62	Ms. Shashikala	Smart Board, E-Notes, Ppts, Videos

Working models /charts /monograms



Lab Instruction Charts are available in all the labs. Some sample Chart pictures are provided below

		and the second			w NEW HOR
		ALC	GORITHM	S PERFOR	MANCE
A		g (n) f(n)	A	c.g	1(n)
O (Big	(n) = 0 (g Oh) Notatio PARING S	on	(Rin Th	r) = Θ (g(n) eta) Notati MS ON TI	
O (Big	Oh) Notati	on	(Rin Th	eta) Notati NS ON TI Space	() - (g(n))
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O (Big COMI Sorting Techniques Bubble Sort	Oh) Notatio PARING S Best Case	ORTING A	⊖ (Big Th LGORITH/ Worst Case	eta) Notati MS ON TI Space Complexity	ion Ω (Big Omega) Notati ME & SPACE COMPLEXITIES
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Fig 5.3 Chart on Algorithm Complexity Analysis





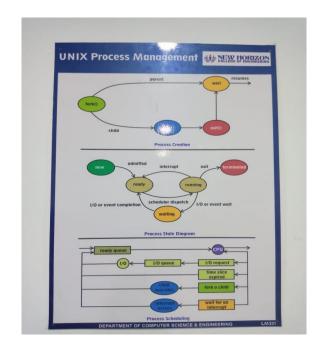


Figure 5.4 Chart on Software Testing Methods

Fig 5.5 Chart on Unix Process Management



5.8.4 Consultancy (from Industry) (20)

(Provide a list with Project Title, Funding Agency, Amount and Duration) Funding Amount (Cumulative for each Assessment years): Amount>10 Lacs – 20 Marks, Amount<10 and > 8 Lacs – 15 Marks, Amount<8 and>6 Lacs– 10 Marks, Amount<6 and >4 Lacs–5 Marks, Amount<4 and >2 Lacs– 2 Marks, Amount<2 Lacs – 0 Mark

2018-19(CAYm1)

Sl. No	Project Title	Duration	Funding Agency	Amount
1	Online evaluation tools	5 months	Sarah Enterprises	150000
2	Online promotional mobile Apps	4 months	K2 Learning	100000

Total Amount:250000

2017-18(CAYm2)

S. No	Project Title	Duration	Funding Agency	Amount
1	Online Evaluation Tools	4 months	EDUMERGE	100000
2	Online promotional mobile Apps	4 months	K2 Learning	100000

Total Amount:200000

2016-17(CAYm3)

Sl. No	Project Title	Duration	Funding Agency	Amount
1	Integrated Maintenance Model	9 months	Infant Travels	750000

Total Amount:750000

Cumulative Amount (X + Y + Z) = 120000.00

5.9 Faculty Performance Appraisal and Development System (FPADS) (10)



Faculty members of Higher Educational Institutions today have to perform a variety of tasks pertaining to diverse roles. In addition to instruction, Faculty members need to innovate and conduct research for their self-renewal, keep abreast with changes in technology, and develop expertise for effective implementation of curricula. They are also expected to provide services to the industry and community for understanding and contributing to the solution of real life problems in industry. Another role relates to the shouldering of administrative responsibilities and co-operation with other Faculty, Heads-of-Departments and the Head of Institute. An effective performance appraisal system for Faculty is vital for optimizing the contribution of individual Faculty to institutional performance. The assessment is based on:

A well-defined system for faculty appraisal for all the assessment years (5)

Its implementation and effectiveness (5)

The College follows the Performance Based Assessment System as prescribed by the UGC. The system was adopted after a thorough discussion and review. The performance review gives a great opportunity to the concerned faculty and the department to look into the areas for improvement and take necessary remedial steps. The purposes of this evaluation are following:

Assess and promote excellence in the teaching/learning process.

a) Meet the educational needs of students and community by continually monitoring instructional performance.

b) Provide a constructive framework for evaluating faculty performance by identifying areas of strength and areas for improvement in classroom instruction.

c) Provide a basis for professional growth and development.

Faculty Performance Appraisal and Development System.

Basic Criteria for Appraisal System:

Teaching Based Appraisal:

 Percentage of Assigned Classes taken.
 PBL projects supervised.
 Swayam / NPTEL course in Blended mode.
 Innovation in teaching pedagogy.
 Number of Guest Lectures/Workshops/Seminar organized for the students.

•Designing of new courses / Revision of courses.



•Extra activities carried out with regard to slow and fast learners.

°MOOC courses completed. Open POWER Academia and Research Webinar

•Proper maintenance of Course Files as per the prescribed list of contents.

•Attainment of Course Outcomes (COs).

Awards/ Recognitions received for excellence in teaching/ research/ students' projects.

- Research Based Appraisal:
 - •Papers published in SCOPUS Indexed Approved journals.
 - •Outside Consultancies completed during the assessment period.
 - •Conference organized by the school during the assessment period.
 - °Papers presented at Conferences, Seminars, Workshops, Symposia, Trade Journals (National/International).
 - $\circ Membership$ of Chapters such IEEE, Institute of Engineers etc.

•Funded Research Projects handled as Principle Investigator (PI) or as Co-PI during the Membership of Chapters Patents granted in the school

°Initiatives and Outreach activities.

•Conduct of Training Programs (FDP/Workshop) should be the Organizer.



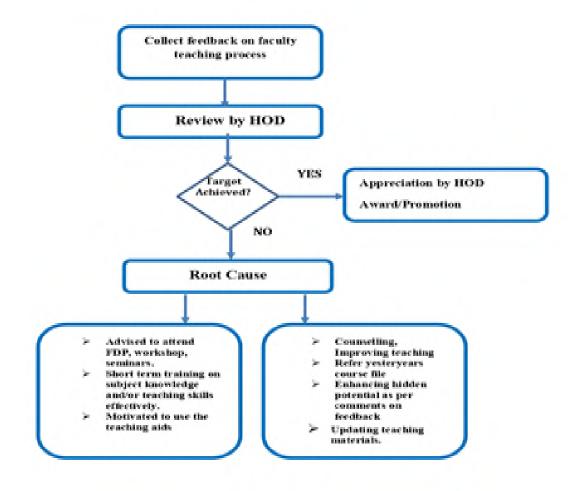


Fig 5.6 Flow Chart indicating the feedback Process



NEW HORIZON COLLEGE OF ENGINEERING

ANNUAL SELF APPRAISAL OF TEACHING STAFF

Academic Year:

Name:.... Designation:.... Department:....

NOTE:

(This document consists of evaluation (i) of teacher by students (ii) by teachers themselves and(iii) of the concerned of Head, all considered together. This evaluation is conducted at the end of each academic year and forms an important document of performance evaluation)



PERFORMANCE APPRAISAL: TEACHING STAFF

In conformity with the job responsibilities (prescribed by AICTE) Assessment period from August 2018 to July 2019

	PART'A'
	(Personal Particular)
Name	
Educational Qualifications	:
(If you posses a Doctorate degree, state if you are a recognized guide)	:
Department	:
Designation	:
No. of years served in NHCE till date	:
Total Experience till date	:
Any extraordinary achievement during the assessment period	:

Part'B'

Academic Duties and responsibilities assigned

	Subject Assigned	No. of Classes Planned	No. of Classes Conducted	Remarks
ODD Semester Theory				



	Laboratory	No. of Experiments Planned	No. of Experiments Conducted	Remarks
ODD Semester				
Laboratory				

	Subject Assigned	No. of Classes Planned	No. of Classes Conducted	Remarks
EVEN Semester Theory				

	Laboratory	No. of Experiments Planned	No. of Experiments Conducted	Remarks
EVEN Semester				
Laboratory				

Applicable to Faculties handled Autonomous scheme

	Subjects Assigned	Self Study / Sem / Student	Assignments / Semester	Quiz / Semester
ODD SEMESTER				



	Subjects Assigned	Self Study / Sem / Student	Assignments / Semester	Quiz / Semester
EVEN SEMESTER				

Part 'C'

A brief pen picture of self, not exceeding in 5 to 6 lines, highlighting the administrative and support activities entrusted

Part 'D'

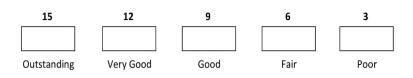
(Appraisal on a 5 point rating scale)

Note: Please put a tick in the appropriate rating

1. Proper maintenance of course files and attendance registers (as per Check list) with necessary proof

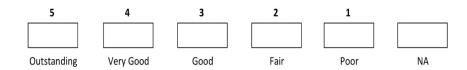


2. Proper valuation & maintenance of blue books of students with necessary proof





3. Contribution in development of lab manuals, addition of new experiments and innovations and modernization of labs

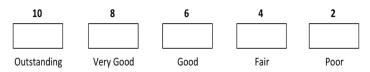


4. Participation in co-curricular activities

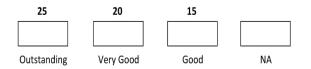


(Here contributions in areas like ISTE, forum activities, arranging guest lectures, symposiums / seminars, Workshops, blood donation, sports and other fruitful activities need to be taken into consideration.)

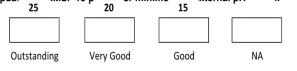
5. Initiatives taken towards counseling / Mentoring, guidance & overall character building of students



6. Initiatives and interest shown in acquiring and disseminating new knowledge and skill through paper publications. Minimum 02 per Academic Year. Update in HRMS. For 02 publications 15 points



7. Initiatives and interest shown in acquiring and disseminating new knowledge and Skill through attending external seminars/ workshops/ conferences: Minimum 02 per Academic Year. Update in URMS. 15 prints for minimum 02 external processes.

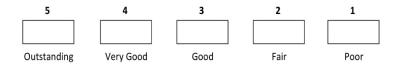




8. Efforts made in attending education program (MOOCS): Update in HRMS. Minimum 01 online program – 15 points



9. Initiative & involvement in curriculum development (Suggestions to improve the Curriculum):



10.Involvement in planning & organizing workshop / seminars / conference / symposium/exhibition / guest lectures etc., please specify



11.Initiative taken towards Societal Development (adult literacy drives & bringing awareness in the society towards hygiene/moral & ethical value etc):



12.Degree of integrity, efficiency, effectiveness& dedication shown during the course of discharging assigned responsibilities:





PART 'E'

Formula Used: (Grand Result % * 5) / 100

(Result Conversion Scale: 1	00% - 5 ,	80% - 4 ,	60% - 3 ,	40% - 2 ,	20% - 1 ,	0% - 0)		
ODD Semester								
	Cub 1	Sub 2	Sub 3	Sub 4	Cub F	Average		
	Sub 1	Sub 2	Sub 3	Sub 4	Sub 5	Average		
Student Feedback								
Result								

EVEN Semester						
	Sub 1	Sub 2	Sub 3	Sub 4	Sub 5	Average
Student Feedback						
Result						

Grand Average							
	ODD	EVEN	Grand				
Student Feedback							
Result							

SUMMARY

SUMMARY OF PART "D"

- Points awarded with 75% weight age: (D1*0.75)

SUMMARY OF PART "E"

- Average of student Feedback and Result (E1)=
- 25% weightage based on grand average: (E1*0.25).....



OVERALL SUMMARY

Annual performance index (D + E) = ______

CORRESPONDING RANKING TAKING INTO ACCOUNT THE POINT SCORE AND CONVERTING IT TO TOTAL WEIGHTAGE OF 75%+25%= 100

Final Grade: 4.5 – 5.0 : OUTSTANDING 4.0 – 4.4 : Very good 3.0 – 3.9 : Good 2.0 – 2.9 : Fair Less than 2: Poor

OTHERS

Additional weightage for the following will be considered :

1. No. of patents filed (Please furnish details and update in HRMS)

- 2. No. of books published (please furnish details and update in HRMS) per patent
- 3. Contribution in promoting institute industry, R & D activities and consultancy services (Minimum 02 proposals per academic year for Professor cadre)
- 4. Contribution through Projects

Signature of faculty member Date:.....

Areas for improvement:



Signature of HOD Date:

Remarks of Principal:

Signature of Principal Date:

GUIDELINES TO HEADS OF DEPARTMENT FOR FILLING UP PERFORMANCE APPRAISAL FORM IN RESPECT OF TEACHING STAFF

- 1. Every faculty person will be assessed on items/areas of achievement on the pressure point rating scale. The concept of rating scale are given below:
 - Outstanding : Excellent professional competence, unblemished track record, utmost efficiency & effectiveness, optimum human capacity utilization, punctuality, sincerity and dedication of highest order.
 - Very good: Satisfactory professional competence with reasonable efficiency & effectiveness, reasonable extent of human capacity utilization and high order of punctuality, sincerity and dedication.
 - Good: Just satisfactory performance with marginal level of efficiency and effectiveness. Medium human capacity utilization, punctuality, sincerity and dedication just adequate to deliver minimum satisfactory performance.
 - Fair: Performance much below the level of expectations. Lack of efficiency and effectiveness, zeal and enthusiasm in performing his/her duties. Under utilization of capacity advertently or inadvertently(due to physical, mental disabilities)
 - Poor: A deplorable performance devoid of initiative efforts, zeal or enthusiasm. A liability for the organisation with either total lack of capacity, utilization to perform or advertently shirking from responsibilities.



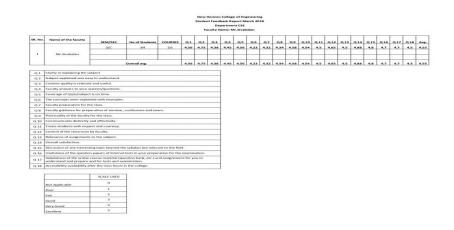
2. PROCEDURE OF COMPUTATION OF GRADING

- 75% weightage of the total points awarded in performance appraisal.
- 25% weightage will be given for points awarded in the faculty evaluation by students both from both semesters.
- 3. CORRESPONDING RANKING TAKING INTO ACCOUNT THE POINT SCORE AND CONVERTING IT TO TOTAL WEIGHTAGE OF 75%+25%= 100%

4.5 – 5.0 : OUTSTANDING 4.0 – 4.4 : Very good 3.0 – 3.9 : Good 2.0 – 2.9 : Fair Less than 2: Poor

- 4. HOD's are required to fill up the performance appraisal proforma in presence of the concerned teaching staff by asking the staff explain item wise performance and their perceptions about the point grades. The HOD's after taking into account the submissions and expectations of the concerned staff & his own perceptions/ option about the capability of the staff, will put a tick on mark particular point scale. In case the ticked grade does not tally with the expectations of the staff, the reasons for variations must be told to staff by HOD in explicit terms.
- 5. The HODs are to ensure that assessment is based on the performance of the individual throughout the stipulated assessment period and not based on seasonal performance. Further biases all sorts and preferential treatment to selected ones should be avoided to make the appraisal system totally transparent and purposeful.
- 6. Both the HOD and the staff have to sign in the appraisal proforma at the appropriate place meant for the purpose. The employees should invariably sign even if they have some reservation on the assessment grades given by HOD's on certain items. They can mention the particular items where they have reservations/ disagreement below their signature at the appropriate place mentioned there in. These dissenting items/points or divergences will be discussed by the staff with Principal at appropriate time after seeking interview or if otherwise automatically called by Principal.
- 7. The decision of the Principal an all dissenting matters will be final & binding on employees. No further query or representations on the subject will be entertained at later stage.





5.10 Visiting/Adjunct/Emeritus Faculty etc. (10):



Adjunct faculty also includes Industry experts. Provide details of participation and contributions in teaching and learning and /or research by visiting/adjunct/Emeritus faculty etc.

• Provision of visiting/adjunct faculty (1)

• Minimum 50 hours per year interaction with adjunct faculty from industry/retired professors etc. (9) (Minimum 50 hours' interaction in a year will result in 3 marks for that year; 3marks x 3years=9 marks)

The Department of Computer Science and Engineering regularly encourages the conduction of lectures by visiting /Adjunct faculty members. These Visiting Faculty are industry experts from various technical domains and the aim of such encouragement is to bridge the Industry-Academia gap.

Summary of the Visiting/Adjunct/Emeritus Faculty

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Table 5.38 Summary of the Visiting/Adjunct/Emeritus Faculty
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Academic Year	No of Hours
2019-20	54
2018-19	178
2017-18	220

Academic Year 2019-2020

Table 5.39 List of 2019-2020 Visiting Faculty Members

Sl. No.	Name of the visiting Faculty	Designation Company		Duration	
1	Mr. Vinod Unnikrishnan	Senior Product Owner	Dell International Service, Bangalore	18 Hrs	
2	Mr. Muralitharan. G	Tech Lead	E-mids Technologies, Bangalore	18 Hrs	
3	Mr. Ramkumar Senior Technology Specialist		Wells Fargo solutions (India) Pvt. Ltd	18 Hrs	
	Total Hours	54 Hrs			

Academic Year 2018-2019

Table 5.40 List of 2018-2019 Visiting Faculty Members



Sl. No.	Name of the visiting Faculty	- HASIGNATIAN I LAMBANY		Duration				
1	Mr. Vinod Unnikrishnan	Associate Director	Virtusa Software, Bangalore	10 Hrs				
2	Mr. Ravikumar Reddy	Senior Engineer	Russell TechSys Pvt. Ltd	18 Hrs				
3	Mr. Harish T	Sr. Security Analyst	EMC2	6 Hrs				
4	Mr. Harshit Kumar Pal	Senior Engineer	Edge Verve	18 Hrs				
5	Mr. Ramkumar	Senior Technology Specialist	Wells Fargo solutions (India) Pvt. Ltd	18 Hrs				
6	Mr. Rajeev T C	Senior Software Engineer	Source Bits	18 Hrs				
7	Mr. Venkat. T	Senior Software Engineer	Accenture	18 Hrs				
8	Mr. Santhosh B	Senior Software Engineer	Aricent	6 Hrs				
9	Mr. R. Ramkumar	Senior Technology Specialist	Wells Fargo solutions (India) Pvt. Ltd	30 Hrs				
10	Mr. Sateesh Jayabalan	Senior Software Engineer	EMC	18 Hrs				
11	Mr. K. Vivekananda	Analytics Manager	Wipro Ltd	12 Hrs				
12	Mr. Manjunath Gundappa	Tech Lead	Aricent	6 Hrs				
	Total Hours							

Academic Year 2017-2018

Table 5.41 List of 2017-2018 Visiting Faculty Members



Sl. No.	Name of the visiting Faculty	Designation	Company	Duration
1	Mr. R. Ramkumar	Senior Technology Specialist	Wells Fargo solutions (India) Pvt. Ltd	6 Hrs
2	Mr. M. Raman	Technology Consultant	Accenture Solutions Pvt. Ltd	12 Hrs
3	Mr. Silvester Rajpal	Cloud Operations Engineer Senior Analyst	Accenture Solutions Pvt. Ltd	22 Hrs
4	Mr. Vinoth. G	Tech Consultant	Atos	6 Hrs
5	Mr. Muralitharan. G	Tech Lead	E-mids Technologies, Bangalore	24 Hrs
6	Mr. Niranjan. K	Technical Specialist	NetScout	17 Hrs
7	Mr.R. Shankar Team Leader KIPT Techno		KIPT Technologies	31 Hrs
8	Mr. Deepak Natarajan	Associate Technical Lead	Sourcsebits	7 Hrs
9	Mr. Harish Thanikachal	Sr. Security Analyst	EMC2	6 Hrs
10	Mr. Dinesh	Work Stream Lead	ANZ	6 Hrs
11	Mr. Ravikumar Reddy	Senior Engineer	Russell TechSys Pvt. Ltd	6 Hrs
12	Mr. Karthikeyan	Senior Cloud Engineer	Accenture Solutions Pvt. Ltd	8 Hrs
13	Mr. Anand Sudhir	Senior VLSI Engineer	Apex Semiconductor	6 Hrs
14	Mr. L. Sunder Murthy	Proprietor of LS Control Systems	LS Control Systems	3 Hrs
15	Mr. Rajasekhar	Senior Software Engineer	JDA Software Solutions	16 Hrs
16	Mr. Ramkumar Rajavel	Senior Technology Specialist	Wells Fargo solutions (India) Pvt. Ltd	8 Hrs



17	Mr. Sharan Kumar	Solutions Architect	Akamai Technologies	8 Hrs			
18	Mr. Satheesh Jayabalan	Senior Software Engineer	DELL EMC	12 Hrs			
19	Mr. G. Parthiban	Senior Business Analyst	Foray Software Pvt. Ltd	8 Hrs			
20	Mr. Vinod Unnikrishnan	Product Manager	Dell International Services	8 Hrs			
	Total Hours						

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CRITERION 6

FACILITIES AND TECHNICAL SUPPORT

388

CRITERION 6

FACILITIES & TECHNICAL SUPPORT

80

6.1 Adequate and well equipped laboratories and technical manpower (40)

The Department of Computer Science and Engineering has well established laboratories with necessary hardware and software for enriching the practical knowledge of the students with creative engineering programs / exercises. Over and above the students can develop variety of applications with the support and guidance of the faculty members.

		No of		Weekly Utilization	Technical Manpower support			
SI. No	Name of the Laboratory	Students per setup (Batch size)	Name of the Important equipment	status (all the courses for which the lab is utilized)	Name of the technical staff		Qualification	
1	CCP LAB 1	30	 ✓ CPU- Model: Intel i7- 2700K, 4GB RAM, 1TB HDD"19" View sonic LCD Monitor Computer Systems ✓ Projector ✓ Software package: Open office, G++ Compiler, GCC Compiler 	Fully Utilized	Kempalinge Gowda B G	Instructor	BSc, MCA	
2	CCP LAB 2	30	 ✓ CPU- Model: Intel i7- 2700K, 4GB RAM, 1TB HDD"19" View sonic LCD Monitor Computer Systems ✓ Projector ✓ Software package: Open office, G++ Compiler, GCC Compiler 	Fully Utilized	Chethan N	Diploma in CSE	BSc, MCA	



			✓ CPU-		1]
3	LAB 1 (DBMS/ OOPS)	35	Model: Intel i7 3.4 Ghz 1TB HDD, 4 GB RAM"19" LG LED Monitor Computer Systems ✓ Projector ✓ Software package: My Sql, Java, Eclipse, Open Office, G++ Compiler, GCC Compiler	Fully Utilized	Shantha Murthy K C	Instructor	BCA
4	LAB 2 (WT/DS/CN)	35	 ✓ CPU- Model: Intel i3 3.6 Ghz 500TB HDD, 4 GB RAM"19" View sonic LCD Monitor Computer Systems ✓ Projector ✓ Software package: My Sql, Java, Eclipse, Open Office, G++ Compiler, ✓ GCC Compiler 	Fully Utilized	Ravichandra N	Instructor	Diploma in CSE
5	LAB 3 (USP, JAVA, SOFTWARE TESTING)	35	✓ CPU- Model: Intel i7 3.5 Ghz 1TB HDD, 4 GB RAM "19" View sonic LED Monitor Computer Systems ✓ Projector	Fully Utilized	Vino Bastin X	Instructor	BSc in CSE



			✓ Software package: Mysql, Open Office, Eclipse, Java				
6	LAB 4 (ADA/DS/ JAVA)	35	 ✓ CPU- Model: Intel i7 3.4 Ghz 1TB HDD, 4 GB RAM"19" View sonic LED Monitor Computer Systems ✓ Projector ✓ Software package: Nctuns, G++ Compiler, Visual Studio, Open Office 	Fully Utilized	Hemanth Kumar P	Instructor	M.Tech
7	LAB 5 (USP/MP)	35	 ✓ CPU- Model: Intel Dual core 2.93, 500 GB HDD, 2 GB RAM "19" View sonic LCD Monitor Computer Systems ✓ Projector ✓ Software package: Masm G++ Compiler, Open Source, Keil micro vision-4, GCC Compiler 	Fully Utilized	Dinesh Kumar R	Instructor	BE(CCE)



	· · · · · ·		1				ı
8	HP LAB BIG DATA	30	 ✓ CPU- Model: Intel i7 3.4 GHz, 4GB, 1TB HDD "19" LG LED Monitor Computer Systems ✓ Smart Board ✓ Software package: Cloudera- quickstart- 4.4.0-1, Mysql 	Fully Utilized	Pandurang K	Instructor	M Tech in DEC.
9	ADE LAB	30	 ✓ CPU- Model: Intel i7 3.4 Ghz 1TB HDD, 4 GB RAM"19" LG LED Monitor Computer Systems ✓ Projector ✓ Software package: Open Office, G++ Compiler, GCC Compiler 	Fully Utilized	Girish S V	Instructor	BE in ECE
10	LAB 6 (MAD/ PYTHON)	35	 ✓ CPU- Model: Intel Core i7-CPU 3.20 Gigabyte Motherboa rd H310MH2. 0, 16GB RAM 1TB HDD ✓ Projector ✓ Software package: G++ Compiler, Open Source, Android studio-3.6, Python 	Fully Utilized	Jayendiran A	Instructor	Diploma in CSE (A+, N+)



11	R & D lab	30	 ✓ CPU- Model: Intel i3 1TB HDD 4GB RAM 19" LCD Monitor ✓ Projector ✓ Projector ✓ Software package: Open Office, G++ Compiler, GCC Compiler 	Fully Utilized	M Sainath Reddy	Instructor	BSc
12	Project Lab	30	 ✓ CPU- Model: Intel Core2Duo 500GB HDD 4GB RAM 19" LCD Monitor ✓ Projector ✓ Projector ✓ Software package: Open Office, G++ Compiler, GCC Compiler 	Fully Utilized	Dhananjaya T H	Instructor	МСА



6.2 Laboratories maintenance and overall ambience (10)

The Department is equipped with sophisticated laboratories and state of art electronic equipment to satisfy the curriculum. Salient features regarding maintenance and ambience of laboratory facilities are as follows

Laboratory Maintenance:

- 1. Informative notice board containing safety, Do's & Don'ts is properly maintained.
- 2. Well trained technical staffs are available for maintenance of computer and software.
- 3. Maintenance and Servicing of each lab is done every month and a servicing register is maintained.
- 4. Department is having internet speed of 200 Mbps and Wi-Fi speed of 100Mbps for students and Faculty usage.
- 5. Department is having three 30 KVA UPS, 240 VDC along with batteries are used as backup to support power failures
- 6. Breakdown register is maintained for all the labs.
- 7. As per the requirements minor repairs are carried out by the lab instructors and Faculty members.
- 8. Chart assisted learning to demonstrate the process is available
- 9. Major repairs are outsourced as per the institutional policy.
- 10. Student's login / logout register is maintained in all laboratories.
- 11. Each laboratory maintains a stock register detailing the equipment history within it.
- 12. Two teaching faculty and a Lab instructor are in-charge of the overall functioning / maintaining of all labs.
- 13. All the computers are protected with licensed anti-virus software.
- 14. First aid kit is available in all laboratories.
- 15. Fire extinguishers are available in all floors.

Overall Ambience

- 1. Department has full-fledged State of Art laboratories to cater to all UG and PG courses as per curriculum requirements.
- 2. For every lab sufficient number of windows is available for ventilation and natural light.
- 3. Lighting system is very effective, along with the natural light in every corner of the rooms.
- 4. Cup-boards are available in each lab for students to place their belongings
- 5. Each Lab is equipped with white/black board, computer, Internet, and such other amenities.



- 6. Each lab is equipped with Projectors to aid the teaching process.
- 7. Laboratory manuals are prepared and are available in soft and hardcopy.
- 8. Laboratories are kept open beyond office hours as per the need.
- 9. Research laboratory is available 24X7 for all faculties and students to carry out research work and projects.
- 10. Exclusively, a project lab has been provided for the students to carry out their mini and major project work. This will promote innovation and creativity in students
- 11. All laboratories are well furnished.
- 12. Lab assessments are done as per the lab rubrics.
- 13. All windows in the Labs are covered by curtains.
- 14. All the doors are sufficiently wide and available in adequate numbers, to evacuate people outside in case of emergency.
- 15. The buildings are designed by professional architects, who give utmost care in providing academic ambience in all labs.
- 16. Every lab is assigned with a main faculty and a co faculty for effective functioning of labs.
- 17. All the labs are conducted as per the specified Timetable.

Photos of the Labs



CCP LAB 1



CCP LAB 2



LAB 1

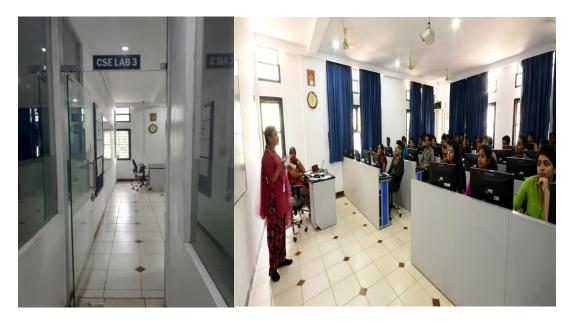




LAB 2



LAB 3





LAB 4



LAB 5





LAB 6



HP LAB

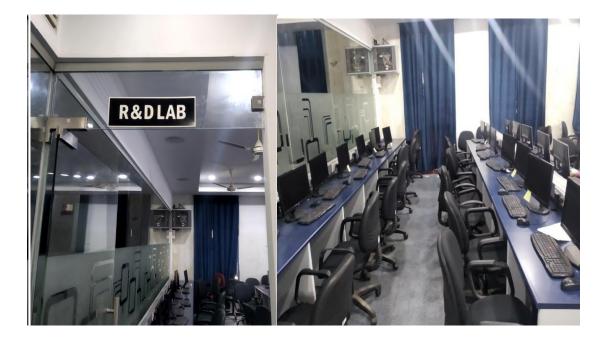




PROJECT LAB



R & D LAB







DE LAB



6.3 Safety Measures in laboratories

Sl. No	Laboratory Name	Safety Measures		
1	CCP LAB 1	 General Rules of Conduct in Laboratories are displayed. First aid box, Fire extinguisher is kept in the laboratory. CCTV camera attached in all labs. Periodical servicing of the lab equipment. Maintain a clean and organized laboratory. Avoiding the use of cell phones. Appropriate storage areas Permission denied for pen drives. Sign the log-out register before leaving the lab. Computers should be turned off properly before leaving the lab. Students must remove their foot wears before entering into the lab. 		
		12. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).		
		1. General Rules of Conduct in Laboratories are displayed.		
		 2. First aid box, Fire extinguisher is kept in the laboratory. 3. CCTV camera attached in all labs. 		
		4. Periodical servicing of the lab equipment.		
		5. Maintain a clean and organized laboratory.		
		6. Avoiding the use of cell phones.		
		7. Appropriate storage areas		
2	CCP LAB 2	8. Permission denied for pen drives.		
		9. Sign the log-out register before leaving the lab.		
		10. Computers should be turned off properly before leaving the lab.		
		11. Students must remove their foot wears before entering into the lab.		
		12. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).		



3	LAB 1	 General Rules of Conduct in Laboratories are displayed. First aid box, Fire extinguisher is kept in the laboratory. CCTV camera attached in all labs. Periodical servicing of the lab equipment. Maintain a clean and organized laboratory. Avoiding the use of cell phones. Appropriate storage areas Permission denied for pen drives. Sign the log-out register before leaving the lab. Computers should be turned off properly before leaving the lab. Students must remove their foot wears before entering into the lab. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect,
		error or damage observed at the computer (hardware/software).
4	LAB 2	 General Rules of Conduct in Laboratories are displayed. First aid box, Fire extinguisher is kept in the laboratory. CCTV camera attached in all labs. Periodical servicing of the lab equipment. Maintain a clean and organized laboratory. Avoiding the use of cell phones. Appropriate storage areas Permission denied for pen drives. Sign the log-out register before leaving the lab. Computers should be turned off properly before leaving the lab. Students must remove their foot wears before entering into the lab. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).
5	LAB 3	 General Rules of Conduct in Laboratories are displayed. First aid box, Fire extinguisher is kept in the laboratory.



		3. CCTV camera attached in all labs.
		4. Periodical servicing of the lab equipment.
		5. Maintain a clean and organized laboratory.
		6. Avoiding the use of cell phones.
		7. Appropriate storage areas
		8. Permission denied for pen drives.
		9. Sign the log-out register before leaving the lab.
		10. Computers should be turned off properly before leaving the lab.
		11. Students must remove their foot wears before entering into the lab.
		12. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).
		1. General Rules of Conduct in Laboratories are displayed.
		2. First aid box, Fire extinguisher is kept in the laboratory.
		3. CCTV camera attached in all labs.
		4. Periodical servicing of the lab equipment.
		5. Maintain a clean and organized laboratory.
	LAB 4	6. Avoiding the use of cell phones.
		7. Appropriate storage areas
6		8. Permission denied for pen drives.
0		9. Sign the log-out register before leaving the lab.
		10. Computers should be turned off properly before leaving the lab.
		11. Students must remove their foot wears before entering into the lab.
		12. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).
		1. General Rules of Conduct in Laboratories are displayed.
7	LAB 5	2. First aid box, Fire extinguisher is kept in the laboratory.
7		· · · · · · · · · · · · · · · · · · ·
	LAB 5	3. CCTV camera attached in all labs.
	LAB 5	 CCTV camera attached in all labs. Periodical servicing of the lab equipment.



		6. Avoiding the use of cell phones.
		7. Appropriate storage areas
		8. Permission denied for pen drives.
		9. Sign the log-out register before leaving the lab.
		10. Computers should be turned off properly before leaving the lab.
		11. Students must remove their foot wears before entering into the lab.
		12. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).
		1. General Rules of Conduct in Laboratories are displayed.
		2. First aid box, Fire extinguisher is kept in the laboratory.
		3. CCTV camera attached in all labs.
		4. Periodical servicing of the lab equipment.
		5. Maintain a clean and organized laboratory.
		6. Avoiding the use of cell phones.
		7. Appropriate storage areas
8		8. Permission denied for pen drives.
		9. Sign the log-out register before leaving the lab.
		10. Computers should be turned off properly before leaving the lab.
		11. Students must remove their foot wears before entering into the lab.
		12. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).
		1. General Rules of Conduct in Laboratories are displayed.
		2. First aid box, Fire extinguisher is kept in the laboratory.
		3. CCTV camera attached in all labs.
9	ADE LAB	4. Periodical servicing of the lab equipment.
		5. Maintain a clean and organized laboratory.
		6. Avoiding the use of cell phones.
		7. Appropriate storage areas
		8. Permission denied for pen drives.



		 9. Sign the log-out register before leaving the lab. 10. Given the labeled of the log-out register before leaving the labeled of t
		10. Computers should be turned off properly before leaving the lab.
		11. Students must remove their foot wears before entering into the lab.
	 12. The student must check the computer peripherals attached before using it. The immediately inform the instructor if there error or damage observed at the (hardware/software). 13. All electrical wires are protected by MC Fuses 14. Avoid the use of condemned equipment needful equipment and components 15. Trainer kits are equipped with proper full 	
		are calibrated. 1. General Rules of Conduct in Laboratories are
		displayed.
		2. First aid box, Fire extinguisher is kept in the laboratory.
		3. CCTV camera attached in all labs.
		4. Periodical servicing of the lab equipment.
		5. Maintain a clean and organized laboratory.
	LAB 6	6. Avoiding the use of cell phones.
		7. Appropriate storage areas
10		8. Permission denied for pen drives.
10		9. Sign the log-out register before leaving the lab.
		10. Computers should be turned off properly before leaving the lab.
		11. Students must remove their foot wears before entering into the lab.
		12. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).
		1. General Rules of Conduct in Laboratories are displayed.
		2. First aid box, Fire extinguisher is kept in the laboratory.
11	R & D lab	3. CCTV camera attached in all labs.
		4. Periodical servicing of the lab equipment.
		5. Maintain a clean and organized laboratory.
		6. Avoiding the use of cell phones.



		7. Appropriate storage areas
		8. Permission denied for pen drives.
		9. Sign the log-out register before leaving the lab.
		10. Computers should be turned off properly before leaving the lab.
		11. Students must remove their foot wears before entering into the lab.
		12. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).
		1. General Rules of Conduct in Laboratories are displayed.
		2. First aid box, Fire extinguisher is kept in the laboratory.
	Project Lab	3. CCTV camera attached in all labs.
		4. Periodical servicing of the lab equipment.
		5. Maintain a clean and organized laboratory.
		6. Avoiding the use of cell phones.
		7. Appropriate storage areas
12		8. Permission denied for pen drives.
		9. Sign the log-out register before leaving the lab.
		10. Computers should be turned off properly before leaving the lab.
		11. Students must remove their foot wears before entering into the lab.
		12. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software).



6.4 Project Laboratory

- 1. In CSE department, an exclusive lab with 59 computers is available for project work to be carried out by students of all semesters.
- 2. Project Laboratory enables UG students to obtain hands-on experience and to realize their project ideas as executable projects.
- 3. Several successful projects have been carried out by students in this lab.
- 4. Students use this lab to compete in several Hackathons and have won various awards across India.
- 5. High speed internet facilities are always available to these systems.
- 6. This lab is equipped with three 30 KVA UPS, 240 VDC along with batteries which are used as backup to support power failures
- 7. Final year project and mini project of all semesters are carried out in this lab.

Table: Project Lab					
Lab	Facilities	Utilization	Relevance to POs and PSOs		
PROJECT LAB	 ✓ CPU-Model: Intel Core2Duo 500GB HDD 4GB RAM 19" LCD Monitor ✓ Projector ✓ Projector Software package: Open Office, G++ Compiler, GCC Compiler 	 UG students PG students Research Scholars Faculty members 	PO6, PO7, PO9, PO11, PO12		

Table: Project Lab

PROJECT LAB



Department of Computer Science and Engineering | NHCE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CRITERION 7

CONTINUOUS IMPROVEMENT

409



CRITERION 7 CONTINUOUS IMPROVEMENT

75

7.1 Actions taken based on the results of evaluation of each of the POs & PSOs (30)

Identify the areas of weaknesses in the program based on the analysis of evaluation of POs & PSOs attainment levels. Measures have been identified and implemented to improve POs & PSOs attainment levels for the assessment years.

POs Attainment Levels and Actions for improvement – CAY (2018-19)

Table 7.1 POs Attainment Levels and Actions for Improvement CAY 2018- 2019

POs	Target Level	Attainment Level	Observation	
PO1: Engine	ering Knowle	edge: Apply the l	knowledge of mathematics, science,	
engineering	fundamentals	and computing	to solve Computer Science and	
Engineering r	elated problem	S.		
PO1	2.6	2.77	Target achieved. Hence the same practice will be continued for the next year. Practical approach of teaching programming was adopted to help students to understand the basics of programming.	
concepts for b Action 2: Stu refresh their fu Action 3: Ad courses which Action 4: Co-	 Action 1: The target will be retained. Video lectures will be used to explain the concepts for better understanding. Action 2: Students will be asked viva questions relating to the basic concepts to refresh their fundamentals in laboratory sessions. Action 3: Additional classes will be conducted beyond the regular classes for the courses which has less attainment. Action 4: Co-curricular activities are scheduled in the area of information security, cyber security, AGILE and AI & ML. 			
	•		ility to identify, formulate and solve	
engineering p	roblems related	to Computer Scie	ence and Engineering.	
PO2	2.6	2.77	Target achieved. Hence the same practice will be continued for the next year. Additional classes conducted for numerical courses beyond the regular planned classes has helped the students to perform better.	
Action 1: Target will be retained and will be observed for next academic year. Action 2: Additional classes will be conducted beyond the regular classes for the courses which has less attainment.				

Action 3: Conduct Expert lectures, Seminars and Guest lecture to help students in identifying & analysing the real time problems.



problems.	interpret data	and implement s	olutions for software based real life
PO3	2.6	2.75	Target achieved. Hence the same practice will be continued for the next year. Performance of the students in design related subjects, target and activities like guest lectures, hands-on training helped to achieve the target.
Action 2: To understand pro Action 3: Stu	conduct Expe ocess of designi dents were enc	rt lectures, works ng and analysing r	served for next academic year. hop and hands on training session to eal life software problems. pate in external inter college technical
<u> </u>	U		lex Problems: Use research-based
knowledge an	nd research m	ethods including	design of experiments, analysis and prmation to provide valid conclusions.
PO4	2.6	2.72	Target achieved. Hence the same practice will be continued for the next year. Students were informed to refer IEEE journal papers /scopus to enhance their research knowledge, analysis and interpretation of data.
Action 2: Nati among student PO5: Moder resources, and	onal/ internations. rn tool usag d modern engin	nal conferences ar e: Create, select neering and IT too	served for next academic year. e scheduled to promote research culture and apply appropriate techniques, ols including prediction and modeling omputer Science and Engineering with
-	ling of the limi		Supporter Science and Engineering with
PO5	2.6	2.84	Target achieved. Hence the same practice will be continued for the next year. Students were exposed to various modern tools like android studio, Jupyter, Eclipse, Netbean, Pycharm, NS2, which helped to attain the target.
			bserved for next academic year.
		-	webinars/seminars conducted by third
	regarding mod		asoning informed by the contextual
knowledge to	assess societ	tal, health, safety	<i>i</i> , legal and cultural issues and the fessional engineering practice.
- sussquent re			Target achieved. Hence the same



Action 1: Target will be retained and will be observed for next academic year.

Action 2: Students have to be exposed to various professional engineering practices followed in the industries through industrial visits.

Action 3: Continue association with professional bodies like CSI and CSI will arrange expert talks to create more awareness among the students about professional engineering practice.

Action 4: To understand the safety concerns and social aspects, students shall visit industry to expand their practical knowledge with the effect of improved practices in engineering.

Action 5: Students are encouraged to carry out inter domain projects so that they would realize the importance of a project involving society, safety, health, and the legalities

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.

	2.6	2.75	Target achieved. Hence the same practice will be continued for the next
PO7			year. Best practices like WhatsApp is used for intra department communication
			to eliminate the need of papers.

Action 1: Students are encouraged to indulge in mini projects/projects where societal and environmental issues can be addressed.

Action 2: Students are strictly instructed to switch off all electrical Equipment /Resources when not in use for all the laboratories.

Action 3: Best Practices like Rain water harvesting, Sewage treatment plants, proper waste management procedure are employed at our college.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO8	2.6	2.77	Target achieved. Hence the same practice will be continued for the next year.It is mandatory that students should submit plagiarism certificate for mini projects/project work.
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Action 1: Projects/ mini projects will be scrutinized, code reviews will be conducted, plagiarism check will be done to determine the originality of the project to ensure professional ethics.

PO9: Individual and Team Work: Function effectively as an individual and as a member or leader to diverse teams, and in multidisciplinary settings.

	member of reader to arrense teams, and in matriciserprintary settings.						
PO9	2.6	2.85	Target achieved. Individual work was observed during lab sessions/mini projects/project work. There was an excellent team work observed during peer review				
10)	2.0	2.05	U I				
			presentation/seminars.				
			Students were encouraged to work as				
			a team in all co-curricular and extra-				
			curricular activities.				



Action 1: Target will be retained and will be observed for next academic year. Action 2: Students will be encouraged to participate in various co-curricular and

extra-curricular activities in other colleges/sports activities/cultural activities.

Action 3: Students are encouraged to participate in Inter Collegiate Cultural Fest (SARGAM).

Action 4: Students were encouraged to participate in external inter college technical competitions, coding contests and hackathons.

Action 5: Department encourages formation of student clubs, participation in technical events/Business ideas/ app development.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective report and design documentation, make effective presentations, and give and receive clear instructions.

			Target achieved. Soft skills training
			was imparted to the students to
			enhance communication through
			group discussions and presentations.
			Project and seminar presentations
PO10	2.6	2.83	assisted the students to communicate
1010	2.0	2.05	effectively and efficiently.
			Every year department/institution
			organises National level Project
			exhibition – TECHORIZON where
			in students portray their
			communication and technical skills.

Action 1: Target will be retained and will be observed for next academic year. Action 2: To enhance the employability skills of the students, training programmes will be conducted on the topics: how to face the interview, career development, higher studies, entrepreneurship development.

PO11: Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments

PO11 2.6 2.83 Target achieved	d.
-------------------------------	----

Action 1: Target will be retained and will be observed for next academic year.

Action 2: Students are encouraged to prepare project proposals with the guidance of faculty for government funding agencies.

PO12: Life-Long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

			Target	achieved.	Mini	proje	ects/
			projects	which i	s part	of	the
PO12	2.6	2.82	curriculu	m has help	ed the s	studen	ts to
			perform	better	in	placer	nent
			interview	s and high	er studi	es.	

Action 1: Target will be retained and will be observed for next academic year. Action 2: Students will be motivated to register for GRE/TOEFL/GATE and other competitive examinations.



Action 3: Students are encouraged to publish research papers in various national and international journals/conferences.

Action 4: Students are encouraged to take up online courses on new technologies which would help them in continuous learning.

Solution PSOs Attainment Levels and Actions for improvement – CAY (2018-19)

Table 7.2: PSOs Attainment Levels and Actions for Improvement CAY 2018- 2019

PSOs	Target Level	Attainment Level	Observation					
PSO1: Abilit	PSO1: Ability to design, develop, implement computer programs and use knowledge							
in various domains to identify research gaps and hence to provide solution to new								
ideas and inn	ideas and innovations.							
PSO1	2.6	2.75	Targetachieved.IndustrysponsoredLaboratorycourseshave helped the students to design,develop and implement programs.					
Action 1: Tai	rget will be retai	ned and will be obse	rved for next academic year.					
Action2: To	strengthen the d	omain knowledge ar	nd make them job ready graduates,					
department is	s planning to intr	roduce more number	of professional elective courses.					
			arch papers in various national and					
international	journals/confere	ences.						
PSO2: Work	with and comm	unicate effectively w	with professionals in various fields					
and pursue li	felong professio	nal development in c	computing.					
PSO2 2.6 2.68 Target achieved. All the even conducted by the department has helped the students to work as a indusial, work in a tear communicate effectively with both internal and external state holders there by becoming got computer professionals.								
			idents to participate in intra International level activities and					



7.2 Academic Audit and actions taken thereof during the period of Assessment (15)

The Academic audits are conducted once in a semester. The process consists of internal audits and external audits. Audits are conducted for faculty teaching process, Laboratories, and departmental activities. Documents pertaining to different subsections of various parameters as mentioned in the below table are verified during the internal academic audits

Sl. No	Parameters	Sub Sections
1	Board of Studies (BOS) As per Statutory guidelines	Constitution Meeting and its minutes – at-least once in a year (ensure for the structure)
2	Board of Examiners (BOE)	Constitution Meeting and its minutes Quality of question papers at SEE No. of QPs set by External & Internal Examiners
3	Scheme & Syllabus	All the semesters since inception – HARD COPY Frequency of its revision
4	Teaching Learning & Evaluation	Vision & Mission PEOs & PSOs Rules & Regulations copy Calendar of events Students list Registration of the course – including re-registration Students dropping of the course Students withdrawal from the course List of Professional & Open electives offered & its process Adoption of MOOCs Attainment of COs & POs Group discussion Pedagogical approaches / strategies used for Effective teaching learning NSAR, NSSR list Result Analysis Time Table & Work load IA Test details (TT, Invigilation diary, B –Form etc) Blue books Quality of CIE papers

Table 7.1 Academic audit Programme checklist



		Mini Project details (if any)
		i) Process schedule
		ii) Guide allotment
		iii) Topics
		iv) Assessment Pattern (Rubrics)
		v) Final Marks with break up
		Lab Manuals
		Club activities
		Students Mentoring Process
		i) Mechanism of students' feedback
_		ii) Feedback on courses
5	Student Centric	iii) Healthy practices for ensuring students
		discipline
		iv) Assigning of students to faculties
		v) Mentoring record books (update in CONTINEO)
		vi) PTM
		Check List as per Academic file
		cheek List us per reddenne me
		1. Calendar of Events
	Academic files	2. Subject Allotment
		3. Time Table
		4. Syllabus
		5. Lesson Plan
-		6. Attendance Register
6		7. Assignment Questions
		8. Internal Question Paper and Scheme of
		Evaluation
		9. Internal Test Marks
		10. IA- Result Analysis & CAPA Report
		11. Previous Year Question Papers
		12. Special Class Records (if conducted)
		13. Teacher- Appraisal Feedback
		14. Exam Related Work
		Identifications of the subjects
		List of students
7	Coaching Class	Time Table
		Details of classes conducted and attendance
		Test / Assignment / Quiz (conducted if any)
		Details about Research Centre / Supervisors /
		Research Scholars
		Details about publications / grants / patents
8	R&D Activities	Students publication details
		Conferences / Symposium / Seminars / FDPs
		attended by the faculty.
		Conferences / Symposium / Seminars / FDPs
		conducted.
<u> </u>		1



		Chapters & Books published by the faculty.			
		MOUs executed			
9	Result Analysis	Comparison and improvements			
10	Placement Activities	a. Number of students placed in different companies.b. Different types of Technical training given to students			
11	Guest Lectures / Expert talks	Conducted in the department			
12	Industrial visit & Interaction	Any visit carried out			
13	Administration	Teaching Staff list Non-Teaching Staff list Min Minutes of the department meeting Faculty performance			

Table 7.2 Auditors for three academic years (2019-20, 2018-19, 2017-18)

Year	Auditors
	Ms. Hima Bindhu, Educational Prog. Analyst, NHQASDC
	Dr. Meenatchi Sundaram, Ass. Prof
2019-20	Dr. Adhikari, Professor
	Dr. Anitha S Rai, HOD, Library& Information Center, Convener
2018 10	Dr. Anitha S Rai, HOD, Library & Information Center, Convener
2018-19	Dr. Anandhavardhan, Professor
2017-18	Dr. Anitha S Rai, HOD, Library& Information Center, Convener
2017-10	Dr. Girija S, Head, NHQASDC



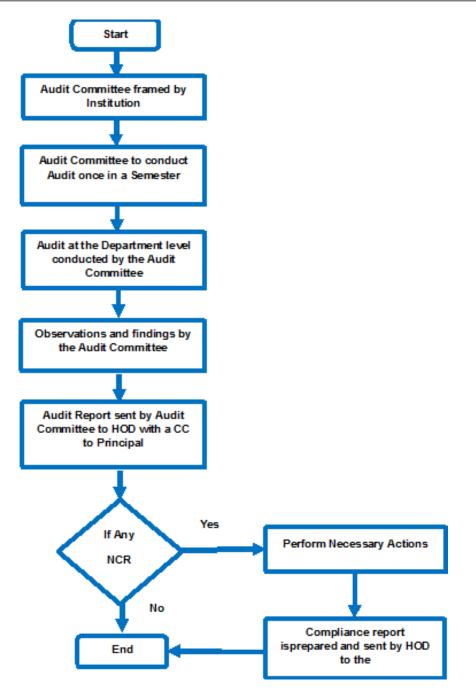


Figure 7.1 Internal Audit Process



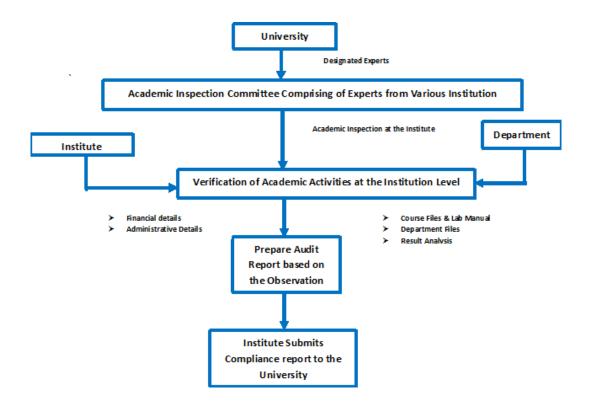


Figure 7.2 External Audit Process



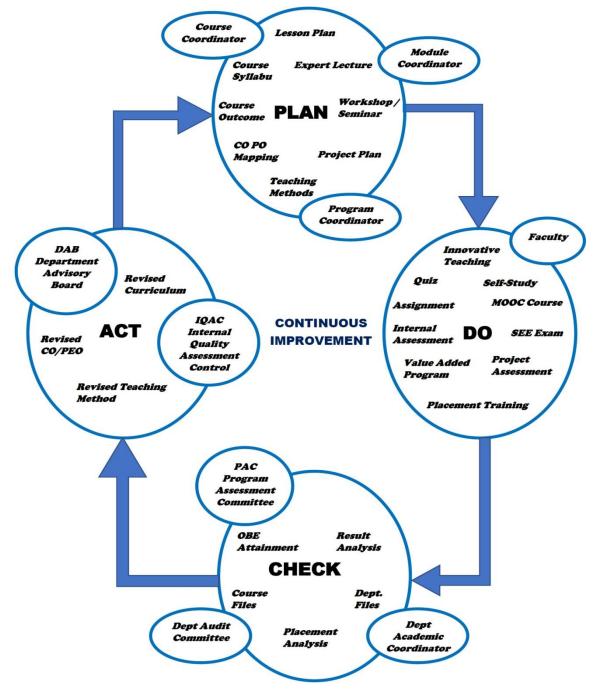


Figure 7.3 Plan-Do-Check-Act Cycle

erion-7 Self-	Assessment Report (S.	AR)	
	•		
AND	ACADEMIC AUDIT OBSER	VATION- CSE	
		Tin	ne : 10:00 am to 1:15 pm
Date: 29/08/2019 Sl. # Parameters	Sub Sections	Available/ Not available	Remarks
1 Board of Studies (BOS)	Constitution	Available	All respective Internal/external stakeholders feedback need to be considered in BOS, Agenda needs a revision
As per Statutory guidelines	Meeting and its minutes – at-least once in a year(ensure for the structure)	Available	
2 Board of	Constitution	Available	
Examiners (BOE)	Meeting and its minutes	Available	2nd Agenda needs a revision to include the consistency of CO's along with Bloom's level
	Quality of question papers at SEE	Available	Good
	No. of QPs set by External & Internal - Examiners	Available	Some strategy can be devised for finding the acceptance/rejection
3 Scheme & Syllabus		PY Available - Goo	d well maintained
	Frequency of its revision	Available	
4 Teaching Learning & Evaluation		Available	Process of Formulation/ Dessimination of Vision/Mission proof should be available in file
	PEOs & PSOs	Available	Process of Formulation/Dessimination of PEOs/PSOs proof should be available in file
	Rules & Regulations copy	Available	
	Calendar of events	Available	Events planned in Academic calender is in line as on date .
	Students list	Available	

1	Mini Project details (if any)	12 10		
	ii) Process schedule	Available		
	ii) Guide allotment	Available		
	iii) Topics	Available		
	iv) Assessment Pattern (Rubrics)	Available		
	v) Final Marks with break up	Available	-	
	Lab Manuals	Available	Suggested to replace front page	
	Club activities	Available	Sufficiency to unbrace most hells	(
SISTUDENT	Students Mentoring Process	Available		
CENTRIC	a) Mechanism of students feedback	Available		
C.L. C.L.	Feedback on courses	Ausilable		
	iii) Healthy practices for ensuring students discipline	Available		
	in't Assigning of students to faculties	Available		
	 v) Mentoring record books (update in CONTINEO) 	Available		
	vi) PTM	Available		
6 Academic files	Check List as per Academic file	Available		1
GLACADETTIC TIPES	Calendar of Events	Ausitable	Individual TT with Load - Format to be forwarded	
	Subject Allotment	Available	Assignment Schemes to be proposed	-
	Time Table	Available	COE Email Copies to be kept (Confidential)	
	Syllabes	Austable	Feedback copy to be kept (other than personal file)	
	Lesson Plan	Available	Coaching Class - Central File (Faculty should keep CC - Lesson Plan)	
	Attendance Register	Available		-
	Assignment Directions	Available		-
	Internal Question Paper and Scheme of Evaluation	Aupilable		
	Internal Test Marks	Available		-
All alon			1	1/2

Figure 7.4 Internal Academic Audit report for 2019-20



7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10)

The mission at New Horizon College of Engineering is to provide able engineers and business managers who are equipped with life skills, such as providing solutions to complex problems, re-engineering processes and adding value to businesses. Four different structured interventions are implemented for all students studying at New Horizon College of Engineering and they are:

- Aptitude development Training
- Basic English Communication
- Domain/Technical Training
- Attitude and Behavioural Development

Our Campus Recruitment Training (CRT) program for students is designed depending on the specific requirements. During the program we ensure that students are given the required amount of practice in various areas like Quantitative Ability, Verbal Ability, Reasoning Ability, Group Discussion, Personality Development and interview. New Horizon College of Engineering has a focused Placement Cell.

Sl. No.	Name of the company	Number of students placed	Salary per annum per student
1	Ad2pro Media Solutions Pvt Ltd	2	835240
2	Applied Materials	1	1254034
3	Aquity Solution	1	1300000
4	Aricent	23	450000
5	Betsol	1	876500
6	Cameo Global	1	754000
7	Catnip Infotech	1	433464
8	CenturyLink Technologies India Pvt Ltd	1	833460
9	Cerner Healthcare Solutions India Pvt Ltd	8	665000
10	Covance India Pharmaceuticals Services Pvt Ltd	2	936543
11	Danske IT and Support Services India Pvt Ltd	2	666700
12	Cognizant Technologies	3	433323
13	EKA Software	1	478166
14	Eleation Academy	1	940000
15	Emertxe	4	700000
16	Epicor Software	1	1550000
17	Eurofins IT Solutions Pvt Ltd	5	1200000
18	EXL Service	5	776712
19	Fintellix Solutions	1	1100000
20	Gray Matter Software Services Pvt Ltd	1	950000

Table 7.3 Placement data for the year 2018-19



	Total number of students		211
	Total Number of students Placed		198
62	Zenken	1	3000000
61	Wipro Zankan	6	350000
60	VVDN Technologies	1	950000
<u>59</u>	Velocis Systems Pvt Ltd	2	975000
58	Unisys Valogia Systems But Ltd	2	420321
57	Udaan	4	785765
56	Thermofisher Scientific	4	757428
55	Temairasu Thormofisher Scientific	1	1969647
	Telaverge Communications		774000
53 54	TCS Talayarga Communications	3 2	396875
52	Surya Software Systems Pvt Ltd	3	934500
<u>51</u> 52	Subex Ltd	1	400000
50	Speridian Technologies	1	900000
	SonicWALL Technology Systems India Pvt Ltd	<u>ک</u> 1	-
48 49	Simeio Solutions	$\frac{5}{2}$	975000 854000
47	ServiceNow	2 5	1700000
46 47	Rakuten	1	1700000
45	Pulse Secure India Pvt Ltd	3	1750125
44	Primenumbers Technologies Pvt Ltd	1	400000
43	Pinclick	2	722801
42	Ocwen Financial	1	712000
41	NTT DATA	2	379000
40	Novelsynth Soft Solutions	2	720000
39	Nineleaps	4	975000
38	Mu Sigma	3	930000
	Moengage Mu Sigmo		450000
36		<u>3</u> 2	352000
<u> </u>	McKinsey & Company Mindtree	<u> </u>	-
<u> </u>	Lowe's Services India Pvt Ltd	<u> </u>	1354545 1209600
<u> </u>		<u>5</u> 2	373000
33	L&T Infotech		400000
31	JMR Infotech L & T Technologies	4 10	651000
30	ITC Infotech	15	365000
<u>29</u> 30	Infosys Ltd	20	350000
28	Incadea India Pvt Ltd	2	1370000
27	Ideas91 India Pvt Ltd	2	1250000
26	IBM	1	759200
25	IBJ	2	1900000
24	HSBC	1	700000
23	HP	1	1200000
22	Hiver	2	1705000
	Ltd	1	400000

Sl. No.	Name of the company	Number of students placed	Salary per annum per student
1	Accion Labs	3	910000
2	Allstate	4	775000
3	Applied Materials	1	1054020
4	Artech (HP)	3	240000
5	Bias Infotech	4	750000
6	Broadridge	1	765000
7	CCP IOT	4	695000
8	Century Link	1	736400
9	Cerner	9	660000
10	Cropin Technologies	3	600342
11	Datacorp Traffic	1	676453
12	Datagres IT	1	850000
13	DXC	1	611045
14	Ellucian	3	860000
15	Envision Financial	2	663400
16	Epsilon	11	728913
17	Eurofins IT	4	1100000
18	Exotel	6	800000
19	Fintellix Solutions	1	1074444
20	Global Logic	6	652457
21	Hexaware	3	700000
22	Hotelsoft	6	780000
23	IBM	1	350000
24	Infosys Ltd	2	325000
25	ITOrizon	5	840000
26	Microgenesis	4	600500
27	Mindtree	4	325000
28	Netscope	2	720000
29	NineLeaps	4	950000
30	NTTDATA	7	300000
31	Profinch	9	591916
32	Quintiles	4	698000
33	TCS	5	336875
34	Telaverge	4	674000
35	Torry Harris	4	665000
36	Valtech	1	676098
37	Verdantis	2	690000

Table 7.4 Placement data for the year 2017-18



38	VVDN	1	920000	
39	39 Wipro Ltd 13 32000			
	Total number of students Placed		150	
	Total number of students		171	

Table 7.5 Placement data for the year 2016-17

Sl. No.	Name of the company	Number of students placed	Salary per annum per student
1	24/7	1	180000
2	All State	1	875000
3	Amazon	1	474300
4	Capgemini	12	415000
5	Century Link	2	636600
6	Cerner	23	739605
7	Cigital Asia	12	800979
8	Cropin Technologies	3	320000
9	Cyient	1	575037
10	Datacorp Traffic	2	676453
11	Datagres IT	3	950000
12	Epsilon	7	655720
13	Eurofins IT	12	850000
14	Exotel	2	800000
15	FTD Automation	1	580000
16	IBM Tech	2	588000
17	ICT Technologies	9	640000
18	Incadea	8	720000
19	ITC Infotech	4	599000
20	Lowe's	1	754545
21	Mindtree	3	425000
22	NTT Data	11	547000
23	Orange Business Solutions	1	598744
24	Pin Click	1	643760
25	Profinch	9	675000
26	RLE India	2	615000
27	Servion Global Solutions	1	580000
28	Software AG	2	844000
29	Spirent Technologies	1	694000
30	Stellapps	1	620000

31	1Tech Mahindra432500			
32	Thomson Reuters	3	575000	
33	Torry Harris	6	750000	
34	Wipro	1 320004		
35	Zapcom Solutions	1 750000		
	Total number of students Placed		154	
Total number of students			180	

Number of Students Placed

Year	No. of Students Placed
2016-17	154
2017-18	150
2018-19	198

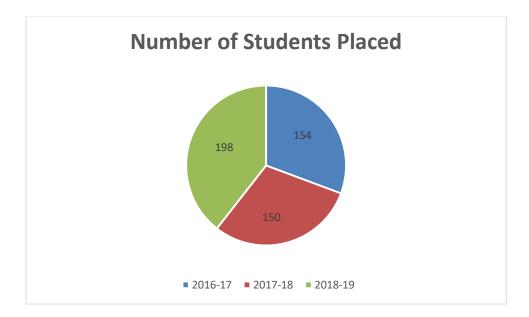


Figure 7.5 Number of Students Placed



Placement Percentage

Year	Placement Percentage
2016-17	85.55
2017-18	87.71
2018-19	93.84

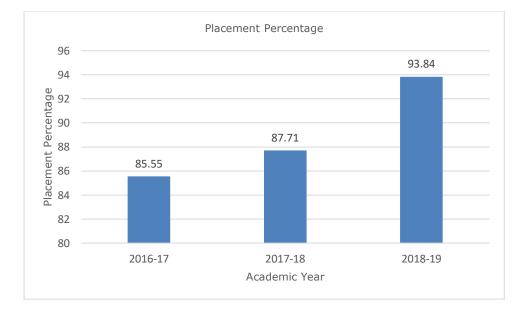


Figure 7.6 Placement percentage

Minimum Package and Maximum Package

Year	Minimum Package (Lakhs)	Maximum Package (Lakhs)
2016-17	1.8	9.5
2017-18	2.4	11
2018-19	3.5	30



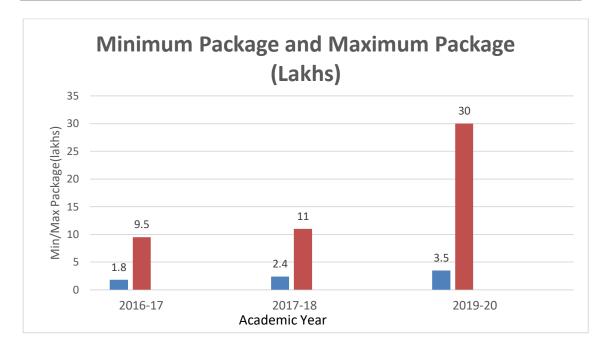


Figure 7.7 Minimum Package and Maximum Package

Average Package

Year	Average Package (Lakhs)
2016-17	6.23
2017-18	6.84
2018-19	9.09

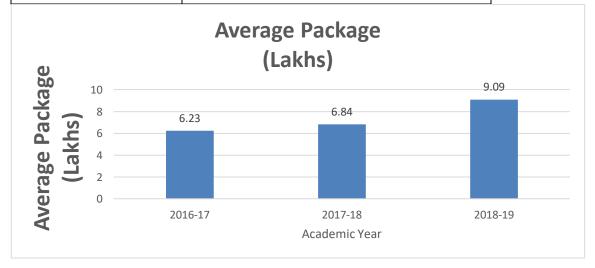


Figure 7.8 Average package



Table 7.6 Higher studies enrolment details for 2018-19

SI.No	Name of the Exam	Number of Students Appeared	Number of Students cleared
1	GRE	3	3

Table 7.7 Higher studies enrolment details for 2017-18

Sl.No	Name of the Exam	Number of Students Appeared	Number of Students cleared
1	GRE	2	2

Table 7.8 Higher studies enrolment details for 2016-17

Sl.No	Name of the Exam	Number of Students Appeared	Number of Students cleared
1	GRE	1	1

Table 7.9 Entrepreneur details

Sl.No	Year	Number of students attempted for company registration	Number of students Re-registered and started
1	2018-19	3	3
2	2017-18	0	0
3	2016-17	2	2

Placement, Higher Studies and Entrepreneurship Ratio

Year	No. of Students	No. of students placed+ No if students admitted for Higher Studies+ Opted Entrepreneurship	Placement, Higher Studies and Entrepreneurship Ratio
2016-17	180	157	87.2
2017-18	171	152	88.8
2018-19	211	204	96.6



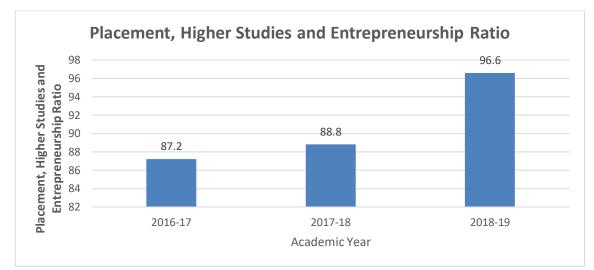


Figure 7.9 Placement, Higher Studies and Entrepreneurship Ratio



7.4 Improvement in the quality of students admitted to the program (20)

Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrances tests, percentage marks in Physics, Chemistry and Mathematics in 12th Standard and percentage marks of the lateral entry students.

Items	Items		2018-19	2017-18
National Level Entrance Examination (Name of the	No. of Students admitted	1	1	1
Entrance Examination)	Opening Score/Rank	0	0	0
AICTE	Closing Score/Rank	0	0	0
State/Institute/Level Entrance	No. of Students admitted	95	91	76
Examination/Others (Name of the Entrance	Opening Score/Rank	492	3844	5143
Examination) CET	Closing Score/Rank	14615	16183	19508
Name of the Entrance Examination for Lateral	No. of Students admitted	21	28	31
Entry or lateral entry details	Opening Score/Rank	1675	4250	1843
CET	Closing Score/Rank	7484	14180	13793
Average CBSE/Any other admitted students (Physics Mathematics)	90.8785	73.9082	79.702	

Serial Code & Link to the Item	Item	Page No.
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10	Governance, Institutional Support and Financial Resources	591-672
PART C	Declaration by the Institution	673
Annexure I	Program Outcomes(POs) & Program Specific Outcomes (PSOs)	674-675

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CRITERION 8

FIRST YEAR ACADEMICS

432



CRITERION 8

FIRST YEAR ACADEMICS

8.1: First Year Student-Faculty Ratio (FYSFR, 5)

Data for first year courses to calculate the FYSFR:

Year	Number of Students (Approved intake strength)	**Number of Faculty Members (Considering fractional load)	FYSR	Assessment = (5x15) / FYSFR (Limited to max. 5)
CAYm2 (2017-18)	1020	72	14	5
CAY m1 (2018-19)	1080	76	14	5
CAY (2019-20)	1200	82	15	5
Average	1100	76	14	5

Table B.8.1.

****** All faculties are dedicated to first year only



8.2 Qualification of Faculty Teaching First Year Common Courses (5)

Assessment of qualification = (5x + 3y)/RF, x = Number of Regular Faculty with Ph.D, y = Number of Regular Faculty with Post-graduate qualification, RF = Number of faculty members required as per SFR of 20:1, Faculty definition as defined in 5.1

Year	X	Y	RF	* Assessment of Faculty qualification (5x+3y) / RF
CAYm2 (2017-18)	9	57	51	4
CAY m1 (2018-19)	16	54	54	4
CAY (2019-20)	20	56	60	4
Average				4

8.3First Year Academic Performance (10)

Academic Performance	Comput	er Science Engineering		
Academic Terrormance	CAYm1	CAYm2	CAYm3	
Mean of CGPA of all successful students (x)	8.13	8.42	8.43	
Total no. of successful students (y)	257	184	183	
Total students appeared in the examination (Z)	273	208	207	
$API = x^*(y/Z)$	7.65	7.45	7.45	
Average		7.52		

Academic Performance = ((Mean of 1^{st} Year Grade Point Grade Point Average of all successful students on a 10-point scale) or (Mean of the percentage of marks in first year of all successful students/10)) x (number of successful students/number of students appeared in the examination). Successful students are those who are permitted to proceed to the second year.



8.4 Attainment of Course Outcome of First Year Courses

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

Assessment Tool Type	Assessment Tool Title	Tool Description			
	Continuous Internal Evaluation (CIE)	This is used as an assessment tool to evaluate thattainment of course outcomes, through Assignment Quizzes, Internal Assessment (Average of 3 Exam which are conducted throughout the semester and designed in such a way that the evaluation of complet syllabus is covered. This is done for all courses of the semester.			
Direct Assessment	Laboratory Examinations	The performance in laboratory is evaluated through appropriate rubrics. The students are tested for their confidence in terms of design of a system and experimentation. Ability of the students to analyze and interpret the results of experiments is continuously evaluated by the faculty during laboratory classes. The strength of the students in using their skills and tools in the laboratory is also evaluated in external laboratory			
	Semester End Examinations (SEE)				

Table 8.4.1.a	Tools	used in	measuring	СО
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Table 8.4.1.b Calculation of CO attainment

CO Attainment	Weightage	Assessment Tools	
Overall CO Attainment	10004	Continuous Internal Evaluation CIE (50%)	
Direct Attainment	100%	Semester End Examinations (SEE) (50%	



The individual COs of the courses is mapped with Correlation level and is being evaluated by prescribed assessment tools. The attainment of individual CO is calculated by assigning separate weightage to the continuous Internal Evaluation, Semester End examination, assignments and quizzes. The attainment of COs is compared with the target level. The CO is said to be attained if its attainment value is greater than or equal to target attainment level.

8.4.1.1. Theory Course Evaluation

Assignments, Quizzes, Internal assessment test, semester end examinations are conducted and evaluated for (both theory and lab) integrated courses.

The distribution of marks for theory courses (Sample) is as given in table below.

Assessment Tool	Max Marks	Marks scaled to	Weightage	
Assignments	15	15		
Quizzes	10	10		
Internal Assessment Exam (Avg. of 3 Exams)	25	25	50%	
Everyday Lab session (Each Expt. 10 marks)	10	10		
Lab Internal Exam	15	15		
Semester End Examination – Theory	100	50	50%	
Semester End Examination – Lab	50	25		

 Table 8.4.1.1. Distribution of marks for theory & Lab courses evaluation.

The Process for Assessment and Attainment of COs is described in the flowchart as shown in Flow Chart

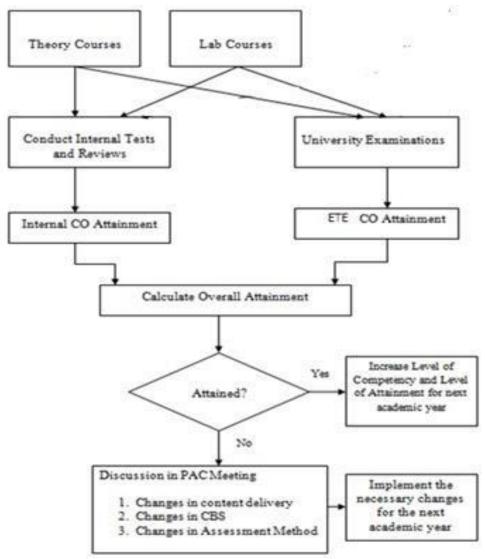


Fig 8.4.1. Process of assessment and attainment of CO

8.4.2 Record the attainment of Course Outcomes of all First Year Courses (5)

Program shall have set attainment levels for all first year courses. (The attainment levels shall be set considering average performance levels in the institution level examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect the COs of a subject plus the performance in the institution level examination)



Attainment Levels: Internal Assessment

		CAYm3	CAYm2	CAYm1
Course	Attainment Level	2016-17	2017-18	2018-19
	0	less than 37% scored >=28	less than 40% scored >=28	less than 45% scored >=28
natics]	1	37% to 46% scored >=28	40% to 49% scored >=28	45% to 54% scored >=28
Mathematics I	2	47% to 56% scored >=28	50% to 59% scored >=28	55% to 64% scored >=28
Π	3	57% and more scored >=28	60% and more scored >=28	65% and more scored >=28
sics	0	less than 45% scored >=34	less than 45% scored >=38	less than 45% scored >=28
Engineering Physics	1	45% to54% scored >=34	45% to54% scored >=38	45% to54% scored >=28
gineeri	2	55% to 64% scored >=34	55% to 64% scored >=38	55% to 64% scored >=28
Eng	3	65% and more scored >=34	65% and more scored >=38	65% and more scored >=28
ſŗ	0	less than 40% scored>=23	less than 42% scored>=25	less than 44% scored>=25
Elements of Civil Engineering	1	40% to 49% scored>=23	42% to 51% scored>=25	44% to 53% scored>=25
ements of Ci Engineering	2	50% to 59% scored>=23	52% to 61% scored>=25	54% to 63% scored>=25
Ele	3	60% and more scored>=23	62% and more scored>=25	64% and more scored>=25
	0	less than 40% scored >=34	less than 40% scored >=36	less than 40% scored >=25
ements of echanical gineering	1	40% to49% scored >=34	40% to49% scored >=36	40% to 49% scored >=25
Elements of Mechanical Engineering	2	50% to 59% scored >=34	50% to 59% scored >=36	50% to 59% scored >=25
	3	60% and more scored >=34	60% and more scored >=36	60% and more scored >=25
al	0	less than 35% scored >=21	less than 45% scored >=23	less than 50% scored >=25
asic Electric: Engineering	1	35% to44% scored >=21	45% to54% scored >=23	50% to 59% scored >=25
Basic Electrical Engineering	2	45% to 54% scored >=21	55% to 64% scored >=23	60% to 69% scored >=25
I	3	55% and more scored >=21	65% and more scored >=23	70% and more scored >=25
ing ,ab	0	Included with	Included with	less than 50% scored >=15
Engineering Physics Lab	1	Theory as it is an integrated subject	Theory as it is an integrated subject	50% to59% scored >=15
En Ph	2	integrated subject	integrated subject	60% to 69% scored >=15

				700/ 1
	3			70% and more
				scored $>=15$
la da	0			less than 40% scored >=15
ectrica ing La	1			40% to49% scored >=15
Basic Electrical Engineering Lab	2	- No Lab Course	No Lab Course	50% to 59% scored
Ba Eng	3	-		60% and more scored >=15
	0	less than 37% scored >=28	less than 40% scored >=28	less than 45% scored >=28
atics I	1	37% to 46% scored >=28	40% to 49% scored >=28	45% to 54% scored >=28
Mathematics II	2	47% to 56% scored >=28	50% to 59% scored >=28	55% to 64% scored >=28
Z	3	57% and more scored >=28	60% and more scored >=28	65% and more scored >=28
istry	0	less than 45% scored >=34	less than 45% scored >=38	less than 45% scored >=28
Engineering Chemistry	1	45% to54% scored >=34	45% to54% scored >=38	45% to54% scored >=28
neering	2	55% to 64% scored >=34	55% to 64% scored >=38	55% to 64% scored >=28
Engi	3	65% and more scored >=34	65% and more scored >=38	65% and more scored >=28
o th C	0	less than 40% scored >=34	less than 40% scored >=38	less than 45% scored >=38
troduction to amming with	1	40% to49% scored >=34	40% to49% scored >=38	45% to54% scored >=38
	2	50% to 59% scored >=34	50% to 59% scored >=38	55% to 64% scored >=38
Int Progr	3	60% and more scored >=34	60% and more scored >=38	65% and more scored >=38
ed ving	0	less than 40% scored>=25	less than 40% scored>=27	less than 40% scored>=28
Computer Aided Engineering Drawing	1	40% to 49% scored>=25	40% to 49% scored>=27	40% to 49% scored>=28
ompute ineerin	2	50% to 59% scored>=25	50% to 59% scored>=27	50% to 59% scored>=28
Engi	3	60% and more scored>=25	60% and more scored>=27	60% and more scored>=28
ics	0	less than 30% scored >=28	less than 30% scored >=29	less than 30% scored >=30
Basic Electronics	1	30% to 39% scored >=28	30% to 39% scored >=29	30% to 39% scored >=30
asic El	2	40% to 49% scored >=28	40% to 49% scored >=29	40% to 49% scored >=30
B	3	50% and more scored >=28	50% and more scored >=29	50% and more scored >=30



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$\frac{1}{2} \begin{array}{c} 40\% \text{ to } 49\% \\ \text{scored} >= 25 \\ 2 \begin{array}{c} 50\% \text{ to } 59\% \\ \text{scored} >= 25 \\ \end{array} \begin{array}{c} 55\% \text{ to } 64\% \\ \text{scored} >= 30 \\ \end{array} \begin{array}{c} \text{Course removed and} \\ \text{included in higher} \\ \text{semester} \\ \end{array}$	al	0	scored>=25	scored>=30			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	ents	1	40% to 49%	45% to 54%	Course removed and		
$\frac{2}{3} = \frac{2}{3} = \frac{50\% \text{ to } 59\%}{3} = \frac{50\% \text{ to } 59\%}{3} = \frac{55\% \text{ to } 64\%}{3} = \frac{55\% \text{ to } 10\%}{3} = \frac{55\% \text{ to } 10\%}{3} = 55\% \text{$	lnvironme nce & Awa	1	scored>=25				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2	50% to 59%	55% to 64%	•		
3 60% and more 65% and more $scored \ge 30$		2	scored>=25	scored>=30	semester		
∞ $\frac{1}{2}$ scored>=25 scored>=30	E	3	60% and more	65% and more			
	Š	5	scored>=25	scored>=30			



Attainment Levels: External Assessment

Course	Attainment Level	CAYm3 2016-17	CAYm2 2017-18	CAYm1 2018-19		
	0	less than 37% scored	less than 40% scored $>=56$			
Basic Electrical Elements of Elements of Elements of Civil Engineering Mechanical Engineering Mathematics I Engineering Engineering Engineering	1					
Mathem	2	47% to 56% scored >=56	50% to 59% scored >=56	55% to 64% scored >=56		
	3	57% and more scored >=56	60% and more scored >=56	65% and more scored >=56		
sics	0	less than 45% scored >=68	less than 45% scored >=76	less than 45% scored >=56		
ng Phy	1	45% to54% scored >=68	45% to54% scored >=76	45% to54% scored >=56		
ineeriı	2	55% to 64% scored >=68	55% to 64% scored >=76	55% to 64% scored >=56		
Eng	3	65% and more scored >=68	65% and more scored >=76	65% and more scored >=56		
Elements of Civil Engineering	0	less than 40% scored>=46	less than 42% scored>=50	less than 44% scored>=50		
	1	40% to 49% scored>=46	42% to 51% scored>=50	44% to 53% scored>=50		
	2	50% to 59% scored>=46	52% to 61% scored>=50	54% to 63% scored>=50		
E	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	60% and more scored>=46	62% and more scored>=50	64% and more scored>=50		
	$ \begin{array}{c c} scored>=46 \\ 0 \\ \hline 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $		less than 40% scored >=72	>=50		
ts of nical ering	1	40% to49% scored >=68	40% to49% scored >=72	40% to 49% scored >=50		
llemen Aechai Inginee	2	50% to 59% scored >=68	50% to 59% scored >=72	50% to 59% scored >=50		
	3	60% and more scored >= 68	60% and more scored >=72	60% and more scored >=50		
-	0	less than 35% scored >=42	less than 45% scored >=46	less than 50% scored >=50		
lectrica eering	1	35% to44% scored >=42	45% to54% scored >=46	50% to 59% scored >=50		
asic El Engin	2	45% to 54% scored >=42	55% to 64% scored >=46	60% to 69% scored >=50		
3 55% scored		55% and more scored >=42	65% and more scored >=46	70% and more scored >=50		
ctrical	0			less than 40% scored >=30		
Basic Electrical Engineering Lab	1	$ \begin{array}{ c c c c c c } >= 50 & >= 5 \\ >= 50 & >= 5 \\ 3 & 37\% & to 46\% & scored & 40\% \\ >= 56 & >= 5 \\ 2 & 47\% & to 56\% & scored & 50\% \\ >= 56 & >= 5 \\ 3 & 57\% & and & more & 60\% \\ scored >= 56 & score \\ 0 & >= 68 & >= 7 \\ 1 & 45\% & to 54\% & scored & 45\% \\ >= 68 & >= 7 \\ 2 & 55\% & to 64\% & scored & 55\% \\ >= 68 & >= 7 \\ 3 & 65\% & and & more & 65\% \\ scored >= 68 & score \\ 0 & less & than 40\% & less \\ scored >= 68 & score \\ 0 & less & than 40\% & less \\ scored >= 46 & score \\ 1 & 40\% & to 49\% & 42\% \\ scored >= 46 & score \\ 2 & 50\% & to 59\% & 52\% \\ scored >= 46 & score \\ 3 & 60\% & and & more & 62\% \\ scored >= 46 & score \\ 3 & 60\% & and & more & 62\% \\ scored >= 46 & score \\ 3 & 60\% & and & more & 62\% \\ scored >= 46 & score \\ 1 & 40\% & to 49\% & scored & less \\ >= 68 & >= 7 \\ 1 & 40\% & to 49\% & scored & less \\ >= 68 & >= 7 \\ 3 & 60\% & and & more & 62\% \\ scored >= 46 & score \\ 0 & less & than 40\% & scored & less \\ >= 68 & >= 7 \\ 3 & 60\% & and & more & 60\% \\ scored >= 68 & score \\ 0 & less & than 35\% & scored & 1ess \\ >= 42 & >= 4 \\ 3 & 55\% & and & more & 65\% \\ scored >= 42 & >= 4 \\ 3 & 55\% & and & more & 65\% \\ scored >= 42 & score \\ 0 & less & than 35\% & scored & 55\% \\ >= 42 & scored >= 42 & score \\ 0 & less & than 35\% & scored & 55\% \\ scored >= 42 & score \\ 0 & less & than 35\% & scored & 55\% \\ scored >= 42 & score \\ 0 & less & than 35\% & scored & 55\% \\ scored >= 42 & score \\ 0 & less & than 35\% & scored & 55\% \\ scored >= 42 & score \\ 0 & less & than 35\% & scored & 55\% \\ scored >= 42 & score \\ 0 & less & than 35\% & scored & 55\% \\ scored >= 42 & score \\ 0 & less & than 35\% & scored & 55\% \\ scored >= 42 & score \\ 0 & less & scored >= 42 & score \\ 0 & less & scored >= 42 & score \\ 0 & less & scored >= 42 & score \\ 0 & less & scored >= 42 & score \\ 0 & less & scored >= 42 & score \\ 0 & less & scored >= 42 & score \\ 0 & less & scored >= 42 & score \\ 0 & less & scored >= 42 & score \\ 0 & less & scored >= 42 & score \\ 0 & less & scored & score \\ 0 $	No Lab	40% to49% scored >=30		
Ba: E	2			50% to 59% scored		

				>=30			
				60% and more			
	3			scored $>=30$			
q				less than 50% scored			
Engineering Physics Lab	0			>=30			
sics				50% to59% scored			
hys	1	Included with	Included with	>=30			
р Б Б		Theory as it is an	Theory as it is an	60% to 69% scored			
erin (2	integrated subject	integrated subject	>=30			
nee				70% and more			
[ng]	3			scored ≥ 30			
<u> </u>		less than 37% scored	less than 40% scored	less than 45% scored			
	0	>=56	>=56	>=56			
П							
tics	1	37% to 46% scored >=56	40% to 49% scored	45% to 54% scored			
Mathematics II			>=56	>=56 55% to 64% scored			
the	2	47% to 56% scored >=56	50% to 59% scored >=56				
Ma		>=30 57% and more	>=30 60% and more	>=56 65% and more			
	3	scored $\geq = 56$	scored >=56	scored >=56			
		less than 45% scored	less than 45% scored	less than 45% scored			
try	0	>=68	>=76	>=56			
mis		45% to54% scored	45% to54% scored	45% to 54% scored			
Engineering Chemistry	1	>=68	>=76	>=56			
				55% to 64% scored			
	2	55% to 64% scored >=68	55% to 64% scored >=76	>=56			
jine							
Eng	3	65% and more	65% and more	65% and more			
		scored >=68 less than 40% scored	scored >=76 less than 40% scored	scored >=56 less than 45% scored			
U	0	>=68	>=76	>=76			
to /ith		40% to49% scored	40% to49% scored	45% to54% scored			
ion Ig w	1	>=68	>=76	>=76			
duction to nming with		50% to 59% scored	50% to 59% scored	55% to 64% scored			
rod	2	>=68	>=76	>=76			
Intro		60% and more	60% and more	65% and more			
Pr	3	scored $>=68$	scored $>=76$	scored $>=76$			
		less than 40%	less than 40%	less than 40%			
ng	0	scored>=50	scored>=54	scored>=56			
Computer Aided Engineering Drawing		40% to 49%	40% to $49%$	40% to $49%$			
Dr	1	$\frac{40\%}{10} = \frac{49\%}{49\%}$	40% to $49%scored>=54$	40% to $49%scored>=56$			
ing			$\frac{\text{scored}}{50\%} \text{ to } 59\%$	50% to 59%			
npu	2	50% to 59% scored>=50	scored>=54	scored>=56			
Con							
En	3	60% and more scored>=50	60% and more scored>=54	60% and more scored>=56			
nics	0	less than 30% scored >=56	less than 30% scored >-58	less than 30% scored >=60			
tro			>=58				
Jeci	1	30% to 39% scored	30% to 39% scored	30% to 39% scored			
Basic Electronics		>=56 40% to 49% scored	>=58 40% to 49% scored	>=60 40% to 49% scored			
asi	2	40% to 49% scored >=56	40% to 49% scored >=58	40% to 49% scored >=60			



		50% and more	50% and more	50% and more		
	3	scored $\geq =56$	scored >=58	scored $\geq =60$		
ith	0			less than 45% scored $>=26$		
Environmental ScienceBusiness / ProfessionalEngineering ChemistryProgramming with& AwarenesscommunicationLabC lab	1	Included with Theory as it is an	Included with Theory as it is an integrated	45% to54% scored >=26		
gram C	2	integrated subject	subject	55% to 64% scored >=26		
\mathbf{Pr}_{0}	3			65% and more scored >=26		
nistry	0			less than 50% scored >=30		
g Chen ab	1	Included with Theory as it is an	Included with Theory as it is an integrated	50% to59% scored >=30 60% to 69% scored >=30		
ıgineering La	2	integrated subject	subject			
Engi	3			70% and more scored >=30		
ional			less than 32% scored >=26	less than 34% scored >=26		
Profess	1	30% to 39% scored >=50	32% to 41% scored >=26	34% to 43% scored >=26		
ness / H	2	40% to 49% scored >=50	42% to 51% scored ≥ 26	44% to 53% scored >=26		
Busi	3	50% and more scored >=50	52% and more scored >=26	54% and more scored >=26		
cience	0	less than 40% scored>=50	less than 44% scored>=60			
ironmental Sci & Awareness	1	40% to 49% scored>=50	45% to 54% scored>=60	Course removed and included in higher		
	2	50% to 59% scored>=50	55% to 64% scored>=60	semester		
Envi	3	60% and more scored>=50	65% and more scored>=60			

Table 8.4.2.

8.4.2.1 Calculations

Direct Attainment (DA) = Semester End Examination * 0.5 + Continuous Internal Assessment * 0.5 Total Attainment = DA



8.4.2.2 The following table shows the attainment of course outcome.

CO Attainment 2016-17

				ttainment		
S. No.	Course Code	Course Name CIE Evaluations		Semester End Exam	Overall CO attainment	
1	15MAT11	Engineering Mathematics I	3	3	3	
2	15PHY12/22	Engineering Physics	3	3	3	
3	15MEE13/23	Elements of Mechanical Engineering	3	3	3	
4	15CIV14/24	Elements of Civil Engineering	3	3	3	
5	15EEE15/25	Basic Electrical Engineering	3	3	3	
6	15HSS162	Business Communication	3	3	3	
7	15MAT21	Engineering Mathematics II	3	3	3	
8	15CHE12/22	Engineering Chemistry	3	3	3	
9	15CSE13/23	Introduction to Programming with C	3	3	3	
10	15MEE14/24	Computer Aided Engineering Drawing	3	3	3	
11	15ECE15/25	Basic Electronics	3	3	3	
12	16HSS161/261	Environmental Science and Awareness	3	3	3	

Table 8.4.2.1a CO Attainment CAYm3 (2016-17)



CO Attainment 2017-18

Table 8.4.2.1b CO Attainment CAYm2 (2017-18)
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			Direct A	ttainment		
S. No.	Course Code	Course Name	CIE Evaluations	Semester End Exam	Overall CO attainment	
1	MAT11	Engineering Mathematics I	3	3	3	
2	PHY12/22	Engineering Physics	3	3	3	
3	MEE13/23	Elements of Mechanical Engineering	3	3	3	
4	CIV14/24	Elements of Civil Engineering	3	3	3	
5	EEE15/25	Basic Electrical Engineering	3	3	3	
6	HSS162/262	Professional Communication	3	3	3	
7	MAT21	Engineering Mathematics II	3	3	3	
8	CHE12/22	Engineering Chemistry	3	3	3	
9	CSE13/23	Introduction to Programming with C	3	3	3	
10	MEE14/24	Computer Aided Engineering Drawing	3	3	3	
11	ECE15/25	Basic Electronics	3	2.8	2.9	
12	HSS161/261	Environmental Science & Awareness	3	3	3	



CO Attainment 2018-19

Table 8.4.2.1c CO Attainment C	CAYm1 (2018-19)
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			Direct Att	ainment		
S. No.	Course Code	Course Name CIE		Semester End Exam	Overall CO attainment	
1	18MAT11	Applied Mathematics I	3	3	3	
2	18PHY12/22	Engineering Physics	3	3	3	
3	18MEE13/23	Elements of Mechanical Engineering	3	3	3	
4	18CIV14/24	Elements of Civil 3 3		3		
5	18EEE15/25	Basic Electrical Engineering	3	2.6	2.8	
6	18PHL16/26	Engineering Physics Lab	3	3	3	
8	18EEL17/27	Basic Electrical Engineering Lab	3	3	3	
9	18MAT21	Applied Mathematics II	3	3	3	
10	18CHE12/22	Engineering Chemistry	3	3	3	
11	18CSE13/23	Introduction to Programming with C	3	2.8	2.9	
12	18MEE14/24	Computer Aided Engineering Drawing	3	2.8	2.9	
13	18ECE15/25	Basic Electronics	3	3	3	
14	18CHL17/27	Engineering Chemistry Lab	3	3	3	
15	18CSL18/28	Programming with C Lab	3	3	3	



8.5. Attainment of Program Outcomes from first year courses (20)

8.5.1 Indicate results of evaluation of each relevant PO and/or PSO if applicable (10)

The relevant program outcomes that are to be addressed at first year need to be identified by the institution Program Outcome attainment levels shall be set for all relevant POs and/or PSOs through first year courses.

(Describe the assessment processes that demonstrate the degree to which the Program Outcomes and Program Specific Outcomes are attained through first year courses and document the attainment levels. Also include information on assessment processes used to gather the data upon which the evaluation of each Program Outcome is based indicating the frequency with which these processes are carried out)

The process to assess the attainment of the Program Outcomes and Program Specific Outcomes begins with the assessments of course outcomes attainment. The assessment of POs /PSOs during first year involves direct methods of assessment only.

	Assessment method	Assessment Tool	Frequency
POs/PSOs attainment	Direct Method	Course outcomes attainment	At end of every semester

DAC collects the data for internal and external assessment of POs and PSOs from the respective source and calculate the attainment. Direct assessment level of POs and PSOs is determined by taking average of course attainment level across all courses addressing that PO and/or PSO.



Programme Articulation Matrix CAYm3 (2016-17) Table 8.5.1.1a Programme Articulation Matrix CAYm3 (2016-17)

Course	Course Name	P01	P02	PO3	P04	PO5	PO6	P07	PO8	P09	P010	P011	P012
15MAT11	Engineering Mathematics I	3	3	3	2	2	-	-	-	-	2	-	3
15PHY12/22	Engineering Physics	3	2	2	-	-	-	-	-	2	-	-	1
15MEE13/23	Elements of Mechanical Engineering	3	1	3	-	3	2	1	-	-	3	-	1
15CIV14/24	Elements of Civil Engineering	3	3	3	-	-	-	-	-	-	-	-	-
15EEE15/25	Basic Electrical Engineering	3	3	3	2	-	-	-	-	-	2	1	-
15HSS162/262	Business Communication	-	-	-	-	-	-	-	3	2	3	I	3
15MAT21	Engineering Mathematics II	3	3	3	3	3	-	-	-	1	3	-	3
15CHE12/22	Engineering Chemistry	3	3	-	-	-	-	3	-	-	-	-	3
15CSE13/23	Introduction to Programming with C	3	3	3	1	3	-	-	-	3	1	-	1
15MEE14/24	Computer Aided Engineering Drawing	2	-	2	2	1	-	-	-	-	2	-	2
15ECE15/25	Basic Electronics	3	2	2	-	-	-	-	-	-	-	-	-
16HSS161/261	Environmental Science and Awareness	3	2	-	2	-	-	3	1	-	-	-	-
Avg.		2.91	2.5	2.67	2.0	2.4	2.0	2.33	2.0	2.0	2.29	1.00	2.13



Programme Articulation Matrix CAYm2 (2017-18)

Course Code	Course Name	P01	P02	PO3	P04	PO5	P06	P07	P08	P09	PO10	P011	P012
MAT11	Engineering Mathematics I	3	3	3	2	2	-	-	-	-	1	-	3
PHY12/22	Engineering Physics	3	2	2	-	-	-	-	-	2	-	-	1
MEE13/23	Elements of Mechanical Engineering	3	1	3	-	3	2	1	-	-	3	-	1
CIV14/24	Elements of Civil Engineering	3	2	1	1	-	-	-	-	-	-	-	1
EEE15/25	Basic Electrical Engineering	3	3	2	2	-	-	-	-	-	2	1	-
MAT21	Engineering Mathematics II	3	3	3	3	3	-	-	-	1	3	-	3
CHE12/22	Engineering Chemistry	3	3	-	-	-	-	3	-	-	-	-	3
CSE13/23	Introduction to Programming with C	3	3	3	1	3	-	Н	-	3	1	-	1
MEE14/24	Computer Aided Engineering Drawing	2	I	2	2	1	-	-	-	-	2	-	2
ECE15/25	Basic Electronics	3	2	2	-	-	-	-	-	-	-	-	-
HSS161/261	Environmental Science and Awareness	3	3	-	3	-	-	3	2	-	-	-	-
HSS162/262	Professional Communication	-	-	-	-	-	-	-	3	2	3	-	3
Avg.		2.9	2.5	2.3	2.0	2.4	2.0	2.3	2.5	2.0	2.1	1.0	2.0



Programme Articulation Matrix CAYm1 (2018-19)

Course	Course Name	P01	P02	P03	P04	PO5	P06	P07	PO8	P09	PO10	P011	P012
18MAT11	Applied Mathematics I	3	3	3	2	2	-		-	-	2	-	3
18PHY12/22	Engineering Physics	3	2	2	-	-	-	-	-	2	-	-	1
18MEE13/23	Elements of Mechanical Engineering	3	1	3	-	3	2	1	-	-	3	-	1
18CIV14/24	Elements of Civil Engineering	3	2	1	1	-	-	-	-	-	-	-	1
18EEE15/25	Basic Electrical Engineering	3	3	2	1	1	-	-	-	-	-	2	-
18PHL16/26	Engineering Physics Lab	3	2	2	-	-	-	-	-	2	-	-	1
18EEL17/27	Basic Electrical Engineering Lab	3	3	2	1	1	-	-	3	-	-	-	2
18MAT21	Applied Mathematics II	3	3	3	3	3	-	-	-	1	3	-	3
18CHE12/22	Engineering Chemistry	3	3	-	-	-	-	3	-	-	-	-	3
18CSE13/23	Introduction to Programming with C	3	3	3	1	3	-	-	-	3	1	-	1
18MEE14/24	Computer Aided Engineering Drawing	2	-	2	2	1	-	-	-	-	2	-	2
18ECE15/25	Basic Electronics	3	2	2	-	-	-	-	-	-	-	-	-
18CHL17/27	Engineering Chemistry Lab	3	3	-	-	-	-	3	-	-	-	-	3
18CSL18/28	Programming with C Lab	3	3	3	3	3	-	-	-	3	-	-	3
18HSS16/26	Professional Communication	-	-	-	-	-	-	-	3	2	3	-	3
Avg.		2.9	2.5	2.3	1.8	2.1	2.0	2.3	3.0	2.2	2.3	2.0	2.1

Table 8.5.1.1b Programme Articulation Matrix CAYm1 (2018-19)



PO Attainment CAYm3 (2016-17)

	Table 8.5.1.2a PO Attainment CAYm3 (2016-17)											
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
15MAT11	3	3	3	3	3	-	-	-	3	3	-	3
15PHY12/22	3	3	3	-	-	-	-	-	3	-	-	3
15MEE13/23	3	3	3	-	3	3	3	-	-	3	-	3
15CIV14/24	2.96	3	2.95	-	-	-	-	-	-	-	-	-
15EEE15/25	3	3	3	3	-	-	-	-	-	3	3	-
15HSS162/262	-	-	-	-	-	-	-	3	3	3	-	3
15MAT21	3	3	3	3	3	-	-	-	3	3	-	3
15CHE12/22	3	3	-	-	-	-	3	-	-	-	-	3
15CSE13/23	3	3	3	3	3	-	-	-	3	3	-	3
15MEE14/24	3	-	3	3	3	-	-	-	-	3	-	3
15ECE15/25	3	3	3	-	-	-	-	-	-	-	-	-
16HSS161/261	3	3	-	3	-	-	3	3	-	-	-	-
Direct Attainment	2.995	3	2.995	3	3	3	3	3	3	3	3	3

Table 8.5.1.2a PO Attainment CAYm3 (2016-17)



PO Attainment CAYm2 (2017-18)

	1 able 0.5.1.201 O Attainment CA1112 (2017-10)											
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
MAT11	3	3	3	3	3	-	-	-	-	3	-	3
PHY12/22	3	3	3	-	-	-	-	-	3	-	-	3
MEE13/23	3	3	3	-	3	3	3	-	-	3		3
CIV14/24	3	3	3	-	-	-	-	-	-	-	-	3
EEE15/25	3	3	3	3	-	-	-	-	-	3	3	-
MAT21	3	3	3	3	3	-	-	-	3	3	-	3
CHE12/22	3	3	-	-	-	-	3	-	-	-	-	3
CSE13/23	3	3	3	3	3	-	-	-	3	3	-	3
MEE14/24	3	-	3	3	3	-	-	-	-	3	-	3
ECE15/25	2.86	2.75	2.75	-	-	-	-	-	-	-	-	-
HSS161/261	2.9	3	-	3	-	-	2.9	3	-	-	-	-
HSS162/262	-	-	-	-	-	-	-	3	3	3	-	3
Direct Attainment	2.98	2.97	2.97	3	3	3	2.97	3	3	3	3	3

Table 8.5.1.2b PO Attainment CAYm2 (2017-18)

PO Attainment CAYm1 (2018-19)

Table 8.5.1.2c PO Attainment CAYm1 (2	2018-19)
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Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
18MAT11	3	3	3	3	3	-	-	-	-	3	-	3
18PHY12/22	3	3	3	-	-	-	-	-	3	-	-	3
18MEE13/23	3	3	3	-	3	3	3	-	-	3	-	3
18CIV14/24	3	3	3	3	-	-	-	-	-	-	-	3
18EEE15/25	2.81	2.81	2.81	2.81	2.81	-	-	2.7	-	-	2.92	2.7
18PHL16/26	3	3	3	-	-	_	-	_	3	-	-	3



	2	0	2	2	2	2	2	2				
18EEL17/27	3	3	3	3	3	3	3	3	-	-	-	3
18MAT21	3	3	3	3	3	-	-	-	3	3	-	3
18CHE12/22	3	3	-	-	-	-	3	-	-	-	-	3
18CSE13/23	2.815	2.75	2.75	2.75	2.82	-	-	-	2.82	2.795	-	2.81
18MEE14/24	3	-	2.56	3	3	-	-	-	-	3	-	3
18ECE15/25	2.845	2.87	2.87	-	-	-	-	-	-	-	-	-
18CHL17/27	3	3	-	-	-	-	3	-	-	-	-	3
18CSL18/28	3	3	3	3	3	-	-	-	3	-	-	3
18HSS16/26	-							3	3	3	-	3
Direct Attainment	2.96	2.96	2.91	2.94	2.95	3	3	2.95	2.97	2.96	2.92	2.98

Target Attainment Level

Target	2016-17	2017-18	2018-19
Attainment Level	2.2	2.4	2.6

8.5.2 Actions taken based on the results of evaluation of relevant POs (5):

PO Attainment Levels and Actions for improvement: 2018-19 (CSE)

РО	Target Level	Attainment Level	Observations					
PO-1: Eng	ineering know	ledge: Apply the kn	owledge of mathematics, science,					
engineering	g fundamentals,	and an engineering	specialization to the solution of					
complex engineering problems.								
Emphasized the role of fundamental sciences in Computer science engineering								
domain by	domain by conducting the virtual tours of the Labs related to Computer Science							
Engineering	Engineering department and student were briefed about Quantum Computation							
whose unde	erlying phenom	enon is Quantum med	chanics					
PO-1	2.6	2.96	Target Achieved					
PO	Target Level	Attainment Level	Observations					
PO-2: Problem analysis : Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.								
Organized	Organized Expert Lectures from leading R & D organizations such as Tata Institute							



	ental Research(TIFR)Bangalore, International Researchers (USA),								
	1	aboratories (NAL)	Bangalore, Raman Research						
	RI) Bangalore	2.96 Target Achieved							
PO-2	2.6		-						
PO	Target Level	Attainment Level	Observations						
engineering specified n	g problems and eeds with appro	design system comp priate consideration f	Design solutions for complex ponents or processes that meet the for the public environmental considerations.						
Workshop	on 18MEE14/24	4 (CAED) was condu	icted to the students.						
engineering	sing the Industry Institute labs students were demonstrated the solution for ngineering problems. As well the students were assigned the small projects as self- udy and the project exhibition was conducted at the end of the semester								
PO-3	2.6	2.91	Target Achieved						
РО	Target Level	Attainment Level	Observations						
conclusion	S.		e information to provide valid ed to students.						
	The significance of literature survey was outlined to students.								
PO-4	2.6	2.94	Target Achieved						
PO-4 PO	2.6 Target Level		Target Achieved Observations						
PO PO-5: Mo resources, a	Target Level dern tool usag and modern eng	Attainment Level ge: Create, select, a ineering and IT tools							
PO PO-5: Mo resources, a to complex Using SAP	Target Level dern tool usag and modern engineering act	Attainment Level ge: Create, select, a ineering and IT tools tivities with an under VMware Labs and H	Observations nd apply appropriate techniques, including prediction and modelling						
PO PO-5: Mo resources, a to complex Using SAP	Target Level odern tool usag and modern engineering act lab, IIOT lab,	Attainment Level ge: Create, select, a ineering and IT tools tivities with an under VMware Labs and H	Observations nd apply appropriate techniques, including prediction and modelling standing of the limitations.						
PO PO-5: Mo resources, a to complex Using SAP the capabil	Target Level odern tool usag and modern engineering act engineering act lab, IIOT lab, ities of software	Attainment Level ge: Create, select, a ineering and IT tools tivities with an under VMware Labs and H e solutions	Observations nd apply appropriate techniques, including prediction and modelling standing of the limitations. IP lab students were demonstrated						
PO PO-5: Mo resources, a to complex Using SAP the capabili PO-5 PO PO-6: The knowledge consequent	Target Level odern tool usag and modern engineering act lab, IIOT lab, ities of software 2.6 Target Level e engineer and to assess sociat responsibilities	Attainment Level ge: Create, select, a ineering and IT tools is tivities with an under VMware Labs and H e solutions 2.95 Attainment Level society: Apply reas etal, health, safety, s relevant to the profe	Observations Observations Including prediction and modelling including prediction and modelling standing of the limitations. IP lab students were demonstrated Target Achieved Observations oning informed by the contextual legal and cultural issues and the essional engineering practice.						
PO PO-5: Mo resources, a to complex Using SAP the capabili PO-5 PO PO-6: The knowledge consequent Engineers public. En beneficiary the course	Target Level odern tool usag and modern engineering act lab, IIOT lab, ities of software 2.6 Target Level e engineer and to assess sociat responsibilities primary obligat agineers decision are the general Constitution of	Attainment Level ge: Create, select, a ineering and IT tools is tivities with an under VMware Labs and H e solutions 2.95 Attainment Level society: Apply reas etal, health, safety, s relevant to the profe ion is to protect the on making is very public or society at la	Observations apply appropriate techniques, including prediction and modelling standing of the limitations. IP lab students were demonstrated Target Achieved Observations oning informed by the contextual legal and cultural issues and the essional engineering practice. safety, health and welfare of the important because the ultimate arge. This was emphasized through health induction						



PO	Target Level	Attainment Level	Observations					
professiona	al engineering s	solutions in societal	Understand the impact of the and environmental contexts, and tainable development.					
The e waste management and disposal was outlined through videos. The awareness of the role of IT in ecological sustainability was created through eco club								
PO-72.63Target Achieved								
РО	Target Level	Attainment Level	Observations					
		cal principles and c of the engineering pr	ommit to professional ethics and actice.					
Ethics will guide the engineers to mould the personality trait of an individual which will play a key role in instilling discipline and facilitating students to become a responsible citizen of the nation. This is also reemphasized through the course Constitution of India and Professional Ethics.								
PO-8								

РО	Target Level	Target Level Attainment Level Observations							
		m work : Function ef teams, and in multi	fectively as an individual, and as a disciplinary settings.						
As part of the self-study evaluation, students were assigned the small projects in groups; working in the groups enabled them to understand the intricacies of team work and decision making process									
PO-9									
РО	PO Target Level Attainment Level Observations								
activities w able to cor effective p The "Cent	vith the engineer nprehend and w resentations, and er for Soft Skil	ring community and w vrite effective reports d give and receive cle	earning" ensures the students are						
PO-10	2.6	2.96	Target Achieved						
PO Target Level Attainment Level Observations									
understand one's own multidiscip	PO-11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.Students get hands on experience on managing small group tasks and associated								



finances by participating actively in the Curricular, Co-curricular and Technical					
clubs. Technically too students were assigned the small projects in groups as part					
of the self-study evaluation, which teaches the nuances of project management					
PO-11	2.6	2.92	Target Achieved		
РО	Target Level	Attainment Level	Observations		
PO-12: Life-long learning: Recognize the need for, and have the preparation and					
ability to engage in independent and life-long learning in the broadest context of					
technological change.					
The "Center for Soft Skills and Life Long Learning" conducts various activities					
PO-12	2.6	2.99	Target Achieved		



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CRITERION 9

STUDENT SUPPORT SYSTEMS

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CRITERION 9 STUDENT SUPPORT SYSTEMS

9.1 Mentoring system to help at individual level (5)

(Type of mentoring: Professional guidance/career advancement/coursework specific/ laboratory specific/all-round development, number of faculty mentors, number of students per mentor, Frequency of meeting. The institution may report the details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system)

1. Mentoring System

The role of the faculty as a mentor is one of nurturing and providing support for a student during the transition period in academic, professional as well as personal augmentation. In all departments of the Institution, mentoring is a continuous process where faculty mentors serve as a resource who will respond to many questions, trivial or complex, that the student might pose; support students in choosing course work that meets their needs and interests; encourage students to actively participate in seminars and laboratory work that are realistic in scope; and counsel the students on any other academic, professional, personal growth, etc., for necessary advice/guidance/help.

Role of a Mentor

- Keeps the records of student's profile in the prescribed format
- Maintains the records of absentees, problems/issues
- Explains to students the academic rules and regulation.
- Collects or downloads the attendance of each student for all courses either on monthly basis (if done manually) or fortnightly
- Examines the results of the students and counsel for poor results within a week after the results is published.
- Communicates with parents of students to discuss students' performance, any attendance issues and future plan at least twice in a semester.
- Gives specific guidance to students in selecting elective courses for registration.
- Gives guidance and information to plan for industry internship.
- Ensures to provide study material for advanced courses or advance study
- Gives guidance to students for selecting project topic, project guide, counsel them on back papers and debarred courses.



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• Reports Unresolved cases of students to Dean / HOD and if Dean / HOD require further attention to resolve the issue, the un resolved cases can be brought to the attention of higher authorities'/ student counselors.

I. Types of mentoring activities done towards students

• Academic Growth

- First, mentors educate their mentees in a particular course, serving as masters to the developing learners by analyzing their performance in continuous internal evaluation tests (CIE).
- Based on academic record, students with good performance are encouraged to achieve next higher level of performance and slow learners are motivated and guided to improve the performance.
- The mentors counsel the students for their low attendance, low performance in examination (with the emphasis on the reason(s) of low attendance and performance).
- Information of academic planners, academic schedules and e-learning resources are shared to enhance their knowledge.
- Students are given training for taking up competitive exam GATE, IES, UPSC etc.
- Faculty members encourage students to do poster presentation on the mini-projects and PBL based project learning.

• Professional Guidance

- The students are encouraged and guided to register themselves in the professional bodies like IEEE, CSI, and ISTE etc. to create awareness and enhance the knowledge about the various activities including research in their area of specialization.
- Mentors support their learning and enhance their laboratory and research skills through technical workshops/symposiums.
- Industry based training is offered to students to improve their chances of employability.
- Students are encouraged to develop their oral and written communication skills by writing research papers /articles and presenting in national and international conferences.
- The projects are designed based on real time scenarios to apprise students about the working culture of industry and industry expectations.

• Career Advancement

• Students are supported to take up online certification courses offered by MOOC/NPTEL/SWAYAM to strengthen the qualification for their academic



progression. This also helps them to achieve higher career paths in the applied areas of their specializations.

- Career guidance and counseling is provided by senior faculty members and placement Co-coordinators
- Value added training programs are arranged to enhance their placement opportunities as well as to support their research in industry. Students are also encouraged to take up international professional certification for example in CISCO, Microsoft, Java, etc. This helps the students to improve their profiles for future.

• Laboratory Specific

- Counsel irregular students to laboratory classes to attend regularly and complete backlog experiments during specified extra hours.
- Arrange special lab coaching for Students with backlogs in external lab exams.

• All-round Development

• Encourage and support students towards all round development through participation in literary, cultural and sports activities which helps to develop leadership qualities, decision making abilities, team spirit, socio-psychological awareness, and shapes the student into an intellectually integrated person.

• Student Personality development

- Empower and enable inner adjustments by individual students to counter and cope with physical, emotional, mental, social and environmental challenges through student-counselor interaction/ through meditation workshops/ through other specialized workshops / activities.
- Use of therapeutic interventions by counselors where necessary; such as Cognitive Behavior Therapy(CBT), Rational Emotive Behavior Therapy (REBT), Desensitization Therapy, Psychodynamic therapy, Group therapy and so on.
- Engage in family /peer counseling by Counselor/ Mentor /HOD to strengthen student's interpersonal relationships thereby improving their grades.

II. List of Training activities

- Orientation of the students prior to Placement season.
- Aptitude Training.
- Mock online aptitude practice test.
- Technical training through labs.



- Mock online technical practice test.
- One to one career counseling and guidance to all the students.
- Mock Group Discussion practice.
- Personality development activities.
- Life skill trainings.
- Verbal and written communication trainings.
- Company specific trainings.
- Mock face to face interviews.
- Industry visits.
- Internship opportunities.
- Participation in Hackathon and other coding challenge contests.

Parameter	Description	
Types of mentoring activities	Academic growth / Professional guidance / career advancement / laboratory specific / All – round development / Student personality development	
Number of faculty mentors	42	
Number of students per mentor	12-14	
Frequency of meeting	Once in a month	
Counselor available for specific number of students	One per branch	

Table 9.1: Summary of Mentoring System

The student mentoring process flow is shown below



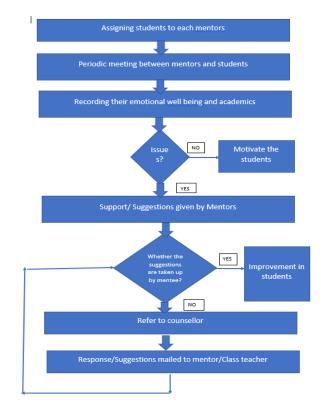


Figure 9.1: The structure of mentoring report

III. Counseling System

Department of Counseling offers individual, group and family counseling in the campus. The Department is equipped with 6 professionally qualified counselors who are easily approachable t o the students and help them to deal with their daily life challenges and develop an insight for making right choices and decisions in their lives. In the department, each counselor allows an individual to have an opportunity to improve upon their understanding of themselves, including their pattern of thoughts, behavior, feelings and the ways in which these may have been problematic in their lives. It also helps to examine how to tap into existing resources or develop new ones that enhance their academic and personal lives.

Procedure to be followed by counselors at NHCE:

- Department of counseling always focuses on mental health as well as academic achievement of students.
- Counselors are easily approachable to the students in two ways either through referral or self -walk in.
- Counselor helps them to deal with their daily life challenges and develop an insight for making right choices and decisions in their lives.
- After first session of counselling, counselor always follows up the students.
- If requires counselor uses paper pencil tests to find out the exact issue of



students.

- Counselor always maintains soft copy report of the students. Department of counseling conducts awareness program for the students.
- In this pandemic situation it's difficult to meet the students in person but department of counseling always ready to help students online or offline.

Sl. No.	Name	Designation
1	Dr. Reena Jain	Chief Counselor
2	Mrs.Deepa S	Student Counselor
3	Mrs. Arghyasri Sensarma	Student Counselor
4	Mrs. Roshina Jacob	Student Counselor
5	Mrs. Shanthala Roa	Student Counselor
6	Mrs. Sahana S	Student Counselor

 Table 9.2: Details of Counselors committee members

Format used by Counselors

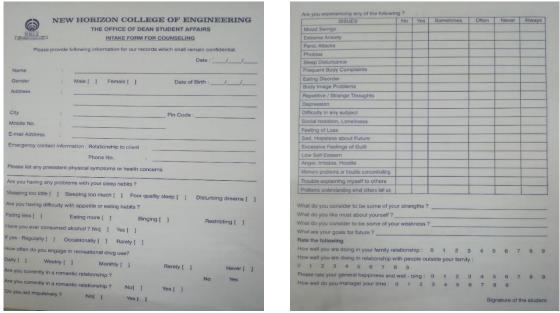


Figure 9.2: Format of the counseling form used by counselor

IV. Career Advancement

- Students are encouraged to take up online certification courses offered by MOOC/NPTEL/SWAYAM to strengthen the qualification for their academic progression. This also helps them to achieve higher career paths in the applied areas of their specializations.
- Career guidance and counseling are provided by senior faculty members and placement co-coordinators.
- Value added training programs are arranged to enhance their placement



opportunities as well as to support their research in industry. Students are also encouraged to take up international professional certification for example in CISCO, Microsoft, Java, etc. This helps the students to improve their profiles for future.

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9.1.1 Sample Format of Mentoring System for CSE

Figure 9.3: A snap shot of the mentoring system

Semester	Course Code	Subject Name	
		Course Specific	
Ι	CSE13	Introduction to Programming with C	
III	CSE34	Data Structures using C	
III	CSE35	UNIX System Programming	
IV	CSE43	Object Oriented Programming with C++	
V	CSE51	Analysis and Design of Algorithms	
V	CSE52	Operating System	
V	CSE53	Database Management Systems	
V	CSE54	Software Engineering	
VI	CSE61	Core JAVA Programming	
VI	CSE62	Computer Networks	
VI	CSE641	Social Network Analysis	
VI	CSE642	Soft Computing	
VI	CSE643	Usability and Human Computer Interaction	

Table 9.3: List of Courses offered for Life Long Learning



	1	
VII	CSE71	Web Technologies
VII	CSE72	Software Testing
VII	CSE73	Mobile Application Development
VII	CSE741	Fundamentals of Data Science
VII	CSE742	Cryptography & Network Security
VII	CSE743	Artificial Intelligence
VII	CSE745	Cyber Security, Forensics and Law
VIII	CSE81	Object Oriented Analysis and Design
VIII	CSE82	Data Mining and Machine Learning
		Laboratory Specific
Ι	CSE13	Programming with C Lab
III	CSE34	Data Structures using C Lab
III	CSE35	UNIX System Programming Lab
IV	CSE43	Object Oriented Programming with C++
V	CSE51	Analysis and Design of Algorithms Lab
V	CSE53	Database Management Systems Lab
V	CSE553	Big Data Analytics with HP Vertica
VI	CSE61	Core JAVA Programming
VI	CSE62	Computer Networks
VII	CSE71	Web Technologies
VII	CSE72	Software Testing
VII	CSE73	Mobile Application Development
		All-round Development
Ι	HSS171	Essential English
Ι	HSS172	Constitution of India and Professional Ethics
II	HSS271	Professional Communication
III	HSS322	Life skills for Engineers
III	HSS321	Economics for Engineers
IV	HSS422	Life skills for Engineers
IV	HSS421	Economics for Engineers
	Student j	personality development activity
III	CSE36	Mini Project in C
IV	CSE46	Mini Project in C++
V	CSE56	Mini Project in DBMS
VI	CSE65	Mini Project in JAVA
VII	CSE76	Mini Project in Mobile Application Development
VIII	CSE83	Internship
VIII	CSE84	Project



9.1.2 Sample Format of Mentoring System for CV

Registration Data 📕 Performance 📕 Profile 📕	Mentoring		Ment	oring Rep	ort		
AMAL THOMAS Counselling Details : Last Counselled : 17-03-2020 02:18:	19	1NH16CV011	SEM06		•		-
ANAND VIJAYAN M Counselling Details : Last Counselled : 17-03-2020 02:21:3	0	1NH16CV014	SEM06		•	•	-
ARJUN G V Counselling Details : Last Counselled : 17-03-2020 02:24:0	00	1NH16CV016	SEM06	1	•	•	-
ARUN GOPINATH Counselling Details : Last Counselled : 17-03-2020 02:27:3	21	1NH16CV017	SEM06		•	•	-

Figure 9.4: Sample Student mentoring in Contineo

SI. No	Name	USN	Roll No	Semester	Nature of Counselling	Issue/Details	Suggestion/Action	Date Of Session
1	AMAL THOMAS	1NH16CV011	1	SEM06	Periodic	Irregular to classes, He is	stage2	17-03-2020
					counseling	good but lack in concentration	-	
2	ANAND	1NH16CV014	0	SEM06	Periodic	He is irregular to classes and	stage2	17-03-2020
	VIJAYAN M				counseling	lacks interest in studying		
3	ARJUN G V	1NH16CV016		SEM06	Periodic	not regular average scoring	none	17-03-2020
					counseling	in internals		
4	ARUN	1NH16CV017		SEM06	Periodic	irregular and absent in most of	stage2	17-03-2020
	GOPINATH				counseling	subjects cie		
5	м	1NH16CV057	0	SEM06	Periodic	he s regular to classes but	none	17-03-2020
	GIRISHANKAR				counseling	should concentrate in class		
						and work hard.		
6	SHUHAIL M	1NH16CV101		SEM06	Periodic	he is very irregular to class.	stage2	17-03-2020
					counseling			
7	ABDUL ROUF	1NH17CV001		SEM06	Periodic	Quite good in the	none	18-03-2020
	WANI				counseling	studies, However there is a		
						scope for improvement		
3	ABHINAV	1NH17CV002		SEM06	Periodic	student is regular and	none	18-03-2020
	DUBEY		1		counseling	disciplined, no issues in		
						academics and behaviour		
9	ABHISHEK B V	1NH17CV003		SEM06	Periodic	good student no issues	none	18-03-2020
					counseling			
10	ABHISHEK P	1NH17CV004		SEM06	Periodic	good student no issues	none	18-03-2020
					counseling			
11	AKRITI NAIK	1NH17CV008		SEM06	Periodic	v good student no issues	none	18-03-2020
					counseling			

Figure 9.5: Sample Student Mentoring Report



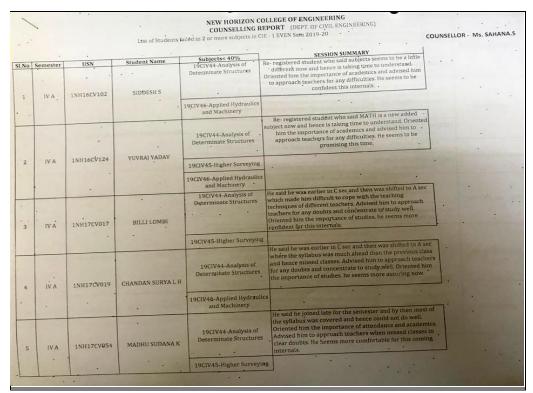


Figure 9.6: Sample Counseling Report

No. of students called	Type of issue	Mode of communication	Plan of action
1 (CIVIL)	Confusion regarding the CIE marks calculation.	Mobile Texts	Advised him to enquire his teachers for further marking queries and request them to look into if any discrepancies.
1 (CIVIL)	Anxiety regarding pandemic and scheduling of end <u>sem</u> exams.	Mobile Texts	Counselled and built hope in him regarding the current crisis. Advised him to not panic regarding the exams, since the administration will take steps which are appropriate.

Figure 9.7: Counseling report



C. Efficacy of mentoring/counseling system:

The mentoring/counseling system developed by the college is very effective as defined by different parameters as listed in Table 9.14

	of Mentoring System
Parameters	Outcome
Student's Attendance:	Enhanced / Improved
The Involvement of Students in the	
Academics, Co-Curricular and Extra-	Improved
Curricular:	
Individual Student's Talents/ Skills	Excellent (the mentor/counselor/student
Identified and Nurtured towards:	ratio being optimum for supported
Identified and Nutrured towards.	growth).
	Improved over time, thus making inner
	adjustments easier and coping with and
Students' Self-Confidence/ Self-	tackling successfully external challenges
Esteem:	like facing job interviews/ speaking in
	public /giving presentations/ even
	mentoring peers.

Table 9.4:	Efficacy	of Mentoring	System
1 4010 7.44	Lincacy	or mentoring	by seem

9.1.3 Sample Format of Mentoring System for ECE

Semester	Course Codes	Subject Name New
Ι	15MA11	Engineering Mathematics I
Ι	15CH12	Engineering Chemistry
Ι	15HP16	Personality Development and Soft skills
II	15MA21	Engineering Mathematics II
II	15HB26	Business Communication
III	16MAT31	Engineering Mathematics -III
III	16HSS322	Life Skills for Engineers
III	16ECE34	Electronic circuits-1
III	16ECE35	Network Analysis
III	16ECE36	Signals and Systems
IV	16MAT41	Engineering Mathematics- IV
IV	16ECE44	Digital Signal Processing
IV	16ECE45	Control Systems

Table 9.5: List of Courses offered for Life Long Learning



V	ECE53	CMOS VLSI Design	
V	ECE54	Information Theory and Coding	
V	ECE55	Engineering Electromagnetics	
VI	ECE62	Embedded System Design	
VI	ECE63	Microelectronics circuits	
VI	ECE651	Routing and Switching	
VIII	ECE81	Routing and switching-3	
VIII	ECE82	Internship	
VIII	ECE83	Project Phase-I	
VIII	ECE84	Project Phase-II	
VIII	ECE85	Project Phase- III	

The summary of the mentoring system is shown in Table 9.6.

New Horizon College of Engineering First Year Student Mentoring Report

SI. No	Name	USN	Roll No	Semester	Nature of Counselling	Issue/Details	Suggestion/Action Plan	Date Of Session
19	ANJU GOPINATH	1NH16EC708		SEM08	Follow up of previous discussion	No issues.Got placed in Hexaware.project 2nd review is done.	none	14-04-2020
20	B VAMSI KRISHNA REDDY	1NH16EC710		SEM08	Follow up of previous discussion	No issues.Attending online classes and happy with classes.Doing final year project.Searching for Job.	none	14-04-2020
21	BALAJI L	1NH16EC711		SEM08	Follow up of previous discussion	Doing final year project. No issues.	none	14-04-2020
22	CHIRAG S	1NH16EC713		SEM08	Follow up of previous discussion	Attending online classes and project 2nd review is done.Trying for Job.No issues.	none	14-04-2020
23	GAGANA M R	1NH16EC714		SEM08	Follow up of previous discussion	No issues.80% of the final year project is completed.Planning to do higher studies in Australia.Got offer letters from 2 universities.	none	14-04-2020
24	GOWRI SNEHA PRIYA S	1NH16EC715		SEM08	Follow up of previous discussion	Doing final year project and no issues.	none	14-04-2020
25	GURRAM VENKATA NIKESH	1NH16EC716		SEM08	Follow up of previous discussion	Happy with online classes.Project 2nd review not done and going to do this week due to lock down and unavailability of components.	none	14-04-2020

Mentor:Ms. Parepalli Ramanamma (P Rama)

HOD

Figure 9.8: Sample Student Mentoring Report



	USN	STUDENT NAME	Session Summary
Sl.No.			
1.	1NH18EC001	ABHIRAG	The student said that he did not study as he missed classes due to fast track exam
			He was asked to reflect on how he gets fastrack and how that affects the upcoming semester. He was to be more
			responsible and take academics seriously.
2.			The student said that he did not study that is the reason he
			could not perform well.
			Spoke to him on the consequences of not securing enough marks for the internals. Motivated him to study better for the coming
	1NH18EC005	AMITH SABU	internals.
3.			It was understood from the session that the student is not taking his academics seriously. Spoke to him on the consequences of not securing
			enough marks for the internals. Motivated him to
	1NH18EC016	AYAAN KHAN S	study better for the coming internals.

IIIA

Figure 9.9: Sample report by counselor

Efficacy of mentoring/counseling system:

The mentoring/counseling system developed by the college is very effective as defined by different parameters as listed in Table 9.6.

Parameters	Outcome
Student's Attendance:	Enhanced / improved
The Involvement of Students in the	
Academics, Co-Curricular and	Has improved
Extra-Curricular:	
Individual Student's Talents/ Skills	Excellence (the mentor/counselor/student
Identified and Nurtured towards:	ratio being optimum for supported growth).
	Improved over time, thus making inner
	adjustments easier and coping with and
Students' Self-Confidence/ Self-	tackling successfully external challenges
Esteem:	like facing job interviews/ speaking in
	public /giving presentations/ even mentoring
	peers.

Table 9.6	: Efficacy	of Mentoring	System
-----------	------------	--------------	--------



9.1.4 Sample Format of Mentoring System for ME

New Horizon College of Engineering Mechanical Engineering Student Mentoring Report

SI. No	Name	USN	Roll	Semester	Nature of	Issue/Details	Suggestion/Action	Date Of Session
			No		Counselling		Plan	
1	B MAHITHESH	1NH15ME708	0	SEM08	Periodic	NOT REGULAR TO CLASS	none	18-03-2020
	GOWD				counseling	AS HE IS REREGISTERED.		
2	MOHAMMED	1NH15ME727	0	SEM08	Periodic	since he has very less basiCS	none	18-03-2020
	RIYAZ BAIG				counseling	HE NEEDS TO PREPARE		
					-	MORE		
3	RAKSHITH	1NH15ME735	0	SEM08	Periodic	Irregular to classes.working on	none	18-03-2020
	REDDY				counseling	internship		
4	ABHISHEK	1NH16ME700		SEM08	Periodic	no issues observed.	none	18-03-2020
					counseling			
5	GOUTHAM G	1NH16ME718		SEM08	Parent teacher	student was not willing to	none	18-03-2020
					meeting	come to college and hence		
						parent had to come with him		
6	ADHARSH	1NH16ME701		SEM08	Periodic	Good student. No issue with	none	18-03-2020
	MADHUSUDAN				counseling	him.		

Figure No. 9.10: Student Counseling Report (Faculty)

	Counselling R	eport on Students scored less than 10 in CIE1- O	
		Department of Mechanical Engineering- 3rd Sem	Odd Semester, 2019
	Name	Response	Session Summary
16ME025	Dhanush R	I was not regular before because of dengue and later accident. But now regular and will improve scores in the next exam	Helped him to orient towards semester requirements in
8ME089	Prashanth M	Scored less in CAMD, MOM, MSM and all are numerical subjects. Didn't get answer correct.	Helped to set target score to compensate on marks and encouraged to seek help from teachers and friends for better subject understanding.
8ME082	Nishanth Manoj	Due to fever, I couldn't do well. Will get retest	Appeared to be confident about scoring better and suggested to contact teachers for the re-test
8ME081	Nischal P	also coulde't do all the bulgets and because of fever	Suggested to take help from teachers or friends for better
8ME424	Ancesh Ahmed	Joined late for the semester and some basics are	subject clarity. Needs to work on motivation. Helped to set target scores
8ME759 unsellor	Yathish Ravindra	Deserves C. 1. 1.C. Lt.	according to the shortage to compensate on marks. Helped to set target scores accordingly for the next exam.

Figure No. 9.11: Student Counseling Report (Counselors)

Table 9.7: Im	pact of efficacy	of mentoring	/counseling system
		· · · · 0	

Type of	2018	8-19	201	7-18	2016-17			
Mentoring/ Counseling	No. of students counseled	No. of students improved	No. of students counseled	No. of students improved	No. of students counseled	No. of students improved		
Academic guidance	58	36	47	31	37	25		



9.2. Feedback analysis and reward /corrective measures taken, if any (10)

(Feedback collected for all courses Specify the feedback collection process Average Percentage of students who participate Basis of reward/ corrective measures, if any; Indices used for measuring quality of teaching& learning and summary of the index values for all courses/teachers; Number of corrective actions taken).

Feedback on Teaching-Learning by Students

The entire process is executed in following three stages

- Feedback collection
- Feedback analysis
- Reward / corrective measures

Feedback Collection Process

- Feedback mechanism is well organized system in the college for all courses.
- All the students are allowed to give feedback.
- Computerized feedback is collected from students for all the courses. The feedback collection process is discussed in Table 9.8

Title	Description
Feedback collection process	Online feedback from all students on
	respective courses
Process	Online on CONTINEO
Frequency of feedback	
Collection	Twice in a semester
	5-Excellent 4-Very Good 3-Good
Metrics used for calculation	2-Satisfactory
	1-Below average

Table 9.8: Feedback collection process

Feedback Analysis Process

Summary of the feedback reports pertaining to course, program and teachinglearning is prepared, usually on the scale of 1 to 5. The minimum expected feedback for a faculty member from the students is 3.5 on 5-point scale rating system. The feedback is shared with heads of the respective departments. Informal feedback is also taken directly by the heads from time to time during the ongoing semester. A special emphasis is paid on transparency and impact of the feedback system. A broad range of parameters that are used for collecting the feedback data is as given below.



- Particular on timely coverage of syllabus.
- Ability to integrate content with other courses.
- Depth of the course content including project work, if any.
- Learning value (in terms of knowledge, concepts, manual skills, analytical abilities and broadening perspectives)
- Lectures are interesting.
- Logical structuring & sequencing of course content into modules.
- Promptness & adequacy of feedback provided by teacher on academic performance.
- Promptness in Evaluation of Tests, Assignments and Quizzes.
- Punctuality (starting time & ending time for lectures, Lab classes and Tutorials Classes)
- Recap of last lecture, assignments, quizzes, projects, discussion, case studies etc.
- Teacher comes well prepared to teach in the class.
- Teacher encourages students to ask questions and are satisfied with answers.
- Teacher encourages students to think independently.
- Teacher gives real life examples/ uses videos.
- Teacher is approachable to students for Academic/ personal advice.
- Teacher is clear with course concepts.
- Teacher is enthusiastic about teaching the course.
- Teacher provides course and lecture outline at the semester beginning.
- Teacher suggests web-links related to the topics taught.
- Teacher takes extra care to ensure learning.
- Teacher uploads the teaching material well before the class.
- The course materials (e.g. text, case studies, readings etc.) are helpful in learning the course. The evaluation process is well designed during the course.
- There is clarity in presentation, considering language, voice and black board Writing.

A format of student feedback on teaching -learning is given in figure

FORMAT of Student Feedback on Teaching – Learning <u>Questionnaire</u>

- 1. Clarity in explaining the subject
- 2. Subject explained was easy to understand
- 3. Content quality is relevant and useful
- 4. Faculty answers to your queries/questions
- 5. Coverage of topic/subject is on time
- 6. The concepts were explained with examples
- 7. Faculty preparation for the class
- 8. Faculty guidance for preparation of seminar, conference and exam
- 9. Punctuality of the faculty for the class
- 10. Communicates distinctly and effectively



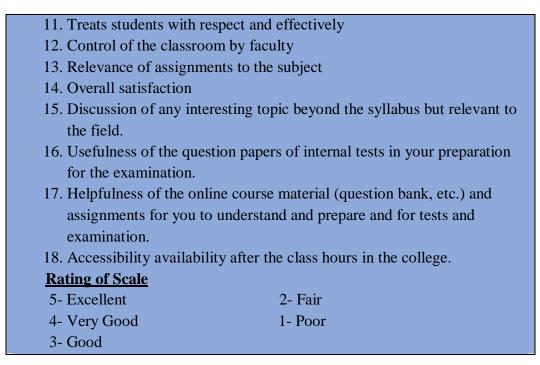


Figure 9.12: Format of student feedback on Teaching – Learning

9.2.1 Sample Feedback analysis for CSE

A broad range of parameters that are used for collecting the feedback data is as given below.

- Particular on timely coverage of syllabus
- Ability to integrate content with other courses
- Depth of the course content including project work, if any
- Learning value (in terms of knowledge, concepts, manual skills, analytical abilities and broadening perspectives)
- Lectures are interesting
- Logical structuring & sequencing of course content into modules
- Promptness & adequacy of feedback provided by teacher on academic performance
- Promptness in Evaluation of Tests, Assignments and Quizzes
- Punctuality (starting time & ending time for lectures, Lab classes and Tutorials Classes)
- Recap of last lecture, assignments, quizzes, projects, discussion, case studies etc.
- Teacher comes well prepared to teach in the class
- Teacher encourages students to ask questions and are satisfied with answers
- Teacher encourages students to think independently



- Teacher gives real life examples/ uses videos
- Teacher is approachable to students for Academic/ personal advice
- Teacher is clear with course concepts
- Teacher is enthusiastic about teaching the course
- Teacher provides course and lecture outline at the semester beginning
- Teacher suggests web-links related to the topics taught
- Teacher takes extra care to ensure learning
- Teacher uploads the teaching material well before the class
- The course materials (e.g. text, case studies, readings etc.) are helpful in learning the course
- The evaluation process is well designed during the course
- There is clarity in presentation, considering language, voice and blackboard writing

undradual fee		
	to you to analyze the effectiveness of the service offmed at NHCE. Please accure ling about the course so far, and not those of your collective group. This would be u individually, and the level of interaction between you, faculty and the institut completery contenentsi.	Ip us in accurately evaluating how the course is per
raceutical And P	unitional Focus (BTE812) Dr.Aph	a 5 M
	FEEDBACK ON FACULTY	
Dia. No.	Particulars	CONTRACT DIA DIA
	Clarity is explaining the subject	Colect ~
2	Rubjert explained was easy to understand.	Enlect V
2	Content quality is relevant and useful.	Select V
4	Faculty answers to your overlas/avestions-	Select V
5	Coverage of topic/subject is on lime.	Select V
•	The concepts were explained with examples.	Select V
7	Faculty preparation for the class.	Select 🗸
8	Faculty guidance for preparation of seminar, conference and exam.	Select V
0	Punctuality of the faculty for the class.	Select 🗸
10	Communicates distinctly and effectively.	Select 🗸
11	Treats students with respect and courtesy.	Select 🗸
12	Control of the classroom by faculty.	Select 🗸
13	Relevance of assignments to the subject.	Select 🛩
14	Overall satisfaction.	Select 🗸
15	Discussion of any interesting topic beyond the syllabus but relevant to the	field. Select 🗸
10	Usefulness of the question papers of internal tests in your preparation for t examination.	he Select 🗸
17	Helpfulness of the online course material (question bank, etc.) and assignm you to understand and prepare and for tests and examination.	sents for Select V
1.0	Accessibility availability after the class hours in the college.	Select V

Figure 9.13: Sample Students feedback on Teaching -Learning



Rewards/Corrective Measures

Based on the consolidated feedback reports and faculty self-appraisal reports, the faculty members are apprised about their performance.

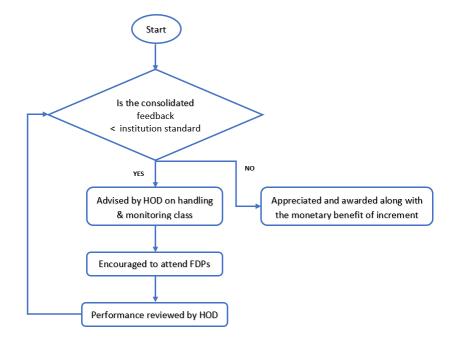


Figure 9.14: Sample Corrective Measure on teaching-learning

9.2.2 Sample Feedback analysis for CV

The faculty members who follow good and innovative teaching pedagogies are appreciated and awarded along with the monetary benefit of increment, in recognition of their exemplary efforts of

- Resourcefulness
- Innovations in bringing about the change
- Dependability in their work
- Expertise used and developed in academics, research and patenting
- Corrective actions are taken for the faculty whose feedback score is less than the institution standard.
- Encouraging faculty to attend more Faculty Development Programs (FDPs). Suggestions are given to enhance their academic skill set with the peer support within a stipulated time period. The performance is reviewed by the head of the department regularly.

These corrective actions taken are as shown in Figure



A format of student feedback on teaching -learning is given in figure

				New	Horizo	n Colle	ge of E	nginee	ring														
					Studer	nt Feed	- back R	eport															
					D	epartm	nent CV																
					Facu	lty Nan	ne Sum	ар															
SR. No.	Name of the faculty	CLASS	No of Students	Subjects	Q1	Q2	Q 3	Q4	Q 5	Q6	Q7	Q8	Q 9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Avg.
		CV SEM VI SEC A	54	CIV653	4.54	4.52	4.59	4.54	4.48	4.5	4.56	4.31	4.5	4.48	4.46	4.5	4.52	4.5	4.39	4.43	4.46	4.44	4.48
1	Suma p	CV SEM IV SEC B	42	19CIV43	4.52	4.4	4.48	4.43	4.48	4.45	4.33	4.43	4.43	4.38	4.48	4.43	4.48	4.43	4.24	4.4	4.36	4.43	4.42
			Overall avg		4.53	4.46	4.54	4.49	4.48	4.48	4.45	4.37	4.47	4.43	4.47	4.47	4.5	4.47	4.32	4.42	4.41	4.44	4.45
Q1	Clarity in explaining the subject									Q 9	Punct	uality o	f the f	aculty	for the	class.							
Q 2	Subject explained was easy to understand.									Q 10	Communicates distinctly and effectively.												
Q 3	Content quality is relevant and u	iseful.								Q 11	1 Treats students with respect and courtesy.												
Q.4	Faculty answers to your queries,	questions.								Q 12	12 Control of the classroom by faculty.												
Q 5	Coverage of topic/subject is on t	ime.								Q 13	3 Relevance of assignments to the subject.												
Q 6	The concepts were explained wi	th examples.								Q 14	4 Overall satisfaction.												
Q.7	Faculty preparation for the class									Q 15	Discussion of any interesting topic beyond the syllabus but relevant to the field						L.						
Q.8	Faculty guidance for preparation	of seminar, conferen	ice and exam.							Q 16	Usefu	lness o	f the q	uestio	n pape	rs of in	ternal	tests ir	your p	orepara	ation fo	or the e	xamir
										Q 17	Helpf	Iness	of the	online	course	mater	ial (qu	estion	bank, e	etc.) an	d assig	nment	s for y
										Q 18	Acces	sibility	availal	oility at	fter the	e class	hours i	n the c	ollege.				
	SCALE USED																						
Not Applicable	0																						
Poor	1																						
Fair	2																						
Good	3																						
Very Good	4																						
Excellent	5																						

Figure 9.15: Sample Students feedback on Teaching –Learning

Methodology being followed for corrective measures taken:

Based on the consolidated feedback and faculty self-appraisal reports, the faculty members are appraised about their performance. Some of the faculty members are appreciated and awarded monetarily, in recognition of their exemplary efforts of,

- Resourcefulness
- Innovations in bringing about the change
- Dependability in their work
- Expertise used and developed in academics, research and patenting

Necessary corrective actions taken for the faculty members whose feedback score is less than the institution standard, are as given below.

Head of the Department chairing the senior faculty members advise the faculty member suitably with regard to

- Clarity in explanation, effective communication, syllabus coverage
- Participating in Faculty Development Programs (FDPs).
- Enhancing their academic skill set with the peer support within a stipulated time period.

The performance is reviewed regularly.

T. 11

00.0

	-	ole feedback analysis on Teaching –Learnin	g
		RIZON COLLEGE OF ENGINEERING	
		TMENT OF CIVIL ENGINEERING	
		edback analysis - 2019-20 - EVEN SEM	
Sl.no.	Feedback range	Name of the faculty	Score
1	15 5	Dr. Niranjan P S	4.64
2	4.5 - 5	Dr. N Mahesha	4.52
3		Ms. Suma Paralada	4.45
4		Mr. Surendra B V	4.4
5		Ms. Serin Issac	4.36
6		Dr. Geetha Varma	4.35
7		Ms. Vandhana P	4.32
8		Ms. Swetti Jha	4.32
9		Mr. Channabasava	4.31
10		Mr. Vijay N.C	4.3
11		Mr. Sudhakar G N	4.23
12		Ms. Geethu V	4.23
13	4-4.5	Dr. Muralikrishna	4.21
14		Mr. Pawan kumar	4.2
15		Dr. Ranganthan	4.12
16		Ms. Neethu Elizabeth john	4.12
17		Mr. Yogesh	4.12
18		Dr. Giriprasad Chandran	4.07
19		Mr. Rahul N K	4.05
20		Mr. Harish G R	4.03
21		Dr. Vinay Kumar B M	4.01
22		Ms. Athuliya	4.01
23		Ms. Sathya Priya	3.98
24		Mr. Sunil M Horaginamani	3.95
25		Mr. Prakash A N	3.94
26		Mr. Nitish kumar	3.93
27		Mr. Satish D	3.92
28	2 5 2 00	Mr. Rajendra T N	3.91
29	3.5 - 3.99	Mr. Sandeep T. D	3.91
30		Ms. Meghana .P	3.9
31		Ms. K.sharmila	3.86
32		Ms. Ramya H S	3.81
33		Dr. Balamurugan	3.76
34		Dr. Jagadish C B	3.67

A format of feedback analysis on teaching -learning is given in figure



35		Dr. Nachimuthu subramani	3.66
36	-	Dr. Harish Velagiri	3.91
37		Ms. Snehal R L	3.54

A format of feedback analysis on teaching -learning is given in figure

Faculty Feedback Analysis for EVEN Semester 2020							
Total number of Faculties							
Feedback	4.5-5	2					
Feedback	4-4.5	20					
Feedback	3.5-3.99	15					
Feedback	less than 3.5	0					

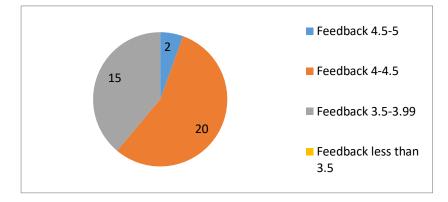


Figure 9.16: Sample feedback analysis on Teaching- Learning

- 1) List of faculties with student feedback <3.5-----Nil
- 2) Activity followed for faculty having student feedback <3.5-----Nil
- 3) FDP attended by faculty having student feedback<3.5-----Nil
- 4) NPTEL courses attended by faculties having student feedback <3.5-----Nil

Format of faculty feedback and corrective measure analysis on teaching -learning is given in figure



NEW HORIZON COLLEGE OF ENGINEERING, BANGALURU DEPARTMENT OF CIVIL ENGINEERING FACULTY FEEDBACK AND CORRECTIVE MEASURE ANALYSIS

FACULTY NAME: -

DESIGNATION: -

SEM/ YEAR: -

$ \begin{array}{c c} 1 & S \\ T \\ T \\ 2 & a \\ 3 & S \\ a \\ \hline & C \\ \end{array} $	Clarity in explaining the subject & Freats students with respect and courtesy. Communicates distinctly and effectively. Aims and objectives of the syllabi are well defined and clear to students Course content is followed by corresponding			
$ \begin{array}{c c} 1 & T \\ & rr \\ 2 & a \\ \hline 3 & s \\ a \\ \hline & C \\ \end{array} $	Treats students with respect and courtesy. Communicates distinctly and effectively. Aims and objectives of the syllabi are well defined and clear to students Course content is followed by corresponding			
$\begin{array}{c c} & 1 \\ & r_{1} \\ & r_{2} \\ & 2 \\ & a \\ & A \\ & 3 \\ & s \\ & a \\ & a \\ & c \\ & c \\ \end{array}$	respect and courtesy. Communicates distinctly and effectively. Aims and objectives of the syllabi are well defined and clear to students Course content is followed by corresponding			
$ \begin{array}{c} 2 \\ 3 \\ 3 \\ 3 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0$	Communicates distinctly and effectively. Aims and objectives of the syllabi are well defined and clear to students Course content is followed by corresponding			
$ \begin{array}{c c} 2 \\ 3 \\ 3 \\ 4 \\ \hline 0 \\ \hline \hline \hline \hline 0 \\ \hline \hline \hline 0 \\ \hline \hline \hline 0 \\ \hline \hline \hline \hline 0 \\ \hline \hline \hline \hline \hline 0 \\ \hline \hline$	Aims and objectives of the syllabi are well defined and clear to students Course content is followed by corresponding			
3 s a	Aims and objectives of the syllabi are well defined and clear to students Course content is followed by corresponding			
3 s a C	syllabi are well defined and clear to students Course content is followed by corresponding			
a C	and clear to students Course content is followed by corresponding			
0	Course content is followed by corresponding			
	by corresponding			
4 b				
1 1				
r	reference books/materials			
Г	The course/syllabus has			
5 g	good balance between			
tl	heory and Lab.			
Г	The course/syllabus of this			
S	subject increased my			
6 k	knowledge and			
p	perspective in the subject			
	area			
	The course/program of			
7 s	studies carries sufficient			
	number of optional papers.			
	Counseling the faculty			
	hrough counselors			
	About building confidence			
	n handling the			
	subject(referral*)			
	Deputing faculty to FDP			
	(if any)			
,	(referral) K IF ANY			

REMARK IF ANY

Figure 9.17: Sample Corrective Measure on teaching-learning



					Conso			ent Fe	edbac	k Repo	ort		Q. ent										
SR. No.	Name of the faculty	CLASS	of Stude	Subjects	Q1	Q 2	Q 3	Q4	Q 5	Q6	Q.7	Q8	0.0	0.10	0.11	0.1		0 14	101	0.16		101	
		SEC A	1	ECE44	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
		SEC A	1	ECE44	5	5	5	5	5	5	5	5	5	5	5	5	5	5	.5	5	-5	5	
1	Ms. Monika Gupta	SEC A	3	ECE45	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.33	4.67	4.67	4.67	4.67	4.67	4.67	4.33	4.67	4.67	4.67	4.
		SEC A EC SEM IV SEC A	43	19ECE45	4.09		4.02			4.05				-				3.93				3.88	
		EL SEM IV SEC A	19	19ECL48	3.89		3.68	1	1000					4.25				4.25					
		. 0	verall av		4.35	-	4.33					-						4.27	12.00		100		
SR. No.	Name of the faculty	CLASS	No of Student s	Subjects	Q1	Q2	Q3	Q4	Q 5	Q 6	Q.7	Q8		1				Q 14			-		
2	Ms. Vijaya	SEC B	1	18HSS272	4	4	3	3	3	4	3	4	3	4	3	4	4	3	4	3	4	3	3.5
SR. No.	Name of the faculty	CLASS	Overall av No of Student S	s Subjects	4 Q1	4 Q2	3 Q3	3 Q4	3 Q 5	4 Q6	3 Q7	4 Q 8	3 Q9	4 Q 10	3 Q 11	4 Q 12	4 Q 13	3 Q 14	4 Q 15	3 Q 16	4 Q 17	3 Q 18	3.5 Avg.
		SEC A	1	ECE43	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
		SEC A	19	19ECL47	3.68			3.58						3.63						3.47	3.37	3.26	3.5
		SEC C	1	ECE44 ECE44	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
		SEC C EC SEM IV SEC C	1 50	19ECE44	4.46	Samuel		4.48				and a	-					4.4				1.44 4	2000
3	Ishani Mishra	EC SEM VI	46	ECE61	4.3	4.33	4.3	4.28	4.33	4.24	4.35	4.28	4.5	4.33	4.37	4.33	4.41	4.37	4.35	4.3 4	.35 4	.33 4	.34
		SEC C	14	ECE61		-			1000	1000	100		1					4.14 4					
		SEC C EC SEM VI SEC C	13	ECE61 ECE61	1	4.23	Const.	-	1000000	(area)		and the second	in the second			and a		4.53 4	and the		and in		
			Overall av	8	4.37	4.33	4.36	4.35	4.35	4.29	4.39	4.36	4.47	4.37	4.39	4.32	4.37	1.36 4	.35 4	.34 4.	34 4.	33 4.	36

9.2.3 Sample Feedback analysis for ECE

Figure 9.18: Sample Students feedback on Teaching -Learning

Rewards/Corrective Measures

Based on the consolidated feedback reports and faculty self-appraisal reports, the faculty members are apprised about their performance. The faculty members who follow good and innovative teaching pedagogies are appreciated and awarded along with the monetary benefit of increment, in recognition of their exemplary efforts of

- Resourcefulness
- Innovations in bringing about the change
- Dependability in Their Work
- Expertise Used and Developed in Academics, Research and Patenting

Necessary corrective actions are taken for the faculty members who score less than the institution standard, are followed as given below.



- Head of the department advise the faculty about handling and monitoring the class.
- Encouraging faculty to attend more Faculty Development Programs (FDPs). Suggestions are given to enhance their academic skill set with the peer support within a stipulated time period. The performance is reviewed by the head of the department regularly.

9.2.4 Sample Feedback analysis for ME

					New	horizon	Conege	OTENGI	ieering														
						Student	Feedba	ick Repo	rt														
				Conso				ard for N		rtment													
SR. No.	Name of the faculty	CLASS	No of Students	Subjects	Q1	Q 2	Q 3	Q.4	Q 5	Q 6	Q.7	QS	Q.9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Avg.
		ME SEM IV SEC A	69	MEE452	4.77	4.77	4.77	4.77	4.7	4.72	4.77	4.64	4.7	4.64	4.67	4.57	4.64	4.75	4.64	4.7	4.65	4.62	4.69
		ME SEM IV SEC A	24	MEE452	4.88	4.83	4.88	4.79	4.63	4.83	4.88	4.58	4.63	4.79	4.58	4.54	4.63	4.83	4.79	4.79	4.71	4.67	4.74
1	Prof. Puneeth H V	ME SEM IV SEC A	23	MEE452	4.65	4.65	4.7	4.65	4.65	4.61	4.65	4.57	4.7	4.61	4.7	4.57	4.61	4.65	4.52	4.57	4.61	4.57	4.62
		ME SEM IV SEC A	22	MEE452	4.77	4.82	4.73	4.86	4.82	4.73	4.77	4.77	4.77	4.5	4.73	4.59	4.68	4.77	4.59	4.73	4.64	4.64	4.72
			Overall avg		4.77	4.77	4.77	4.77	4.7	4.72	4.77	4.64	4.7	4.64	4.67	4.57	4.64	4.75	4.64	4.7	4.65	4.63	4.69
SR. No.	Name of the faculty	CLASS	No of Students	Subjects	Q1	Q 2	Q 3	Q.4	Q 5	Q 6	Q.7	QS	Q 9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Avg.
	ME SEM IV SEC A	69	MEE462	4.84	4.78	4.84	4.78	4.7	4.75	4.84	4.71	4.72	4.72	4.64	4.78	4.72	4.75	4.65	4.74	4.7	4.7	4.74	
		ME SEM IV SEC A	24	MEE462	4.92	4.83	4.92	4.83	4.79	4.88	4.92	4.79	4.75	4.71	4.71	4.79	4.71	4.71	4.5	4.75	4.67	4.75	4.77
2	2 Prof. Ronald Reagon R	ME SEM IV SEC A	23	MEE462	4.78	4.74	4.78	4.78	4.61	4.7	4.74	4.61	4.7	4.65	4.48	4.83	4.65	4.74	4.7	4.7	4.7	4.7	4.7
		ME SEM IV SEC A	22	MEE462	4.82	4.77	4.82	4.73	4.68	4.68	4.86	4.73	4.73	4.82	4.73	4.73	4.82	4.82	4.77	4.77	4.73	4.64	4.76
			Overall avg		4.84	4.78	4.84	4.78	4.7	4.75	4.84	4.71	4.73	4.73	4.64	4.78	4.73	4.76	4.66	4.74	4.7	4.7	4.74
SR. No.	Name of the faculty	CLASS	No of Students	Subjects	Q1	Q 2	Q 3	Q.4	Q 5	Q 6	Q.7	QS	Q 9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Avg.
3	Dr. Kavitha	ME SEM IV SEC A	69	MAT41	4.12	4.07	4.16	4.32	4.42	4.14	4.39	4.14	4.41	4.19	4.33	3.91	4.42	4.25	4	4.14	4.1	4.23	4.21
	DITION	Overall avg		4.12	4.07	4.16	4.32	4.42	4.14	4.39	4.14	4.41	4.19	4.33	3.91	4.42	4.25	4	4.14	4.1	4.23	4.21	
SR. No.	Name of the faculty	CLASS	No of Students	Subjects	Q1	Q 2	Q 3	Q.4	Q 5	Q 6	Q.7	QS	Q9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Avg.
		ME SEM IV SEC A	69	MEE442	4.52	4.46	4.52	4.54	4.51	4.41	4.54	4.33	4.55	4.51	4.55	4.36	4.51	4.45	4.36	4.51	4.52	4.52	4.48
		ME SEM IV SEC A	24	MEE442	4.5	4.42	4.5	4.54	4.63	4.46	4.58	4.25	4.58	4.5	4.58	4.33	4.58	4.46	4.33	4.5	4.54	4.46	4.49
4	Prof. Raghu Tilak Reddy	ME SEM IV SEC A	23	MEE442	4.39	4.3	4.35	4.35	4.17	4.17	4.3	4.17	4.39	4.43	4.35	4.13	4.22	4.17	4.17	4.3	4.35	4.52	4.29
		ME SEM IV SEC A	22	MEE442	4.68	4.68	4.73	4.73	4.73	4.59	4.73	4.59	4.68	4.59	4.73	4.64	4.73	4.73	4.59	4.73	4.68	4.59	4.68
			Overall avg		4.52	4.47	4.53	4.54	4.51	4.41	4.54	4.34	4.55	4.51	4.55	4.37	4.51	4.45	4.36	4.51	4.52	4.52	4.49

Figure No. 9.19: Faculty Feedback

New Horizon College of Engineering Department of Mechanical Engineering Faculty Feedback Analysis for EVEN Semester 2018

Tot	al number of Faculties	57
Feedback	4.5-5	29
Feedback	4-4.5	25
Feedback	3.5-3.99	03
Feedback	less than 3.5	00



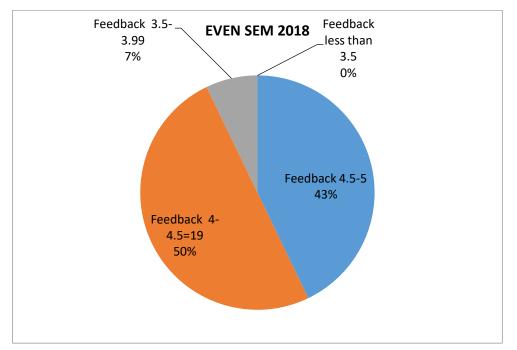


Figure No. 9.20: Faculty Feedback analysis

- 1) List of faculties with student feedback <3.5-----Nil
- 2) Activity followed for faculty having student feedback <3.5-----Nil
- 3) FDP attended by faculty having student feedback<3.5-----Nil
- 4) NPTL courses attended by faculties having student feedback <3.5---Nil



9.3. Feedback on facilities (5)

(Assessment is based on student feedback collection, analysis and corrective action taken).

A standard procedure of feedback on facilities demonstrates a commitment to excellence in the planning and provision of services across different departments of the University. The feedback is collected from the students on the facilities available in the university such as class room infrastructure, library, laboratories, hostel, playground, Internet facility, food court etc.

The feedback is analyzed and the necessary corrective measures are implemented after discussions with the management.

The feedback on facilities is taken up in the department as per the following steps:

- 1) Feedback collection
- 2) Feedback analysis
- 3) Corrective measures

Feedback Collection:

A formal feedback is gathered, at least once during every semester, about the use and satisfaction with a variety of facilities and services which are categorized as

- General Facilities & Services
- Technology Services
- Specialized Services

A broad range of parameters that are used for collecting feedback on facilities is given below:

- Availability of teaching aids such as multimedia projectors, speakers etc. in classrooms/ tutorial rooms
- Library space and ambience, timings and usage
- Adequacy of number of titles in library or range of text and reference books covering syllabus relating to different courses
- Adequacy of Internet facilities in terms availability of terminals & bandwidth
- Drinking water facilities & their maintenance
- Canteen facilities
- Medical & first-aid facilities
- Housekeeping & maintenance
- Infrastructure for Co-curricular and extra-curricular activities
- Mentoring system to help students at individual level



The details of feedback collection process on facilities are summarized in Table 9.10

	r r r
Items	Description
Feedback collected on all facilities provided	YES
by the college.	IES
Feedback collection process	Computerized
Feedback receiver	Administrative officer / Admin
	manager
Frequency of feedback collection	Once in an academic year
	Strongly agree
Metrics used for calculation	Agree
Methes used for calculation	Partially agree
	Disagree
Dumosa of comments	For improving the quality of
Purpose of comments	facilities.

 Table 9.10: Details of feedback collection process

Format of student feedback on Facility

Feedback analysis

A combined report is prepared on the basis of students' feedback under the supervision of committee and corrective action suggested to the appropriate departments/person to resolve these problems and improve the facilities continuously. A sample feedback on facilities is given below.

On university website, a student's portal is made available to post students grievances. When students register their complaint, they are being referred to corresponding department for timely resolution.



Figure 9.21: Table Tennis room

Figure 9.22: Gymnasium



The feedback format consists of following questions

Questionnaire

- 1. How do you rate the Canteen facilities provided by the institution?
- 2. How do you rate the class room Infrastructure?
- 3. How do rate the cyber lab facility provided by the institution?
- 4. Are you satisfied with the extracurricular infrastructure at College?
- 5. Are you satisfied with the Hostel Facility provided by the institution?
- 6. How do you rate the Lab facilities at the institution?
- 7. How do you rate the Library Facilities provided by the institution?
- 8. Are you satisfied with the placement support provided?
- 9. How is the responsiveness of Accounts office?
- 10. How is the responsiveness of College Admin office?
- 11. How is the responsiveness of Exam office?
- 12. How do you rate the Sports facilities provided by the Institution?
- 13. Are you satisfied with the toilet facilities and Maintenance?
- 14. How do you rate the transport facility provided by the college?

Rating of Scale

- 5-Excellent
- 4-Very Good
- 3-Good
- 2-Satisfactory
- 1-Below Average

On the institution website, a student's portal is made available to post students' grievances. When students register their complaints, they are being referred to corresponding department for timely resolution.

Corrective Measures

Some of the corrective actions taken are,

- Recreation center
- Dance room and music room in boys' hostel
- Gymnasium
- Table Tennis room
- Enhancement of food court



9.3.1 Feedback analysis for CSE

A combined report is prepared on the basis of students' feedback under the supervision of committee and corrective action suggested to the appropriate departments/person to resolve these problems and improve the facilities continuously.

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7 Content quality - relevant & Beloct > 8 Communicates distinctly and Beloct >	. 5	Clarity in explaining the subject.	[Belect -	6	Overall satisfaction.	Select 🗸	
		Content quality - relevant & usefulness.	(Select ~)		Communicates distinctly and effectively.	Select ~	
nments (if any)							

Figure 9.23: Sample Student feedback on facilities



9.3.2 Feedback analysis for CV

NEW HORIZON COLLEGE OF ENGINEERING, BANGALURU DEPARTMENT OF CIVIL ENGINEERING <u>FEEDBACK FORM ON FACILITIES</u>

YEAR:....

SEM:.....

SEC:....

FACILITIES/	EXCELLENT	VERY	GOOD	AVERAGE	FAIR
RATINGS	(5)	GOOD (4)	(3)	(2)	(1)
CLASS ROOM					
INFRASTRUCTURE					
LIBRARY					
LABORATORIES					
CANTEEN					
PLAYGROUND					
INTERNET					
FACILITY					
INDOOR STADIUM					
PARKING SPACE					
COLLEGE					
AMBIENCE					
MEDICAL					
FACILITY					
OVERALL RATING					

REMARK IF ANY

Figure 9.24: Sample Student feedback on facilities



9.3.3 Feedback analysis for ECE

SI, No.	Year	Problem	Action taken
1		The number of engineering mathematics book in library are less.	Informed to Library
2		Mini project guide is not supportive. Any time we try to meet her she is busy. She is not able to guide properly.	Addressed the min project in charge and asked to communicate the same to all guides
3	2nd	AEC lab equipment, especially the CRO have lot of problems showing the output waveform which result in not completing the experiment on time.	Informed the lab instructors to maintain and service the equipments.
4		Change the teacher of analog electronic, he is dis-respecting the students.	Class was monitored by Dean Academics and suggestions were given.
5	3rd	The course work this year has been too hectic. Two case studies along with extra curricular certificate is not feasible. It should be made to one case study and one certificate	In coming semester there will be one case study and one co- curricular certificate
6		The components in AC lab are broken or not working most of the time.	Informed the lab instructors to maintain and service the equipments.

Figure 9.25: Sample Student feedback on facilities

9.3.4 Feedback analysis for ME

SL.NO.	Question	Avg. Rating
	Engineering	
1	Canteen facilities	3.96
2	Classroom Infrastructure	3.63
3	Cyber Lab facility	3.75
4	Extra-curricular activities at College	3.65
5	Hostel Facility	3.31
6	Lab facilities	3.93
7	Library facilities	4,19
8	Placement support provided	3.64
9	Responsiveness of Accounts office	3,13
10	Responsiveness of college admin office	3.20
11	Responsiveness of Exam office	3.45
12	Sports Facility	3,49
13	Toilet facilities and maintenance	3.55
14	Transport facilities of the College	3.42
	Total Average:	3.59

Figure No. 9.26: Feedback on Facilities



9.4 Self-Learning (5)

(The institution needs to specify the facilities, materials and scope for self-learning / learning beyond syllabus, Webinars, Podcast, MOOCs etc. and evaluate their effectiveness)

Self-learning is endorsed in the institution by generating self-learning facilities under various learning activities, resources and environments for students based on their academic background. Students are encouraged for self-learning by personal counseling and mentoring.

Scope of Self-learning

- Web based learning (Learning a course online or partially online through MOOCs, NPTEL, SWAYAM, edX, Coursera, Webinars, YouTube)
- Library and Digital Library
- McGraw-Hill digital books
- Learning activities around collaborative projects (PBL- Project Based Learning)
- Learning around case descriptions (Case Study)
- Assignments
- Professional bodies
- Club activities

Additional resources for online learning for both faculty and students

Exposure was given for additional learning resources both for faculty and students. Some of the resources are listed below:

- NHCE digital library resources on the Internet (earlier it was on Intranet) text books / Question papers / Lesson modules / Student project reports / other references / e-books are available online
- 3062 users from New Horizon College of Engineering registered on the portal vtuconsortium.org, qualifying as the highest number among all the colleges as per the communication received from Prof. Konnur, Advisor- VTU Consortium, VTU, Belagavi
- Virtual labs
- e-Content URL's
- Open access resources
- 408 e-books
- Online certification courses
- Websites for academic enrichment
- Webinars



Webinars organized by New Horizon College of Engineering during Covid
(to name a few)
Coping with studies during dark clouds of Covid 19 Collegedunia
How to sharpen the skills?
Math works
MATLAB
Intellectual property rights
Competency mapping and career direction
Career opportunities post Covid 19
Latest trends in Machine Language
Embracing the new normal
Future of HR
Cracking the code of career development
Data driven decision-making using AI
Emerging trends in business and finance
Power train and electromagnetic transients
Reshaping of HR practices and business excellence
AI applications in industries

Table 9.11: A sample list of webinars organized during Covid

Following are the various modes of self-learning and facilities created in the institution.

Table 9.12: Self Learning Facilities

Table 7.12. Sen Learning Facilities						
	• It creates the opportunity for sharing ideas &					
	knowledge and also helps improving lifelong learning					
	skills by providing easy access to global resources.					
Web been diles and a	• It improves cross-cultural relation-ships which lead to					
Web based learning	collaboration between institution educators and learners					
	locally and internationally.					
	• Enhances active learning.					
	• Contextualized content can be shared by all.					
	• The college library provides information and ideas that					
	are fundamental to functioning successfully in today's					
	information and knowledge-based society.					
	• College library equips students with learning skills and					
	develop their knowledge.					
Library/Digital						
Library	The Digital Library offers,					
	• NPTEL videos.					
	• Sufficient systems with multimedia facilities.					
	•Institutional membership of DELNET, a library					
	networking database.					
	• Internet facility.					



	• Enables students to think from different angles or
	• Enables students to think from different angles or simply 'to think out of the box'.
Project Based	• To aid in language development and in particular
Learning	subject areas of study.
	• Helps in building knowledge base.
	• Helps in building Team work
Case study	 Students are actively engaged in figuring out the principles by abstracting from the examples. This develops their skills in: Problem solving Analytical tools, quantitative and/or qualitative, depending on the case Descion making in complex situations
	 Decision making in complex situations Conting with ambiguities
	Coping with ambiguities
Professional Bodies	 Joining a professional association will be one of the most important activities in a student's career. To increase knowledge in their own fields, expand networking possibilities or jump start to job hunt, a professional association membership is an option which is worth exploring. All career options are corresponding professional association that offers valuable information and resources for their career enhancement. ISTE, IEEE and CSI student chapters are established where the students can achieve the knowledge about the advance engineering skills.
Club Activities	 Helps in building knowledge base. It increases visibility, credibility, and competitive advantage. It can be an excellent chance to network with other people in related field, allowing the student to feel more integrated into professional community.
Assignments	 It enables students to go through the topics in a more elaborate manner in order to explore the academic topic which lead to an overall better learning experience for students. Assignments help the students to understand the subject in a more detailed pattern. Faculty will conduct assignments on regular basis with two units of every subject and these are graded.



The Source and Tools of Self Learning

The sources and tools of self-learning used are as shown in Table 9.13

Sl. No	Self-Learning Sources	Tools	ICT Support
1.	E Courses/Learning	NPTEL Course Era Swayam Udemy	Computer System Internet Connection
2.	Workshops	Conducted by different organizations	Computer System Internet Connection
3.	Conferences	Organized by various institution	Computer System Internet Connection
4.	Self-Study	Self-study topics as specified by faculty handling courses	Computer System Internet Connection
5.	Projects Based Learning	Students gain knowledge and skills by developing mini projects and projects	Computer System Internet Connection

Table 9.13: Sample Sources and	tools of self-learning
--------------------------------	------------------------

Process of Self Learning

In the classrooms:

• Faculty members run at least 2 video lectures per course and evaluate as per Table 9.14

Giving Reference of Materials

- Faculty member shall give reference of video lectures or other online materials for every topic.
- The reference shall be mentioned in the lecture schedule



Sl. No.	Mode of Evaluation	Related Sources in which student shall be asked by faculty member to prepare through self-learning	Description
1.	Quiz	E-Books, Course and lecture materials	Questions are framed on the portion of content in which student are asked to prepare through self- learning using all sources mentioned. Quiz is conducted in the class or it shall be conducted online or in extra class (if students are free)
2.	Quiz	On the video material posted by faculty for flipped class room.	Quiz is conducted in the class or it shall be conducted online.
3.	Presentation	Magazine, Journal and articles	Student is asked to prepare on particular topics through self study (in magazine, journal.
4.	Assignment on problem solving	Course and lecture materials	Assignment on problem solving is given by faculty member on lecture material.
5.	Report preparation	Magazine, Journal and articles	Students are asked to write a review report on literature.
6.	Viva	Books, Course and lecture materials	Faculty member conducts viva voce to know the level of understanding.
7.	Quiz /test	MOOC/SWAYAM/NPTEL other ICT tool	Students register and take up the examination and obtain certificates.

Table 9.14: Mode of evaluation with various related sources of self-learning



9.4.1: Scope of Self-learning for CSE

MOOC Courses by Students

MOOC courses are used as an alternative method to bridge the gap and expand the existing knowledge. Every academic year students are appraised of the MOOC courses that can be considered as self-study for specific courses of the semester. Students are encouraged to take up at least one MOOC for the courses specified. This exposes the student to the different avenues of learning like interactive user forums and multimedia repositories, thereby ensuring the development of lifelong learning skills.

A year wise consolidation of the MOOC courses registered and completed by students is given in Table 9.15.

Sl. No	Year/ Sem	NPTEL Course Name	Course Duration	Total No. of Students Registered
		Academic Year 2019-2020		
1	3rd/6 Sem	Social Network Analysis	12 Weeks	64
2	3rd/6 Sem	Cloud Computing	8 Weeks	27
3	3rd/6 Sem	Machine Learning with Python	12 Weeks	2
4	4th/7 Sem	Data Science for Engineers	8 Weeks	81
5	4th/7 Sem	Introduction to Machine Learning (IItkgp)	8 Weeks	3
6	4th/7 Sem	Introduction to Machine Learning (IItm)	12 Weeks	4
7	4th/7 Sem	Machine Learning for Engineering and Science Applications	12 Weeks	3
8	4th/7 Sem	Introduction to Internet of Things	12 Weeks	13
9	4th/7 Sem	Human Computer Interactions	8 Weeks	9
10	4th/7 Sem	Ethical Hacking	12 Week	4
11	4th/7 Sem	Practical Machine Learning with TensorFlow – Online	8 Weeks	7
		Academic Year 2018-2019		
1	3rd/6 Sem	Social Networks	12 Weeks	40
2	3rd/6 Sem	Privacy and Security in Online Social Media	12 Weeks	25

Table 9.15: MOOC Courses Registered and Completed



3	3rd/6 Sem	Introduction to Soft Computing	8 Weeks	38	
4	3rd/6 Sem	Multimodal Interaction	4 Weeks	36	
	Academic Year 2017 – 2018				
	No NPTEL Planned for This Academic Year				

Paper Publication

The department also encourages students to publish papers in national/international journals. To promote this culture department/institution organizes National / International conferences as well. Table 9.16 shows the papers published by the students of Computer Science and Engineering in various journals / conferences

			per Publication by S			
Sl. No	USN	Name of the Student	Title of The Paper	Journal	Date of Publication	
	Academic Year 2019-2020					
1	1NH16CS079 1NH16CS093 1NH14CS091	Eric, Pooja Nimje, Roshlin Acharya, Prachi Singh	Face emotion recognition techniques		Dec-19	
2	1NH16CS064	Moni Krithika S	MoC++ Interpreter for the C++ language		Dec-19	
3	1NH16CS009 1NH16CS069	Anand R Patil, Nasir Hasan	We Vote – Secure voting using Blockchain	International Journal of Scientific	Dec-19	
4	1NH16CS077	P. Giri Kishore, Athira Ajayakumar	Intelligent Character Recognition- Character detection using Neural Networks	Research in Computer Science, Engineering and Information	Dec-19	
5	1NH16CS069	Nasir Hasan Dilawar	Big Data in Telecommunication	Technology ISSN: 2456-	Dec-19	
6	1NH16CS073 1NH16CS074 1NH16CS145	NirupashreeS Nisha R Kalyan Naidu M	A review on emotional intelligence	3307 UGC Journal No: 64718 Impact Factor = 4.032	Dec-19	
7	1NH17CS745	Savion Mario Sequeira	Overview of Use of Raspberry Pi in Implementation of	1 40101 - 7.032	Dec-19	

Table 9.16: Paper Publication by Students



I			Machine Learning		I
			and Image		
			Processing		
			Analyzing		
			GraphQL and		
8	1NH16CS094	S Sivan	implementing the		Dec-19
Ũ		Chakravarthy	framework on		2
			Android devices		
-			Safe-Ride:		
			Automatic		
			Detection of		
			Potholes and		
9	1NH16CS066	Namratha L	Humps on Roads		Dec-19
		Bemane	using Ultrasonic		
			Sensor and		
			Notifying the Same		
			to the Drivers		
		Kirti R	Credit card reader		
10	1NH16CS051	Nambiar,	with face		D 10
10	1NH16CS118	Vaibhavi	recognition using		Dec-19
		Kulkarni	webcam		
		Shalini	Efficient		
11	1NH16CS727	Koyikkal,	Buildings- A key		Dec-19
11	1NH16CS701	Anurag	element to build		Dec-19
		Rajshekar	smart cities		
			Feature selection		
			for smartphone-		
12	1NH17CS106	Punyasri H	based recognition		Dec-19
12	11117C5100	1 uliyasii 11	of human activities		Dec-19
			and postural		
			transitions		
13	1NH17CS753	Srinivas R	An Application of		
15	1111705755	Simivas K	Autocrat Workshop		Dec-19
			Natural language		
	1NH16CS700	Alankrita	processing-		
14	1NH16CS709	Srivastava,	Interaction between		Dec-19
		Hritik	humans and		
			machines		
		Acad	emic Year 2018-2019		
1	10001500001		Indexing solr with	International	M 10
1	1NH15CS084	Nissi Thomas	MySQL database	Journal of	May-19
			APACHE PIG as a	Information	
2	1NH16CS112	Sumangala S	platform for Data	and	May-19
		-	analytics	Computing	-
2	11111000001	V.C Chandra	A survey of Big	Science ISSN	M 10
3	1NH16CS736	Kishore	Data analytics-it's	NO: 0972-	May-19
L			-		



			challenges	1347	
4	1NH15CS092	Pranav M D. Sakthi	Modelling cognitive states of pilots to minimize commercial aviation disasters Weather prediction		May-19
5	1NH15CS714	Keerthana	using deep learning		May-19
6	1NH16CS086 1NH16CS733 1NH16CS750	Rahul Jain, Sriram Gupta Kaluva, Sandhya Reddy	Machine learning: Supervised learning		May-19
7	1NH15CS148	Soundarya Saravan	Hand gesture recognition using convolutional Neural network		May-19
8	1NH15CS048	Harshitha H	Agricultural crop yield prediction using Machine learning		May-19
9	1NH15CS044	H.D Nidhishree	Literature survey on predicting Thyroid Cancer using machine learning algorithms		May-19
10	1NH16CS733	Sriram Gupta Kaluva	Data and Pre- Processing of data for Machine Learning		May-19
11	1NH16CS031	Edwin Benny	Dairy farm tracking using Blockchain		May-19



9.4.2 Scope of Self-learning for CIVIL

Lever Lournals Lournals Lournals Lournals Lournals	Constanting we where we not a constant of the second se	Abut - Resources - Activities	KELEGARMAN New Person Q a- E-Postala - Circulara - Contact
Library/Digital Library • Internet • Internet • Interne	EBOOKS i user institution library p leas that are funda ssfully in today's ledge based socie institution library of nstitution library of ng skills and deve ability of NPTEL cient systems with utional membersh y networking data tet facility LIST OF JO Title w Bldg, terials & nstruction World il Engineering nstruction	provides in amental to information informa	o functioning on and dents with nowledge dia facilities. .NET, a



		Indian Comente			
	3	Indian Concrete	12	TICJ	
		Journal Journal of			
	4	Construction	4	NICMAR	
	4	Management	4	MCMAR	
	<u> </u>	Structural			
	5	Engineering	4	IUP	
	6	Indian Highways	12	IRC	
Project Based Learning	de so tes sp en to im 4 an or	oject-based learning velopment of critical t lving skills by allowir ams on real world p ite of its effectivenes gineering classrooms the challenges associa plementation. Mini Projects includ d Final year projects Project Based Learni	hinking an org student orojects. H s, the use has been ted with it ing Exten are carrie ng	nd problem- s to work in However, in e of PBL in limited due s design and sive survey d out based	
Case study	Through case studies, students will improve their ability to learn and retain concepts in their courses, on work terms and in their professional lives. One of the best means to create case studies is by converting them from student-generated work reports.				
Professional Bodies	ne mi co wl he mi	ining a professional be twork of knowledge uch wider than your mmunity. Students wi ho are one or two step lps them feel part of inded people.	and expe immediat Il gain acc s ahead of a commu	rtise that is e university cess to those them and it nity of like-	
		akruthi club			
Club Activities	To to To en	b identify major enviro find the best possible create an awarene vironment preservat morrow.	remedies. ss on th	e need for	
	Avishkar club				
	To	provide insight into	existing a	nd evolving	



	technologies.
	To familiarize with real life problems and the
	ideas to tackle them.
Assignments	It enables students to go through the topics in a more elaborate manner in order to explore the academic topic which lead to an overall better learning experience for students.
Industrial visit	Industry visits help enhance interpersonal skills and communication techniques. Students become more aware of industry practices and regulations during industry visits. Industry visits broaden the outlook of students with exposure to different workforces from different industries.
Internships	During an internship, students work on real projects, get acquainted with the current market trends, sharpen their technical skills, and learn in-demand technical skills. Apart from this, an internship introduces them to the corporate world, teaches them professional ethics and polishes their soft skills like communication and inter personal skills. With an internship they can become engineer's way before their graduation which could prove to be extremely helpful for an effortless adaptation to work environment when they join a full time job.
Conference/Seminar/workshop	Engineering is forever changing. Technology changes. Methods and processes change. Environmental focuses change. Everything changes. And the rate of change is ever- increasing. Conference/Seminar/workshop help students in, Broadening their knowledge Cross pollinating their ideas Developing their Network Advancing their careers Re igniting their enthusiasm or passion.



	Records of Self Learning Activities to be maintained by each faculty							
SI. No	Mode of Evaluation	Source of Self-learning activities	Name of source of self- learning activities	given by faculty	Date of event conducted by faculty	No. of participants	Avg. marks (%)	Event conducted by faculty (Yes/No)
		Lecture	CIV824, lecture no.54	https://form s.gle/Wf3Y Ut2mRTS KfTZv6	17/04/2020	64	90%	Yes
1	Quiz	Videos of Flipped class room	Course video – on the topic "Manufacturin g of concrete"	https://docs .google.co m/forms/d/ 1uSM1JZO UpMuWR C9xeT7Dh - qhGorCvD M0EcjrDJ9 yC8Y/edit	30/04/2020	54	72%	Yes
				a) Suma. P	07/11/2019	97	80%	Yes
2	Presentation	Journal and articles	Institute of Civil Engineers -	(civ33) b) Suma.P (civ653)	19/05/2020	62	70%	Yes
			ICE	c)Swetti Jha (civ824)	24/04/2020 19/05/2020	64 60	80% 70%	Yes Yes
3	Assignment on problem solving	Course and lecture Materials	Concrete technology – lecture materials on Concrete mix design	https://clas sroom.goo gle.com/u/ 1/c/OTE3N zk5NzEzM zla/a/OTE3 Nzk5NzEz NTNa/sub missions/b y- status/and- sort- name/all	21/04/2020	52	100%	Yes
4	Viva	NPTEL	Water resource engineering	N. Mahesha (civ654)	19/05/2020	60	70%	Yes

Table 9.17: Records of evaluation of self-learning activities

Summary:

The overall aim of this review is to evaluate the effectiveness of self-directed learning which aims to enhance the professional skill of students.

• Most of the students agreed that self-learning process is an effective approach for learning in addition to traditional method of teaching.

• Most of the students admitted that self-learning process help them in preparing better to reach their goals.

• Students are able to do better in competitive examinations and get placed in suitable companies

9.4.3 Scope of Self-learning for ECE

	Records of Self Learning Activities to be maintained by each faculty							
SI. No	Mode of Evaluation	Sources of Self-learning	of self-learning	URL Reference given by faculty		No. of participants	Avg. marks (%)	Event conducted by faculty (Yes/No)
1	Quiz	Videos of Flipped class room	Course – DSP video contents uploaded by the Faculty	https://youtu. be/5BURUM fuII8, https://youtu. be/Zt7u4WA yQnk	24/3/2020	73	80%	Yes
	Presentation	Course-Rural Energy system- RDL 722	Animal Energy and its application	http://web.Ilt d.ac.in/~vkvi jay/files/Ani mal%20Ener gy.pdf	16-9-2019	16 (4Teams)	90%	Yes
2	and Report Preparation	IIsc-article	Design and fabrication of universal action bullock cart	http://www.k scst.IIsc.erne t.in/sppArchi ve/public/Ab stract/038/79 62.pdf	17-9-2020	6 (2 teams)	85%	Yes
3	Assignment on problem solving	Course - Routing and switching	Static and Dynamic Routing (NHOP09)	https://drive. google.com/f ile/d/1dXEyS lgHQgr0obZ qRFEczDVta _Fm2rIc/vie w?usp=shari ng	2/4/2020	35	80%	Yes
4	Viva	SWAYAM- "Embedded System Design with ARM"	ARM Cortex Architecture https://onlineco urses.nptel.ac.i n/noc19_cs22/	https://drive. google.com/f ile/d/12eJTB E-	2-4-2020	12 teams	75%	Yes

 Table 9.18: Records of evaluation of self-learning activities

I. <u>Utilization and its effectiveness:</u>

- The overall aim of this review is to evaluate the effectiveness of self- directed learning on the professional development of students.
- Most of the students reached to a conclusion that self-learning process is an effective approach for learning but not more than the traditional method of teaching.
- Students are motivated to improve their initiation in reaching their goals.



- Students are able to scan through the reading material available to them.
- Many of the needs of students are best met by learning process. The students are encouraged to learn by themselves for their present and future needs.
- Students are able to do better in competitive examinations and get placed in suitable companies.

9.4.4 Scope of Self-learning for ME

Utilization and its effectiveness:

- The overall aim of this review is to evaluate the effectiveness of self-directed learning on the professional development of students.
- Most of the students reached to a conclusion that self-learning process is an effective approach for learning but not more than the traditional method of teaching.
- Students are motivated to improve their initiation in reaching their goals.
- Students are able to scan through the reading material available to them.
- Many of the needs of students are best met by learning process. The students are encouraged to learn by themselves for their present and future needs.
- Students are able to do better in competitive examinations and get placed in suitable companies.

Table 9.19: Detailed list of Mooc course certification for self-learning

Year	2017-18	2018-19	2019-20
Faculty	36	63	32
Students	125	137	658 (combining 2 semesters and 2 nd ,3 rd and 4 th year students)

Table 9.20: Records of evaluation of self-learning activities

Year	No of Students	No of faculty	Courses
			Manufacturing Automation
		Robotics	
July Dec			Aircraft Propulsion – Online
July -Dec 2019	128	2	Fluid Machines – Online
2019			Machine Learning for Engineering and Science
			Applications – Online
			Manufacturing of Composites - Online
Ion Ann			Electric Vehicles - Part 1
Jan- Apr 2019	136	31	Non-Conventional Energy Resources
2019			Product Design and Development



			Fundamentals of Welding Science and
			Technology
			Inspection and Quality Control in Manufacturing
			Electronic Packaging and Manufacturing
			Electronic Packaging and Manufacturing
			IC Engines and Gas Turbines
			Manufacturing Process Technology
			Inspection and Quality Control in Manufacturing
			Surface Engineering of Nanomaterials
			Roadmap for patent creation
			Nanotechnology in Agriculture
			Outcome based pedagogic principles for effective
			teaching
			Laws of thermodynamics
		10	Mechanics of Machining
July -Dec	2		Processing of Polymers and Polymer Composites
2018	Z	10	Fundamentals of Surface Engineering:
			Mechanisms, Processes and Characterizations
			Design Practice – II
			Leadership
			Introduction to Operations Research
			Nature and Properties of Materials
			Energy conservation and heat recovery
			Manufacturing of composites
			Fundamentals of Manufacturing process
Jan- Apr	0	26	Refrigeration and air conditioning
2018	2018		Processing of polymers and polymer composites
			Nature and properties of materials
			Energy conservation and waste heat recovery
			Two phase flow and heat transfer



9.5 Career Guidance, Training, Placement

NHCE offers career guidance and placement on all aspects of career planning, job searching and post-graduate studies. College provides individual counseling for all the students towards reaching goals.

A. Availability of career guidance facilities:

- The college has career guidance and placement cell with 9 full time staff members, headed by Executive Director Placement & Training.
- The team fine tunes the students by providing insights into the complex dynamics of the corporate world and the current critical industrial & business scenarios.
- Campus Recruitment Training (CRT) program grooms the students in various areas like Quantitative Ability, Verbal Ability, Reasoning Ability, Group Discussion, Personality Development, Attitude and Behavioral Development and Facing Interview.
- An online portal is used for training the students. This portal allows students to register for placement, avail training using the numerous videos and take up tests to assess themselves. In addition, the portal also provides company specific question papers which can be used to ensure better performance in the aptitude/technical tests. Certified Trainers are deputed to take sessions on Verbal, Written and listening skills to ensure our students are well trained in Business English Communication
- Domain and technical training is provided based on the industry requirement.
- Mock interviews and GDs are conducted on a regular basis to equip final and prefinal students to face the challenges of recruitment scenario.
- The placement cell organizes on-campus and off-campus recruitments.
- In addition to the training conducted by the placement division the department organizes training on technical aspects like Data Structures, Java, C, C++ and Python.

An MOU was signed between New Horizon College of Engineering, New Horizon College and Zenken Corporation, Japan on 5th September 2018 to collaborate on campus recruitments for their operations in Japan (International Placements) and to establish Japan Career Centre at New Horizon Campus, Bangalore. Senior Executives from Zenken are deputed at New Horizon to train students on Japanese companies' requirements.

The College has created the following infrastructure facilities to conduct training program and campus recruitment.



Facilities	Number
Office	1
Auditorium	1
Seminar hall	2
Rooms for Group Discussion	3
Interview Rooms	4
Computer Centers for Online Test	11

 Table 9.21: Facilities for Placement & Training

The college also has a placement committee that ensures that the needs of the students belonging to different branches of engineering are addressed and all are given equal opportunities.

Industry Sponsored Labs

- Cisco Networking Academy
- Indo French Center of Excellence in Electricity Automation and Energy
- Quest Global IIOT Centre of Excellence
- VMWARE IT Academy
- SAP Centre of Excellence
- HP Centre of Excellence
- IBM Open Power
- Automation Anywhere
- CAPGEMINI

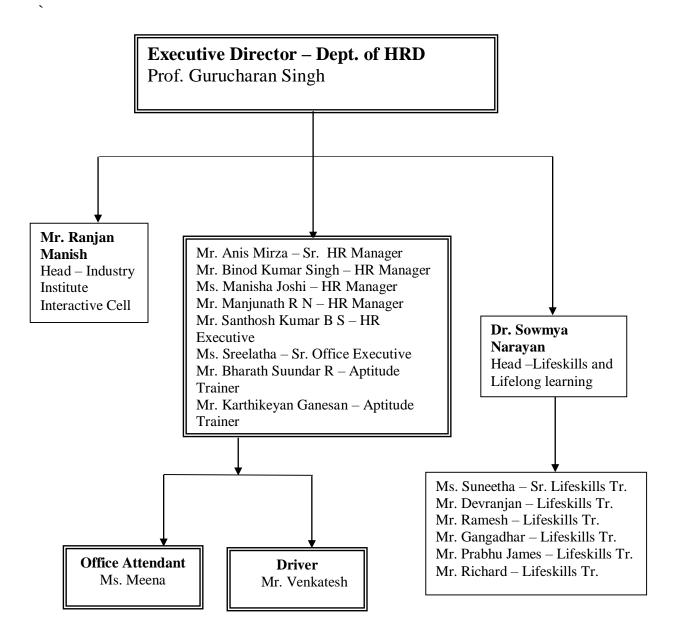
Table 9.22: Details of Career guidance, Training, Placement committee members

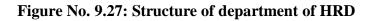
Sl. No.	Name of the faculty	Designation
1	Prof. Gurucharan Singh	Exe, Director - Dept. of HRD
2	Mr. Ranjan Manish	Head - IIC
3	Dr. Sowmya	Prof. & Head Centre for lifeskills & lifelong learning
4	Mr. Anis Mirza	Sr, HR Manager - CR (L&D &P)
5	Mr. Binod Kumar Singh	HR Manager - CR (L&D &P)
6	Ms. Manisha Joshi	HR Manager - CR (L&D &P)
7	Mr. Manjunath R N	HR Manager - CR (L&D &P)
8	Ms. Sreelatha	Sr. Office Executive
9	Mr. Bharat Suundar	Aptitude Trainer
10	Mr. Karthikeyan	Aptitude Trainer
11	Mr. Santhosh	HR Executive



12	Ms. Suneetha	Sr. Lifeskills Trainer
13	Mr. Devranjan Chatterjee	Lifeskills Trainer
14	Mr. Ramesh	Lifeskills Trainer
15	Mr. Gangadhara Murthy	Lifeskills Trainer
16	Mr. Prabhu James	Lifeskills Trainer
17	Mr. Richard	Lifeskills Trainer

Department of HRD - Structure







B. Pre-Placement Training:

The process involves

- Identification and grooming of capable students for a particular domain
- Arranging Training Sessions from industry resources regularly.
- Counseling the students having less attendance in trainings.
- Interacting with Life skills trainer regularly for inputs on training.
- Maintaining the attendance of the students and sharing the same with Centre for Life Skills and Life Long Learning.
- Ensuring students learn English essentials/business communication as a subject. Arranging Aptitude Development training sessions for all programmes of Undergraduate (UG).

-Vista Mind, Ethnus Consultants, Focus Academy for creative Education are engaged to conduct Aptitude Development training which is scheduled as part of academic schedules.

- Soft skills development sessions are scheduled for all UG programmes. PCC India handles Soft skills for all these students by the seasoned trainers experienced in corporate orientation.

• Arranging Technical and domain related sessions and the topics will vary from one programme to another programme. All circuit programmes are taught with basic programming subjects, C, DS etc. Non-circuit programmes students are trained with core subjects and the highlight would be fundamentals of Electrical Engg, Electronics Engg, Mechanical Engg, Civil Engg, Automobile Engg, etc. and some application orientation.

(b)The Roles and Responsibilities of Placement Committee (PC)

- To conduct research regarding the skills, abilities, and credentials employers seek from graduates and also to find relevant job titles and industries for graduates.
- To help students create their resumes and cover letters, find internship or externship sites, and apply for jobs in their fields.
- To arrange for mock interviews to give students practice answering common questions and provide information about companies hiring in the area.
- To develop strong rapport with employers and develop local partnerships with companies where students can do internships or externships or visit for job shadowing. And also to recommend students to these employers after they learn necessary skills.
- To schedule hiring events like job fairs which gives students exposure to potential jobs and helps local companies find suitable candidates.
- To Ensure students availability for all campus recruitment events.
- To participate in pre-placement presentations conducted by companies.



• To participate in exit meetings at the end of each company recruitment events and to implement suggestions regard to grey areas as mentioned in the feedback in the departmental activities.

• To coordinate with each Department regarding aptitude, soft skills and domain related training activities to students.

• To Visit companies for presenting Department's quality and talent pool availability

• To arrange for domain related training and re-training activities based on companies' feedback.

NEW HORIZON SCHOLAR PROGRAM has focused an initiative to tap potential students at 2nd& 3rd year level and groom them to the best possible opportunities in Corporate, Government or Higher Education purposes. The following interventions are provided for the selected students.

- Conduct problem solving sessions by highly accomplished people in industry / institutions.
- Expose them on areas beyond the engineering textbooks such as economy, emerging business areas, international affairs, social issues etc.
- Focused technology sessions such as Big Data Analytics, SMAC (Social Media Mobility Analytics Cloud Computing), Digital marketing etc.
- Motivation sessions by high achievers in business, entrepreneurship etc.
- Focused on recent advancement in Internet of Things (IOT)by enabling the interconnection and integration of the physical world and the cyber space.
- To develop insight into the usability challenges in developing Artificial Intelligence (AI) systems, and effective means of meeting these challenges and to gain knowledge for collaboration between the Human Computer Interface (HCI) and AI communities.
- Fundamental foundations and application skills for non-circuit branches.

Selection of students: Students are selected at $3^{rd} / 4^{th}$ semester level by heads of departments. The criteria for selection of students is broadly based on academic performance and exceptionally good students who may not be top in class but have the potential to excel in studies if they are given required support.

Operational arrangements: Identified students will be provided an environment for each other to discuss debate and interact on their thoughts at regular intervals. An exclusive space of about one class room size is provided with necessary aids within the room such as journals, some latest books on innovation, creativity. Two computers with internet connectivity and Air Conditioning facility with biometric based entry are also provided. This space can be branded and showcased for other students to aspire to belong this group.



Career counseling for higher studies:

Career guidance and motivational lectures by Alumni, External guests and faculty are organized frequently.

Organizing coaching classes for competitive exams

The departments organize coaching classes for GATE and other competitive examinations.

- The placement cell organizes seminars on higher studies and conduct aptitude training sessions.
- Foundation course for Civil Services is offered for interested students appearing for Civil Services. Many books and periodicals are available in the library for the students.

Skill development (Spoken English, Computer Literacy etc.)

Communicative English has been incorporated into the curriculum. The English Language communication lab with a capacity of 60 consoles has been set up with innovation.

Industry – Institute Collaboration Activities:

The purpose of Industry Institute Collaboration Cell which shall be referred to as IIC hereon is to ensure a paradigm shift in the thought process of a New Horizon student from J2C (Job to Career). This should lead a student towards identification of a SMART CAREER GOAL. Taking a step further, IIC would endeavour to establish connect between eminent faculty members and the relevant industries to join hands and work towards mutually beneficial cause/projects.





Figure No. 9.28: Industry Institute interaction

The ulterior aim of IIC is to work towards making New Horizon College of Engineering, a respectable and most sought after Engineering college which provides the best amalgamation of Innovation, entrepreneurship development, skill up gradation, passion and aptitude along with sound theoretical subject knowledge which in turn makes our students industry ready and innovators of tomorrow so that they can pursue their passion and think beyond a job. The efforts and orientation of IIC would be in a manner wherein industry academia alliance would help our students reach the pinnacle of success and also ensure our elite faculty members are amongst the most sought after teaching fraternity.

Centre of Excellence

- Develop best learning process using a comprehensive understanding of industry's best practices.
- Imbibe professionalism, behavioural aspects and awareness as per the industry expectations.
- Continuous improvement to achieve success and growth.



Industry/Incubation

- Align aspirations of the students with the needs of the industries.
- Solutioning is the need of the hour.
- Customer value creation for industry and students
- Attention to both individual and students and groups.

Industry Integration

- Leveraging networking and collaboration with partnership.
- Promote career counselling by organizing guidance lectures by senior corporate personnel.
- Regular interaction with the industry through Seminars, Guest Lectures, Conferences, Corporate Meets, etc.

Internship Visits

- Enable student readiness.
- Training on employable skills.
- Talent transformation.

9.5.1: Career Guidance and Placement support for CSE

The placement data for the last three academic years and the maximum & average pay package offered to the students of CSE are given.

Sl. No.	Name of the company	Number of students placed
	Academic Year 2018-19	
1	Ad2pro Media Solutions Pvt Ltd	2
2	Applied Materials	1
3	Aquity Solution	1
4	Aricent	23
5	Betsol	1
6	Cameo Global	1
7	Catnip Infotech	1
8	CenturyLink Technologies India Pvt Ltd	1
9	Cerner Healthcare Solutions India Pvt Ltd	8
10	Covance India Pharmaceuticals Services Pvt Ltd	2
11	Danske IT and Support Services India Pvt Ltd	2
12	Cognizant Technologies	3

Table 9.23: Placement details

	1	Γ
13	EKA Software	1
14	Eleation Academy	1
15	Emertxe	4
16	Epicor Software	1
17	Eurofins IT Solutions Pvt Ltd	5
18	EXL Service	5
19	Fintellix Solutions	1
20	GrayMatter Software Services Pvt Ltd	1
21	Harman Connected Services Corporation (I) Pvt. Ltd	1
22	Hiver	2
23	HP	1
24	HSBC	1
25	IBJ	2
26	IBM	1
27	Ideas91 India Pvt Ltd	2
28	Incadea India Pvt Ltd	2
29	Infosys Ltd	20
30	ITC Infotech	15
31	JMR Infotech	4
32	L & T Technologies	20
33	L&T Infotech	5
34	Lowe's Services India Pvt Ltd	2
35	McKinsey & Company	1
36	Mindtree	3
37	Moengage	2
38	Mu Sigma	3
39	Nineleaps	4
40	Novelsynth Soft Solutions	2
41	NTT DATA	2
42	Ocwen Financial	1
43	Pinclick	2
44	Primenumbers Technologies Pvt Ltd	1
45	Pulse Secure India Pvt Ltd	3
46	Rakuten	1
47	ServiceNow	2
48	Simeio Solutions	5
49	SonicWALL Technology Systems India Pvt Ltd	2
50	Speridian Technologies	1



C 1		1
51	Subex Ltd	1
52	Surya Software Systems Pvt Ltd	3
53	TCS	3
54	Telaverge Communications	2
55	Temairasu	1
56	Thermofisher Scientific	4
57	Udaan	4
58	Unisys	2
59	Velocis Systems Pvt Ltd	2
60	VVDN Technologies	1
61	Wipro	6
62	Zenken	1
	Total Placed	208
	Academic Year 2017-18	
1	Accion Labs	3
2	Allstate	4
3	Applied Materials	1
4	Artech (HP)	3
5	Bias Infotech	4
6	Broadridge	1
7	CCP IOT	4
8	Century Link	1
9	Cerner	9
10	Cropin Technologies	3
11	Datacorp Traffic	1
12	Datagres IT	1
13	DXC	1
14	Ellucian	3
15	Envision Financial	2
16	Epsilon	11
17	Eurofins IT	4
18	Exotel	6
19	Fintellix Solutions	1
20	Global Logic	6
21	Hexaware	3
22	Hotelsoft	6
23	IBM	1
24	Infosys Ltd	2



[
25	ITOrizon	5
26	Micro genesis	4
27	Mindtree	4
28	Netscope	2
29	Nine Leaps	4
30	NTTDATA	7
31	Profinch	9
32	Quintiles	4
33	TCS	5
34	Telaverge	4
35	Torry Harris	4
36	Valtech	1
37	Verdantis	2
38	VVDN	1
39	Wipro Ltd	13
	Total Placed	150
	Academic Year 2016-17	
1	24/7	1
2	All State	1
3	Amazon	1
4	Capgemini	12
5	Century Link	2
6	Cerner	23
7	Cigital Asia	12
8	Cropin Technologies	3
9	Cyient	1
10	Datacorp Traffic	2
11	Datagres IT	3
12	Epsilon	7
13	Eurofins IT	12
14	Exotel	2
15	FTD Automation	1
16	IBM Tech	2
17	ICT Technologies	9
18	Incadea	8
19	ITC Infotech	4
20	Lowe's	1
21	Mindtree	3

22	NTT Data	11
23	Orange Business Solutions	1
24	Pin Click	1
25	Profinch	9
26	RLE India	2
27	Servion Global Solutions	1
28	Software AG	2
29	Spirent Technologies	1
30	Stellapps	1
31	Tech Mahindra	4
32	Thomson Reuters	3
33	Torry Harris	6
34	Wipro	1
35	Zapcom Solutions	1
	Total Placed	154

Table 9.24: Pay Package offered to students

2019-20	Maximum Salary	3000000
2019-20	Average Salary	908934.6613
2019 10	Maximum Salary	1100000
2018-19	Average Salary	683714.5385
2017 19	Maximum Salary	950000
2017-18	Average Salary	622649.9143

9.5.2 Career Guidance and Placement support FOR CV

A. Counseling for higher studies (GATE/GRE, GMAT etc):

Students who are looking for a change and want to get a self-direction are counseled so that they can explore and make an incredible career by opting for higher studies like an MBA or M. Tech in their field or related fields. Students are shared with opportunities available by managing talks by Colleges like RICS School of Built Environment that offers various MBA courses like MBA in Construction Project Management, and MBA in Construction Economics and Quantity Surveying, helping students build a definitive career after civil engineering. Counselling is also organized related to the technomanagerial education and various examinations like GATE/GRE/UPSC/PSC etc. that help students get job opportunities in Public/Private Sector Industries, Government Jobs, Defense sector or obtain higher degrees abroad.



Higher Education	2016 - 2017	2017 - 2018	2018 - 2019
M. Tech/MS/Ph.D	No. of Students	No. of Students	No. of Students
M. Tech/MS	12	20	12

C. Placement Committee (PC):

The Career Guidance and Placement Cell have constituted a Placement Committee (PC) for smooth functioning.

(a) Members of the Placement Committee:

The members of the Placement Committee are as below:

Name of the Faculty	Designation	Department
Prof. Gurucharan Singh Executive Director		Dept. of HRD
Mr. Binod Kumar Singh	HR Manager	Dept. of HRD
Dr. Niranjan P S	HOD & Professor	Dept. of Civil Engineering
Ms. Suma Paralada	Sr. Asst. Professor	Dept. of Civil Engineering
Mr. Channabasava	Asst. Professor	Dept. of Civil Engineering

Table 9.26: Members of the Placement Committee

(b) Achievements:

 Table 9.27: Placement details - Academic Year 2018-19

Name of the company	No. of students placed
Aparna constructions	5
BSR Developers Pvt Ltd.	11
CBRE South Asia Pvt Ltd	5
Cyient Ltd	1
Extra Marks	1
H M Constructions	19
IBM	1
Ideas91 India Pvt Ltd	1
NCCCL India	10
NHEI	4
Regalia Civils	15

Criterion-9 Self-Assessment Report (SAR)



Salarpuria Sattva	7
Shobha Developers	2
Shri Aruna Constructions	12
Shriram Properties	3
Sowparnika Projects & Infrastructure Pvt Ltd	10
STUP Consultants	10
Target Corporation	1
Udaan	3
Total number of students placed	121

Academic Year 2017-18

Name of the company	No. of students placed
STUP Consultants	7
Chowgule	3
TCS	9
IBM	8
Raaga Constructions	6
Salarpuria Sattva	14
Total number of students placed	47

Academic Year 2016-17

Name of the company	No. of students placed
DSR Infrastructure	5
H M Group	4
Incadea	10
ITC Infotech	5
Pin Click	1
Profinch	7
Raaga Constructions	6
Sattva Group	3
Secon	1
Sobha Developers	3
Speridian	1
Sunquest	2
Volvo IT	8
Wipro	16
Total number of students placed	72



1	Maximum Salary	14,63,000
2	Average Salary	5,50,000

Table 9.28: Pay Package offered to students

9.5.3 Career Guidance and Placement support for ECE

NHCE offers career guidance and placement on all aspects of career planning, job searching and post-graduate studies. College will provide individual counseling for all the students towards reaching goals.

Sl. No.	. No. Organization Date of MoU			
1	Compute Silicon	26/4/2019		
2	Electronics for you	1/5/2019		
3	Edu Saksham	17/9/2018		

Table 9.29. List of MoUs with Industries

Table 9.30: Members of the Placement Committee

Name of the Faculty	Designation	Department
Dr. B. Mohan Kumar Naik	Professor	ECE
Prof. Ashok	Asst. Professor	ECE

Table 9.31: Placement details

Sl. No	Name of Company	Number of students Placed			
	Academic Year 2018-19				
1	42Gears Mobility Systems	3			
2	Altran Gurgaon	2			
3	Allstate Solutions Pvt Ltd	3			
4	Aeronautical Development Agency(ADA)	1			
5	Aricent	5			
6	Anora Semiconductors	3			
7	Astromeda	1			
8	Applied Materials	1			
9	Elmeasure	7			
10	EXL Service	5			
11	CenturyLink Technologies India Pvt Ltd	2			
12	Eurofins IT Solutions Pvt Ltd	2			



13	Extra Marks	1
14	Infosys Ltd	6
15	IBM	1
16	Huawei Technologies	2
17	IBM, pune	1
18	Ideas91 India Pvt Ltd	5
19	ITC Infotech	11
20	L&T Infotech	5
21	L & T Technologies	11
22	JMR Infotech	11
23	LGSOFT India Pvt Ltd	1
24	Mindtree	3
25	Moengage	2
26	Microchip Technology India Pvt Ltd	1
27	Nineleaps	1
28	Lowe's Services India Pvt Ltd	2
29	NTT DATA	8
30	Ocwen Financial	1
31	Pinclick	1
32	QtPi Robotics	2
33	SOCTRONICS	1
34	SoCtronics Technologies Pvt Ltd	1
35	Sony India	2
36	SonicWALL Technology Systems India Pvt Ltd	4
37	Softcell technologies	1
38	Speridian Technologies	3
39	TCS	5
40	Torry Harris Business Solutions	3
41	Telaverge Communications	5
42	Tricon infotech Pvt Ltd	1
43	Surya Software Systems Pvt Ltd	4
44	Wipro	8
45	Yokogawa	1
46	Udaan	3
47	VVDN Technologies	1
48	Velocis Systems Pvt Ltd	4
	Total Students Placed	158
	Academic Year 2017 – 2018	
1	Infosys Ltd	2
2	DXC	10



3	Comion	2		
	Servion	2		
4	Mindtree	8		
5	Sonata	4		
6	Envision Financial	4		
7	NTT Data	6		
8	Torry Harris	1		
9	Wipro	9		
10	Cameo Global	6		
11	Valtech	5		
12	Cyient	1		
13	Verdantis	4		
14	CCP IOT	3		
15	Quintiles	3		
16	Eximius Design	3		
17	IBM	1		
18	Profinch	4		
19	Hexaware	2		
20	Quick Logic	5		
21	Sankalp Semiconductor	6		
22	Century Link	3		
23	Microchip Technology	1		
24	Zapcom Solutions	6		
25	Secpod	1		
26	EFI	5		
27	Broadridge	1		
28	Sony	6		
29	Allstate	1		
30	Hotelsoft	3		
31	Speridian Technologies	1		
32	Datagres IT	4		
33	Ellucian	4		
34	VVDN	5		
35	NineLeaps	1		
36	Intimetec	2		
37	Applied Materials	1		
38	Fintellix Solutions	3		
39	Eurofins IT	4		
40	Juniper Networks	3		
	Total Students Placed	144		
	Academic Year 2016 – 2017			
1	Ellucian	1		



	Total Students Placed	115
19	Global Logic	21
18	Torry Harris	2
17	Epsilon	4
16	Sankalp Semiconductors	11
15	Anora Semiconductors	11
14	Sprinklr	11
13	Servion Global Solutions	1
12	Cyient	1
11	Speridian	2
10	Thomson Reuters	4
9	Wipro	6
8	Sigma infosolutions	1
7	NTT Data	10
6	Microland	2
5	Amazon	1
4	Mindtree	1
3	Capgemini	9
2	Tech Mahindra	16

Table 9.32: Pay Package offered to students

2018-19	Maximum Salary	1463000
2010-19	Average Salary	786188
2017-18	Maximum Salary	1200000
2017-18	Average Salary	724680
2016-17	Maximum Salary	950393
2010-17	Average Salary	553981

Table 9.33: Higher Education

Higher Education	2018 - 2019	2017 - 2018	2016 - 2017
M. Tech/MS/Ph.D	No. of Students	No. of Students	No. of Students
	15	15	16



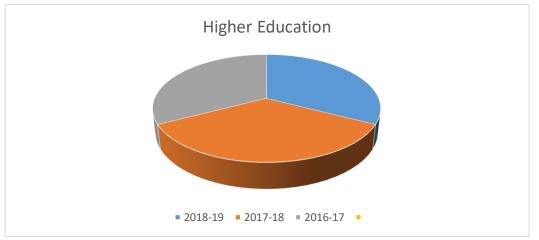


Figure No 9.29: Higher Studies Statistics

9.5.4 Career Guidance and Placement support for ME

NHCE offers career guidance and placement on all aspects of career planning, job searching and post-graduate studies. College will provide individual counseling for all the students towards reaching goals.

I. Efficacy of career Guidance, Training, Placement

Sl. No.	Academic year	Total no. of students	No. of students placed	No. of students admitted to higher studies	No. of students as entrepreneur
1	2018-19	210	88	53	05
2	2017-18	187	69	57	04
3	2016-17	175	67	61	02

Table 9.34: Impact of career guidance, training, placement and certification



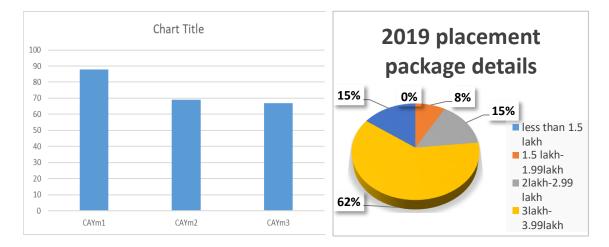


Table 9.35: Quality of Placement

Year	% of IT placement	% of Core placement
2018-19	46/88 = 52.28	42/88 = 47.72
2017-18	32/69 = 46.37	37/69 = 53.62
2016-17	51/67 = 76.12	16/67 = 23.88



9.6 Entrepreneurship Cell (5)

- NH-EDC was established in August 2011, under the aegis of Department of Management Studies. NH-EDC is headed by Dr. Sheelan Misra, Prof. & HoD–MBA with a team of faculty coordinators from other departments of the college.
- The goal of NH-EDC is to assist students, entrepreneurs, including Institutes' faculty, with pre-venture, start-up or existing business with financial management, marketing, technology and product development and commercialization issues.
- Working in collaboration with National Entrepreneurship Network (NEN), since its inception, NH-EDC has conducted various activities for the college students creating and promoting entrepreneurship awareness at the campus. E-WEEK is one of such initiatives where array of activities is conducted raising the spirit of innovation and creativity which are considered as sparkplugs of entrepreneurship.
- The students are given latest inputs about the industry, the changes happening and the expectations just to make them understand the employability options and opportunities to control unemployment and create better opportunities for youngsters.

Entrepreneurship Initiatives:

- To create an environment for self-employment, promote innovation, incubation and Entrepreneurship development through formal and non-formal programs
- > To introduce the concept of Entrepreneurship in curriculum at degree levels
- To develop management personnel at appropriate levels for non-corporate and unorganized sectors like education, rural development, small-scale industry etc
- To utilize the infrastructure facilities and technically trained manpower for the development of non-corporate and unorganized sectors.
- > To promote employment opportunities
- > Technology Commercialization Assistance and Management Evaluation
- Intellectual Property Rights/Management
- Help with Regulatory Compliance
- Feasibility Study (Technical and Financial)
- Help with Business Basics
- Marketing Assistance/Market Research/Pilot Study/Test Marketing.
- Enhancement of Marketing Skills, Commercialization/Scale up: Access to Bank Loans, Loan Funds and Guarantee Programs and Access to Angel Investors or Venture Capital etc.
- Business Structuring Advisory: Help with Accounting/Financial Management/ Company Formation/Management Team Identification/HR Services.
- > Help with Presentation Skills and Business Etiquettes.
- Comprehensive Business Training Programs.



Entrepreneurship Development (ED) Cell facilities:

The infrastructure facilities of Entrepreneurship Development (ED) Cell at NHCE are tabulated in Table 9.36 and the details of ED cell committee members are listed in Table 9.37.

Table 9.36: List of Entrepreneurship Development Cell facilities and physical infrastructure at NHCE

Sl. No.	Description	Number
1	Computer	3
2	Printer	3
3	Scanner	1
4	LCD Projector	1
5	Interactive White Board	1
6	Furniture's	Table-5, Chair-30
7	Seminar Halls/Conference Rooms	1
8	Discussion Rooms	1
9	Video Conferencing Facilities	50 Seats
10	Incubation Space (Cubicles)	1000 Sq.mt
11	Office Space	250 Sq,mt

Entrepreneurship Development Cell committee management:

Table 9.57 Entrepreneursmp Development Cen committee members				
Sl. No.	Name	Dept.	Position	
1	Dr. Smita Harwani	MBA	Associate Professor	
2	Mr. Sidde Gowda	MCA	Assistant Professor	
3	Mr. Prashanth K S	BSH	Assistant Professor	
4	Mr. Gagan Purad	CSE	Assistant Professor	
5	Ms. Vandana	ISE	Assistant Professor	
6	Mr. Mohan B S	EEE	Assistant Professor	
7	Dr. Piruthiviraj P	ECE	Associate Professor	
8	Mr. Ranganathan	CIVIL	Assistant Professor	
9	Mr. Puneeth	ME	Assistant Professor	
10	Mr. Sunil	AU	Assistant Professor	
11	Dr. Upendra	BT	Assistant Professor	

Table 9.37 Entrepreneurship Development Cell committee members



Entrepreneurship Development Cell (EDC) conducts various events to help students to know the importance of being an entrepreneur and ways to get financial assistance to become a successful entrepreneur. The list of events conducted is mentioned in Table 9.38.

Event	Date	Venue
Talk on "Motivation for startingown venture"	29/2/2018	Falconry Seminar Hall
MOU WITH CIMSME (Confederation of Indian Micro, Small and Medium Enterprises) to establish the Centre of Excellence for Innovation, Incubation and Entrepreneurship	22/10/2019	Conference Hall
Start-ups Pitch-athon	04/12/2019	Sap Gen Next Lab
World Entrepreneurship Summit in associationGlobalEntrepreneurs Grid (GEG)	8/2/2020	Department of Management Studies
Launching of Quest IIoT Center of Excellence	14/2/2020	New horizon College of Engineering

9.6.1 Data on Entrepreneurship Initiatives for CSE

These initiatives of the Entrepreneurship Development Cell have been successful and have resulted in the setting up of various startups by the students of the Department of CSE. The details are given below.

Sl. No	Name of the Student/Alumni Entrepreneurs/USN/ Semester/ Section/Mobile/Email etc.	Graduating Year (Applicable for Student/ Alumni)	Name of the Company Incubated Mentor/Faculty Advisors	Nature of Business/Technolo gy/Activities/ Business Solutions etc.	Remarks/ Progress/Patents Filed/ Partnership Deed/Funding/ Investor Identified/ Publications/ Participation in Outside Events etc.
1	Sanketh S Huddar BE (CSE) 3 Sem "C" Sec (9740496061) 1NH16CS751 proxy.sudo@gm ail.com	2019-20	GEEKSPACE Inc [™] Dr.K. Gopalakrishnan, Dean (R&D)	Providing High-tech Services and Solutions, Professional Training/Inte rnships and	Networked with IBM Open POWER, Object Automation, Nvidia. Started

Table 9.39: List of Entrepreneurship Initiatives



	I		1		
				Project Solutions etc. in the emerging IT/ITES domains	Doing Trainings/Eve nts with them!
2	G. Vishwa, BE (CSE) 3 Sem "A" Sec (9480199973) 1NH16EE059 vishgoki@gmail .com	2019-20	Career Tech Solutions [™] Dr.K. Gopalakrishnan, Dean (R&D)	Providing Online Skill- Gap Analytics- Career Guidance Tool along with Professional Certifications . Road map for hi-tech skill training on emerging areas of S&T and Management.	Patents Filed. "IBM Watson IoT and Power AI Developer Conference" scheduled on 3 rd November 2017 at an Auditorium, IIT Madras Research Park, Chennai- 600113
3	G. Vishwa &Sanketh S Huddar BE (CSE) 3 Sem "C" Sec (9740496061) 1NH16CS751 proxy.sudo@gm ail.com	2019-20	Career ReadyWizard TM Dr.K. Gopalakrishnan, Dean (R&D)	Virtual Finishing School and providing single platform for related services and solutions	-do- Patents Filed
4	S. Sivan Chakravarthy BE (CSE) 3 Sem "B" Sec (9448928290) 1NH16CS094 <u>sivan.sundar@g</u> mail.com	2019-20	Dream Factory Solutions [™] Dr.K. Gopalakrishnan, Dean (R&D)	Providing Virtual Production Design Solutions remotely and connecting funding sources with talented or needy technicians in "dream factory" solutions.	-do- Patents Filed
5	Vinayaka S.S. Sandilya BE (CSE) 3 Sem "B" Sec	2019-20	Bhoral Solutions	Advanced Web Design/App Development	Currently Active in the Business, since last 3 years!



	(9401333313) 1NH16CS123 Nishant Jha, BE (Mech) 3 Sem "C" Sec (9481015089) 1NH16ME732			and Providing Turnkey Solutions for Data Analytics	
6	Mr. Rohit Mulay, Mr. Goutham. R &Mr. Sidharth. BE (CSE) 5 Sem "C" Sec (8951102065) 1NH15CS106 rohitmulaynhce @gmail.com	2017-18	Own Your LMS	Personalized LMS ased on individual competency and skill mapping	Patent Draft under Review/Filing in Progress (30 Dec 2017). "IBM Watson IoT and Power AI Developer Conference" sc heduled on 3 rd Novemb er 2017 at an Auditorium, IIT Madras Research Park, Chennai- 600113
7	Mr. Rohit Mulay	2017-18	AgroFix	Providing on demand Agro based solutions	
8	Mr. Rohit Mulay	2017-18	Easy Learn	Providing virtual personalized/ customized Learning Management Solutions	

9.6.2 Data on Entrepreneurship Initiatives CV

(i) Entrepreneurship Development Cell Events:

Entrepreneurship Development Cell (EDC) conducts various events to help students to know the importance of being an entrepreneur and ways to get financial assistance to become a successful entrepreneur.



Events	Date	Venue	Number of students
Dept. of MBA Organized a			
visit to Cheemasandhra and	13/04/2018 -	MBA Seminar	MBA Seminar
to Nimbakaypura for Rural	16/04/2018	Hall	Hall
development			
Dept. of MBA organised a			
visit to SWANTHANA, Care	12/04/2018	MBA Seminar	MBA Seminar
for mentally and physically	12/04/2018	Hall	Hall
challenged female children.			
1St World Entrepreneurship	02/02/2018	Falconry	Falconry
Summit	02/02/2018	Seminar Hall	Seminar Hall
Entrepreneurship awareness		C-202,	C-202,
program		Department of	Department of
by Mr. Prakash Choudhary,	06/02/2020	Civil	Civil
co-founder entrepreneurship		Engineering,	Engineering,
garage		NHCE	NHCE
World Entrepreneurship	02/02/2019	New Horizon	New Horizon
Summit	02/02/2019	Auditorium	Auditorium
Global family business summit	12/06/2020	Webinar	Webinar

Table 9.40: List of Events (Civil Engineering)



Figure 9.31: Entrepreneurship events

Table 9.41: Number of students opted for entrepreneurship
(Civil Engineering)

Entropy or set in	2016 - 2017 2017 - 2018		2018 - 2019	
Entrepreneurship	No. of Students	No. of Students	No. of Students	
	7	13	5	

9.6.3 Data on Entrepreneurship Initiatives for ECE

Number of students got benefitted with ED cell activities. The below tables shows the data corresponding to 2018-19, 2017-18 and 2016 -17 academic years.

Events	Date	Venue
Dept. of MBA organized a visit to Cheemasandhra and to Nimbakaypura for Rural development	13/04/2018 16/04/2018	MBA Seminar Hall
Dept. of MBA organized a visit to SWANTHANA, Care for mentally and physically challenged female children.	12/04/2018	MBA Seminar Hall
1 St World Entrepreneurship Summit	02/02/2018	Falconry Seminar Hall
Open my Book	28/02/2019	Falconry Seminar Hall
E-Week	25/03/2019 & 30/03/2019	Falconry Seminar Hall
Orientation Program on EDC	24/08/2019	Falconry Seminar Hall
FDP	31/08/2019	Falconry Seminar Hall
COSMOS 'E'	23/10/2019 & 24/10/2019	Falconry Seminar Hall
Start-Up Pitch-Athon	04/12/2019	Falconry Seminar Hall

 Table 9.42: List of Entrepreneurship Initiatives (EC)





Figure 9.32: Entrepreneurship events (EC)

 Table 9.43: List of Entrepreneurs for academic year 2018-19 (EC)

S.No	Enrollment no.	Name of the student	Name of the Company Incubated	Year
1	1NH15EC062	Nikhil Riyaz	3D Print Concrete	2018-19
2	1NH15EC727	Hari Raj	3D Print Concrete, Self- Propelled Jet, ECG/ICG T-Shirts	2018-19
3	1NH15EC004	Ankit Mishra	Urban Tribe	2018-19
4	1NH15EC011	Bhavana Savanth	Infinity Designs	2018-19
5	1NH15EC741	Sanjana Ranjan	Noveltech Corner	2018-19
6	1NH15EC748	T Venkatesh Shuvampal	GamaProto Solutions	2018-19
7	1NH15EC062	Nikhil Riyaz	Self-Propelled Jet	2018-19
8	1NH15EC019	Denzel Abraham George	ECG/ICG T- Shirts, Machine Vision Grading, Self-Propelled Jet	2018-19
9	1NH15EC703	Ashwin S	TSC Pvt Ltd	2018-19
10	1NH15EC727	Hari	Machine Vision Grading	2018-19



S.No.	Enrollment no.	Name of the student	Name of the Company Incubated	Year
1	1NH13EC112	Rohit Mulay	Own Your LMS, AgroFix, EasyLearn	2017-18
2	1NH13EC102	Goutham R	Own Your LMS, EnergyGuru, MedCall	2017-18
3	1NH14EC012	Sidharth P	Own Your LMS, EasyTech	2017-18
4	1NH13EC008	Amrithnath	Overnight Ventures	01-05-17

 Table 9.44: List of Entrepreneurs for academic year 2017-18 (EC)

Table 9.45: List of Entrepreneur	s for academic year	2016-17 (EC)
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S.No.	EnrollmentName of the studentno.student		Name of the Company Incubated	Year
1	1NH13EC717	Chethan R	Aspire Ventures	22-12-2018

9.6.4 Data on Entrepreneurship Initiatives for ME

Following list provide the effectiveness of the EDC cell in developing the student skills to a level of Entrepreneur. List of Entrepreneurs is given below:

Table 9.46: List of Entrepreneurs in mechanical engineering for the duration				
2017-19 (ME)				

Sl. No	Academic Year	Name of the entrepreneur	USN	Type of Business started	Type of product	Company name & Place
1	2017	Mazood Shafeeque	1NH13ME075	Automobile	Cars	Terazzo
2		Nitesh Sharma	1NH13ME092	Football Academy	Sports	MAJAZ Football
1		Amar Kumar Bhatt	1NH14ME017	Hydraulic Hose and Fittings	Hydraulic Hose and Fittings	New Bombay Hydraulic
2	2018	Yashash.K	1NH14ME147	Gifts Trading	Gifts wholesale dealer	Indian National
3		Sanjaya Mahato	1NH14ME159	Food Chain	Foods and beverages	Tam Chibe café
4		Vineet Nandiki	1NH15ME434	Interior Design	Interior Design	V Create Interio
1	2019	Manjunath G	1NH15ME063	Products Consultant	Beauty care	Modicare



2	Prajwal B R	1NH15ME086	Products Consultant	Beauty care	Modicare
3	Deepak.S	1NH16ME404	Water Distillary	Water Purification	SLV Mineral Water treatment
4	Saleel Hussain	1NH15ME744	HVAC Servicing	HVAC	Airtech Entreprise
5	Srigi Reddy Dinesh Kumar Reddy	1NH15ME750	Batteries management	Batteries management	Sri Anantha Entriprise





9.7. Co- Curricular and extra- curricular Activities (10)

9.7.1 Extra-Curricular Activities of CSE

Sports

Sports at the NHCE are played with much fervor and passion. There is emphasis on regular exercise and physical fitness. All games are supervised by professional coaches. Equal importance is extended by the department towards extracurricular and co-curricular activities. This can be envisaged by the number of students participating in such events. The department has students who are members of various college/university level teams like basketball, volleyball, football, throwball,etc. Our students regularly participate in tournaments including those at the state level. Given below are the details of such participation in the different academic years.

Event Name	Name & USN of Student	Semester of Student	Tournament	Event Date		
	Academi	c Year 2019 –	2020			
			Court Wars	1/9/2019 to 8/9/2019		
	Anurag Rajshekar 1NH16CS701 Mohan Sai Krishna		RIT	9/9/2019 to 11/09/2019		
		VII/VIII	VTU(BCZ)	16/09/2019 to 17/09/2019		
			VTU(IZ)	25/09/2019 to 28/09/2019		
			KreeDostava	1/10/2019 to 4/10/2019		
Basket Ball(M)		V/VI	PESIT	14/10/2019 to 16/10/2019		
Dasket Dan(WI)	1NH17CS082	1NH17CS082 Nitish Naik 1NH19CS421 III/IV			Association Cup	3/11/2019 to 9/11/2019
			Malleshwaram Cup	25/1/2020 to 3/02/2020		
			SPIEL	10/02/2020 to 15/02/2020		
			RVCE	22/02/2020 to 24/02/2020		
			Devadan Cup	28/02/2020 to 29/02/2020		
Basket Ball (W)			Court Wars	1/9/2019 to 8/9/2019		

Table 9.7.1: List of Sporting Events Participated in by Students of CSE



			RIT	9/9/2019 to
			KII	4 4 10 0 10
	Muskan Agrawal			11/09/2019
	1NH18CS117	III/IV	KreeDostava	1/10/2019 to
				4/10/2019
			PESIT	14/10/2019 to
				16/10/2019
			Spradha 2019	26/9/2019 to
	Banu Prathap		*	28/9 /2019
Kabaddi (M)	Reddy	V/VI	PESIT	14/10/2019 to
~ /	1NH17CS022			16/10/2019
			SJCC	24/2/2020 to
				25/2/2020
	Banu Prathap			
	Reddy	V/VI		5/9/2019 to
Wrestling Judo	1NH17CS022		VTU	7/9/2019
	Purshotham	V/VI		
	1NH17CS002			
Hockey	Joydeep Singh	III/IV	St. John's	25/9/2019 to
Посксу	(1NH18CS220)	111/1 V	St. John S	28/9/2019
			VTU	24/8/2019 to
	Muchtag Ahmad		VIU	25/8/2019
Badminton(M)	Mushtaq Ahmed KS 1NH17CS086	V/VI	Spradha 2019	26/9/2019 to
Dauminton(MI)				27/09/2019
			KreeDostava	1/10/2019 to
			KieeDostava	4/10/2019
	Preksha		VTU	24/8/2019 to
	1NH17CS102	V/VI	V/VI	25/8/2019
Badminton(W)	1111705102		Spradha 2019	26/9/2019 to
	KN Sripriyo		Spradila 2017	27/09/2019
	KN Sripriya 1NH17CS060	V/VI	KreeDostava	1/10/2019 to
	INHI/CS000		KleeDostava	4/10/2019
	Ashwij Kumar	III/IV	CHRI-SPO	12/09/2019
	1NH18CS031	111/1 V		
	Devendra Desai	TTT /TX 7	Basavangudi	24/02/2020 to
Handball(M)	1NH18CS057	III/IV		25/02/2020
	Jayesh Naidu	** 7	CUFEE	28/02/2020 to
	1NH18CS080	IV		29/02/2020
				14/09/2019 to
		III/IV	CHRI-SPO	17/09/2019
	Tanith T		SPRADHA	26/09/2019 to
Football	1NH18CS194		2019	27/09/2019
				1/10/2019 to
			KREEDOSTAVA	



				22/02/2020 to
			RVCE	24/02/2020
				27/02/2020 to
			CUFE	29/02/2020
	Academ	ic Year 2018-	-2019	
			BTL	11/09/2018
			KREEDOSTAVA	22/09/2018 to
			KREEDOSTAVA	24/09/2018
			SPARDHA	3/10/2018 to
				4/10/2018
			RVCE	9/2/2019 to
				10/02/2019
Volleyball(M)	Abhishek	VII/VIII	CUFE	28/02/2019
(ivi)	1NH14CS001	· · · · · · · · · · · · · · · · · · ·		to 2/3/2019
			VTU(BCZ)	8/3/2019 to
				9/3/2019
			FISA	28/03/2019
			AMC	29/3/2019 to
				30/3/2019
			NEW HORIZON	3/4/2019 to
			CUP	5/4/2019
	Kavya A S 1NH16CS050	VI	VTU(IZ)	18/3/2019 to
				19/3/2019
			VTU(BCZ)	15/3/2019 to
				16/3/2019
Volleyball(W)	Sameeksha P 1NH16CS100	VI	FISA	29/3/2019 to
				30/3/2019
			AMC	28/3/2019
			NEW HORIZON CUP	3/4/2019 to 5/4/2019
	Abhishek			3/4/2019
	1NH14CS001	VII		05/10/2010 /
Athletics	Mailaresh S		VTU	25/10/2018 to 29/10/2018
		VII		29/10/2018
	1NH15CS072			5/0/2019 4-
			St. Johns	5/9/2018 to 9/9/2018
				14/9/2018 to
	Mohan Sai		VTU(BCZ)	14/9/2018 to
Basketball(M)	Krishna	III/IV		17/9/2018 to
Daskeidäll(191)	1NH17CS082	111/1 V	VTU(IZ)	18/9/2018 to
	1111170002			21/9/2018 to
			KREEDOSTAVA	24/9/2018
			MS RAMAIH	22/9/2018 to
			MS KAMAIH	22/9/2018 to



				24/9/2018
				3/10/2018 to
			SPRADHA	4/10/2018 to
			Malleshwaram Cup	26/1/2019 to 3/2/2019
			RVCE	8/2/2019 to 10/2/2019
				10/2/2019 11/2/2019 to
			Spiel	15/2/2019 to
				28/3/2019
			New Horizon Cup	to 5/4/2019
				28/2/2019
			CUFE	to 2/3/2019
			СМР	25/3/2019
			NHPS	1/8/2018 to 4/8/2018
				5/9/2018 to
Madhuri Mandlem		St. Johns	9/9/2018 to 9/9/2018	
	Madhuri Mandlem	VII/VIII		22/9/2018 to
			MS RAMAIH	24/9/2018 to
			SPRADHA	3/10/2018 to
				4/10/2018
	1NH15CS067		Malleshwaram Cup	26/1/2019
Basketball (W)				to 3/2/2019
	Tulasi Somaiah		RVCE	8/2/2019 to
	1NH16CS078	V/VI		10/2/2019
	11111005070		Spiel	11/2/2019 to
				15/2/2019
			New Horizon	28/3/2019
			Cup	to 5/4/2019
			VTU(BCZ)	10/4/2019
				11/4/2019 to
			VTU(IZ)	12/4/2019
				3/10/2018 to
			SPRADHA	5/10/ 2018
				10/10/2018 to
			INFINI	13/10/ 2018
	Kabbadi(M) Banu Prathap	III/IV		6/3/2019 to
Kabbadi(M)		111/1 1	St. Joseph's	7/3/2019
	Reddy		REVA	23/3/2019 to
	1NH17CS022		University	25/3/2019
			New Horizon	3/4/2019 to
			Cup	5/4/2019



				11/4/2019
Wrestling(M)	Banu Prathap Reddy	III/IV	VTU	15/10/2018 to 17/10/2018
wresting(wr)	1NH17CS022	111/ I V	VTU(Nationals)	7/11/2018 to 20/11/2018
Wrestling (W)	Kavya AS 1NH16CS050	V	VTU (Silver Medal)	15/10/2018 to 17/10/2018
Table Tennis	Likhita Suresh 1NH15CS064	VII	VTU	3/9/2018 to 4/9/2018
Throwball(W)	Nayana K 1NH15CS081 Amrutha HR 1NH15CS016	VII VII	VTU	9/10/2018
	Mushtaq Ahmed 1NH17CS086	III/IV	VTU	27/8/2018 to 28/8/2018
Badminton	G Naveen Sai Kaanth 1NH15CS041	VII/VIII		
	Preksha 1NH17CS177	III/IV	RVCE	8/2/2019 to 10/2/2019
	KN Sripriya 1NH17CS060	III/IV		
			St. John's	5/9/2018
	Sujay Hazra 1NH17CS127	III/IV	SPRADHA	3/10/2018 to 4/10/2018
Football	Kartikey	III/IV	CUFE	28/2/2019 to 2/3/2019
	1NH17CS726		NITTE	6/3/2019 to 8/3/2019
	Thejus B 1NH16CS116	V		
Softball	Naman Gupta 1NH17CS731	Ш	VTU	4/10/2018 to 5/10/2018
	Akash Kumar 1NH17CS701	III		
	Mohith Teppola	III		



		1		
	1NH17CS084			
	M Gopinath			
	1NH17CS721	III		
	~ ~	III	PES	6/10/2018 to
Cricket	S Jagadeesh			13/10/2018
	1NH17CS125		MSRIT	29/10/2018 to
				9/11/2018
Academic Year 2017 – 18		- 18	Γ	
			VIE	25/1 / 2018
				to 28/1/2018
			Malleshwaram Cup	4/2/2018 to
				11/2/2018
			SPIEL	19/2/2018 to
	Anurag			21/2/2018
Basketball(M)		IV	Devdan Cup	1/3/2018 to
	Rajshekar			3/3/2018
	1NH16CS701		KREEDOSTAVA	8/3/2018 to
				10/3/2018
			AZURA 2018	14/3/2018
				to 4/4/2018
			RV Momentum	17/2/2018 to
				18/2/2018
			VIE	25/1 / 2018 to
			Malleshwaram Cup SPIEL RV Momentum	28/1/2018
				4/2/2018 to 11/2/2018
				19/2/2018 to
				21/2/2018
	Madhuuri			17/2/2018 to 18/2/2018
Basketball(W)	Madhuri Mandlem	IV		
	1NH15CS067		KREEDOSTAVA	8/3/2018 to 10/3/2018
	11113C3007			14/3/2018 to
			AZURA 2018	4/4/2018
				12/4/2018 to
			Dr.AIT	12/4/2018 to
				14/4/2018 to
			BLDEACET	16/4/2018 to
				22/3/2018 to
			BGS Cup	23/3/2018 to
Kabaddi(M)	Arun Kumar	Х/I		2/4/2018 to
	1NH15CS708	VI	Azura 2018	2/4/2018 to 4/4/2018
	11,1112,05700			7/7/2010



			SAI LIO	17/4/2018 to 18/4/2018
	Tenzin Namdol 1NH14CS136	VIII	RVCE	17/2/2019 to 19/2/2018
	Prajan Adhikary		VTU	20/2/2018 to 21/2/2018
Football	1NH16CS138	IV	Devandan Cup	1/3/2018 to 3/3/2018
	Roshan Jimi 1NH14CS157	VIII	AZURA 2018	2/4/2018 to 4/4/2018
	Subin Pandey 1NH14CS159	VIII		
Chess	Kaushik 1NH14CS743	VIII	RVCE	16/3/2018 to 17/3/2018
Badminton(M)	G Naveen Sai Kanth 1NH15CS041	VI	RVCE	17/2/2019 to 19/2/2018
Baummon(191)	Bhavan A 1NH14CS021	VIII	AZURA 2018	2/4/2018 to 4/4/2018
	B L Shraadha 1NH14CS020	VIII	VTU	7/3/2018
	Amrutha H R 1NH15CS016	VI		
Volleyball(W)	Nayana K 1NH15CS081	VI	BMSCE	8/3/2018 to 10/3/2018
	Priyanka Dubey 1NH15CS735	VI		2/4/2018 to
	Ashwini S 1NH15CS022	VI	AZURA 2018	4/4/2018
	B L Shraadha		VTU	7/3/2018
Throwball (W)	1NH14CS020	VIII	BMSCE	8/3/2018 to 10/3/2018



	Amrutha H R 1NH15CS016 Nayana K	VI VI	AZURA 2018	2/4/2018 to 4/4/2018
	1NH15CS081 Aishwarya 1NH15CS700	VI		
	Abhishek	VI RVCE		17/2/2019 to 19/2/2018
КНО КНО	1NH14CS011 Mailresh 1NH15CS072	VI	CIT	6/4/2018 to 7/4/2018
			NHCE	13/3/2018
			AZURA 2018	2/4/2018 to 4/4/2018
			Star Shooters	15/2/2018 to 16/2/2018
			Devdan Cup	1/3/2018 to 2/3/2018
Handball	Naveen Raj 1NH13CS732	VIII	Star Shooters	6/3/2018 to 10/3/2018
			VTU(BCZ)	13/3/2018 to 14/3/2018
		VTU(IZ)	16/3/2018 to 17/3/2018	

Participation in Inter College and Intra College Events

The students of the department of CSE have also participated in different inter-college fests and have also become winners in a few events. In addition, the students also participate in several activities/events organized by the college as well. Given below is the list of such participation in the various academic years

SI No	Event	Name of Participating Student	Semester	Date		
	Academic Year 2019-2020					
	1. One Tree One Student	Akshaya P Nayak	7			
1.		Harshini K	7	29.08.2019		
	Student	Inducuri Sweetha	7			



		Ishitha Nilesh Joshi	7		
		Sandhya M N	7		
		Sowmya P B	7		
2.	Donation Camp for the Flood Victims of North Karnataka and Kerala	Nikita Upadhyay	7	10.08.2019	
3.	Times Fresh Face by Times of India	Nikita Upadhyay	7	09.10.2019	
		Keerthana	5		
Λ	Bangalore Medical	Sreehari N R	5	16.10.2019	
4.	College Fest (Play Team)	Joel Chacko	3	16.10.2019	
	Teamy	Neeharika	3		
		Akshaya Suresh	3		
		Siri	5		
5.	5.	St. John's Fest Autumn	See Hari NR	5	27.09.2019
	Autumin	Emmanuel Leo	3	_	
		Joel CC	3		
6.	Orphanage visit	Anshika Singh	3	26.10.19	
		Diwakar P	5		
		Thanush	5		
7.	Sporter Dece	Ashwij	3	26.10.19	
1.	Spartan Race	Jayesh Naidu	3	20.10.19	
		Rathod Akash Ashok	3		
		Stuti	3		
		Sivan Chakravarthy	7		
		Deeksha S	5		
		Deepthi S	5		
	Literature Chat	Nikshitha Bollineni	3	25 10 10	
8.	Litrary Club - NHMUN Event	Arohi Jain	3	25.10.19, 26.10.19	
	INFINION Event	Harshith Pant	3	20.10.19	
		Bhoomika	5		
		Jeshav	7		
		Anurag	7		
		Keerthana	5		
9.	Kannada Daivataava	Srihari NR	5	04.11.2019	
9.	Kannada Rajyotsava	Joel CC	3	04.11.2019	
		Kavya	7		



	Aca	demic Year 2018-2019			
		Abhishek	7		
		SrivardhanBandi	7		
1.	. PES fest	Huma Farheen	7	11.08.2018	
		Nitin Shashi	7		
		Rahul Prem	7		
		SrivardhanBandi	7		
		Huma Farheen	7	-	
2.	Nagarjuna Fest	Nitin Shashi	7	28.08.2018	
		Rahul Prem	7	-	
		Salman M G	5	-	
2	Jain Fest	Nitin Shashi	7	27.9.2018	
3.	Jain Fest	Rahul Prem	7	27.9.2018	
	17 1	Prathiksha	5		
4.	Kannada Reiveetheeve	Sanjana Anand	7	3.11.2018	
	Rajyaothsava	Kurthana	5	1	
5.	MUN Event	Rahul Prem	7	6.11.2018	
6	Club Activities-	Suhasendra	7	- 2.2.2019	
6.	Media club	Sanket S Huddar	5		
7	Desitations Eleter Disease	Rohit Mullay	5	21.10.2010	
7.	Rashtriya Ekta Diwas	Sivan Chakraborty	5	31.10.2018	
		Sri Raksha G	5		
8.	PINK DAY	Kuwa Saurya Keshav	5	23.6.2018	
		Salman M G	5		
		Akhil	5		
9.	MAAYA 2018	Ramachandran		30.7.2018	
		Renuka P	5		
10.	Independence Day /Cultural Event	Suhasendra	5	15.8.2018	
		Keshav	6		
		Aditya RV	8		
		Suhasendra N B	6	-	
11.	Woman's day	Salman	6	8.3.2019	
	Celebrations	Akhil	6	1	
		Sanjana Anand	8	1	
		Aditya RV	8	1	
12.	Birth Anniversary of Chhatrapati Shivaji	Keshav	6	19.2.2019	



		Gopinath	4		
	Christ Univ Fest	Siri	4	1	
		Sreehari	4	_	
13.		Akshaya	2	6.3.2019	
		Nithin S	8		
		Srinivas R	4		
		Likhith Suresh	8	1	
14.	NIFT Fest	Keshav	6	4.04.2010	
14.	NIFI Fest	Gopinath	4	4.04.2019	
		Keshav	6		
		Gopinath	4		
15.	ICAT Fest	Anurag G	6	26.3.2018	
		Sivan Chakravarthy	6		
		Sujay Hazra	4		
		Rahul Prem	8		
	NMIT Fest	Huma Farheen	8	_	
		Swapnil	8		
		Mohan	4	- 25.02.2019	
16		Siri	4		
16.		Sreehari	4		
		Akshaya	2		
		Keerthan K Bhat	4		
		Likhith Suresh	8		
		Sanjana Ramesh	8		
		Huma Farheen	8		
17		Swapnil	8		
17.	IIM-B Fest	Mohan	4	- 26.08.2018	
		Sanketh	4		
		Huma Farheen	8		
18.	Presidency University Fest	Swapnil	8	30.03.2019	
	rest	Mohan	4		
		Huma Farheen	8		
19.	Ambedkar Institute of	Swapnil	8	4.03.2019	
	Technology	Mohan	4		
		Huma Farheen	8		
20		Mohan	4	- - 16.07.2018 -	
20.	Dayananda Sagar Fest	Siri	4		
		Sreehari	4		



		Akshaya	2	
		Keerthan K Bhat	4	
		Huma Farheen	8	
21.	International School	Mohan	4	20.09.2018
	of Management	Abhishek	8	
		Huma Farheen	8	
22.	SJBIT Fest	Swapnil	8	7.10.2018
22.	SJDII FESI	Mohan	4	7.10.2018
		Abhishek	8	
	Komunanidhi Callaga	Huma Farheen	8	
23.	Karunanidhi College Fest	Swapnil	8	21.10.2018
	1050	Mohan	4	
		Sreehari	4	
24.	RVCE	Siri	4	12.11.2018
24.	RVCE	Akshaya	2	12.11.2010
		Keerthan K Bhat	4	
		Suhasendra N B	6	
25.	CMRIT College Fest	Akhil	6	15.03.2019
		Renu	6	
		Keshav	6	
26.	Ramaiah Institute of	Suhasendra N B	6	25.04.2019
20.	Technology	Salman	6	23.04.2019
		Akhil	6	

Co-Curricular Activities

To enhance the organizational and interpersonal skills of our students we conduct several activities under the aegis of various clubs in the department. These activities are the sole responsibility of the student organizers. The department has three clubs namely ACE, BIT & MAD. Several technical activities are conducted by these clubs and year wise consolidation of these are given in Table 9.49.

Sl. No	Event	Name of Club	Date
	Academic Year 2019-2	2020	
1.	Event X	BIT	16-10-2019
2.	Tech talk on blockchain	BIT	28-08-2019
3.	PubApp (Workshop)	MD	27-09-2019
4.	Appathon	MD	30-08-2019
5.	Appatronics	MD	06-02-2020

Table 9.7.3: List of Club Activities organized



6.	Code storm	ACE	07-02-2020
7.	Tech talk Advanced CSS	ACE	13-09-2019
8.	Hour of Code	ACE	23-08-2019
0.	Academic Year 2018		25 00 2017
1.	BIT Volume-2 (coding, quiz)	BIT	31/10/2018
2.	Hackathon	BIT, ACE, MD	11-03-2019
3.	Current trends in data analytics (tech talk)	BIT	17/04/2019
4.	Workshop on android app development	MD	26-10-2018
5.	Battle of Apps	MD	26-10-2018
6.	Workshop on android app development	MD	11-04-2019
7.	Hackathon	BIT, ACE, MD	11-03-2019
8.	QuBytes	MD	22-03-2019
9.	Appathon	MD	23-03-2019
10.	Shark Tank	ACE	23-03-2019
11.	Entretien	ACE	05-10-2018
12.	Blank Coding	ACE	05-10-2018
	Academic Year 2017	-18	• •
1.	Volume-1 Quiz, Puzzle, Treasure Hunt	BIT	28/03/2018
2.	Mobile app devp workshop	MD	07-03-2018
3.	Techquiz 2.0	ACE	04-04-2018
4.	Python Workshop 2.0	ACE	06-04-2018

Participation in Inter-College Technical Events

Students of the department are encouraged to participate in technical activities conducted by other colleges. Several of our students have won events as well. The details of such participation are listed below

Sl. No	USN	Name of the Student	Event Date	Event Details	Institution/ Organization	Achievement
		Ruman	3-20-2020	IBM - Hacker	Kristu Jayanti	
1	1NH17CS112	Ahmed	&	Verse	College,	1st Prize
		Shaikh	4-02-2020	Hackathon	Bangalore	
2	1NH17CS127	Sujay	3-02-2020	IBM - Hacker	Kristu Jayanti	1st Prize
2	11111/CS12/	Hazra	&	Verse	College,	150 1 1120



			4-02-2020	Hackathon	Bangalore	
$\left - \right $			3-20-2020	IBM - Hacker	Kristu Jayanti	
3	1NH18CS120	Gulsan	&	Verse	College,	1st Prize
	1111000120	Borbhiya	æ 4-02-2020	Hackathon	Bangalore	150 1 1120
			4-02-2020	Паскашон	-	
		A1-:4	14-2-2020		Maharaja Institute of	
4	1NH18CS706	Ankit	&	Code Connect		Participation
		Datta	15-2-2020		Technology,	
					Thandavapura	
		Abhay	14-2-2020		Maharaja	
5	1NH18CS006	Thoppal	&	Code Connect	Institute of	Participation
		Shiva	15-2-2020		Technology,	1
					Thandavapura	
			14-2-2020		Maharaja	
6	1NH18CS069	Goutham	&	Code Connect	Institute of	Participation
	1111005009	Shanbhag	æ 15-2-2020		Technology,	i a norpanoli
			13-2-2020		Thandavapura	
			14-2-2020		Maharaja	
7	11110000000	Classes D		Calla Campant	Institute of	Dentisiastica
7	1NH18CS229	Shreyas B	&	Code Connect	Technology,	Participation
			15-2-2020		Thandavapura	
			14.0.0000		Maharaja	
		Sajjan	14-2-2020	Code	Institute of	.
8	1NH18CS742	Kumar	&	Connect	Technology,	Participation
			15-2-2020		Thandavapura	
			14.0.0000		Maharaja	
0		Devendra	14-2-2020	Code	Institute of	.
9	1NH18CS057	Desai	&	Connect	Technology,	Participation
			15-2-2020		Thandavapura	
				Open		
10	1NH18CS103	Kundana R	29-2-2020	Day'2020 -	HSC -	1st Prize
	_		-	Blind coding	Bangalore	
				Open		
11	1NH18CS108	Madhura K	29-2-2020	Day'2020 -	HSC -	2nd prize
_				Blind coding	Bangalore	
\vdash		Yagna		Open		
12	1NH18CS203	Vikas	29-2-2020	Day'2020 -	HSC -	3rd Prize
		Parvatikar		Blind coding	Bangalore	
					SAP LABS	
		Ms Shreya		Sap	Office,	
13	1NH18CS177	Pradeep	18-10-2019	Semicolon	Whitefield,	Participation
		1 Iudeep		Hackathon	Bangalore	
├					CSI 2020	
	1NH17CS127	H17CS127 Sujay Hazra	21-12-2019	CSI programming	Convention,	
14					Bhubanewsw	Participated
		118218		contest		
					ar	



Hackathon

Students of our department also participated in the Hackathon. The details are given below

Event	Team Name	Name	USN	Role	Remarks
		Gulsan Borbhuiya	1NH18CS720	Team Leader	Participated
GTT	Mt. J	Manasa A	1NH18CS110	Team Member	Participated
SIH - 2019	Mind Benders	Harshit Pant	1NH18CS072	Team Member	Participated
2017	Denuel S	Muskan Agrawal	1NH18CS117	Team Member	Participated
		K Ashwin Athappan	1NH18CS085	Team Member	Participated
		Sathish Kumar s	1NH17CS114	Team Leader	Participated
SIH -		PayelPattanayak	1NH17CS147	Team Member	Participated
2019	S-team	Sushmitha G. S	1NH17CS131	Team Member	Participated
		Niveditha C b	1NH17CS094	Team Member	Participated
		Praveen C	1NH17CS100	Team Member	Participated
		Madhumitha R	1NH16CS745	Team Leader	Participated
		Shubham Chaudhary	1NH16CS752	Team Member	Participated
SIH -		Ayush Bhardwaj	1NH16CS739	Team Member	Participated
2019	SMARTS	RAHUL	1NH16CS085	Team Member	Participated
		ToshBir Singh	1NH16CS756	Team Member	Participated
		Suhas S Kamath	1NH16CS754	Team Member	Participated
		N Kavya	1NH18CS118	Team Leader	Participated
SIH -	Xite	Kolisetty Krishna Himaja	1NH18CS096	Team Member	Participated
2019		P. Lakshmi Sumana	1NH18CS132	Team Member	Participated
		Priyadharshini. S	1NH18CS144	Team Member	Participated
		Ramya Shree S	1NH18CS156	Team Member	Participated
		Deepthi. S	1NH17CS035	Team Leader	Participated
SIH -	Code	Harini.M	1NH17CS050	Team Member	Participated
2019	Breakers	Deeksha.S	1NH17CS033	Team Member	Participated
		Chandana Menon	1NH17CS712	Team Member	Participated
		Gopinath M	1NH17CS721	Team Leader	Participated
SIH -	Team 1-up	Santoshi	1NH17CS740	Team Member	Participated
2019	ream r-up	Nagarjun S	1NH17CS739	Team Member	Participated
		Sriram S	1NH17CS754	Team Member	Participated
		Harikrishnan G S	1NH17CS722	Team Member	Participated
		Srinivas R	1NH17CS753	Team Member	Participated

Table: 9.7.5 Participation in Hackathon



9.7.2 Co- Curricular and extra- curricular activities of CV

The college encourages the students to take part in both co-curricular and extracurricular activities. The students are allowed to take part in various sport activities also.

Event Name	Event Date
Guest lecture on "An -Avenue for higher education for civil engineering in India & Abroad"	02.04.2018
Expert lecture on Hydraulics	10.04.2018
Expert lecture on analysis of determinate structures	10.04.2018
Expert lecture on water supply	15.03.2018
Expert lecture on design and drawing of RC structures	16.04.2018
Site visit to Geological Department BU	10.02.2018
Industrial visit to 42 Queen Square	24.03.2018
Industrial visit to Salapuria Sattva divinity, Ganapati Nagar, Mysore road, Bangalore	29.06.2018
Seminar on BIM software	03.03.2018
A workshop on Reliability Concepts in Civil Engineering	30.01.2018
A workshop on Cype software	20.02.2018
A workshop on TEKLA software	15.03.2018
Industrial visit to Meteorological Centre, Palace Road, Bangalore	03.09.2018
A guest lecture on Smart Dynamic Concrete	22.09.2018
A quiz on International Design Competition	25.09.2018
One-day seminar on BETTER AGGREGATES FOR CONCRETE & ALTERNATIVES TO RIVER SAND	04.10.2018
A workshop on Green Technology – its significance and relevance	05.10.2018
Guest lecture on Construction Methodology for Earthquake resisting structures	15.03.2019

Table 9	.7.6: Li	st of Co	-Curricular	Activities
I and /	• • • • • • • •			

Event Name	Event Date
A seminar on Archibus software	05.02.2018
A seminar on Social Values & Social Responsibilities	07.02.2018
A seminar on Financial Literacy program for SC/ST Students	21.02.2018



Faculty development program on Preparation development on Rubrics	08.01.2018
A workshop on Archi-Bus	22.03.2018 to 24.03.2018
A workshop on Students exchange program to France	06.04.2018
Alumni interaction - Career Development	30.08.2018
A workshop on Stakeholder Management	12.09.2018

Following are the Extra-Curricular activities organized by NHCE every year.

Table 9.7.8: List of Extra-Curricular activities organized every year

Sl.No.	Name of the Event
1	Republic Day
2	Independence day
3	Teachers Day
4	Engineers Day
5	Kannada Rajyotsava
6	International Women's Day
7	Birthday of Subhas Chandra Bose
8	Birthday of Sir. M Visvesvaraya
9	Birthday of Sardar Vallabhai Patel
10	Birthday of Rani Channamma
11	Birthday of Jhansi Rani
12	Birthday of Chatrapathi Shivaji
13	Birthday of Shaheed Bhagat Singh
14	Birthday of Swami Vivekananda
15	Birthday of Shaheed Hemu Kalani
16	Birthday of Major Sandeep Unni Krishnan
17	Deepavali
18	Founders' Day
19	Induction Program



20	Graduation Day
21	Freshers' Day
22	Annual Day "SARGAM"

a) Availability of sports facilities:

The table below summarizes the list of indoor and outdoor games available in the campus of NHCE.

Sl. No.	Name of the sport facility	Numbers available	Place of availability	Whether available beyond
1	Caroms	8		
2	Chess	8	Students	
3	Table tennis	3	Recreation Centre	Yes
4	Madison ball	12	Centre	
5	Yoga mats	6		

Table 9.7.9: List of indoor games available in the campus

Sl. No.	Name of the sport facility	Numbers available	Place of availability	Whether available beyond	
1	Volley ball	12			
2	Basket ball	24			
3	Throw ball	6			
4	Hand ball	10	Open ground	YES	
5	Kho-Kho	2			
6	Football/Cricket	12]		
7	Shot put	2			
8	Badminton	10			

SI. No	Name	USN	Sem	Event	Date	Tournament	No. of Days	Achievements
1	Md. Muizur Rehman	1NH13CV058	V	Foot Ball	27 to 29 Aug 2015 12 to 14 Sept 2015	ST. JOHN'S MC CHRIST UST	03 03 03	Participation Participation Participation



2 Prashanth INH14CV137 III Poot Ball 12 to 14 Sept 2015 CHNS1 UST RVCE 03 03 Participati Participati 3 Sahana R Reddy INH13CV104 V Basket Ball 27 to 29 Aug 2015 ST. JOHN'S MC 03 03 Participati 3 Sahana R Reddy INH13CV104 V V Basket Ball 27 to 29 Aug 2015 ST. JOHN'S MC 03 03 Participati 4 Nawazulla N INH14CV072 III V V Basket Ball 27 to 29 Aug 2015 MC 03 VUU C Participati 5 Rakesh S INH14CV072 III Volley Ball Cricket Volley Ball 27 to 29 Aug 2015 Cricket MC 03 MSRT Participati 5 Rakesh S INH14CV693 III Volley Ball 27 to 29 Aug 2015 Cricket ST. JOHN'S MC 03 Participati 03 Participati 5 Rakesh S INH14CV693 III Volley Ball ST. JOHN'S Cricket 03 MC 03 Participati 6 Rajesh Kosuri INH13CV088 V Cricket 30 & 31 OC t2015 VTU BUCE 02 5th Place					1	164.10	DVCE		
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Aug 2015 B'LORE		manara				-	VTU		
(1) Participat		Sumith			Badmin	•		02	Participation
1 8 INHI3CV121 V 04 Participat	8		1NH13CV121	V				04	Participation
Kumar Dey Kumar Dey ton Aug 2015 STATE 03 Participati		Kumar Dey			ton	•		03	Participation
1 to 3 Oct CHAMP 05 Tartepat									
2015 BMSCE									
23 & 24 VTU		N			D 1 ·			0.2	D
	8		1NH14CV068	III		-			Participation
ton I to 3 Oct C Z 03 Participati	-	Raj		_	ton			03	Participation
2015 BMSCE							BMSCE		
	9		1NH12CV001	v			VTU IC	03	Participation
9 Abhishek 1NH12CV001 V Power 29 to 31 VTUIC 03 Participat	1	Kukreti		•	Lift	Oct 2015			- and pation



Sl.				T.	r	III sports -20	No. of	
No	Name	USN	Sem	Event	Date	Tournament	Days	Achievements
1	Amr Nazeer Ahmed	17CV100	Ι	Wrestling & Judo	9 th &12 th Oct 2017	PESCE (VTU)	04	Bronze Medal
2	Newton Buragohain	1NH16CV077	IV	Basket ball(M)	25 th to 28 th Jan 2018 4 th to 11 th Feb 2018 17 th &18 th Feb 2018 19 th to 21 st Feb 2018 1 st to 3 rd Mar 2018 8 th to 10 th Mar 2018 14 th Mar to 4 th Apr 2018	VIE MALLESH WARAM RV MOMENTU M SPIEL DEVDAN CUP KREEDOST AVA AZURA 2018	04 07 02 03 03 03 22	Participation Participation Participation Participation Participation Runners Runners
3	Nawazullah N	1NH14CV072	VIII	Volley ball (M) Cricket	17 th to 19 th Feb 2018 28 th Feb to 1 st Mar-18 2 nd & 3 rd Mar 2018 4 th to 6 th Mar 2018 7 th & 8 th Mar 2018 2 nd to 4 th Apr 2018 17 th Apr 2018 18 th Apr 2018 11 th ,15 th , 20 th ,22 nd , 23 rd Feb 2018 26 th Feb to 1 st ,3 rd ,5 th ,6 th Mar 2018 21 st ,24 th to 26 th Mar 2018	RV MOMENTU M DEVADAN CUP VTU (BCZ) VTU(IZ) KREEDOST AV AZURA 2018 SAI LIO AMC RV MOMENTU M VTU PESIT	03 02 02 03 02 03 01 01 05 05 04	Participation Winners Winners Runners Winners Winners Winners Participation Participation Participation
4	Rakesh Shetty	1NH14CV093	VIII	Volley ball (M)	17 th to 19 th Feb 2018 28 th Feb to 1 st Mar-18 2 nd & 3 rd Mar 2018	RV MOMENTU M DEVADAN CUP VTU (BCZ)	03 02 02 03 02 03	Participation Winners Winners Runners Winners Winners

Table 9.7.12: List of students participated in sports -2017-18



					4th cth		01	***
					4^{th} to 6^{th}	VTU(IZ)	01	Winners
					Mar 2018	KREEDOST	01	Winners
					7 th & 8 th	AV		
					Mar 2018	AZURA		
					2^{nd} to 4^{th}	2018		
					Apr 2018	SAI LIO		
					17 th Apr	AMC		
					2018			
					18 th Apr			
					2018			
5	Rajesh Sah	1NH14CV138	VIII	Cricket	17^{th} to 20^{th}	SAMBHRA	03	Participation
5	Rajesh San	1141140 1150	v 111	CHERCI	Mar 2018	М	05	1 articipation
6	Abdul	1NH14CV146	VI	Cricket	17 th to 20 th	SAMBHRA	03	Douticipation
0	Husain	ПNП14C V 140	V1	Cheket	Mar 2018	М	05	Participation
					17 th to 19 th			
					Feb 2018	RVCE		
					20^{th} to 21^{st}	VTU	03	Participation
	Prashant			Foot	Feb 2018	DEVANDA	02	Participation
7	Thapa	1NH14CV137	VIII	Ball	1 st to 3 rd	N CUP	03	Participation
	I			Dull	Mar 2018	AZURA	03	Runners
					2 nd to 4 th	2018		
					Apr 2018			
					1^{st} to 3^{rd}	DEVANDA		
				Foot	Mar 2018	N CUP	03	Participation
8	8 Tejas 1NH15	1NH15CV130	VI	Ball	2^{nd} to 4^{th}	AZURA	03	Runners
				Dall		2018	05	Kuimers
	D			E (Apr 2018 2 nd to 4 th			
9	B	1NH14CV013	VIII	Foot		AZURA	03	Runners
	Lathlamuana			Ball	Apr 2018	2018		
10	Lalremsiama	1NH14CV021	VIII	Foot	2^{nd} to 4^{th}	AZURA	03	Runners
				Ball	Apr 2018	2018		
11	Benjamin	1NH14CV016	VIII	Foot	2^{nd} to 4^{th}	AZURA	03	Participation
	-			Ball	Apr 2018	2018		
12	Anand S	1NH16CV013	IV	Table	8 th to 10 th	BMSCE	03	Participation
	Kotnoor		- ·	Tennis	Mar 2018	2112 02	00	Turingunon
					17 th to 19 th	RVCE		
13	Monish Raj	1NH14CV068	vm	II Badmin ton (M)	Feb 2018	AZURA	03	Participation
15	мошын Кај	1111140 0000	VIII		2^{nd} to 4^{th}	2018	03	Runners
					Apr 2018			
14	Amal		IV	Badmin	2^{nd} to 4^{th}	AZURA	02	Dunners
14	Thomas	1NH16CV011	11	ton (M)	Apr 2018	2018	03	Runners
	V: also and				17 th to 19 th			
1.7	Kishore Kumar Nayak		* 7*	Kho	Feb 2018	RVCE	03	Participation
15		1NH16CV403	VI	Kho	6 th & 7 th	CIT(VTU)	02	Participation
				IXIIU	Apr 2018	× -/		I
					15 th & 16 th	STAR		
					Feb 2018	SHOOTERS	02	Participation
					$1^{\text{st}} \& 2^{\text{nd}}$	DEVDAN	02	Participation
				Handba	Mar 2108	CUP	02	Participation
16	Sanjay H R	1NH16CV096	IV	Handba 11	6^{th} to 10^{th}	STAR	03	Winners
				11	Mar 2018	SHOOTERS	02	Participation
					13^{th} to 14^{th}			Participation
		1	1		15 10 14	VTU (BCZ)	03	rancipation
					Mar 2018	VTU (IZ)		-



					16 th & 17 th	AZURA		
					Mar 2018	2018		
					2 nd to 4 th			
					Apr 2018			
17	Sourav Das	1NH15CV126	VI	Hockey	14 th to 16 th Mar 2018	ST. JOHNS	03	Participation
18	Rohan Bopanna N M	1NH15CV100	VI	Hockey	14 th to 16 th Mar 2018	ST. JOHNS	03	Participation
19	Somanna N B	1NH15CV124	VI	Hockey	14 th to 16 th Mar 2018	ST. JOHNS	03	Participation
20	Sachin Patil	1NH15CV108	VI	Hockey	14 th to 16 th Mar 2018	ST. JOHNS	03	Participation
21	Udit Kumar	1NH15CV134	VI	Hockey	14 th to 16 th Mar 2018	ST. JOHNS	03	Participation
22	Vineeth A	1NH15CV139	VI	Hockey	14 th to 16 th Mar 2018	ST. JOHNS	03	Participation
23	Tejwanth S	1NH15CV150	VI	Hockey	14 th to 16 th Mar 2018	ST. JOHNS	03	Participation
24	Prasann Arjun Bajantri	1NH14CV084	VI	NHCE	2 nd to 4 th Apr 2018	AZURA 2018	03	Participation
25	Dharshan Raj	1NH14CV030	IV	NHCE	2 nd to 4 th Apr 2018	AZURA 2018	03	Participation

 Table 9.7.13: List of students participated in sports -2018-19

Sl. No	Name	USN	Sem	Event	Date	Tournament	No. of Days	Achievements
1	Sanjay H R	1NH16CV096	v	Handball (M) Athletic	29 th & 30 th Aug 2018 25 th to 29 th Oct 2018	CHRISPO VTU	02 05	Participation Participation
2	Suraj R	1NH17CV117	III	Handball (M)	29 th & 30 th Aug 2018	CHRISPO	02	Participation
3	Anand S Kutnoor	1NH16CV013	V	Table Tennis	3 rd & 4 th Sep 2018 22 nd to 24 th Sep 2018 3 rd & 4 th Oct 2018	VTU KREEDOST AVA SPARDHA 2018	02 03 02	Participation Participation Participation
4	Amritansh	1NH17CV010	III	Table Tennis	3 rd & 4 th Sep 2018 22 nd to 24 th Sep 2018	VTU KREEDOST AVA SPARDHA 2018	02 03 02	Participation Participation Participation



1		1			and i d	1		1
					3 rd & 4 th Oct 2018			
5	Rohan Bopanna N M	1NH15CV100	VII	Hockey	5 th & 6 th Sep 2018	ST. JOHNS	02	Participation
6	Somanna N B	1NH15CV124	VII	Hockey	5 th & 6 th Sep 2018	ST. JOHNS	02	Participation
7	Sachin Patil	1NH15CV108	VII	Hockey	5 th & 6 th Sep 2018	ST. JOHNS	02	Participation
8	Sourav Das	1NH15CV126	VII	Hockey	5 th & 6 th Sep 2018	ST. JOHNS	02	Participation
9	Udit Kumar	1NH15CV134	VII	Hockey	5 th & 6 th Sep 2018	ST. JOHNS	02	Participation
10	Tejwanth S	1NH15CV150	VII	Hockey	5 th & 6 th Sep 2018	ST. JOHNS	02	Participation
11	Vineeth A	1NH15CV139	VII	Hockey	5 th & 6 th Sep 2018	ST. JOHNS	02	Participation
12	Nikhil H A	1NH17CV072	III	Hockey	5 th & 6 th Sep 2018	ST. JOHNS	02	Participation
13	George Joseph	1NH15CV036	VII	Hockey	5 th & 6 th Sep 2018	ST. JOHNS	02	Participation
14	Raj Domadiya	1NH15CV094	VII	Hockey	5 th & 6 th Sep 2018	ST. JOHNS	02	Participation
15	Abdul Rehman Khan	1NH15CV001	VII	Power Lifting	27 th to 29 th Sep 2018	VTU	03	Participation
16	Amal Thomas	1NH16CV011	III	Badmint on	27 th & 28 th Aug 2018	VTU	02	Participation
17	Poorvika S	1NH16CV076	V	Athletics	25 th to 29 th Oct 2018	VTU	05	Participation
18	Tejas K Suresh	1NH15CV130	VII	Foot Ball	1 st to 5 th Sep 2018	CHRISPO	05	Participation
19	Abdul Rehman Khan (Played VTU Nationals)	1NH15CV001	VII	Wrestl. & Judo Wrestling	15 th to 17 th Oct 2018 7 th to 20 th Nov 2018	VTU VTU (NATIONA LS)	03 14	Gold Medal Participation
20	Amr Nazeer Ahmed	1NH17CV009	III	Wrestl. & Judo	15 th to 17 th Oct 2018	VTU	03	Participation
21	Sahas A S	1NH17CV099	III	Softball Cricket	4 th & 5 th Oct 2018 6 th to 13 th Oct 2018 29 th Oct to 9 th Nov 2018	VTU PES MSRIT	02 08 12	Participation Participation Participation



					6 th Tto 13 th Oct			
22	Dhiraj T	1NH15CV034	VII	Cricket	2018 29 th Oct to 9 th Nov 2018	PES MSRIT	08 12	Participation Participation
23	Kon Jarbin	1NH15EC078	VII	Weight Lifting	29 th to 31 st Oct 2018	VTU	03	Participation
24	Amr Nazeer Ahmed	1NH17CV036	III	Wrestl. & Judo	15 th to 17 th Oct 2018	VTU	03	Participation
1	Sanjay H R	1NH16CV096	VI	Handball	15 th & 16 th Feb 2019 28 th Feb to 2 nd Mar 2019 2 nd to 3 rd Apr 2019 8 th & 9 th Apr 2019	STAR SHOOTERS CUFE VTU (BCZ) VTU (IZ)	2 3 2 2	Participated Participated Winners Participated
2	Newton Buragohain	1NH16CV072	IV	Basket ball(M)	26 th Jan to 3 rd Feb 2019 8 th to 10 th Feb 2019 11 th to 15 th Feb 2019 28 th Feb to 2 nd Marc 2019 25 th Mar 2019 28 th Mar to 5th April 2019	MALLESH WARAM RVCE SPIEL/JNC CUFE CMP NEW HORIZON CUP	9 3 5 3 1 9	Participated Participated Participated Participated Participated Runners
3	Amal Thomas	1NH16CV011	IV	Badmint on	8 th to 10 th Feb 2019	RVCE	3	Participated
4	Manu K H	1NH18CV410	IV	Kho-Kho	1 st & 2 nd Mar 2019	VTU	2	Participated
5	Kishore Kumar Nayak	1NH16CV403	VIII	Kho-Kho	1 st & 2 nd Mar 2019	VTU	2	Participated
6	Dhiraj T	1NH15CV034	VIII	Cricket	16 th to 23 rd Feb	CUFE & RVCE	6 4	Participated Participated



2019 VTU 7 th ,11 th , 13 th & 14 th Mar	
13 th &	
L ⁴ ^m Mar	
2019	
16 th to	
23 rd Feb	
2019 CUFE &	6 Participated
7 Sahas A S 1NH17CV099 IV Cricket 7 th ,11 th , RVCE	4 Participated
13 th & VTU	
14 th Mar	
2019	
15 th to	
17 th Mar	
2019	
Rohan 15 th & IISC	3 Participated
	2 Runners
	2 Participated
23 rd Apr	
2019	
15 th to	
17 th Mar	
2019	
Somenne N	3 Participated
	2 Runners
	2 Participated
22 nd &	
23 rd Apr	
2019	
15 th to	
17 th Mar	
2019	
15 th & IISC	3 Participated
10 Sourav Das 1NH15CV126 VIII Hockey 16 th Apr VTU (BCZ)	2 Runners
2019 VTU (IZ)	2 Participated
22 nd &	1
23 rd Apr	
2019	
15 th to	
17 th Mar	
2019	
	3 Participated
	2 Runners
	2 Participated
2019 VIO(12) 22 nd &	
23 rd Apr	
2019	
12 Wind thursday with the last	a n · · · ·
12Vineeth1NH15CV139VIIIHockey17th MarIISC	3 Participated
12Vineeth1NH15CV139VIIIHockey17th MarIISC12019	3 Participated3 Participated

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					17 th Mar 2019			
14	Tejwanth S	1NH15CV150	VIII	Hockey	15 th to 17 th Mar 2019	IISC	3	Participated
15	Nikhil H A	1NH17CV072	IV	Volunteer	1 st to 5 th Apr 2019	NEW HORIZON CUP	5	Participated

9.7.3 Co- Curricular and Extra-Curricular Activities of EC

The college encourages the students to take part in both co-curricular and extracurricular activities. The students are allowed to take part in various sport activities also.

I) Co- Curricular (Club activities):

Department of ECE has 3 three clubs:

1.Electronics Hobby Club

2. Technology Sharing Club

3. Professional Connect Club

The activities conducted under each club is given in below tables from 9.60 to 9.62. The pictures of events are shown in figures from 9.36 to 9.38.

Event	Date	Description
Arduino Workshop	26 th Sept 2018	Basics of Arduino Types of Sensors & I/O Basic usage of discrete components
PCB Design and Fabrication Workshop Using Eagle Cad	24 th October 2018	Introduction to PCB Fabrication process Hands on Experience on Eagle CAD Software Design of 555 time A stable multi vibrator
Soldering Workshop	13 th March 2019	The process of Soldering Soldered the NE555 timer PCB
Sensors and Arduino	17 th April, 2019	Presentation on Arduino and Sensors Hands-on experience on making a Hand Follower Robot

Table 9.7.14: Electronics Hobby Club Activities



DIY Workshop part -I	31 st August 2019	EFY kits to have hands on experience in circuit building and soldering. Students learnt about various electronic devices and IC's used and also had the opportunity to explore their functionalities.
DIY Workshop part -II	26 th October 2019	Participants were given the kits from EFY which consisted of different circuits.
A & D Circuit Analysis	6 th March 2020	Students worked on FM audio transmitter, EEPROM programmer, Band pass filters, buck-boost convertors, logic-gates using transistors

Table 9.7.15: Technology Sharing Club Activities

Event	Date	Description
Test 360	22-09-2018	General Aptitude Test Technical Aptitude Test Treasure Hunt
Tech Talk	27-10-2018	Technical Talk on Introduction to Python and Machine Learning
Tech Talk On Machine Learning	15-03-2019	Fundamentals Real time applications
Brain Games	05-04-2019	General Quiz Code Debugging Circuit Debugging
Block chain and IOT workshop	26-10-2019	Technical Talk on Block chain by Mr. Musaveer (alumni) IOT hands-on session using NODEMCU-ESP8266 WIFI Module.
Paper Presentation on Emerging Technologies	13-09-2019	Students presented innovative ideas on the latest trending technologies like Artificial Intelligence, IoT, Machine Learning, Block chain etc.
Brain Games 2.0	27-02-2020	Technical quiz Debug and decode Teknovation
TechZest	10-04-2020	Cancelled due to Covid 19



Event	Date	Description
Idea Hunt	05-10-2018	The club aimed at bringing out ideas from students to solve the persisting problems in the society. Even if the problem was a drop in the bucket, students were encouraged to generate ideas, that could effectively and feasibly solve the problem.
Workshop on Underwater Vehicle	17-11-2018	The workshop gave us an insight to what an ROV is, the various fields in which ROVs are used, a briefing on other types of underwater robots, and the Ten main guidelines for designing and ROV.
Marine Exploration – Build your own ROV	16-04-2019	Fueling the objecting of the Professional Connect Club, the Remotely Operable Vehicles were demonstrated, enabling students to have hands-on experience on how to build their own ROVs.
Jalayantra 2019- Rov Competition	27-04-2019	In the Competition the participating groups taking part in the first round, which was a checkpoint race, where there were five bottles placed around the pool in strategic places, and the groups had to decide which route to take achieve the fastest time. This placed a huge focus on the speed and efficiency at which the ROVs moved. The structural integrity also came into the picture, as when the ROVs dove underwater, they had to be able to surface.
Electronics for Dummies	24-08-2019	The aim of the event was to make sure that each and every Electronics student knew the theory and also knew how to implement with their very own hands using smartphone.
Subjected Oriented Activity on Engineering Electromagnetic	14-11-2019	The Model exhibition, Paper presentation, Role play, Scientific Temper showed how the laws of electromagnetic can be explained using different methods.





Figure 9.36.a: Technical Talk event (Technology Sharing Club)



Figure 9.36.b: Brain games 2.0 (Technology Sharing Club)



Figure 9.37: ROV workshop (Professional Connect Club)





Figure 9.38: PCB design and fabrication workshop using EAGLE CAD (Electronics Hobby Club)

II)Extra-Curricular activities:

Following are the Extra-Curricular activities organized by NHCE every year. Table 9.7.18: List of Extra-Curricular activities organized every year

Sl. No.	Name of the Event
1	Republic Day
2	Independence day
3	Teachers Day
4	Engineers Day
5	Kannada Rajyotsava
6	International Women's Day
7	Birthday of Subhas Chandra Bose
8	Birthday of Sir. M Visvesvaraya
9	Birthday of Sardar Vallabhai Patel
10	Birthday of Rani Channamma
11	Birthday of Jhansi Rani
12	Birthday of Chatrapathi Shivaji

Sl.	Name of the Event				
No.					
13	Birthday of Shaheed Bhagat				
15	Singh				
14	Birthday of Swami				
14	Vivekananda				
15	Birthday of Shaheed Hemu				
15	Kalani				
16	Birthday of Major Sandeep				
10	Unni Krishnan				
17	Deepavali				
18	Founders' Day				
19	Induction Program				
20	Graduation Day				
21	Freshers' Day				
22	Annual Day "SARGAM"				
23	Fresh Face				
24	IT Quiz				



a) Availability of sports facilities:

Table below summarizes the list of indoor and outdoor games available in the campus of NHCE.

Sl. No.	Name of the sport facility	Numbers available	Place of availability	Whether available beyond regular timings
1	Caroms	08 boards		
2	Chess	08 boards	Students	
3	Table Tennis	03 boards	Recreation	YES
6	Madison ball	12	Centre	
7	Yoga mats	06		

 Table 9.7.18: List of indoor games available in the campus

Sl. No.	Name of the sport facility	Available Kits	Place of availability	Whether available beyond regular timings	
1	Volley ball	12 balls			
2	Basket ball	24 balls			
3	Throw ball	06 balls			
4	Hand ball	10 balls	Open ground	YES	
5	Kho-Kho	2 poles	Open ground	115	
8	Football/Cricket	12 balls			
9	Shot put	02			
12	Badminton	10 bats			

Achievements in sport activities

Apart from academic achievement, we take pride in our students' achievement in sports activities.

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      Table 9.7.20: Summary of achievement in sports activities (2017 – 18)
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Sl. No	Name	USN	Sem	Event	Date	Tournament	No. of Days	Achievements
1	J Ruth Sharon	17ECE086	Ι	Basket Ball(W)	20 th to 22 nd Sep 2017	M.S RAMAIAH	03	Runners



2	Vinay Bhandari	1NH14EC155	VIII	Volleyball (M)	17 th to 19 th Feb 2018 28 th Feb to 1 st Mar-18 2 nd & 3 rd Mar 2018 4 th to 6 th Mar 2018 7 th & 8 th Mar 2018 2 nd to 4 th Apr 2018 17 th Apr 2018	RV MOMENTU M DEVADAN CUP VTU(BCZ) VTU(IZ) KREEDOST AV AZURA 2018 SAI LIO AMC	03 02 02 03 02 03 01 01	Participation Winners Winners Runners Winners Winners Winners Winners
3	Chirag S	1NH16EC713	IV	Volleyball (M)	17 th to 19 th Feb 2018 28 th Feb to 1 st Mar-18 2 nd & 3 rd Mar 2018 4 th to 6 th Mar 2018 7 th & 8 th Mar 2018 2 nd to 4 th Apr 2018 17 th Apr 2018 18 th Apr 2018	RV MOMENTU M DEVADAN CUP VTU(BCZ) VTU(IZ) KREEDOST AV AZURA 2018 SAI LIO AMC	03 02 02 03 02 03 01 01	Participation Winners Winners Winners Winners Winners Winners Winners
4	Bhavana Savanth	1NH15EC011	VI	Basketball (W)	25 th to 28 th Jan 2018 4 th to 11 th	VIE MALLESH WARAM RV MOMENTU M SPIEL KREEDOST AVA AZURA	04 07 03 03 03 22 02 02 03	Participation Runners Winners Participation Winners Winners Runners Runners



					2018 8 th to 10 th Mar 2018 14 th Mar to 4 th Apr 2018 12 th & 13 th Apr 2018 14 th to 16 th Apr 2018	2018 Dr. AIT(VTU) BLDEACET (VTU)		
5	Bharath M	1NH14EC403	VIII	Kabaddi (M)	22 nd & 23 rd Mar 2018 2 nd to 4 th Apr 2018 17 th & 18 Apr 2018	BGS CUP AZURA 2018 SAI LIO	02 03 02	II Runner Up Runners Participation
6	Achal	1NH15EC003	VI	Kabaddi (M) Kho Kho	22 nd & 23 rd Mar 2018 2 nd to 4 th Apr 2018 17 th & 18 Apr 2018 17 th to 19 th Apr 2018	BGS CUP AZURA 2018 SAI LIO RVCE	02 03 02 03	II Runner Up Runners Participation Participation
7	Lingraj Jamkhan di	1NH16EC722	IV	Foot Ball	17 th to 19 th Feb 2018 20 th to 21 st Feb 2018 1 st to 3 rd Mar 2018 2 nd to 4 th Apr 2018	RVCE VTU DEVANDA N CUP AZURA 2018	03 02 03 03	Participation Participation Participation Runners

SI. No	Name	USN	Sem	Event	Date	Tournament	No. of Days	Achievements
1	Chirag S	1NH16EC713	v	Volley Ball(M)	5 th to 9 th Sep 2018 11 th Sep 2018 22 nd to 24 th Sep 2018 3 rd & 4 th Oct 2018	ST. JOHN'S BTL KREEDOST AVA SPARDHA	05 01 03 02	Participation Winners Participation Participation



				1		1		1
2	Ritvik Giridhar	1NH16EC725	v	Basket Ball(M) Kabaddi	5 th to 9 th Sep 2018 14 th & 15 th Sep 2018 17 th & 18 th Sep 2018 21 st to 24 th Sep 2018 22 nd to 24 th Sep 2018 3 rd to 4 th Oct 2018 3 rd & 5 th Oct 2018	ST. JOHN'S VTU(BCZ) VTU(IZ) KREEDOST AVA MS RAMAIAH SPARDHA	05 02 04 03 02 04	Participation Runners Participation Participation Participation Participation
3	U	1NH17EC112	III	(M)	10 th to 13 th Oct 2018	INFINI	04	Participation
4	J Ruth Sharon * (Played VTU Nationals)	1NH17EC033	III	Basket ball(W)	1st to 4th Aug 2018 5th to 9th Sep 2018 21st to 24th Sep 2018 22nd to 25th Sep 2018 25th Sep to 2nd Oct 2018 3rd& 4th Oct 2018 22nd to 28th Oct 2018 3rd& 4th Oct 2018 22nd to 28th Oct 2018 3rd& to 28th Oct 2018 29th Oct to 9th Nov 2018	NHPS CUP ST JOHN'S KREEDOST AV MS RAMAIAH COURT WARS SPARDHA FIBA VTU (NATIONA LS)	04 05 04 04 08 02 07 12	Participation Participation Winners Winners Participation Winners Participation Participation
5	Giridhar V	1NH17EC112	IV	Kabadd i	6 th & 7 th Mar 2019 23 rd to 25 th Mar 2019 3 rd to 5 th Apr 2019 10 th to 11 th Apr 2019	ST. JOSEPH'S REVA UNIVERSIT Y NEW HORIZON CUP RNSIT	2 3 3 2	Participated Participated Winners Winners
6	Achal B	1NH15EC003	VIII	Kabaddi	6 th & 7 th Mar 2019 23 rd to 25 th Mar 2019 3 rd to 5 th Apr 2019 10 th to 11 th Apr 2019	ST. JOSEPH'S REVA UNIVERSIT Y NEW HORIZON CUP RNSIT	2 3 3 2	Participated Participated Winners Winners
7	Chirag S	1NH16EC713	V I	Volley ball(M)	9 th &10 th Feb 2019 28 th Feb to 2 nd Mar 2019 8 th 9 th Mar 2019 12 th & 13 th Mar 2019 28 th Mar 2019	RVCE CUFE VTU (BCZ) VTU SELECTIO NS FISA	2 3 2 2 1 2 3	Participated Participated Participated Participated Winners Winners Winners



					29 th to 30 th Mar	AMC		
					29 th to 30 th Mar 2019 3 rd to 5 th Apr 2019	AMC NEW HORIZON		
					ath a sath — a sasa	CUP		
8	Janardhana T	1NH17EC408	VI	Volley ball(M) Cricket	9 th &10 th Feb 2019 28 th Feb ot 2 nd Mar 2019 8 th 9 th Mar 2019 28 th Mar 2019 29 th to 30 th Mar 2019 3 rd to 5 th Apr 2019 16 th to 23 rd Feb 2019 7 th ,11 th ,13 th & 14 th Feb 2019	RVCE CUFE VTU (BCZ) FISA AMC NEW HORIZON CUP CUFE & RVCE VTU	2 3 2 1 2 3 6 4	Participated Participated Participated Winners Winners Winners Participated Participated
9	Bhavana Savanth	1NH15EC011	VIII	Basket Ball(W)	26 th Jan to 3 rd Feb 2019 8 th to 10 th Feb 2019 11 th to 15 th Feb 2019 28 th Mar to 5th April 2019 10 th April 2019 11 th &12 th Apr 2019	MALLESH WARAM RVCE SPIEL NEW HORIZON CUP VTU (BCZ) VTU (IZ)	9 3 5 9 1 2	II Runners Up Winners Participated Winners Winners Winners
10	J Ruth Sharon	1NH17EC033	IV	Basket ball(W)	26 th Jan to 3 rd Feb 2019 8 th to 10 th Feb 2019 11 th to 15 th Feb 2019 28 th Mar to 5th April 2019 10 th April 2019 11 th &12 th Apr 2019	MALLESH WARAM RVCE SPIEL NEW HORIZON CUP VTU (BCZ) VTU (IZ)	9 3 5 9 1 2	II Runners Up Winners Participated Winners Winners Winners
11	Ritvik Msvv	1NH16EC725	VI	Basket ball(M)	26 th Jan to 3 rd Feb 2019 8 th to 10 th Feb 2019 11 th to 15 th Feb 2019 28 th Feb to 2 nd Mar 2019 25 th Mar 2019 28 th Mar to 5th April 2019	MALLESH WARAM RVCE SPIEL/JNC CUFE CMP NEW HORIZON CUP	9 3 5 3 1 9	Participated Participated Participated Participated Participated Runners
12	Akhilesh Varma	1NH16EC006	VI	Foot ball	28 th Feb to 2 nd Mar 2019 6 th To 8 th Mar	CUFE NITTE VTU	3 3 2	Participated Participated Participated



					2019 21 st to 22 nd Mar 2019 3 rd to 5 th Apr 2019	NEW HORIZON CUP	3	Participated
13	Vinod K	1NH18EC421	IV	Foot ball	28 th Feb to 2 nd Mar 2019 6 th to 8 th Mar 2019 21 st to 22 nd Mar 2019 3 rd to 5 th Apr 2019	CUFE NITTE VTU NEW HORIZON CUP	3 3 2 3	Participated Participated Participated Participated
14	Radhika B	1NH15EC078	VIII	Volley ball (W)	15 th & 16 th Mar 2019 18 th & 19 th Mar 2019 28 th Mar 2019 29 th to 30 th Mar 2019 3 rd to 5 th April 2019	VTU (BCZ) VTU (IZ) AMC FISA NEW HORIZON CUP	2 2 1 2 3	II Runners Up Participated Winners Winners Runners
15	Meghash ree R	1NH16EC055	VI	Volley ball (W)	15 th & 16 th Mar 2019 18 th & 19 th Mar 2019 28 th Mar 2019 29 th to 30 th Mar 2019 3 rd to 5 th April 2019	VTU (BCZ) VTU (IZ) AMC FISA NEW HORIZON CUP	2 2 1 2 3	II Runners Up Participated Winners Winners Runners
16	Deepika S	1NH15EC017	VIII	Volley ball (W)	15 th & 16 th Mar 2019 18 th & 19 th Mar 2019 28 th Mar 2019 29 th to 30 th Mar 2019 3 rd to 5 th April 2019	VTU (BCZ) VTU (IZ) AMC FISA NEW HORIZON CUP	2 2 1 2 3	II Runners Up Participated Winners Winners Runners
17	Mounika E	1NH16EC730	VI	Volley ball (W)	15 th & 16 th Mar 2019 18 th & 19 th Mar 2019 28 th Mar 2019 29 th to 30 th Mar 2019 3 rd to 5 th April 2019	VTU (BCZ) VTU (IZ) AMC FISA NEW HORIZON CUP	2 2 1 2 3	II Runners Up Participated Winners Winners Runners



				y or actine	evenient in spor			_ 0)
Sl. No	Name	USN	Sem	Event	Date	Tournament	No. of Days	Achievements
1	Ritvik Msvv	1NH16EC725	VII	Basket ball (M)	1 st to 8 th Sep 2019 9 th to 11 th Sep 2019 16 th & 17 th Sep 2019 25 th to 28 th Sep 2019 1 st to 4 th Oct 2019 14 th to 16 th Oct 2019 25 th , 30 th & 31 st Oct 2019 3 rd to 9 th Nov 2019	COURT WARS RIT VTU (BCZ) VTU (IZ) KREEDOSTA	08 03 02 04 04 03 03 07	Participation Runners Runners Winners Participation Participation Participation Participation
2	J Ruth Sharon	1NH17EC033	v	Basketba ll (W)	7 th & 8 th Aug 2019 1 st to 8 th Sep 2019 9 th to 11 th Sep 2019 16 th & 17 th Sep 2019 1 st to 4 th Oct 2019 14 th to 16 th Oct 2019 3 rd to 9 th Nov 2019	MAYUR'S CUP COURT WARS RIT VTU (BCZ) KREEDOSTA VA PESIT ASSOCIATIO N CUP	02 08 03 02 04 03 07	Participation Participation Winners Participation III Place Participation Participation
3	Chirag S	1NH16EC713	VII	Volleyba ll (M)	26 th & 27 th Sep 2019 1 st To 4 th Oct 2019	SPARDHA 2019 KREEDOSTA VA	02 04	Participation III Place
4	Janardha na T	1NH17EC408	VII	Volleyba ll (M) Cricket (M)	26 th & 27 th Sep 2019 1 st to 4 th Oct 2019 12 th to 16 th Oct 2019 11 th ,13 th & 14 th Nov 19	SPARDHA 2019 KREEDOSTA VA PESIT RIT	02 04 05 03	Participation III Place Participation Participation
7	Aditya Choudha ry	1NH17EC003	v	Table Tennis	26 th & 27 th Sep 2019 1 st Oct 2019	SPARDHA 19 KREEDOSTA VA	02 01	Runners Participation
8	Souvik Das	1NH17EC096	v	Football	14 th to 17 th Sep 2019 26 th & 27 th Sep 2019 1 st to 4 th Oct 2019	CHRI-SPO SPARDHA 19 KREEDOSTA VA	04 02 04	Participation Runners Participation
10	Milan Rao	1NH17EC051	v	Football	14 th to 17 th Sep 2019	CHRI-SPO SPARDHA 19	04 02	Participation Runners

Table 9.7.22: Summary of achievement in sports activities (2019 – 20)



					26 th & 27 th Sep	KREEDOSTA	04	Participation
					2019	VA	01	i unicipution
					1 st to 4 th Oct 2019			
					14 th to 17 th Sep	CHRI-SPO		
					2019	SPARDHA 19	04	Participation
11	M Sachit	1NH16EC046	VII	Football	26 th & 27 th Sep	KREEDOSTA	02	Runners
					2019	VA	04	Participation
					1 st to 4 th Oct 2019	V 1 1		
					14 th to 17 th Sep	CHRI-SPO		
	Akhilesh				2019	SPARDHA 19	04	Participation
12	Varma	1NH16EC006	VII	Football	26 th & 27 th Sep	KREEDOSTA	02	Runners
					2019	VA	04	Participation
					1 st to 4 th Oct 2019 14 th to 17 th Sep			
					2019	CHRI-SPO	04	Participation
13	Rajeev	1NH18EC741	III	Football	26 th & 27 th Sep	SPARDHA 19	04	Runners
15	Kumar	INFIIOEC/41	111	FOOLDall	20° & 27° Sep 2019	KREEDOSTA	02 04	Participation
					1^{st} to 4^{th} Oct 2019	VA	04	rancipation
					25 th Jan to 3 rd Feb			
					2020	Malleshwaram		
					10^{th} to 15^{th} Feb	Cup	10	Participation
	Ritvik			Basket	2020	SPIEL	06	Participation
14	Msvv	1NH16EC725	VIII	ball (M)	22 nd to 24 th Feb	RVCE	03	Participation
					2020	DEVADAN	02	Winners
					28 th & 29 th Feb	CUP		
					2020			
					25 th Jan to 3 rd Feb			
					2020	Malleshwaram	10	3 rd PLACE
15	J Ruth	1NH17EC033	VI	Basket	10 th to 15 th Feb	Cup	10 06	RUNNERS
15	Sharon	INIII/EC033	V I	ball (W)	2020	SPIEL	00	WINNERS
					22 nd to 24 th Feb	RVCE	05	WINNERS
					2020			
					1 st and 2 nd Feb			
					2020			
					23 rd and 24 th Feb		02	Runners
					2020	UMANG	02	Runners
16	Chirag S	1NH16EC713	VIII	Volleyba	28 th and 28 th Feb	RVCE	02	Participation
	U			ll (M)	2020	CUFEE	02	Runners
					5 th and 6 th Mar	VTU (BCZ)	02	II Runners
					2020	VTU (IZ)		
					9 th and 11 th Mar			
					2020 1 st and 2 nd Feb			
					2020	UMANG	02	Runners
				Volley	2020 23 rd and 24 th Feb	RVCE	02	Runners
				ball (M)	2020	CUFEE	02	Participation
	Janardha				28 th and 28 th Feb	VTU (BCZ)	02	Runners
17	na T	1NH17EC408	VIII		2020 and 20 100	VTU (IZ)	02	II Runners
	=				5 th and 6 th Mar	CUFEE	04	Participation
				a · ·	2020	RVCE	04	Participation
				Cricket	9 th and 11 th Mar	VTU	02	Participation
					2020			÷
		I			2020			



					14 ^{th,} 15 th 20 th 23 rd Feb 2020 16 th to 19 th Feb 2020 11 th to 20 th Mar 2020			
18	Tanmaya Sh	1NH18EC112	IV	Volley ball (W)	13 th to 15 th Mar 2020	VTU(BCZ)	03	2 nd RUNNER UP
19	Meghashr ee R	1NH16EC055	VIII	Volley ball (W)	13 th to 15 th Mar 2020	VTU(BCZ)	03	2 nd RUNNER UP
20	Sneha N S	1NH18EC106	IV	Volley ball (W)	13 th to 15 th Mar 2020	VTU(BCZ)	03	2 nd RUNNER UP
21	Shivani Yadav	1NH18EC103	IV	Volley ball (W)	13 th to 15 th Mar 2020	VTU(BCZ)	03	2 nd RUNNER UP

Participation in Inter College and Intra College Events

The students of each department have also participated in different inter-college fests and have also become winners in a few events. In addition, the students also participate in several activities/events organized by the college as well. Given below is the list of such participation in the various academic years

Sl. No.	Event	Name of Participating Student	Semester	Date					
	Academic Year 2019-2020								
		Madhunitha R	5						
	One Tree One Student	Monika K Reddy	5	29.08.2019					
1.		Rishita S	5						
		Syale Rajkumar	5						
		Prajval T J	5						
	Donation Camp for the	Preshika J M	7						
2.	Flood Victims of North Karnataka and Kerala	Prithipa A	7	10.08.2019					
		Pavan Raj R	7						
3.	Times Fresh Face by Times of India	Naini Reddy	5	09.10.2019					

 Table 9.7.23: List of Inter College and Intra College Events Participated



	Bangalore Medical	Dhayana Sree Reddy	5			
4.	College Fest (Play	Shakthi A	5	16.10.2019		
	Team)	Raksha Krishi	3	-		
		Shakti A	5			
		Harsha E	7			
		Akhilesh	7			
		Joshua	1			
		Gridar	5			
		Kevin	1			
		Chirag Sharma	5			
		Janardhan	5			
		Deeksha S	5			
~		Deepthi S	5	0 < 10 10		
5.	Spartan Race	Nikshitha Bollineni	3	26.10.19		
		Arohi Jain	3			
		Harshith Pant	3	-		
		Bhoomika	5			
		Jeshav	7			
		Anurag	7			
		Rakshitha	7			
		Shakthi A	5			
		Syale Rajkumar	5			
		Rakshitha	7			
		A Anil Bharat	5			
		Dhayana Sree Reddy	5			
-		Madhunitha R	5			
6.	Kannada Rajyotsava	Monika K Reddy	5	04.11.2019		
		Sowmiya A	5			
		Syale Rajkumar	5			
		Vignesh R	4			
		Manisha	3			
	Acader	nic Year 2018-2019				
		Akshitha R	5			
1.	PES fest	Sahib	7	11.08.2018		
		Jitin Jain Mathew	7			



		Anju	7		
		Jitin Jain Mathew	7		
2.	Nagarjuna Fest	Anju	7	- 28.08.2018	
		Jitin Jain Mathew	7		
3.	Jain Fest	Akshitha R	5	- 27.9.2018	
		Prathiksha	5	3.11.2018	
4.	Kannada Rajyaothsava	Sanjana Anand	7	-	
		Kurthana	5	-	
5.	MUN Event	Jitin Jain Mathew	7	6.11.2018	
		Abhishekh VP	5		
		Ashwin	5	-	
<i>.</i>	Independence Day	Megha	5	15.0.2010	
6.	/Cultural Event	Achal	7	- 15.8.2018	
		Bhavana Savant	7	1	
		Anju	7		
		Bhavana	8	6.3.2019	
7.	Christ Univ Fest	Ashwin S	8		
		Soumya	4		
		Bhavana	8		
0		Ashwin S	8	4.04.2019	
8.	NIFT Fest	Anju	6		
		Kevine P Kumar	4		
		Bhavana	8	-	
0		Ashwin S	8		
9.	ICAT Fest	Anju	6	- 26.3.2018	
		Kevine P Kumar	4		
		Kushi Ponnamma	6		
10.	NMIT Fest	Soumya	4	25.02.2019	
10.		Dhanyashree V Reddy	4		
11.	IIM-B Fest	Kushi Ponnamma	6	26.08.2018	
12.	Presidency University Fest	Kushi Ponnamma	6	30.03.2019	
10	International School of	Kushi Ponnamma	6		
13.	Management	Sahib Arora	4	20.09.2018	
1.4		Kushi Ponnamma	6	7 10 2010	
14.	SJBIT Fest	Sahib Arora	4	- 7.10.2018	
15.	Krupanidhi College	Kushi Ponnamma	6	21.10.2018	



	Fest	Sahib Arora	4	
		Soumya	4	
16.	RVCE	Dhanyashree V	4	12.11.2018
		Reddy	4	
	CMRIT College Fest	Anju	6	
17.		Bhavana	8	15.03.2019
		Ashwin S	8	
18.	Ramaiah Institute of	Anju	6	25.04.2019
10.	Technology	Aliju	6	

Participation in Inter-College Technical Events

Students of the department are encouraged to participate in technical activities conducted by other colleges. Several of our students have won events as well. The details of such participation are listed below

Sl. No	USN	Name of the Student	Event Date	Event Details	Institution/ Organization	Achievement
1	1NH16EC012	Athira Ajayakumar K (ECE) & research team	06-02-2020	National Seminar on New Space: Small Satellites-Big Applications	Dr. Sivanthi Aditanar College of Engineering, Tiruchendur.	ICE Centenary Innovation Award as Young Research Team
2	1NH16EC012	Athira Ajayakumar K (ECE) & research team	08-02-2020	Internationl Cansat Workshop: Space Quest and launching of CanSata	Jeppiaar Institute of Technology Sriperumpudur, Chennai.	Young research engineer Award by National Design and research forum and UNISEC- India.
3	INH17EC052	Mohammed Ghassan and Team	04-03-2020	Hackathon	Nitte Meenakshi Institute of Technology, P.B.No.6429. Yelahanka, Bangalore 560064.	First Prize- 1 lakh rupees for winning under the category 'Future Mobility'.
4	1NH16EC012	Athira Ajaya kumar K	04 th to 06 th October 2019	CanSat/Rocketry International Competition	Serbia	First Prize (outside country event)
5	1NH16EC754	Tarun	04 th to 06 th October 2019	CanSat/Rocketry International Competition	Serbia	Second Prize (outside country event)
6	1NH16EC748	Shyam	04 th to 06 th October 2019	CanSat/Rocketry International Competition	Serbia	Third Prize (outside country event)



7	1NH15EC019	Denzel Abraham George	Sept to Dec 2018	Exchange program at ESIGELEC, Rouen, France.	Rouen, France	Participation in outside country event
10	1NH15EC019 1NH15EC062	Denzel Abraham George and Nikhil Riyaz	30 Nov - 05 Dec 2018	UNISEC-India at the 7th annual UNISEC- Global conference	Tokyo, Japan	Participation in outside country event
11	1NH16EC012	Athira Ajayakumar K	26 Oct to 03 Nov 2019	COSPAR Capacity Building Workshop on Small Satellites	Tel Aviv University, Israel	Participation in outside country event
12	1NH16EC036	K Girivardhan	05-09-2019	Indian Technology Congress 2019 - Human Digitalization: Future Intelligence(Seminar)	NIMHANS Convention Centre, Bengaluru	Participation
13	INH17EC092	Shoaib Ahmed	01-11-2019	India Innovation Challenge Design Contest	Texas Instruments – Online Event	Participation
14	INH17EC011	Bharath M	29-02-2020 & 01-03-2020	Technical Symposium	Indian Institute of Technology, Chennai, Tamil Nadu	Participation (Outside state event)
15	1NH16EC714 1NH16EC715 1NH16EC717 1NH16EC730	Gagana M R Gouri Shneha Priya Harshitha p. Mounica E.	13-06-2020	National Conference on Advances in Engineering, Management and Sciences- 2020	Santhiram Engineering College, Nandyal	Outside State Participation (Outside state event)
16	1NH15EC062 1NH15EC727 1NH15EC019	Nikhil Riyaz, Hariraj R and Denzel Abraham George.	17 th to 29 th June 2019	The International Summer Space School: Future Space Technologies and Experiments in Space	Samara National Research University, Samara, Russia	Presented the Seminar on 6U CubeSat for studying CME from the sun's corona Participation of students outside country
17	1NH15EC019	Denzel Abraham George	06 th & 07 th Oct 2018	AI4GOOD Hackathon by IBM at Amsterdam	IBM Open POWER Europe Summit and Hackathon, Amsterdam	Runner-up position for lung cancer malignancy detection model (outside country event)



Hackathon

Students of our department also participated in the Hackathon. The details are given below

Event	Name	USN	Conducted	Remarks
	Shashank B	1NH16EC095	CISCO	Winner
	T E Habishek	1NH16EC106	CISCO	Winner
Ideathon	Roshini M	1NH16EC085	CISCO	Winner
	Parithosh Vema	1NH16EC072	CISCO	Winner

III. Annual Student Activities:

The list of Annual activities conducted in the College/Department of Electronics and Communication Engineering are tabulated in Table 9.72.

The pictures of annual events are shown in figures.

Sl. No.	Event	Facilities	Participants	Month of conduction
1	College Annual day (SARGAM)	Seminar hall, LCD, PCs, Accommodation	Students from Engineering colleges	2018-19 (Sept) 2017-18 (Sept) 2016-17 (Sept)
2	Sports Day ECE	Recreation center, Indoor and outdoor accommodation	Students from various Engineering disciplines	2018-19 (Sept) 2017-18 (Sept) 2016-17 (Sept)
3	ALUMNI meet	Seminar hall, LCD, PCs, OHP, Accommodation	ALUMNI Students from NHCE	2018-19 (Aug) 2017-18 (Aug) 2016-17 (Aug)

 Table 9.7.26: List of Annual activities





Figure 9.39: Sargam 2019



Figure 9.40: Sargam 2019





Figure 9.41: Alumni meet 2019

9.7.4 Co- Curricular and extra- curricular Activities of ME

The several values learn from Co-curricular activities like:

- Cultural Values
- Development of Social Values
- Psychological Values
- Recreational Values
- Physical Development Values
- Educational value

Co-curricular activities play an important role in the development of vision, thought even though this is not part of core curriculum. The university has designed and developed an environment in which students participate in Co-Curricular activities while maintaining the academic standards. It will play a vital role for growth of students in different walks of life.

The role of Co- Curricular activities in student's life are important and listed as:

- 1. Overall Personality
- 2. Strengthened Self-confidence



- 3. Developed specialized skills
- 4. Improved Academic performance
- 5. Greater Opportunities
- 6. Sense of Responsibilities
- 7. Exposure to new activities

IV) Co-curricular Activities

Under co-curricular activities NHCE celebrates Engineers day, Mathematics day, Education day, and Teachers day, professional society activities under SAE, ISTE and annual day. Along with the above mentioned events various co-curricular activities like debate and discussion, Quiz, paper presentations, seminars and group discussion sessions are conducted.

The details of various categories of activities are listed below:

i. Annual activities:

Sl. No.	Event	Facilities	Participants	Month of conduction
1	College Annual day (SARGAM)	Seminar hall, LCD, PCs, Accommodation	Students from Engineering colleges	(Sept-2017) (Sept-2018) (Sept-2019)
2	National level Project Expo "TechHorizon"	Seminar hall, LCD, PCs, OHP, Accommodation	Students from Engineering Institutions	(May 2017) (May 2018) (May 2019)
3	National level paper presentation "MechHorizon"	Seminar hall, LCD, PCs Accommodation	Students from Engineering Institutions	(May 2017) (May 2018) (May 2019)
4	Sports competition "Kreedayantrik"	Recreation centre, indoor & outdoor accommodation	Students from various Engineering disciplines	(Oct 2019)

 Table 9.7.27: List of Annual activities





Figure No 9.42: Glimpses of "Sargam"

TecHorizon 2019



New Horizon College of Engineering organized National Level Project exhibition *TecHorizon 2019* on 27-04-2019. Dr. K R Venugopal, Vice Chancellor, Bangalore University was Guest of Honour and Mr. O P Khanna, chairman, Needy Heart Foundation was Chief Guest. Around 600+ final engineering projects were exhibited. The theme for this year was "*smart India*". Good number of institutes from state as well as outside Karnataka were part of this mega event. Jury members were from the reputed organization and NHCE alumni association.



Figure No 9.43: Glimpses of "TechHorizon"







Figure No 9.44: Glimpses of "Kreedayantrik"

				ME			
SL NO	NAME OF THE STUDENT	USN	DEPT	SEM	EVENT AND REASON	DATE	TIME
					Club Meeting	14.08.2019	3.50 Pm to 4.50 Pm
1	Pavan Kumar Reddy	1NH14ME091	ME	7th	Krishna Janmastami	24.08.2019	Full Day
-	- crain rainer rizoday	111111111111111111111111111111111111111		1 41	One Tree One Student	29.08.2019	Full Day
					KANNADA RAJYOTSAVA	04/11/2019,05.11.19	10.00am onwards
2	Vishala	1NH14ME142	ME	7th	Krishna Janmastami	24.08.2019	Full Day
3	Manoj Gowda T C	1NH16ME055	ME		Donation Camp for the Flood Victims of North Karnataka and Kerala	10.08.2019	Full Day
					Club Meeting	14.08.2019	3.50 Pm to 4.50 Pm
4	Sammed Patil	1NH16ME094	ME	7	Donation Camp for the Flood Victims of North Karnataka and Kerala	10.08.2019	Full Day
N	Serningaren	1111101012004	IVIL		KANNADA RAJYOTSAVA	22/10/2019,23.10.19	2:50 TO 4:50
						04/11/2019,05.11.19	10.00am onwards
5	Vaijinath	1NH16ME120	ME	7th	Krishna Janmastami	24.08.2019	Full Day
6	Varun Uday Chebbi	1NH16ME121	ME	7th	Donation Camp for the Flood Victims of North Karnataka and Kerala	10.08.2019	Full Day
					Club Meeting	14.08.2019	3.50 Pm to 4.50 Pm
7	Karan S Kumar	1NH17ME040	ME		Club Meeting	14.08.2019	3.50 Pm to 4.50 Pm
8	Prashant N Prasad	1NH17ME072	ME	5th	Club Meeting	14.08.2019	3.50 Pm to 4.50 Pm
9	Zaid Huq	1NH17ME109	ME	5th	Club Meeting	14.08.2019	3.50 Pm to 4.50 Pm
10	Akash B G	1NH17ME402	ME	7th	Krishna Janmastami	24.08.2019	Full Day
	Anton Konnen	11011714767	ME	7th	Krishna Janmastami	24.08.2019	Full Day
11	Arjun Kumar	1NH17ME407	MIE	7th	One Tree One Student	29.08.2019	Full Day
12	Hariprasad P	1NH17ME414	ME	7th	Krishna Janmastami	24.08.2019	Full Day
13	Naresh R	1NH17ME424	ME	7th	Krishna Janmastami	24.08.2019	Full Day
14	Sachin M D	1NH17ME427	ME	5th	Club Meeting	14.08.2019	3.50 Pm to 4.50 Pm
15	Shivu Kumar	1NH17ME428	ME	7th	Krishna Janmastami	24.08.2019	Full Day
-					Club Meeting	14.08.2019	3.50 Pm to 4.50 Pm

Figure No 9.45: Student participation at sports events



ii. Achievements in Co-curricular activities:

Sl.	Name of the activity	No. of students participated			
No.		2016-17	2017-18	2018-19	
1	Project Expo / Paper presentation	67	100	100	
2	Technical workshops	3	3	3	
3	Industrial Visit	5	07	07	

 Table 9.7.28: Summary of achievements in Co-curricular activities



Figure No 9.46: Industrial visit



Workshop

Two days faculty development program "3D & Surface modeling through UXD/CATIA-Dassault systems" was organized by Department of Mechanical Engineering, in association with EDS Technologies Pvt Ltd, Bangalore was held from 17th to 19th July 2019 at CAED Lab, NHCE. The Programme also intends to develop the knowledge of participants for simulation with advanced software in the relevant field for inculcating learning values in students and guiding and monitoring their progress. The program enhanced the understanding on recent trends in Computer aided Design and manufacturing systems.





A One day hands-on workshop on "Computational Fluid Dynamics - simulation and analysis" was organized by Department of Mechanical Engineering, in association with KFour metrics Bangalore and POINTWISE Texas USA was held on 17th July 2019 at SAP NextGen- Centre of Excellence Lab, NHCE. This workshop intended to give exposure to the faculties about the scope and essential fundamentals of CFD. Computational Fluid Dynamics (CFD) being an important subject and skill in industry as well as academia was discussed in-depth during the sessions. The workshop was attended by participants from faculty members of various colleges and in house.

Figure No 9.47: Technical Workshop

V) Extra-Curricular activities

a. Availability of sports facilities:

140	Table 9.7.29. List of Extra-Curricular activities organized every year					
Sl. No.	Name of the Event		Sl. No.	Name of the Event		
1	Republic Day		14	Birthday of Shaheed Bhagat Singh		
2	Independence day		15	Birthday of Swami Vivekananda		
3	Teachers Day		16	Birthday of Shaheed Hemu Kalani		
4	Engineers Day		17	Birthday of Major Sandeep Unni Krishnan		
5	Kannada Rajyotsava		18	Deepavali		
6	International Women's Day		19	Founders' Day		
7	Birthday of Subhas Chandra Bose		20	Induction Program		
8	Birthday of Sir. M Visvesvaraya		21	Graduation Day		
9	Birthday of Sardar Vallabhai Patel		22	Freshers' Day		
10	Birthday of Rani Channamma		23	Annual Day "SARGAM"		

Table 9.7.29: List of Extra-Curricular activities organized every year



11	Birthday of Jhansi Rani
12	Birthday of Chatrapathi Shivaji
13	Birthday of Dr. APJ Abdul Kalam

24	Fresh Face
25	IT Quiz



Figure No. 9.48: Kannada Rajyotsava



Figure No 9.49: Birthday of Dr. APJ Abdul Kalam

Sl. No.	Name of the Sport Facility	Numbers Available	Place of Availability	Whether Available beyond Regular Timings
1	Caroms	08 boards		
2	Chess	08 boards	Students	
3	Table Tennis	03 boards	Recreation	YES
4	Madison Ball	12	Centre	
5	Yoga Mats	06		

 Table 9.7.30: List of indoor games available in the campus



Sl. No.	Name of the Sport Facility	Available Kits	Place of Availability	Whether Available beyond Regular Timings
1	Volley ball	12 balls		
2	Basket ball	24 balls		
3	Throw ball	06 balls		
4	Hand ball	10 balls	Open ground	YES
5	Kho-Kho	2 poles	Open ground	11.5
6	Football/Cricket	12 balls]	
7	Shot put	02		
8	Badminton	10 bats		

Table 9.7.31: List of outdoor games available in the campus

Achievements in sport activities

Sl.	Nome of the grout	No. of students		s
No.	Name of the sport	2016-17	2017-18	2018-19
1	Volley ball	4	2	2
2	Basket ball	2	2	2
3	Football	3	4	3
4	Hand ball	-	2	2
5	Kabaddi	3	2	2
6	Wrestling & Judo	2	-	-
7	Weight Lifting	1	-	-

 Table 9.7.32: Summary of achievements in sport activities

b) National Service Scheme (NSS):

NSS is a voluntary association of young people in Colleges, Universities. The cardinal principal of the NSS program is that it is organized through participation in community service; gets a sense of involvement in the task of nation building.

List of NSS Events:

Table 9.7.33: Summary of NSS events conducted in the academic years of2016-19

Sl. No.	Event Name	No. of students participated
1	Blood donation camp (Lions club)	210
2	Women Empowerment	70



3	Orphanage Visit	25
4	Blood donation camp (Nimhans & Kidwai)	143
5	Blood donation camp (Nimhans)	203
6	Blood donation camp (Grace Blood Bank)	127
7	Blood donation camp (Lions club)	91



Figure 9.50: Blood donation camp

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CRITERION 10

GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES

591



	GOVERNANCE, INSTITUTIONAL	
CRITERION 10	SUPPORT AND FINANCIAL	120
	RESOURCES	

10.1 Organisation, Governance and Transparency (55)

10.1.1. State the Vision and Mission of the Institute (5)

(Vision statement typically indicates aspirations and mission statement states the broad approach to achieve aspirations)

VISION OF THE INSTITUTE

To emerge as an Institute of eminence in the fields of engineering, technology and management in serving the industry and the nation by empowering students with a high degree of technical, managerial and practical competence.

MISSION OF THE INSTITUTE

To strengthen the theoretical, practical and ethical dimensions of the learning process by fostering a culture of research and innovative among faculty members and students.

To encourage long-term interaction between the academia and industry through their involvement in the design of curriculum and its hands-on implementation.

To strengthen and mould students in professional, ethical, social and environment dimensions by encouraging participation in co-curricular and extracurricular activities.

10.1.2 Availability of the Institutional Strategic Plan and Its effective implementation and Monitoring (25)

Institutional strategic plan has been made by performing deep analysis of Strength, weakness, Opportunity and Threat of the institute. Several meetings and interactions with Management, Director, Dean Academic, Dean Research, Registrar, all HoD's, Faculty



members, Supporting staff, Students, Parents and Alumni were held for the same. The strategic plan is given below:

Following key points about institute were discussed to carry out the analysis

- Infrastructure Strategic plan
- Teaching Learning(Curriculum) Strategic plan
- Student Centric Strategic plan
- Faculty Strategic plan
- Research and Development Strategy plan
- Co-curricular Activity Strategy plan
- Extra-curricular Activity Strategy plan

After several brainstorming session by keeping above key points in mind, following strategy plans and its implementation & monitoring have been set up that transform New Horizon College of Engineering into globally recognize technical institute.

The Quantification for all the above Strategic plans are mentioned in the following table:

(i) Strategic plan

	Strategic Plan										
Infrastructure											
Acad	lemic Years	2019-20	2020-21	2021-22	2022-23	2023-24					
S.No	S.No Key Progress Area (KPA)		sive Enhanc	ement Targ	ets (PET)-Y	ear wise					
1	Class rooms with Smart Boards	3 per Department	6 per Department	All Class rooms	All Class rooms	All Class rooms					

Table:10.1 Infrastructure Strategic plan



2	Modernization of Lab	25%	30%	50%	New	New			
3	Industry Institute Intraction cell & ED cell	Existing and Coordinating with all the department & Outside world							
4	Centre of Excellence (CoE)	Existing and Coordinating with all the department & Outside world							
5	CMS &LMS	Institute is Presently using							
6	Library ebooks		100	% Existing					
7	Seminar Hall	3 in Institute	+1	+2	+3	+4			
8	Introduction of UG and PG courses	7UG & 3 PG	+2UG	+2UG	+2UG	+2UG			
9	eGovernance		Η	Existing	-				

Table: 10.2 Teaching Learning(Curriculum) Strategic plan

	Strategic Plan										
	Teaching Learning(Curriculum)										
A	cademic Years	2019-20	2020-21	2021-22	2022-23	2023-24					
S. No	Key Progress Area (KPA)	Progre	essive Enhand	cement Targe	ets (PET)-Yea	ır wise					
1	NIRF ranking	106	114	110	105	100					
2	ATAL Ranking	TOP 06-25	Top 5	Top 3	Top 2	Top 1					



Criterion-10 Self-Assessment Report (SAR

3	Professional Society tie up	12	15	20	25	30
4	Branding (Marketing)	PAN INDIA & Social Media	PAN INDIA, Print & Social Media	PAN INDIA, Print & Social Media	PAN INDIA+ Asian	PAN INDIA+ Asian and Europe
5	Innovative teaching & Learning	1 Online Course per Department	1 Online Course per Department	2 Online Course per Department	2 Online Course per Department	3 Online Course per Department
6	Outcome based education (OBE Implementation)	Implementa- tion	Enhance & Improve	Enhance & Improve	Enhance & Improve	Enhance & Improve
7	NBA	All Programs	6 Years 4 Program Tier 1	6 Years 3 Program Tier 1	-	-
8	NAAC	All Programs	All Programs	All Programs	All Programs	All Programs
9	Industrial Collaborated Courses	10 Courses	15 Courses	20 Courses	25 Courses	30 Courses
10	Leadership courses in curricula	2 Courses	4 Courses	6 Courses	8 Courses	10 Courses



	Strategic Plan										
	Student Centric										
Ac	ademic Years	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024					
S.No	Key Progress Area (KPA)	Progres	sive Enhanc	ement Targe	ets (PET)-Ye	ear wise					
1	Admission-UG	Top 8000	Top 6000	Top 5000	Top 3000	Top 2000					
2	Admission-PG	GATE Top 2000	GATE Top 1000	GATE Top 800	GATE Top 600	GATE Top 500					
3	Lateral Entry Admission	Тор 5000	Top 5000 Top 4000		Top 3000 Top 2000	Top 1000					
4	Placement-UG	75% Avg 4 Lakhs	80% Avg 5 Lakhs	82% Avg 5.5 Lakhs	85% Avg 6 Lakhs	87% Avg 6.5 Lakhs					
5	Fee Concession	10%	12%	15%	17%	20%					
6	Best Student - Awards			Existing	1						
7	Top academic Students Scholarship (Class-Wise)	Existing									

Table: 10.3 Student Centric Strategic plan



	Strategic Plan										
	Faculty										
	Academic Years	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024					
S.Key ProgressNoArea (KPA)											
1	Pass % (UG)	90% and above									
2	Pass % (PG)	100% and above									
3	Faculty Average Experience	8 Years	10 Years	12 Years	14 Years	16 Years					
4	Publication per Dept	10 Publications	15 Publications	20 Publications	25 Publications	30 Publications					
5	Ph.D per Department in Percentage wise	30	32	35	40	50					
8	Industrial training	2 per Department	3 per Department	5 per Department	7 per Department	10 per Department					
9	Faculty from industry	5 Nos.	7 Nos.	9 Nos.	12 Nos.	15 Nos.					

Table: 10.4 Faculty Strategic plan



Strategic Plan								
	1	Research an	d Developn	nent				
A	cademic Years	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025		
S.No	Key Progress Area (KPA)	Progressi	ive Enhance	ement Targ	ets (PET)-Y	Year wise		
1	Research FDP/workshop	10 Nos.	14 Nos.	20 Nos.	24 Nos.	30 Nos.		
2	Ph.D registration in Percentage	30	40	50	60	70		
3	Ph.D completion in Percentage	30	40	50	60	70		
4	Ph.D Guidance in Percentage	20	30	40	50	60		
5	Funded project applied per Department	10	20	30	40	50		
6	Funded seminar/workshop conducted	10	20	30	40	50		
7	International conference	1	2	3	4	5		
8	Sponsored project	1 Crore	2 Crores	3 Crores	4 Crores	5 Crores		
9	Consultancy	1 Crores	1.25 Crores	1.5 Crores	2 Crores	2.5 Crores		
10	MoU with industry	10	15	20	25	30		
11	MoU with IIsc, IIT, NIT and premier institutions	2	3	4	5	6		

Table: 10.5 Research and Development Strategy plan



12	Patent provisionally filed	209 Nos.	100 Nos.	125 Nos.	150 Nos.	200 Nos.
13	Patent published	40 Nos.	50 Nos.	75 Nos.	100 Nos.	125 Nos.
14	Research Centre	11 Nos.	+2 Nos.	+2 Nos.	+2 Nos.	+3 Nos.
15	Technology incubator	10 Nos.	20 Nos.	30 Nos.	40 Nos.	50 Nos.

Table: 10.6 Co-curricular Activity Strategy plan

	Strategic Plan									
	Co-curricular Activity(Students)									
Academic Year		2020-2021	2021-2022	2022-2023	2023-2024	2024-2025				
S.No	Key Progress Area (KPA)	Progressive Enhancement T			ets (PET)-Y	lear-wise				
1	Industrial visit	4	6	8	10	12				
2	Exchange programme	2%	4%	6%	8%	10%				
3	Value added courses	4	6	8	10	12				
4	MOOC courses	1	2	3	4	5				



	Strategic Plan									
	Extra-curricular Activity (Students)									
Aca	demic Years	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025				
S.No Key Progress Area (KPA)		Progressi	ve Enhance	ment Targe	ets (PET)-Y	ear-wise				
1	Sports & Games	10	12	14	15	20				
2	Tournaments @ level	5	6	7	8	10				
3	Alumni association	100%	100%	100%	100%	100%				
4	NSS	1	Existing	1						
5	Satellite Club	2%	4%	6%	8%	10%				
6	Rocketry Club	2%	4%	6%	8%	10%				

Table: 10.7 Extra-curricular Activity Strategy plan

(ii) Monitoring

Sl	Stratagia Dlan	Monitoring	
No	Strategic Plan		
1	Infrastructure	Registrar	
2	Teaching learning	Dean – Academics	
3	Student	Dean – Students Affairs	
4	Faculty	HOD's	
5	Research &	Dean – Research &	
	Development	Development	
6	Co-curricular	Dean – Academics	
7	Extra-curricular	Library	



10.1.3 Governing body, administrative setup, functions of various bodies, service rules, Procedure, recruitment and promotional policies (10)

List the governing, senate and all other academic and administrative bodies; their memberships, functions and responsibilities; frequency of the meetings and attendance therein, in a tabular form. A few sample minutes of the meetings and action-taken reports should be annexed.

The published rules including service rules, policies and procedures; year of publication shall be listed. Also state the extent of awareness among the employees/students.

- * To ensure observance and compliance of instructions issued by AICTE, Government of Karnataka and affiliating University.
- * To ensure that the building, land, furniture and facilities are not being used for any other purpose (such as holding political meetings, communal meetings), except for running AICTE approved courses in the institute.
- * To submit reports and returns from time to time to AICTE, Government of Karnataka and affiliating University.
- * Create peaceful and favourable atmosphere for study free from ragging.

Powers and Functions of Chairperson of Governing Council

- * The Chairperson shall intimate the date of the Governing Council meeting to the Principal-cum-Member Secretary for arrangement of Governing Council meeting. In case the Principal-cum-Member Secretary fails or ignores to arrange Governing Council meeting, the Chairperson can call for Governing Council meeting.
- In the event of taking vote on any decision and if a tie occurs, then decision of Chairperson shall be final.
- * The Chairperson shall ensure that the decisions taken in Governing Council meeting are implemented by Member Secretary.
- * The Chairperson shall ensure that the Governing Council is functioning properly to meet the mission of the Institute.



Powers and Functions of Member Secretary of Governing Council

- * Member Secretary of Governing Council of the Institute shall be the Principal, who executes the decisions taken in the Governing Council on behalf of the Governing Council.
- * By the order of the Chairperson, Member Secretary shall arrange the Governing Council meeting. In case of unfavouring situations, he/she will intimate the cancellation of the meeting the Chairperson and other members of the Governing Council.
- * He would take correspondence on behalf of the Governing Council meeting in relation with the decisions taken in it and get it confirmed by the Chairperson and members present. With confirmation, the proceedings would be forwarded to AICTE, Government of Karnataka and affiliating University.
- * The Member Secretary would maintain the properties of the institution and remain in-charge of it, the title deeds and papers related to the need of the institution.
- * He will exercise powers and functions as maybe imposed and assigned by the Governing Council from time to time.
- * The Member Secretary would issue appointment letters to the staffs selected by the Recruitment Committee after the approval from the sponsoring trust and the Governing Council of the institute.
- * To ensure observance and compliance of instructions issued by AICTE, Government of Karnataka and affiliating University.
- * To ensure that the building, land, furniture and facilities are not being used for any other purpose (such as holding political meetings, communal meetings), except for running AICTE approved courses in the institute.
- * To submit reports and returns from time to time to AICTE, Government of Karnataka and affiliating University.
- * Create peaceful and favourable atmosphere for study free from ragging.



Powers and Functions of Chairperson of Governing Council

- The Chairperson shall intimate the date of the Governing Council meeting to the Principal-cum-Member Secretary for arrangement of Governing Council meeting. In case the Principal-cum-Member Secretary fails or ignores to arrange Governing Council meeting, the Chairperson can call for Governing Council meeting.
- * In the event of taking vote on any decision and if a tie occurs, then decision of Chairperson shall be final.
- * The Chairperson shall ensure that the decisions taken in Governing Council meeting are implemented by Member Secretary.
- * The Chairperson shall ensure that the Governing Council is functioning properly to meet the mission of the Institute.

Governing Council

The composition of Governing Council as follows;

SI No.	Member	Address	Designation	Position
1	Dr. Mohan Manghnani	New Horizon College of Engineering, Marathalli, Outer Ring Road, Kadubisanahalli, Bangalore- 560 103	Chairman, NHEI	Chairperson
2	Mr. H N Surya Prakash	New Horizon College of Engineering, Marathalli, Outer Ring Road, Kadubisanahalli, Bangalore- 560 103	Registrar	Member

Table 10.8 Governing Council



3	Dr. R Bodhisatvan	New Horizon College of Engineering, Marathalli, Outer Ring Road, Kadubisanahalli, Bangalore- 560 103	Principal- NHC(M)	Member
4	Dr. M. S. Ganesha Prasad	New Horizon College of Engineering, Marathalli, Outer Ring Road, Kadubisanahalli, Bangalore- 560 103	Dean & Head – Department of Mechanical Engineering	Member
5	Dr. Prashanth C S R	New Horizon College of Engineering, Marathalli, Outer Ring Road, Kadubisanahalli, Bangalore- 560 103	Dean-Academics	Member
6	Dr. Vijilius H Raj	New Horizon College of Engineering, Marathalli, Outer Ring Road, Kadubisanahalli, Bangalore- 560 103	Controller of Examination	Member
7	Prof. Gurucharan Singh	New Horizon College of Engineering, Marathalli, Outer Ring Road,	Executive Director – Training & Placements	Member



		Kadubisanahalli, Bangalore- 560 103		
8	Dr. B.V. Ravishankar	Principal BMS & EC Member VTU	Educationist	Member
9	Prof. H Devraj UGC Nominee	New No. 23/2 IIICommissionMain Road, GandhiCommissionNagar, Adyar(UGC) NomineeChennai – 600 020M		Member
10	AICTE Nominee	Director, AICTE, Palace Road, Bangalore- 560001	Council (AICTE) Nominee	Member
11	DTE Nominee	Directorate of Technical Education, Bangalore – 560001	State Government Nominee	Member
12	Sri. Sagar Nidavani	Executive Council Member VTU	University (VTU) Nominee	Member
13	Prof. T G Sitharam	Professor – Department of Civil Engineering	Professor	Member
14	Dr. Manjunatha	New Horizon College of Engineering,PrincipalMarathalli, Outer Ring Road, Kadubisanahalli, Bangalore- 560 103Principal		Ex Officio Member Secretary



Academic Council

Structure/Constitution	Functions/Responsibilities	Frequency of Meetings
Academic Council constituted with		
 Institution's distinguished Principal as Council Chairman Dean- Academic affairs as Member Secretary 	•Recommend and approve faculty boards, academic regulations, curriculum-scheme and syllabi, teaching & learning practices	
•All Heads of the Departments as Council Members	•Frame regulations regarding students admission into programmes and to conduct of	
•1-Professor, 1-Associate Professor or 1- Assistant Professor(as per seniority in institution) from each department as representing council members(for a period of 2-years)	examinations •Suggest and recommend proposed teaching methods/techniques(LCD projector, Smart Board, Online etc) and student performance	Twice in a Year
•4(Min.)-External experts from engineering education or Industry as council members nominated by Board of Governors(B.O.G)	 evaluation metrics to enhance quality education Approve students for conferment of degrees, diplomas or certificates by the University 	



•1-External expert for each	•Recommend to the B.O.G for
major engineering discipline	about 1. Institute new
nominated by vice chancellor,	programmes of study 2. Student
VTU, Belgaum as council	scholarships, fellowships, medal,
member	prizes with the guideline of
	relevance
•Institution's controller of	
examination(COE) as council	•Promote and verify research
member	activities of the institution

Table 10.9 Academic Council

Sl No.	Category	Sl No.	Name
Ι	Principal of the College – Chairman	1	Dr. Manjunatha
		1	Dr. M S Ganesh Prasad
	All Heads of the Dept. – Members	2	Dr. Niranjan P S
Π		3	Dr. B Rajalakshmi
		4	Dr. Sanjeev Sharma
		5	Dr. Ram Kumar S
		6	Dr. R.J. Anandhi
		7	Dr. Shridhar Kurse



		8	Dr. Ananda Vardhan
		0	
		9	Dr. Revathi V
		10	Dr. Anusuya Devi V S
		11	Dr. Asha V
		12	Dr. Sheelan Misra
		13	Dr. Srinivasa G
		14	Dr. Sowmya Narayanan
III	Controller of Examination	1	Dr. Vijilius H Raj
	Teachers of the College representing different level of teaching staff	1	Dr. Mohan Kumar
IV		2	Prof. Aravinda
		3	Dr. Adhikari
		4	Dr. A R Sainath
V	Experts from outside the college representing areas such as industry, R&D, Tech. Edn	1	Dr. Krishnan – PESIT
		2	Mr. Ashish – Skyfi lab
		3	S K L N Prasanna, Guhring Industries, TT – Head, Bangalore



		4	Dr. Sanjay Gupta, Director Innovation Council, Dell Services
		5	Ajit Kumar Padhi, Director Operation, NASSCOM
		1	Dr. Shadashivegowda, Principal- Vidya Vardhaka College of Engineering, Mysuru
VI	Nominees of University (VTU)	2	Dr. Shivyoginath, Prof., Dept. of Civil Engineering, Basaveswara Engineering College, Bagalkot
		3	Dr. Mary Cherian, Prof., Dept. of CSE, Dr. A.I.T. Bangalore
VII	Dean Academics – Member Secretary	1	Dr. Prashanth C S R

Academic Year	Date of	No. of Members	No. of Members
	Meeting	Attended	Absent
CAY(2019-20)	21-09-2019	21	3
CAT(201)-20)	29-06-2019	24	-
	05-10-2018	18	8
CAY m1(2018-19)	23-06-2018	22	4
	22-01-2018	21	2
CAY m2(2017-18)	03-08-2017	20	2



	28-01-2017	20	-
$CAV m^{2}(2016, 17)$	23-07-2016	22	3
CAY m3(2016-17)	22-01-2016	20	1
	16-12-2015	22	2
	09-11-2015	20	1
CAY m4(2015-16)	18-09-2015	19	1
	31-07-2015	20	-
	06-06-2015	17	3

Statutory Committees

A number of committees are present in the college that are formed taking into the considerations of the students and faculties. There is diversification that ensures that the committees address any issues faced by the stake holders and also aims for the improvements under the purview of the respective committees. The various committees and their in-charges are as follows:

 Table 10.10 Statutory Committees

Sl No	Committees	In-Charge	Designation
1	Accreditation Committee	Dr. M. S. Ganesha Prasad	Dean & Head – Department of Mechanical Engineering
2	Admission Committee	Mr. H N Suryaprakash Ms. Aruna	Registrar Head- Admissions
3	Alumni Committee	Dr. M. S. Ganesha Prasad	Dean & Head – Department of Mechanical Engineering



4	Anti- Ragging Committee	Mr. H N Suryaprakash	Registrar
5	Anti- Sexual Harassment Committee	Dr. R.J. Anandhi	Professor & Head – ISE
6	Co- Curricular Committee	Dr. Anitha S. Rai	Head- Library & Information Center
	Community Development	Mr. H N	Registrar
7	Center (Public Welfare	Suryaprakash	HOD- Marketing &
	Committee)	Ms. Deepa Ganesh	Branding
8	Counselling Committee	Dr. Reena Jain	Head-Counselling
0		Dr. Aritha C. Dai	Head- Library &
9	Cultural Committee	Dr. Anitha S. Rai	Information Center
10	Curriculum Development Committee	Dr. C S R Prashanth	Dean- Academics
11	Disciplinary Committee	Mr. H N Suryaprakash	Registrar
10	Energy Conversion Audit	Dr. Ram Kumar S	HOD-EEE
12	Committee	Mr. Karthik	Estate Manager
13	Examination Committee	Dr. Vijilius Helena	Controller Of
15	Examination Committee	Raj	Examinations
		Mrs. Malathi	Senior Executive
14	Finance Committee	Madhusudan	Director – Accounts &
			Finance
15	Hostel (Boys) Development	Mr. H N	Registrar
10	& Welfare Committee	Suryaprakash	
16	Girls Hostel Development	Ms. Aruna	Head- Admissions
10	& Welfare Committee	1713. / Mullu	11000 / 101113510115
	Infrastructure Development	Dr. P S Niranjan	Head- GPE Program &
17	Committee	Mr. Rao	HOD- Civil Engg.
		····· · ····	Project Manager

	In-Plant Training/		
10	Industrial/ Career	Prof. Gurucharan	Executive Director-
18	Guidance/ Placement	Singh	Training & Placements
	Committee		
19	Instrumentation Cell	Dr. Sanjeev Sharma	HOD- ECE
	Internal Quality Assessment	Dr. Gopal Krishna	Dean – R&D
20	Internal Quality Assessment & Assurance Cell	Mr. Anil Kumar	Head – Quality
	& Assurance Cen	Hangal	Assurance
21	Library Committee	Dr. Anitha S. Rai	Head- Library &
21	Liorary committee	Di. Amina S. Kai	Information Center
		Dr. M. S. Ganesha	Dean & Head –
22	NCC Committee	Prasad	Department of
		Mr. H N	Mechanical Engineering
		Suryaprakash	Registrar
23	NSS Committee	Dr. Anitha S. Rai	Head- Library &
23		DI. Allula S. Kal	Information Center
24	News Letter Committee	Dr. S. Mohan Kumar	Associate Professor,
24	News Letter Committee	DI. S. Wionan Kumai	Department of ISE
			Dean & Head –
	Dhysical Education &	Dr. Ganesh Prasad	Department of
25	Physical Education & Sports Committee	Mr. Vinay	Mechanical Engineering
		Wii. Villay	Physical Education
			Director
26	Professional Societies	Dr. K. Gopala	Dean- R & D
		Krishnan	
27	Public Relations &	Mr. Adarsh J Navale	HOD- Marketing &
21	Marketing Committee		Branding
28	Purchase Committee	Mrs. Malathi	Senior Executive
		Madhusudan	Director – Accounts &



		Mr. H N	Finance	
		Suryaprakash	Registrar	
29	Recruitment Cell	Ms. Manjula V.	Head- HR	
30	Research & Development	Dr. K. Gopala	Dean- R & D	
50	Committee	Krishnan		
31	SC/ST Welfare Cell	Mr. H N	Registrar	
51		Suryaprakash	Registrat	
32	Software / Hardware	Dr. C S R Prashanth	Dean- Academics	
52	Training Committee		Dean Treadennes	
33	College Internal Complaints	Ms. Manjula V.	Head- HR	
00	Committee (CICC)	inisi inianjara vi		
34	Staff Welfare Committee	Ms. Manjula V.	Head- HR	
	Value Added Programs Committee	Dr. M. S. Ganesha Prasad	Dean & Head –	
35			Department of	
			Mechanical Engineering	
36	Women Empowerment	Dr. R.J. Anandhi	Professor & Head – ISE	
00	Committee		110100001 00 11000 122	
37	Student Mentoring	Dr. Anusuya	Professor & Head-	
	Committee	·	Chemistry	
38	Student Grievances	Mr. Suryaprakash	Registrar	
	Redressal			
39	Universal Human Values	Dr. Anusuya	Professor & Head-	
	Committee	21.1111000ju	Chemistry	



Accreditation Committee

As an upcoming engineering college in Bangalore as well as in Karnataka, the college which is already recognised by accreditation councils has formed this committee to look into the requirements for upcoming state and national level accreditations.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H N Suryaprakash	Registrar	Member
3	Dr. C S R Prashanth	Dean- Academics	Member
4	Dr. K. Gopala Krishnan	Dean – Research	Member
5	Dr. Sheelan Misra	HoD- MBA	Member
6	Dr. Anitha S Rai	HoD – Library & Information Center	Member
7	Dr. Ganesh Prasad	Dean-Mechanical Engineering	Member Secretary

Table 10.11 Accreditation Committee

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
	14-07-2020		
	18-06-2020		
	10-06-2020		
CAY(2019-20)	05-06-2020	All	Nil
CAT(2019-20)	01-06-2020	All	Nil
	27-05-2020		
	22-01-2020		
	20-07-2019		



CAV = 1(2019, 10)	18-01-2019	All	Nil
CAY m1(2018-19)	06-09-2018	All	Nil
CAY m2(2017-18)	08.08.2017	5	2
CAT III2(2017-10)	12.06.2017	All	NIL
	10.02.2017	All	NIL
CAY m3(2016-17)	19.08.2016	All	NIL
	05.07.2016	All	NIL
CAY m4(2015-16)	25.02.2016	6	1
CA1 III4(2013-10)	19.08.2015	All	NIL
CAY m5(2014-15)	11.05.2015	All	NIL
CAT III3(2014-13)	17.10.2014	All	NIL

Admission Committee:

This is an integral committee of the institute that deals with the admission of the students into the various undergraduate and postgraduate programs. Based on the students' qualifications and rankings in entrance exams, this committee provides admissions to the students to pursue their course of choice.

Table 10.12 Admission Committee

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H N Suryaprakash	Registrar	Member
3	Mrs. Malathi Madhusudan	Senior Executive Director – Accounts & Finance	Member
4	Ms. Manjula V.	Head- HR	Member
5	Ms. Aruna	Head- Admissions	Member-Secretary
6	Dr. Manjunatha	Principal	Chairman



Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	24.04.2020	All	Nil
CAY m1(2018-19)	12.04.2019	All	Nil
CAY m2(2017-18)	09.04.2018	All	Nil
CAY m3(2016-17)	04.04.2017	All	Nil
CAY m4(2015-16)	20.04.2016	All	Nil
CAY m5(2014-15)	13.04.2015	All	Nil

Alumni Committee

Alumina of an educational institute contributes a lot to the growth of the organization. Besides being a major stakeholder of the institute, they give guidance and feedback to their juniors with respect to their career opportunities. This committee was constituted to keep constant rapport with the alumni.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. C S R Prasanth	Dean – Academics	Member
3	Dr. Niranjan	HoD – Civil	Member
4	Dr. Ram Kumar S	HOD- EEE	Member
5	Dr. R.J. Anandhi	HOD- ISE	Member
6	Dr. SheelanMisra	HOD – MBA	Member
7	Dr. Asha V	HOD – MCA	Member
8	Dr. Revathi V	HoD – BSH (Physics Cycle)	Member
9	Dr. M S Ganesha	Dean, Professor &HoD – ME	Member-Secretary
	Prasad		

Table 10.13 Alumni Committee



Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	20-02-2020	All	Nil
CA1(201)-20)	29-07-2019	All	Nil
CAY m1(2018-19)	19-03-2019	8	1
CAT IIII(2010-19)	20-11-2018	All	Nil
CAY m2(2017-18)	04.08.2017	7	2
CAT III2(2017-10)	05.07.2017	5	4
	11.01.2017	8	1
CAY m3(2016-17)	14.12.2016	9	Nil
	10.08.2016	8	1
CAY m4(2015-16)	12.05.2016	19	2
CAT III4(2013-10)	19.11.2015	18	3
CAV = 5(2014, 15)	09.04.2015	20	1
CAY m5(2014-15)	15.10.2014	20	1

Anti-Ragging Committee

Ragging is a very common problem faced by students in the campus during and after college hours. The consequences of the students who faced ragging are very serious and shocking. Thus, this committee was constituted to control ragging and provide relief to students who come under this shadow. The committee has the powers to take stringent action on students involving in such activities. The Committee comprise of the following members.

Table 10.14 Anti-Ragging Committee

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H N Suryaprakash	Registrar	Member Secretary



3	Dr. C S R Prashanth	Dean – Academics	Member
4	Dr. M S Ganesha Prasad	Dean & Head – Department of Mechanical Engineering	Member
5	Ms. Aruna	Director – Admissions	Member
6	Dr. Revathi V	HOD – Physics	Member
7	Inspector- Marathalli Police Station	Inspector	Member
8	Ms. Sreeja	Parent	Member
9	Mr. Karthik	Parent	Member
10	Mr. Nanjundiah	BEO (Retd.)	Member
11	Ms. Shanti P	Girls Hostel Warden	Member
12	Mr. Devraj R.	Boys Hostel Warden	Member
13	Ms.Sunitha Prabhakar	Student Counselor	Member
14	Mr. Adharsh Madhusudan	Student	Member
15	Ms. Sharon Ann Gomes	Student	Member

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	17.01.2020 22.07.2019	All	Nil
CAY m1(2018-19)	17.01.2019	All	Nil
CAY m2(2017-18)	20.07.2018 22.01.2018	14	01
	20.07.2017 11.01.2017	13	02
CAY m3(2016-17)	23.07.2016	13	02



CAV = 4(2015, 16)	21.01.2016	14	01
CAY m4(2015-16)	22.07.2015	13	02
CAV = 5(2014, 15)	20.01.2015	14	01
CAY m5(2014-15)	16.07.2014	All	Nil

Anti-Sexual Harassment Committee

Sexual Harassment is a very sensitive issue and the students facing such problems will not be in a mind-set to address these issues. Thus this committee was constituted to tackle such problems and help the students. Powers are vested in the hands of the committee to take stringent action on students involving in such activities. The committee is constituted as follows.

Sl. No.	Name	Designation	Position
1.	Dr.Manjunatha	Principal	Chairman
2.	Ms.Manjula	Head-HR	Member
3.	Ms.Aruna	HOD-Admissions	Member
4.	Dr. Revathi V	HOD-Physics	Member
5.	Ms.Cynthia	Student Counselor	Member
6.	Ms.Shanthi	Girls Hostel Warden	Member
7.	Ms.Vijaya	Advocate	Member
8.	Mr.Sadiq Pasha	Police-Inspector-HAL	Member
9.	Ms.Shanmathi K	Student Representative	Member
10.	Dr.R J Anandhi	HOD-ISE	Member-
10.			Secretary

Table 10.15 Anti-Sexual Harassment Committee



Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	13.01.2020	All	Nil
CAY m1(2018-19)	24.10.2018	All	Nil
CAY m2(2017-18)	01.01.2018	All	Nil
CAT III2(2017-10)	20.09.2017	09	01
	17.09.2016	All	Nil
CAY m3(2016-17)	10.08.2016	09	01
	06.08.2016	09	01
CAY m4(2015-16)	22.09.2015	07	03
CAY m5(2014-15)	16.02.2015	09	01
CAT III3(2014-13)	25.09.2014	All	Nil

Co-curricular Committee

The committee of the college is constituted to look into the likes of the students, besides academics. Aimed at ensuring an overall development of the young ester, the committee promotes various activities by forming clubs involving students, helping them excel in competitions.

Name	Designation	Position
Dr. Manjunatha	Principal	Chairman
Prof. Sreeja	Associate Professor – MCA	Member
Prof. Manjesh C	Asst. Prof.– ME	Member
Prof. Aravinda	Sr. Asst. Professor – ECE	Member
Keshav	VIII Sem-CSE	Student Member
Chandan Kumar V T	VI Sem-Automobile	Student Member
Santhosh Kadali	VI Sem- MCA	Student Member
Dr. Anitha S Rai	Head-Library	Member Secretary
	Dr. Manjunatha Prof. Sreeja Prof. Manjesh C Prof. Aravinda Keshav Chandan Kumar V T Santhosh Kadali	Dr. ManjunathaPrincipalProf. SreejaAssociate Professor – MCAProf. Manjesh CAsst. Prof.– MEProf. AravindaSr. Asst. Professor – ECEKeshavVIII Sem-CSEChandan Kumar V TVI Sem-AutomobileSanthosh KadaliVI Sem- MCA

 Table 10.16 Co-curricular Committee



Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	20.01.2020	All	Nil
CAT(2019-20)	24.07.2019	All	Nil
CAY m1(2018-19)	13.01.2019	All	Nil
CAT IIII(2010-19)	16.07.2018	08	01
CAY m2(2017-18)	17.01.2018	All	Nil
CAT III2(2017-16)	14.08.2017	08	01
	19.01.2017	08	01
CAY m3(2016-17)	19.12.2016	08	01
	11.10.2016	All	Nil
	18.07.2016	All	NIL
CAY m4(2015-16)	08.12.2015	All	NIL
	21.07.2015	07	02
CAV = 5(2014, 15)	15.12.2014	All	Nil
CAY m5(2014-15)	04.07.2014	All	Nil

Community Development Centre (Public Welfare Committee)

This committee looks into the interest and development of the faculties and students of the college issues pertaining to campus facilities addressed to this committee who resolve it.

Table	10.17	Public	Welfare	Committee
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Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H N Suryaprakash	Registrar	Member
3	Mrs. Malathi Madhusudan	Senior Executive Director – Accounts & Finance	Member
4	Ms. Manjula V.	Head- HR	Member
5	Mr. Adarsh J Navale	Head- Marketing & Branding	Member- Secretary



Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	06.01.2020	All	Nil
CAY m1(2018-19)	28.01.2019	All	Nil
CAY m2(2017-18)	24.01.2018	All	Nil
CAY m3(2016-17)	23.01.2017	All	Nil
CAY m4(2015-16)	11.01.2016	All	Nil
CAY m5(2014-15)	12.01.2015	All	Nil

Counselling Committee

An essential committee in the college addressing issues of students. This committeewas constituted to help distracted, diverted and students who lack concerntrationin studies to getback to studying. The committee includes the counselors who assist and guide the students to get back to the curriculum.

 Table 10.18 Counselling Committee

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Ms. Deepa	Student Counselor	Member
3	Ms. Revathi Srinivasan	Student Counselor	Member
4	Dr. Sudha Thomas	Student Counselor	Member
5	Ms. Cynthia M.War	Student Counselor	Member
6	Ms. Rakhi N.Gopan	Student Counselor	Member
7	Ms. Sunitha Prabhakar	Student Counselor	Member
8	Dr. Reena Jain	Head-Counselor	Member Secretary

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	04.02.2020	A 11	NT:1
CH1(201)-20)	07.08.2019	All	Nil
CAY m1(2018-19)	07.02.2019	A 11	NT'1
CAT IIII(2010-19)	10.08.2018	All	Nil
	05.02.2018	07	01
CAY m2(2017-18)	08.11.2017	07	01
	02.08.2017	06	02
	23.01.2017	05	03
CAY m3(2016-17)	26.10.2016	08	Nil
CAT III5(2010-17)	15.09.2016	07	01
	03.08.2016	07	01
CAV = 4(2015, 16)	10.05.2016	07	01
CAY m4(2015-16)	18.10.2015	06	02
CAV = 5(2014, 15)	23.04.2015	07	01
CAY m5(2014-15)	16.10.2014	All	Nil

Cultural Committee

Based on the lines of the co-curricular committee, the cultural committee helps the students to distinguish themselves apart from their curriculum. Students are encouraged to take part in various cultural events in college and other colleges and showcase their talents.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. Revathi V	HOD-Physics	Member
3	Dr. Asha V.	ProfMCA	Member
4	Prof. Kavitha	Asst. Professor – ISE	Member
5	Dr. Nisha	Associate Professor – ECE	Member
6	Mr. Keshav	Student member	Member
7	Ms. Varshini	Student member	Member
8	Dr. Anitha S. Rai	Head-Library&Information Center	Member- Secretary

 Table 10.19 Cultural Committee



Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	22.01.2020	All	Nil
CAT(2019-20)	05.08.2019	All	Nil
CAY m1(2018-19)	10.01.2019	All	Nil
CAT III1(2010-19)	11.07.2018	All	Nil
CAY m2(2017-18)	05.02.2018	08	01
CAY m3(2016-17)	01.08.2017	All	Nil
CAY m4(2015-16)	11.08.2016	08	01
CA1 III4(2013-10)	07.10.2015	08	01
CAY m5(2014-15)	21.08.2015	All	Nil
CAT III3(2014-13)	17.11.2014	08	01

Curriculum Development Committee

The committee is essential with respect to the framing of the academic syllabus for undergraduate and postgraduate courses across all departments. The committee involving the Heads of all the Departments aims at framing a curriculum that brings out syllabus that meets the outside/industry requirements and at the same time ensures teaching is done in a very effective way.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr.Prashanth C.S.R	Dean – Academics	Member Secretary
3	Dr. Shridhar Kurse	HoD – AU	Member
4	Dr. Anand Vardhan H	HoD – BT	Member
5	Dr. Niranjan	HoD – Civil	Member
6	Dr. Rajalakshmi	HoD – CSE	Member
7	Dr. Sanjeev Sharma	HoD – ECE	Member

Table 10.20 Curriculum Development Committee

8	Dr. Ram Kumar S	HoD – EEE	Member
9	Dr. R J Anandhi	HoD – ISE	Member
10	Dr. M.S. Ganesha Prasad	HoD – ME	Member
11	Dr. Asha V	HoD – MCA	Member
12	Dr. Sheelan Mishra	HoD – MBA	Member
13	Dr. Revathi V	HoD – BSH (Physics Cycle)	Member
14	Dr. V S Anusuya Devi	HoD – BSH(Chemistry Cycle)	Member
15	Dr. Srinivasa K.G	HOD – Mathematics	Member
16	Dr. Sowmya G.R.N	HOD – Lifeskills	Member

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	23.07.2020	All	Nil
CAV = 1(2018, 10)	28.06.2019	All	Nil
CAY m1(2018-19)	22.06.2018	All	Nil
CAY m2(2017-18)	08.02.2018	All	Nil
CAY m3(2016-17)	16.10.2017	All	Nil
CAY m4(2015-16)	20.01.2016	All	Nil
CAT III4(2013-10)	10.06.2015	All	Nil
CAV = 5(2014, 15)	02.02.2015	All	Nil
CAY m5(2014-15)	27.10.2014	All	Nil



Disciplinary Committee

Indiscipline is a serious aspect of concern amongst students owing to peer pressure and other kinds of distractions around them. Their behavior changes and they react differently to various situations. This committee monitors the students and ensures that no indiscipline happens. Also, in the event of any indiscipline activities, action is taken by the committee.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H. N.Suryaprakash	Registrar	Member
3	HoD of the Concerned Department	HoD	Member

Table 10.21 Disciplinary	Committee
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Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	13.02.2020	All	Nil
0111(201) 20)	16.08.2019	All	1111
CAY m1(2018-19)	12.02.2019	All	Nil
CAT IIII(2010-17)	26.08.2018	All	111
CAY m2(2017-18)	02.02.2018	12	01
CAT III2(2017-10)	16.08.2017	All	Nil
CAY m3(2016-17)	09.05.2017	All	Nil
CAV m 4(2015, 16)	07.04.2016	11	02
CAY m4(2015-16)	10.09.2015	All	Nil
CAV = 5(2014, 15)	13.05.2015	All	Nil
CAY m5(2014-15)	04.09.2014	All	Nil



Energy Conservation Audit Committee

This committee constituted by the Electrical department, is responsible of an eco-friendly campus. They are responsible for conservation of electricity in the college campus buildings and ensure that there is no wastage for power, thus saving it for the future.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. RamKumar.S	HoD-EEE	Member Secretary
3	Dr.Ganesh.C	Prof-EEE	Coordinator
4	Ms. Karthika.M	Sr. Asst.Prof-EEE	Member
5	Mr.Inbasakaran.S	Sr. Asst.Prof-EEE	Member
6	Mr.VinodKumar.S	Sr. Asst.Prof-EEE	Member
7	Mr.Lithesh.J	Asst.Prof-EEE	Member

Table 10.22 Energy Conversation Committee

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	06.02.2020	All	Nil
CAY m1(2018-19)	03.01.2019	All	Nil
CAY m2(2017-18)	24.08.2017	All	Nil
	31.03.2017	All	Nil
CAY m3(2016-17)	13.02.2017	All	Nil
	13.10.2016	All	Nil
	02.02.2016	07	01
CAY m4(2015-16)	06.01.2016	All	Nil
	03.08.2015	All	Nil
CAY m5(2014-15)	16.02.2015	06	02
CAT III3(2014-13)	10.09.2014	07	01



Examination Committee

The committee monitors the autonomous examinations conducted in the college. Starting from the notification of the exam till the declaration of the results, the committee manages all the activities in coordination with the heads of the departments ensuring smooth running of the entire process.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. Vijilius Helena Raj	Controller of Examination	Member- Secretary
3	Mr. Aravinda	Sr. Asst. Prof	Member
4	Dr. Revathi V	Professor & Head	Member
5	Mr.Anil Kumar Hangal	Head Quality Assurance	Member

Table 10.23	Examination	Committee
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Note: All HoDs of various Departments are Ex-officio Members of Examination Committee

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
	05.02.2020		
CAY(2019-20)	03.01.2020	All	Nil
CAT(2019-20)	15.11.2019	All	1111
	10.10.2019		
	04.05.2019		
CAV = 1(2019, 10)	11.02.2019	A 11	Nil
CAY m1(2018-19)	20.11.2019	All	
	29.10.2018		
CAV m2(2017, 19)	23.02.2018	All	Nil
CAY m2(2017-18)	26.09.2017	All	Nil
CAV = 2(2016, 17)	13.02.2017	All	Nil
CAY m3(2016-17)	01.09.2016	All	Nil
CAY m4(2015-16)	27.01.2016	All	Nil
	08.09.2015	All	Nil
CAY m5(2014-15)	NA		



Finance Committee

The committee is responsible for all the monetary activities in the institution. Students' fee collection, funds for procurement of equipment, dispatching salaries and remuneration are under the purview of this committee.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H N Suryaprakash	Registrar	Member
3	Dr. M. S. Ganesha	Dean & Head – Department	Member
5	Prasad	of Mechanical Engineering	WICHIDEI
4	Dr. C S R Prashanth	Dean- Academics	Member
5	Dr. K. Gopala	Dean- R & D	Member
5	Krishnan		WICHIDEI
6	Dr. Sheelan Misra	HOD – MBA	Member
7	Ms. Geetha	Senior Accounts Executive	Member
8	Mrs. Malathi	Senior Executive Director -	Member-
0	Madhusudan	Accounts & Finance	Secretary

Table 10.24 Finance Committee

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	14.03.2020	All	Nil
0111(201) 20)	17.09.2019		
CAY m1(2018-19)	19.03.2019	All	Nil
CAT IIII(2010-19)	19.09.2018		
CAY m2(2017-18)	10.03.2018	All	Nil
CAT III2(2017-10)	20.09.2017	All	Nil
CAY m3(2016-17)	14.03.2017	All	Nil
CAT III3(2010-17)	19.09.2016	All	Nil
CAY m4(2015-16)	18.03.2016	All	Nil
CAT III4(2013-10)	15.09.2015	All	Nil
CAY m5(2014-15)	19.03.2015	All	Nil
CAT III3(2014-13)	08.09.2014	All	Nil



Hostel (Boys) Development & Welfare Committee

The committee looks into the requirement of the students(boys) staying on the campus, in the hostel. The committee monitor with regard to hostel food, accommodation, Maintenance, and discipline in the Hostel.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. Sambashiva Rao	Warden	Member
3	Mr. Sreenivas H S	Warden	Member
4	Mr. Pankajaksan	Warden	Member
5	Mr. Devaraj. R	Sr. Warden	Member
б	Mr. Suryaprakash	Registrar	Member Secretary

Table 10.25 Hostel (Boys) Development & Welfare Committee

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent	
CAY(2019-20)	22.01.2020	All	Nil	
CA1(2019-20)	23.07.2019	All	1111	
CAY m1(2018-19)	23.01.2019	All	Nil	
CAT III(2010-19)	25.07.2018	All	1111	
CAY m2(2017-18)	29.01.2018	All	Nil	
CAT III2(2017-10)	25.07.2017	All	Nil	
CAY m3(2016-17)	20.01.2017	06	01	
CAT III5(2010-17)	06.10.2016	All	Nil	
CAY m4(2015-16)	25.02.2016	All	Nil	
CA1 III4(2013-10)	28.07.2015	06	01	
CAV = 5(2014, 15)	30.01.2015	All	Nil	
CAY m5(2014-15)	23.07.2014	All	Nil	



Hostel(Girls) Development & Welfare Committee

The committee looks into the requirement of the students(girls) staying on the campus, in the hostel. The committee monitor with regard to hostel food, accommodation, Maintenance, and discipline in the Hostel.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. Suryaprakash	Registrar	Member
3	Ms. Shanthi	Warden	Member
4	Ms. Yogitha	Warden	Member
5	Ms. Aruna M	Director-Admission	Member Secretary

Table 10.26 Hostel (Girls) Development & Welfare Committee

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	22.01.2020	All	Nil
	23.07.2019		
CAY m1(2018-19)	23.01.2019	All	Nil
CAT IIII(2010-19)	25.07.2018	7 MI	1111
CAY m2(2017-18)	30.01.2018	05	01
CAT III2(2017-10)	24.07.2017	All	Nil
CAY m3(2016-17)	23.01.2017	All	Nil
CAT III3(2010-17)	06.10.2016	05	01
CAY m4(2015-16)	27.01.2016	All	Nil
CA1 III4(2013-10)	27.07.2015	All	Nil
CAY m5(2014-15)	13.02.2015	05	01
CAT III3(2014-13)	24.07.2014	All	Nil



Infrastructure Development Committee

All hardware infrastructure requirements of the college are taken care by this committee. Furniture and furnishings, lights & fans, other essential infrastructure in the buildings and on the campus are provided by this committee.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. Rao	Project Manager	Member
3	Ms. Shailee	Quantity Surveyor	Member
4	Dr. P S Niranjan	HOD – Civil Engg.	Member – Secretary

Table 10.27 Infrastructure Development Committee

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	08.01.2020	All	Nil
	09.05.2019		
CAY m1(2018-19)	18.01.2019	All	Nil
CAT III(2010-17)	16.05.2018		1111
CAY m2(2017-18)	04.10.2017	All	Nil
CAT III2(2017-18)	05.06.2017	All	Nil
	05.04.2017	All	Nil
CAV = 2(2016, 17)	10.02.2017	All	Nil
CAY m3(2016-17)	02.12.2016	All	Nil
	10.08.2016	All	Nil
	06.05.2016	All	Nil
CAY m4(2015-16)	01.02.2016	All	Nil
	05.10.2015	All	Nil
CAV = 5(2014, 15)	25.02.2015	All	Nil
CAY m5(2014-15)	20.08.2014	All	Nil



In-Plant training/Industrial/Career Guidance/placement committee

This committee is very essential for the graduating undergraduate and postgraduate students, aspiring to get placed in companies as well as to start companies of their own. In plant Training and career guidance are given to the students in their pre-final year and pre-final semester respectively, preparing them for the forthcoming campus interviews.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Ms. Ankita Srivastava	EEE	Member
3	Dr. Mohan Naik	ECE	Member
4	Mr. Girish Tilak	AU	Member
5	Mr. Govinda Raj	MCA	Member
6	Mr. Sudharshan	Mechanical	Member
7	Mr. Bopanna K D	Mechanical	Member
8	Dr. Anand	BT	Member
9	Mr. Sivabalan	CSE	Member
10	Ms.Vandana	ISE	Member
11	Ms. P Suma	Civil	Member
12	Dr. Sheelan	MBA	Member
13	Dr. Sainath	MBA	Member
14	Mr. Binod Kumar Singh	ТРО	Member
15	Mr. Mahesh	ТРО	Member
16	Mr. Rajendra	ТРО	Member
17	Mr. Pavan Kumar M	Executive – HR (Corporate Relations)	Member
18	Mr. Rajendra	ТРО	Member
19	Ms. Manisha Joshi	Sr. Executive – HR (Corporate Relations)	Member

Table 10.28 In-Plant Traing/Industrial/Career Gui	idance/Placement Committee
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20	Mr. Anis Mirza	HR Manager – Corporate Relations	Member
21	Mr. Binod Kumar Singh	HR Manager – Corporate Relations	Member
22	Mr. Gopalakrishna	Asst. HR Manager – Corporate Relations	Member
23	Mr. Ravi Shankar	HR Manager – Corporate Relations	Member
24	Mr.Viswas – 1NH14CS165 (CSE)	Student Member	Member
25	Mr. Rajith Bose M – 1NH14IS087 (ISE)	Student Member	Member
26	Mr. Yashas Bharadwaj – 1NH14ME759 (MECH)	Student Member	Member
27	Mr. Jai Kumar – 1NH14AU021 (AUTO)	Student Member	Member
28	Prof. Gurucharan Singh	Executive Director – Dept of HRD (CR T&P)	Member- Secretary

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	06.07.2020	All	Nil
CAT(201)-20)	02.05.2020		
CAY m1(2018-19)	30.04.2019	All	Nil
CAT III(2010-19)	22.01.2019		
CAY m2(2017-18)	02.02.2018	25	02
CAT III2(2017-10)	10.11.2017	All	Nil
	04.02.2017	26	01
CAY m3(2016-17)	07.11.2016	All	Nil
	18.07.2016	All	Nil

	06.02.2016	All	Nil
CAY m4(2015-16)	07.11.2015	All	Nil
	18.07.2015	All	NII
CAY m5(2014-15)	07.11.2014	All	Nil
CAT III3(2014-13)	17.07.2014	All	Nil

Instrumentation Cell

This body constituted in the college plays a very important role with respect to the laboratory equipment's. Timely calibrations and preventive maintenance ensures that the machines (electrical) do not come for repairs or come in less numbers. Thus, this cell is responsible for keeping a check on the machines and certifying the same.

Table 10.27 Instrument Cen Committee					
Sl. No.	Name	Designation	Position		
1.	Dr. Manjunatha	Principal	Chairman		
2.	Dr. Ganesh Prasad	Dean – Mechanical Engg	Member		
3.	Dr. Ramkumar	Prof. & HOD-EEE	Member		
4.	Dr. Rajalakshmi	Prof. & HOD-CSE	Member		
5.	Dr. Sanjeev Sharma	Prof. & HOD-ECE	Member Secretary		

Sr. Asst Professor

Member

Table 10.29 Instrument Cell Committee

Meetings:

6.

Prof. Aravinda K

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	24.08.2019	All	Nil
CAY m1(2018-19)	16.08.2018	All	Nil
CAY m2(2017-18)	02.02.2018	25	02
CAT III2(2017-10)	10.11.2017	All	Nil
	04.02.2017	26	01
CAY m3(2016-17)	07.11.2016	All	Nil
	18.07.2016	All	Nil



	06.02.2016	All	Nil
CAY m4(2015-16)	07.11.2015	All	Nil
	18.07.2015	All	NII
CAY m5(2014-15)	07.11.2014	All	Nil
CAT III3(2014-13)	17.07.2014	All	Nil

Internal Quality Assessment and Assurance Cell

The committee was constituted to ensure that all the standards with regard to curriculum are met. Any discrepancies with respect to internal valuation, methods of teaching-learning are addressed by this committee. The Principal is the Chairman of the committee and it is constituted as follows.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. Girija Srinivasalu	Director- NHQASDC	Member
3	Dr. Gopal Krishna	Dean – R&D	Member
4	Dr. M.S. Ganesha Prasad	Dean – ME	Member
5	Dr. Anitha Rai	HOD-Library	Member
6	Mr. Anil Kumar Hangal	HoD – QA	Member Secretary
7	Dr. Prashanth CSR	Dean Academics	Member

 Table 10.30 Internal Quality Assessment & Assurance Cell Committee

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	06.01.2020	All	Nil
CAY m1(2018-19)	21.05.2019 26.09.2018	All	Nil
CAY m2(2017-18)	09.08.2017	All	Nil



	10.05.2017		
CAV = 2(2016, 17)	22.03.2017	All	Nil
CAY m3(2016-17)	25.01.2017	All	1811
	06.09.2016		
	07.07.2016		
CAY m4(2015-16)	05.05.2016	All	Nil
CAT III4(2013-10)	28.03.2016		
	16.01.2016		
	09.07.2015		
	17.04.2015		
CAY m5(2014-15)	26.02.2015	All	Nil
	10.12.2014		
	15.10.2014		

Library Committee

Books and other e-learning media are very essential for gaining knowledge as learning is a continuous process. Faculties and students require resources to attain knowledge of the day-to-day requirements. The Library Advisory committee headed by the Principalensures all these requirements are fulfilled through the member secretary and the inputs from the other members. Procuring books, technical journals, technical magazines, applying for access to e-journals, providing food reference books and adequate reading spaces are provided by this committee, which comprises the following members.

Table 10.31 Library	Committee
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Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H N Suryaprakash	Registrar	Member
3	Dr. M. S. Ganesha Prasad	Dean & Head – Department of Mechanical Engineering	Member
4	Dr. C S R Prashanth	Dean- Academics	Member
5	Dr. Sanjeev Sharma	HOD-ECE	Member

6	Dr. Revathi V	HOD-Physics	Member
7	Dr. Sheelan Mishra	HOD-MBA	Member
8	Dr. Siddamallaiah	Principal Librarian (Retd.), NIMHANS	External Member
9	Ms. Vanditha	ECE Branch	Student Member
10	Mr. Keshav	CSE Branch	Student Member
11	Dr. Anitha S Rai	Head – Library & Information Center	Member- Secretary

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	14.07.2020 08.04.2019	All	Nil
CAN 1(2019-10)	12.12.2018	A 11	NT'1
CAY m1(2018-19)	04.04.2018	All	Nil
CAY m2(2017-18)	15.12.2017	All	Nil
CAY m3(2016-17)	13.05.2017	All	Nil
	13.12.2016		
CAY m4(2015-16)	03.05.2016	All	Nil
	14.12.2015		
CAV = 5(2014, 15)	05.05.2015	09	02
CAY m5(2014-15)	13.12.2014	All	Nil



NCC Committee

The committee in the college is constituted to look into the students' interests inclined towards National Cadet Corps(NCC). NCC is the Indian military cadet corps, which is open to school and college students on voluntary basis. National Cadet corps is a Triservices organization, comprising the Army, Navy and Air Force, engaged in grooming the youth of the country into disciplined and patriotic citizens. The National Cadet Corps in India is a voluntary organization which recruits cadets from high schools, colleges and universities all over India. The committee in college has the same motto.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Shri. H N Suryaprakash	Registrar	Member
3	Mr. Vinay J T	Physical Education Director	Member
4	Mr. Pavan Prabhakar	Asst. Prof. – Mechancial Department	Member
5	Dr. M. S. Ganesha Prasad	Dean, Professor &HoD – ME	Member- Secretary

Table 10.32 NCC Committee

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	12.02.2020	All	Nil
CAT(201)-20)	04.10.2019	All	1111
CAY m1(2018-19)	14.03.2019	All	Nil
CAT III(2010-17)	24.09.2018	All	1111
CAY m2(2017-18)	02.02.2018	All	Nil
CAY m3(2016-17)	25.01.2017	All	Nil
CAY m4(2015-16)	19.04.2016	All	Nil
CAT III4(2013-10)	21.09.2015		
CAY m5(2014-15)	12.05.2015	All	Nil
C/11 m5(2014-15)	16.10.2014	711	1311



NSS Committee

The National Service Scheme is an Indian government-sponsored public service program conducted by the Department of Youth Affairs and Sports of the Government of India. Popularly known as NSS, the scheme was launched in 1969. Aimed at developing student's personality through community service, NSS is a voluntary association of young people in Colleges, Universities and at +2 level working for a campus-community linkage. The committee in college aims at moulding interested students on the same lines.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H N Suryaprakash	Registrar	Member
3	Dr. M. S. Ganesha	Dean & Head – Department of	Member
5	Prasad	Mechanical Engineering	Wiember
4	Prof. Puneeth	Sr. Asst. Professor	Member
5	Dr. Mohan	Associate Professor	Member
6	Ms. Pratiksha	Student Member	Member
7	Mr. Mohan	Student member	Member
8	Dr. Anitha S Rai	Head-Library & Information	Member
0	DI. Anitha 5 Kal	Center	Secretary

Table 10.33 NSS	Committee
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Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent	
CAY(2019-20)	18.01.2020	All	Nil	
	20.08.2019			
CAY m1(2018-19)	20.01.2019	All	Nil	
CAT III(2010-17)	08.07.2018		1 111	
CAY m2(2017-18)	19.01.2018	All	Nil	
CAY m3(2016-17)	08.07.2017	All	Nil	
CAT III5(2010-17)	09.01.2017	All	1111	
CAY m4(2015-16)	04.01.2016	All	Nil	
CA1 III4(2013-10)	07.07.2015	All	1111	
CAY m5(2014-15)	01.01.2015	All	Nil	
CAT III3(2014-13)	04.07.2015	All	111	



News Letter Committee

Events and other happenings on the campus and off the campus with regard to the students and college is brought out in the college newsletter . The committee constituted helps to achieve this.

Besides getting articles and covering the relevant issues; compiling, editing, printing and publishing of the newsletter is taken care by this committee.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H N Suryaprakash	Registrar	Member
3	Mr. Adarsh J Navale	HOD- Marketing & Branding	Member
4	Dr. S. Mohan Kumar	Associate Professor, Department of ISE	Member Secretary
5	Mr. Md Yasin	Student Representative	Member
6	Mr. Sumukh	Student Representative	Member

Table 10.34 News L	etter Committee
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Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	11.06.2020	All	Nil
CAY m1(2018-19)	15.05.2019	All	Nil
CAV = 2(2017, 18)	02-02-2018	All	Nil
CAY m2(2017-18)	07-08-2017	05	01
CAY m3(2016-17)	03-01-2017	All	Nil
	03-05-2016	05	01
CAY m4(2015-16)	02-01-2016	All	Nil
	14-12-2015	All	Nil
CAY m5(2014-15)	05-05-2015	All	Nil
CAT III5(2014-13)	13-12-2014	All	Nil



Physical Education and Sports Committee

Parallel to studies, in order to give motivation and an opportunity to excel in sports to interested stdents, this committee looks into the needs of budding sports persons. The college campus has facilities and equipment for a number of sports, for which there is good participation & boys and girls, pursuing undergraduates and postgraduates programs. Students participate in the sports, helping them to perform well in college event at state and national levels.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. Shridhar Kurse	HoD – AU	Member
3	Dr. Anand Vardhan H	HoD – BT	Member
4	Dr. Niranjan	HoD – Civil	Member
5	Dr. Rajalakshmi	HoD – CSE	Member
6	Dr. Sanjeev Sharma	HoD – ECE	Member
7	Dr. Ram Kumar S	HoD – EEE	Member
8	Dr. R J Anandhi	HoD – ISE	Member
9	Dr. Sheelan Mishra	HoD – MBA	Member
10	Dr. Asha V	HoD – MCA	Member
11	Dr. Revathi V	HoD – BSH (Physics Cycle)	Member
12	Dr. V S Anusuya Devi	HoD – BSH(Chemistry)	Member
13	Dr. M.S. Ganesha Prasad	Dean, Professor &HoD –	Member
15	Di. Mi.S. Ganesna i fasau	ME	Secretary
14	Mr. Vinay J T	Physical Education Director	Member

Table 10.35 Physical Education and Sports Committee

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	17-02-2020		Nil
CA1(2017-20)	15-10-2019	All	
CAY m1(2018-19)	04-04-2019	All	Nil
	01-12-2018		
CAY m2(2017-18)	17.01.2018	All	Nil
CAT III2(2017-16)	27.06.2017	All	
CAY m3(2016-17)	16.01.2017	All	Nil
CAT III5(2010-17)	20.06.2016	All	
CAV = 4(2015, 16)	20.01.2016	All	Nil
CAY m4(2015-16)	10.06.2015	All	
CAV = 5(2014, 15)	02.02.2015	A 11	Nil
CAY m5(2014-15)	27.10.2014	All	

Professional Societies Committee

Membership in professional societies is very essential to and individual as weel as instate as a whole. Amongst the various state, national and internation professional societies, the same is reflected, where faculties as well as students and student groups are members. The committee encourages and promotes in obtaining memberships for faculties and students.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Prof. Kamalashish Deb	Professor	Member
3	Dr. Clara Kanmani. A	Professor	Member
4	Prof. Surendra B V	Professor	Member
5	Mr. Arunkumar.M	Asst Professor	Member
6	Mrs. Swathi B	Asst Professor	Member
7	Dr. Nisha K C R	Professor	Member

Table 10.36 Professional Societies Committee



8	Dr. Sujin Jose	Professor	Member
9	Dr. Smita Harwani	Professor	Member
10	Dr. A.P. Nirmala,	Professor	Member
11	Dr. J Kavitha	Professor	Member
12	Dr. Prakash Krishnaiah	Professor	Member
13	Mr. Ramachandra Naik	Asst. Professor	Member

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	12.03.2020 29.01.2020 24.10.2019	All	Nil
CAY m1(2018-19)	03.07.2019 04.04.2019 02.02.2019	All	Nil
CAY m2(2017-18)	17.10.2017 09.08.2017	All	Nil
CAY m3(2016-17)	10.04.2017	All	Nil
CAY m4(2015-16)	05.05.2016 08.03.2016 20.10.2015	All	Nil
CAY m5(2014-15)	10.05.2015 06.04.2015 16.09.2014	All	Nil



Public Relation Committee

An essential committee in the running of the organization, this committee is a preface for the admission committee. This committee is required to have a constant rapport with the public and must ensure that people know about the institution so as to help students who want to pursue undergraduate and post graduate programs to get admission to the college.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H N Suryaprakash	Registrar	Member
3	Dr. M. S. Ganesha Prasad	Dean & Head – Department of Mechanical Engineering	Member
4	Ms. Manjula	Director – HR	Member
5	Mr. Deepak Kumar	Web Developer	Member
6	Mr. Adarsh J Navale	Head- Marketing & Branding	Member- Secretary

Table 10.37 Pub	lic Relation Committee
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Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	20.01.2020	All	Nil
CAY m1(2018-19)	26.02.2019	All	Nil
CAY m2(2017-18)	26.03.2018	All	Nil
CAT III2(2017-18)	12.08.2017	All	1111
CAY m3(2016-17)	28.02.2017	All	Nil
CAY m4(2015-16)	03.05.2016	All	Nil
CAT III4(2013-16)	14.12.2015	All	INII
CAY m5(2014-15)	05.05.2015	All	Nil
CAT III5(2014-13)	13.12.2014		1111



Purchase Committee

This committee of the college is constituted to meet all the hardware requirements for the smooth running of the institute. Requisions given by all the departments for its running are provided by this committee.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Shri.H. N. Suryaprakash	Registrar	Member
3	Dr. Prashanth CSR	Dean Academics	Member
4	Ms. Manjula V	Director-HR	Member
5	Ms. Malathi Madhusudan	Sr. Executive Director, Accounts & Finance	Member Secretary

Table 10.38 Purchase Committee

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	16.03.2020	All	Nil
CAY m1(2018-19)	18.04.2019	All	Nil
CAY m2(2017-18)	10.04.2018	All	Nil
CAY m3(2016-17)	05.04.2017	All	Nil
CAY m4(2015-16)	18.04.2016	All	Nil
CAY m5(2014-15)	15.04.2015	All	NII

Recruitment committee

This committee of the college is responsible for the recruitment of staff for the college, which includes the non-teaching faculty also. The preliminary interview takes place at the department level under the HoD. The final round and selection comes under the purview of this committee.

Sl. No.	Name	Designation	Position
1	Dr. Mohan Manghnani	Chairman-NHEI	Chairman
2	Dr. Manjunatha	Principal	Member
3	Dr. C S R Prashanth	Dean-Academics	Member
4	Respective Dept Heads	HoD	Member
5	Subject Experts 1	Subject Expert	Member
6	Subject Expert 2	Subject Expert	Member
7	Ms. Manjula	Director-HR	Member Secretary

Table 10.39 RecuritmentCommittee

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	03.02.2020	All	Nil
CAT(2019-20)	06.01.2020	All	1111
	08.03.2019		
CAY m1(2018-19)	04.02.2019		
CAT IIII(2010-19)	14.12.2018	All	Nil
	11.10 2018		
	22.02.2018		
	12.02.2018		
CAY m2(2017-18)	18.10.2017	All	Nil
	10.10.2017		
	21.08.2017		
	26.07.2017		
	17.04.2017		
CAY m3(2016-17)	20.02.2017	All	Nil
	12.12.2016		
	22.08.2016		
CAY m4(2015-16)	14.01.2016	All	Nil
CAY m5(2014-15)	14.01.2015	All	NII



Research and Development Committee

Research and development plays a major role in the development of any organization, which also includes educational institutions. The research committee headed by the Principal was constituted for the same reason. The committee encourages faculties and students to publish technical paers and articles, write textbooks, apply for support for project work, get grants for research, apply for patents, etc.,. The committee co-ordinator oversees all the activities. The members of this committee are as follows.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Prof. Kamalashish Deb	Professor	Member
3	Dr. Clara Kanmani. A	Professor	Member
4	Prof. Surendra B V	Professor	Member
5	Mr. Arunkumar.M	Asst Professor	Member
6	Mrs. Swathi B	Asst Professor	Member
7	Dr. Nisha K C R	Professor	Member
8	Dr. Sujin Jose	Professor	Member
9	Dr. Smita Harwani	Professor	Member
10	Dr. A.P. Nirmala	Professor	Member
11	Dr. J Kavitha	Professor	Member
12	Dr. Prakash Krishnaiah	Professor	Member
13	Mr. Ramachandra Naik	Asst. Professor	Member
14	Mr. Ramanjenya	Library Officer	Member
15	Dr. Gopalkrishnan	Dean-R & D	Member Secretary

 Table 10.40 Research & Development Committee



Academic Year	Date of	No. of Members	No. of Members
Academic Tear	Meeting	Attended	Absent
	12.03.2020		
CAY(2019-20)	29.01.2020	All	Nil
	25.10.2019		
	03.07.2019		
CAY m1(2018-19)	04.04.2019	All	Nil
	02.02.2019		
	09.02.2018		
CAY m2(2017-18)	01.12.2017	All	Nil
CAT III2(2017-16)	17.10.2017	All	1111
	17.08.2017		
	19.04.2017		
CAY m3(2016-17)	27.03.2017	All	Nil
CAT III5(2010-17)	09.02.2017	All	
	28.10.2016		
	03.06.2016		
	18.05.2016		Nil
	27.04.2016		
	31,03.2016		
CAY m4(2015-16)	16.02.2016	All	
CAT III4(2013-10)	29.02.2016	All	1111
	13.01.2016		
	09.11.2015		
	13.10.2015		
	04.09.2015		
	06.05.2015		
	13.04.2015		
CAY m5(2014-15)	06.03.2015	All	Nil
	31.10.2014		
	02.09.2014		

SC/ST Welfare Cell

This committee in the college is set up to look into the welfare of the SC/ST students admitted for the various courses. Besides this, the committee allocates monetary assistance to the students in the form of scholarship so as to help them pursue their education.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. Vishwanath Y	Sr. Asst Prof – ISE	Member
3	Mr. Ravi Kumar M.	Asso. Prof ME	Member
4	Mr. Madhusudhan	Asst. Prof. – ME	Member
5	Mr. H N Suryaprakash	Registrar	Member- Secretary

Table 10.41 SC/ST Welfare Committee

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAV(2010,20)	10.02.2020	All	N::1
CAY(2019-20)	06.08.2019	All	Nil
CAY m1(2018-19)	04.02.2019	All	Nil
CAT IIII(2010-19)	02.08.2018	All	1111
CAY m2(2017-18)	26.02.2018	All	Nil
CAT III2(2017-10)	01.09.2017		
CAY m3(2016-17)	20.02.2017	All	Nil
CAT III3(2010-17)	17.08.2016	All	
CAY m4(2015-16)	10.02.2016	All	Nil
CAY III4(2015-16)	35.08.2015	All	
CAY m5(2014-15)	24.02.2015	All	Nil
CAT III3(2014-13)	08.09.2014	All	1111



Software/Hardware Training Committee

This committee is responsible for given training to the staff (technical) who have been newly recruited on using the laboratory equipment in the respective departments. Besides, training is also given to them on operating any newly procured machines, so as to facilitate the smooth running of the laboratory sessions.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr.Prashanth C.S.R	Dean – Academics	Member Secretary
3	Dr. Rajalakshmi	HoD – CSE	Member
4	Dr. Sanjeev Sharma	HoD – ECE	Member
5	Dr. R J Anandhi	HoD – ISE	Member
6	Dr. Asha V	HoD – MCA	Member

Table 10.42 Software/Hardware	Training Committee
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Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	24.08.2020	All	Nil
CITT(201) 20)	10.01.2020	7 111	1 (11
CAY m1(2018-19)	09.04.2019	All	Nil
CAT III(2010-19)	09.08.2018	All	1111
CAV = 2(2017, 19)	08-03-2018	All	Nil
CAY m2(2017-18)	11-12-2017	All	Nil
CAV = 2(2016, 17)	13-04-2017	All	Nil
CAY m3(2016-17)	13-12-2016	All	Nil
CAY m4(2015-16)	05-03-2016	05	01
CAT III4(2013-10)	14-12-2016	All	Nil
CAN 5(0014.15)	05-05-2015	All	Nil
CAY m5(2014-15)	13-12-2014	All	Nil



College Internal Complaints Committee (CICC)

This committee in the college was formed to address all the internal issues of the faculties, so that they get solutions to the various problems. Suggestions and remedies are given by the members so that the problems are tackled by the faculties.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Shri. H. N. Suryaprakash	Registrar	Member
3	Dr. Prashanth C.S.R	Professor & Dean – Academics	Member
4	Dr. Girija N Srinivasalu	Director – NHQASDC	Member
5	Ms. V. Manjula	Head – Human Resources	Convener

Table 10.43 College Internal Complaints Committee

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	10.08.2019	All	Nil
CAY m1(2018-19)	08.07.2018	All	Nil
CAY m2(2017-18)	22-06-2017	All	Nil
$CAV m^{2}(2016, 17)$	07-03-2017	All	Nil
CAY m3(2016-17)	06-02-2017	All	Nil
	16-04-2016	All	Nil
	22-03-2016	All	Nil
CAY m4(2015-16)	01-03-2016	All	Nil
	27-01-2016	All	Nil
	22-12-2015	All	Nil

Staff Welfare Committee

This committee constituted on the similar lines of the Staff Grievances Redressal Committee looks into providing welfare schemes to all the staff of the college. The committee addresses the requirements of the staff and takes necessary steps of action.

Sl. No.	Name	Designation	Position
1	Dr. Mohan Manghnani	Chairman	Chairman
2	Dr. Manjunatha	Principal	Member
3	Ms. Malathi Madhusudan	Sr. Executive Director – Accounts & Finance	Member
4	Shri. H. N. Suryaprakash	Registrar	Member
5	Ms. V. Manjula	Head – Human Resources	Member Secretary

Table 10.44 Staff Welfare Committee

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	25.08.2020 27.04.2020	All	Nil
CAY m1(2018-19)	22.04.2019	All	Nil
CAY m2(2017-18)	01.12.2018	All	Nil
	27-03-2017	All	Nil
CAY m3(2016-17)	08-03-2017	All	Nil
	23-01-2017	All	Nil
	02-04-2016	All	Nil
CAY m4(2015-16)	13-10-2015	All	Nil
CAT III4(2013-10)	11-08-2015	All	Nil
	09-06-2015	All	Nil
CAY m5(2014-15)	09-12-2014	All	Nil
CAT III3(2014-13)	11-11-2014	All	Nil



Value Added Programs Committee

The college has a number of streams of study-Global, Professional & executive. The streams are distinct and provide exclusive training to help in the overall development of the students. Organizing industrial trips at International and National levels, providing industry enriched training are some of the responsibilities of this committee.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr.Prashanth C.S.R	Dean – Academics	Member
3	Dr. Shridhar Kurse	HoD – AU	Member
4	Dr. Anand Vardhan H	HoD – BT	Member
5	Dr. Niranjan	HoD – Civil	Member
6	Dr. Rajalakshmi	HoD – CSE	Member
7	Dr. Sanjeev Sharma	HoD – ECE	Member
8	Dr. Ram Kumar S	HoD – EEE	Member
9	Dr. R J Anandhi	HoD – ISE	Member
10	Dr. Sheelan Mishra	HoD – MBA	Member
11	Dr. Asha V	HoD – MCA	Member
12	Dr. Revathi V	HoD – BSH (Physics Cycle)	Member
13	Dr. V S Anusuya Devi	HoD – BSH (Chemistry Cycle)	Member
14	Ms. Malathi Madhusudhan	Senior Executive Director – Accounts & Finance	Member
15	Dr. M.S. Ganesha Prasad	Dean, Professor &HoD – ME	Member Secretary

Table 10.45 Value Added Programs Committee



Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	10-01-2020 18-07-2019	All	Nil
CAY m1(2018-19)	28-03-2019 12-10-2018	All	Nil
CAY m2(2017-18)	05.10.2017	All	Nil
CAY m3(2016-17)	08.05.2017	10	01
CAT III5(2010-17)	05.10.2016	All	Nil
CAV m 4(2015, 16)	05.05.2016	10	01
CAY m4(2015-16)	05.10.2015	All	Nil
	02.05.2015	10	01
CAY m5(2014-15)	10.02.2015	All	Nil
	26.10.2014	All	Nil

Women Empowerment Committee

This committee of the college addresses issues regarding to the empowerment of the women staff on the campus. The committees role is in ensuring that the powers are also vested in the hands of the women.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. Sheelan Mishra	HOD-MBA	Member
3	Dr. V. S. Anusuya	HOD-Chemistry	Member
4	Ms. Dharmambal	Sr. Asst. Professor	Member
5	Ms. Rajeswari	Sr. Asst. Professor	Member
6	Ms. Cynthia	Student Counselor	Member
7	Ms. Shanthi	Girls Hostel Warden	Member
8	Ms. Shanmathi K	Student Representative	Member
9	Dr. R.J. Anandhi	Professor & Head – ISE	Member- Secretary

Table 10.46 Women Empowerment Committee



Academic Year	Date of	No. of Members	No. of Members
	Meeting	Attended	Absent
CAY(2019-20)	10.08.2019	All	Nil
CAY m1(2018-19)	12.10.2018	All	Nil
	12.02.2018	All	Nil
CAY m2(2017-18)	11.10.2017	09	01
	12.08.2017	08	02
CAY m3(2016-17)	15.10.2016	All	Nil
CAY m4(2015-16)	31.03.2016	09	01
CAT III4(2013-10)	11.09.2015	08	02
CAY m5(2014-15)	27.03.2015	All	Nil
CAT III3(2014-13)	22.09.2014	09	01

Student Mentoring Committee

This committee of the college is responsible for keeping a constant track of the students' performance at the department level. The heads of the department along with the class teachers allocate a group of students to a mentee (faculty) who keeps track of the academic performance of the student. Extreme cases are dealt in the presence of the parents; some are referred to the Counsellors by the committee to resolve the issue.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. C S R Prashanth	Dean- Academics	Member
3	Dr. P S Niranjan	Head- GPE Program & HOD- Civil Engg.	Member
4	Dr. R.J. Anandhi	HOD- ISE	Member
5	Dr. Sheelan Mishra	HOD-MBA	Member
6	Dr. Asha V	HOD- MCA	Member
7	Dr. Revathi V	HOD- Physics	Member
8	Dr.V.S.Anusuya Devi	HOD- Chemistry	Member

Table 10.47 Student Mentoring Committee



Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
	20.05.2020		
CAY(2019-20)	25.10.2019	All	Nil
CAY m1(2018-19)	02-04-2019	A 11	NT:1
CAT IIII(2018-19)	22-10-2018	All	Nil
CAY m2(2017-18)	17-01-2018	07	03
CAT III2(2017-16)	01-08-2017	08	02
CAY m3(2016-17)	09-01-2017	67	03
CAY m4(2015-16)	12-04-2016	All	Nil
CAT III4(2013-10)	20-10-2015	All	Nil
CAY m5(2014-15)	30-04-2015	All	Nil
CAT III5(2014-15)	14-10-2014	All	Nil

Student Grievances Redressal Committee

Adolescence students who come from various backgrounds to study face a lot of problems. Besides a number of distractions are available to take them off their path of leraning. Thus to address the numerous problems of the diverse students from varied backgrounds, the students grievance redressal cell was formed to resolve the issues of the students. The committee is as follows.

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Mr. H N Suryaprakash	Registrar	Member
3	HoD of the Concerned Department	HoD	Member

 Table 10.48 Student Grievances Redressal Committee

Academic Year	Date of	No. of Members	No. of Members
Academic Tear	Meeting	Attended	Absent
CAY(2019-20)	26-09-2019	All	Nil
CAV = 1(2019, 10)	01-04-2019		
CAY m1(2018-19)	30-08-2018	All	Nil
CAX = 2(2017, 19)	01-02-2018	17	01
CAY m2(2017-18)	29-08-2017	16	02
CAV = 2(2016, 17)	17-01-2017	All	Nil
CAY m3(2016-17)	27-10-2016	16	02
CAV = 4(2015, 16)	01-03-2016	All	Nil
CAY m4(2015-16)	04-11-2015	All	Nil
CAV = 5(2014, 15)	02-04-2015	All	Nil
CAY m5(2014-15)	07-11-2014	12	01

Universal Human Values committee

The objective of this committee is to build a strong connection between faculty and students to create holistic awareness about Universal Human Values and create holistic awareness about Universal Human Values. It will help students in the right development of their world-view, mindset, perspective and values.

Sl. No.	Name	Designation	Position
1.	Dr Manjunatha	Principal	Chairman
2.	Dr. Sowmya Narayanan	HoD- Life skills & Lifelong learning	Member
3.	Mr.Aravinda. K	Sr. Assistant Professor	Member
4.	Dr. Anitha S. Rai	Head- Library & Information Center	Member
5.	Ms Vijaya	Advocate	Member
6.	Dr. Anusuya Devi V S	HoD& Professor– Chemistry	Member Secretary

 Table 10.49 Universal Human Values Committee



Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	09.01.2020 07.08.2019	All	Nil
CAY m1(2018-19)	Y m1(2018-19) 11.01.2019 08.08.2018 A		Nil
CAY m2(2017-18)	NA		
CAY m3(2016-17)	NA		
CAY m4(2015-16)	NA		
CAY m5(2014-15)	NA		

10.1.4. Decentralization in working and grievance redressal mechanism (5)

List the names of the faculty members who have been delegated powers for taking administrative decisions. Mention details in respect of decentralization in working. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee.

Sl	Department	Delegation of	Common	Exclusive	
No	Department	Power To	Responsibility	Responsibility	
1	Mechanical	Dean &	Administrative	Sports Activities	
1	Engineering	Professor	work	Alumni	
2	Civil	HoD& Professor	Administrative	Global Trips, GPE	
2	Engineering	Hob& Flotessol	work	Program	
3	Electronics &	HoD& Professor	Administrative	Professional body	
5	Communication	Hob& Flotessol	work	Activities(IEEE)	
	Computer		Administrative		
4	Science &	HoD& Professor	work	IT infrastructure	
	Engineering		WUIK		

Table 10.50Delegation of Powers



5	Electrical & Electronics Engineering	HoD& Professor	Administrative work	Energy Management
6	Information Science & Engineering	HoD& Professor	Administrative work	Professional body activities(CSI) Anti Sexual harassment committee(ICCC)
7	Automobile Engineering	HoD& Professor	Administrative work	Ek Bharath Shresta Bharath
8	Basic Science & Humanities	HoD& Professor	Administrative work	
9	Library and Information Centre	Head	Administrative work in the Library	Student Extra Curricular Club activities Cultural Coordinator Students Feedback

Composition of Grievance Redressal Cell, Anti Ragging Committee & Anti- Sexual Harassment Committee has been mentioned

10.1.5 Delegation of financial powers (5)

Institution should explicitly mention financial powers delegated to the Principal, Heads of Departments and relevant in-charges. Demonstrate the utilization of financial powers for each year of the assessment years.

Budgets for running the department are very essential. These are prepared by every department before the commencement of the academic year. In this regard, Heads of the Departments, with senior faculties give the requisition to the Principal with regard to



stationery, lab requirements, etc, for which budget allocations are approved by the Principal in discussion with the Management.

On the same lines, proposals are sent to the Principal for procuring new equipment for the labs, interactive technologies in the classrooms, conduction of workshops/ conferences/ seminars by the Heads of Departments for which fund allocations are made.

Sl No	Designation	Financial Power(Rs.)	
1	Principal	50,000/-	
2	Registrar	10,000/-	
3	HoDs of Engineering Departments	10,000/-	
4	HoDs of Basic Sciences	10,000/-	
5	HoDs of PG Programs	10,000/-	
6	Head-Library and Informaiton Centre	10,000/-	
7	Dean- R & D	50,000/-	
8	Executive Director- Accounts &	5,00,000/-	
0	Finance	5,00,000/-	

 Table 10.51: Financial Powers

- The Finance Committee has the power to approve bills worth Rs. 10,00,000/-(Rupees Ten Lakh only)
- Further, bills worth more than Rs. 10,00,000/- (Rupees Ten Lakhs) will be approved by the NEW HORIZON EDUCATIONAL & CULTURAL TRUST (NHCET)

10.1.6. Transparency and availability of correct/unambiguous information in public Domain (5)

(Information on policies, rules, processes and dissemination of this information to Stakeholders is to be made available on the web site)

Information on policies, rules, processes and its dissemination is made available to the stakeholders on the college website. Besides, the same is there in the college brochure also.



10.2. Budget Allocation, Utilization, and Public Accounting at Institute Level (15)

Summary of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years.

Total Income at Institute level: For CFY, CFYm1, CFYm2 & CFYm3

CFY: Current Financial Year, CFYm1 (Current Financial Year minus 1), CFYm2 (Current Financial Year minus 2) and CFYm3 (Current Financial Year minus 3)

	Total	Income		Actual Expenditure (till 31/03/20)			Total No. of Students: 5369
Fee	Govt.	Grant (S)	Other Sources (Placement Training, Bus Fees, etc.,)	Recurring Including Salaries	Non- recurring	Special Projects (Land, Building, WIP)	Expenditure per student
707599674	0	5741147	127604280	536995761	41753603	4177391	108573

Table 1: Institute Income and Expenditure for CFY 2019-20

 Table 2 : Institute Income and Expenditure for CFYm1 2018-19

	Total	Income		Actual Expenditure (till 31/03/19)			Total No. of Students: 5510
Fee	Govt.	Grant (S)	Other Sources (Placement Training, Bus Fees, etc.,)	Recurring Including Salaries	Non- recurring	Special Projects (Land, Building, WIP)	Expenditure per student
666506475	0	1511600	136876932	561993276	38268285	0	108940



	Total	Income		Actual Ex	penditure (til	1 31/03/18)	Total No. of Students: 5785
Fee	Govt.	Grant (S)	Other Sources (Placement Training, Bus Fees, etc.,)	Recurring Including Salaries	Non- recurring	Special Projects (Land, Building, WIP)	Expenditure per student
633628870	0	6012514	102783721	531735851	73098860	0	104552

Table 3 : Institute Income and Expenditure for CFYm2 2017-18

Table 4: Institute Income and Expenditure for CFYm3 2016-17

	Total	Income		Actual Expenditure (till 31/03/17)			Total No. of Students: 5810
Fee	Govt.	Grant (S)	Other Sources (Placement Training, Bus Fees, etc.,)	Recurring Including Salaries	Non- recurring	Special Projects (Land, Building, WIP)	Expenditure per student
603117585	0	204500	73194407	469888719	44404088	0	88519



Items	Budgeted in CFY	Actual expenses in CFY (31/03/20)	Budgeted in CFYm1	Actual Expenses in CFYm1 (31/03/19)	Budgeted in CFYm2	Actual Expenses in CFYm2 (31/03/18)	Budgeted in CFYm3	Actual Expenses in CFYm3 (31/03/17)
Infrastructure Built-up	15330000	6748473	14000000	6663271	31240000	23742664	26900000	26737805
Library	892500	2491663	850000	1983781	660000	3904459	600000	3815241
Laboratory Equipment	13650000	21705381	13600000	23413881	17930000	28801047	16300000	12904526
Laboratory Consumables	2500000	6319236	2200000	6255668	2000000	6737831	1850000	6139286
Teaching & Non Teaching Staff Salary	409860000	378318050	372600000	387350116	324000000	350480991	270000000	291220180
Maintenance and Spares	52625000	38441733	50300000	41254680	54800000	39996490	48150000	47235609
Research & Development	1500000	4708075	1200000	5086789	1000000	1315784	950000	231922
Training & Travel	8925000	18577870	8500000	21678725	9350000	10977807	8500000	20802921
Others (Global & Professional Training)	15000000	13629581	13500000	13435190	11500000	10977807	12500000	206886631
Misc	102257000	91986693	98405000	93139460	82555000	127899831	76100000	83616686
Total	622539500	582926755	575155000	600261561	535035000	604834711	461850000	514292807

Institute Budget and Expenditure for assessment years 2019-20, 2018-19, 2017-18, 2016-17



10.2.1. Adequacy of budget allocation (5)

(The institution needs to justify that the budget allocated during assessment years was adequate)

Sl No.	Assessment Year	Budget Allocated in Rs.	Actual Expenditure in Rs.	Adequate/ Non Adequate
1	CFY	622539500	582926755	Adequate
2	CFYm1	575155000	600261561	Adequate
3	CFYm2	535035000	604834711	Adequate
4	CFYm3	461850000	514292807	Adequate

 Table 10.52: Institute planned budget and expenditure

10.2.2.: Utilisation of allocated funds (5)

(The institution needs to state how the budget was utilised during assessment years)

Table 10.53: Utilisation of funds

Sl No.	Assessment Year	Budget Allocated in Rs.	Actual Expenditure in Rs.	Percentage of Utilisation
1	CFY	622539500	582926755	93.64%
2	CFYm1	575155000	600261561	104%
3	CFYm2	535035000	604834711	113%
4	CFYm3	461850000	514292807	111%

10.2.3.: Availability of the audited statements on the institute's website (5)

(The institution needs to make audited statements available on its website)

The audited statements is available on the institution website www.newhorizonindia.edu



10.3: Program Specific Budget Allocation, Utilisation (30)

Total Budget at program level: for CFY, CFYm1, CFYm2 & CFYm3

CFY: Current Financial Year, CFYm1 (Current Financial Year minus 1), CFYm2 (Current Financial Year minus 2) and CFYm3 (Current Financial Year minus 3).

Total Budget: 120000000		Adequate Expenditure (till 31.03.2020): 118344570		Total No of Students: 1090
Non- Recurring	Recurring	Non- Recurring	Recurring	Expenditure per Student
19200000	100800000	18935131	99409439	108573

 Table 1:Program specific budget allocation for CFY 2019-20

Table 2: Program specific budget allocation for CFY 2018-19

Total Budget: 110000000		Adequate Expenditure (till 31.03.19): 107741660		Total No of Students: 989
Non- Recurring	Recurring	Non- Recurring	Recurring	Expenditure per Student
17600000	92400000	17238666	90502994	108940

Table 3:Program specific budget allocation for CFY 2017-18

Total Budget:95000000		Adequate Expenditure (till 31.03.18) : 91587552		Total No of Students: 876	
Non- Recurring	Recurring	Non- Recurring	Recurring	Expenditure per Student	
15200000	79800000	14654008	76933544	104552	



Total Budget:78000000Adequate Expenditure (till 3 75949302		nditure (till 31.03.17):	Total No of Students: 858	
Non- Recurring	Recurring	Non- Recurring	Recurring	Expenditure per Student
12480000	65520000	12151888	63797413	88519

Table 4:Program specific budget allocation for CFY 2016-17

Program specific budget and expenses for assessment years 2019-20, 2018-19, 2017-18, 2016-17

Items	Budgeted in CFY	Actual expenses in CFY (31/03/20)	Budgeted in CFYm1	Actual expenses in CFYm1 (31/03/19)	Budgeted in CFYm2	Actual expenses in CFYm2 (31/03/18)	Budgeted in CFYm3	Actual expenses in CFYm3 (31/03/17)
Laboratory Equipment	1728000	1704161	1980000	1950124	817000	741859	803400	767088
Software	1152000	1136107	1320000	1303674	541500	494573	538200	508860.3
Laboratory Consumables	1656000	1585817	1254000	174384	855000	751018	538200	478480.6
Maintenance & spares	8964000	8569335	10252000	9944555	686850	6575986	4711200	4610123
R & D	2064000	2271030	2200000	2187156	2232500	2188942	1614600	1594935
Training & Travel	4128000	3668682	2046000	1917802	1710000	1538671	1614600	1473416
Miscellaneous (Items to be mentioned)	100308000	99409438	90948000	90263965	88157150	79296503	69794400	66516399
Total	120000000	118344570	110000000	107741660	95000000	91587552	78000000	75949302



10.3.1.: Adequacy of Budget allocation (10)

(Program needs to justify that the budget allocated over the assessment years was adequate for the **program**)

Sl No	Assessment Year	Budget Allocated in Rs.	Actual Expenditure in Rs.	Adequate/Non Adequate
1	CFY	12000000	118344570	Adequate
2	CFYm1	11000000	107741660	Adequate
3	CFYm2	95000000	91587552	Adequate
4	CFYm3	7800000	75949302	Adequate

Table 10.54.: Program budget and expenditure

10.3.2.: Utilisation of allocated funds (20)

(Program needs to state how the budget was utilised during the last three assessment years)

Table 10.55:	Utilisation	of allocated funds
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Sl No	Assessment Year	Budget Allocated in Rs.	Actual Expenditure in Rs.	Percentage of Utilisation
1	CFY	12000000	118344570	98.62%
2	CFYm1	11000000	107741660	97.95%
3	CFYm2	95000000	91587552	96.41%
4	CFYm3	7800000	75949302	97.37%



10.4. Library and Internet (20)

(Indicate whether zero deficiency report was received by the Institution for all the assessment years. Effective availability/purchase records and utilization of facilities/equipment etc. to be documented and demonstrated).

Library Services	Yes
Carpet Area of library (in m2)	4055 m2
Reading Space (in m2)	6703 m2
Nymber of seats Reading Space	450
Number users issue book per day	220
Number of users visits per day	600
Timings : Ground Floor	24/7, 365 days
Lower Level	8.00am – 6.30pm
Number of Library Staff	10
Number of Library staff with degree in Library	08
Management computerization for search, Indexing, Issue return record, Bar-coded	Yes
Library Additional Services	Institutional Repository
	Electronic Resources
	E-Portals
	Online Course(E-shikshana)
	Remote Access of e-resources
	Library App



10.4.1. Quality of Learning resources (hard/soft) (10)

Digital Library	Vac
Services	Yes
Availability of	
Digital Library	Yes
Contents	
Number of Courses	10
Number of eBooks	25589
Availability of	Yes
Exclusive Server	res
Availability of	Yes
Intranet /Internet	1 65
Availability of	
Exclusive	Yes
Space/Room	
Number of users per	250
day	250
Digital Library is	E-Journals Links
provided in the	Elsevier - <u>https://www.sciencedirect.com/</u>
Central Library	Taylor & Francis - <u>http://www.tandfonline.com/</u>
where students can	Springer Nature - <u>http://link.springer.com/</u>
access all kinds of	Institution of Civil Engineers - <u>https://www.ice.org.uk/</u>
e-journals	Emerald - <u>https://www.emeraldinsight.com/</u>
	ASME - https://asmedigitalcollection.asme.org/journals
	E-Books Links
	Elsevier - <u>https://www.sciencedirect.com/</u>
	McGraw Hill Education -
	http://mcgrawhilleducation.pdn.ipublishcentral.com/
	Taylor & Francis - <u>http://www.crcnetbase.com/</u>



	Springer Nature - <u>http://link.springer.com/</u>
	New Age Publishers- https://digital.elib4u.com/
	Packt - <u>https://prod.packtpub.com/in</u>
Video Course online	NPTEL
	NDLI
	GIAN
	National Knowledge Network
	Sarvajanika Granthalaya

Students can access eBooks/journals using internet in the Library.

Ground Floor section of the Library is open 24 hours a day for utilization. They are spacious, well ventilated, having power sockets, lights & fans and Wi-Fi connectivity. The Digital Library, Video Conference Room, Reading Rooms are all located here. Lower level contains the Main Books Stock, Reference Section, Library Office and Photocopier Room.

Library has resources for Undergraduate, Postgraduate and PhD students.

Textbooks, Journals, Bound Volumes, Conference Proceedings, General Reference Material, Technical Magazines, Newspapers and CDs-DVDs are available for reference.

- □ Name of the Internet provider:
- □ Available bandwidth:
- □ Wi-Fi availability:
- [□] Internet access in labs, classrooms, library and offices of all Departments:
- □ Security arrangements:



10.4.2 Internet (10)

- 1. Name of the Internet provider: BSNL and Jio Communication
- 2. Available bandwidth: 300 Mbps
- 3. Wi-Fi availability: Yes.
 - Campus is Wi-Fi enabled. About 40 access points are available in the campus
- 4. Internet access in labs, classrooms, library and offices of all Departments: Yes
 - Internet can be accessed in labs through Wi-Fi. Few systems provided with internet connection.
 - Wi-Fi at the corridors gives access to internet in the classrooms.
 - Library has a designated browsing centre with about 50 systems having internet connection. Wi-Fi accessibility also available
 - Departments have designated systems with internet connection. Wi-Fi accessibility as well as Ethernet available.
 - 5. Security Arrangements: Yes
 - Kaspersky internet security and Antivirus Protection is available across the institution.



Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC Accredited by NAAC with 'A' Grade, Accredited by NBA The Trust is a Recipient of Prestigious Rajyotsava State Award 2012 Conferred by the Government of Karnataka

Declaration

The head of the institution needs to make a declaration as per the format given -

- I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institutes hall fully abide by them.
- It is submitted that information provided in this Self-Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

Head of the Institute Name : Dr Manjunatha Designation: Principal

Principal New Horizon College of Engineering Outer Ring Road. Bellandur Post, Bangalore 560 103.

Place: Bengaluru Date: 01.10.2020

> NEW HORIZON KNOWLEDGE PARK, Ring Road, Bellandur Post, Bangalore - 560 103. India Tel : 080-6629 7777 Web : www.newhorizonindia.edu E-mail : registrar@newhorizonindia.edu



Annexure I

Program Outcomes (POs) & Program Specific Outcomes (PSOs)

Engineering Graduates will be able to:

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and computing to solve Computer Science and Engineering related problems.

2. Problem analysis: Demonstrate the ability to identify, formulate and solve engineering problems related to Computer Science and Engineering.

3. Design/development of solutions: Demonstrate the ability to design, analyse and interpret data and implement solutions for software based real life problems.

4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern tool usage: Create, select and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities related to Computer Science and Engineering with an understanding of the limitation.

6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.

8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. Individual and team work: Function effectively as an individual and as a member or leader to diverse teams, and in multidisciplinary settings.

10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective report and design documentation, make effective presentations, and give and receive clear instructions.

11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environment.



12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

Graduates of Computer Science and Engineering will be able to:	
PSO1	Design, develop, implement computer programs and use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations.
PSO2	Work with and communicate effectively with professionals in various fields and pursue lifelong professional development in computing.



www.newhorizonindia.edu

NEW HORIZON PUBLIC SCHOOL (SSLC - Established 1970)

(Formerly known as New Horizon English School) Email: principalnhps@newhorizonindia.edu Tel: +91-80-2526 1735

NEW HORIZON PUBLIC SCHOOL (ICSE - Established 1982)

Email: principalnhps@newhorizonindia.edu Tel: +91-80-2526 1735

NEW HORIZON COLLEGE OF EDUCATION (Established 1980)

Email: principalbed@newhorizonindia.edu Tel: +91-80-2526 1735

NEW HORIZON PRE UNIVERSITY COLLEGE (Established 1982)

Email: principalnhpuc@newhorizonindia.edu Tel: +91-80-2542 9361

NEW HORIZON COLLEGE (Established 1998)

Email: principalnhcm@newhorizonindia.edu principalnhck@newhorizonindia.edu Tel: +91-80-6629 7777 / +91-80-2542 9361

NEW HORIZON COLLEGE OF ENGINEERING (Established 2001)

Email: principal@newhorizonindia.edu Tel: +91-80-6629 7777

NEW HORIZON PRE PRIMARY TEACHERS TRAINING ACADEMY

(Established 2012) Email: principalbed@newhorizonindia.edu Tel: +91-80-2526 1735